Malaysian Journal of Social Sciences and Humanities (MJSSH) (e-ISSN : 2504-8562)
2025, Volume 10, Issue 6, e003428
DOI: https://doi.org/10.47405/mjssh.v10i6.3428

REVIEW ARTICLE

TikTok in Education: A Bibliometric Analysis of Trends, Challenges, and Opportunities

Xijia Ding[1], Roslina Ismail[2*]

[1]Visual Arts Program, Faculty of Creative Arts, Universiti Malaya, 50603 Kuala Lumpur, Malaysia
Email: xijiading@hotmail.com
[2]Visual Arts Program, Faculty of Creative Arts, Universiti Malaya, 50603 Kuala Lumpur, Malaysia
Email: roslina_i@um.edu.my

CORRESPONDING AUTHOR (*):
Roslina Ismail
(roslina_i@um.edu.my)

KEYWORDS:
Digital Education
Participatory Media
User-Generated Content
Bibliometric Analysis
TikTok

CITATION:
Ding, X., & Roslina Ismail. (2025). TikTok in Education: A Bibliometric Analysis of Trends, Challenges, and Opportunities. *Malaysian Journal of Social Sciences and Humanities (MJSSH), 10*(6), e003428. https://doi.org/10.47405/mjssh.v10i6.3428

ABSTRACT

TikTok has increasingly influenced educational contexts as a global social media phenomenon. However, limited systematic analysis exists regarding its academic applications and research trends, necessitating a comprehensive examination of existing literature to understand current developments and identify research gaps. This study aims to explore TikTok's emerging role in education by revealing trends, challenges, and thematic directions. A bibliometric analysis was conducted on 225 peer-reviewed articles published between 2020 and 2024, extracted from the Web of Science database. Data visualization and network analysis were performed using VOSviewer software and the bibliometrix R package to identify publication patterns, citation networks, and thematic clusters. The findings reveal growing academic interest across disciplines, with TikTok playing a significant role in micro-learning, health education, and informal pedagogy. The platform fosters participatory and learner-centred practices while raising concerns about misinformation and algorithmic bias. Therefore, while TikTok holds transformative potential for education, these issues must be critically addressed. Future research could incorporate regional databases, broader keyword strategies, and mixed-method approaches to gain deeper qualitative insights and enhance understanding of TikTok's educational impact.

Contribution/Originality: This study contributes to the existing literature by providing critical insights into TikTok's transformative educational potential within the rapidly evolving digital learning landscape. The research documents key trends, benefits, and challenges while offering actionable recommendations for leveraging the platform's participatory and algorithmic features to create more inclusive learning environments.

1. Introduction

In recent years, the emergence of the short video social media platforms TikTok and its Chinese version Douyin have garnered widespread attention as global phenomena. Initially attracting the younger generation with its entertaining and creative content (Vázquez-Herrero et al., 2022; Zeng & Kaye, 2022), TikTok has since been adopted by a large group of people across different age groups, demonstrating its potential for educational, political, and economic applications (Abidin, 2020; Zeng et al., 2020; Zeng & Abidin, 2021). According to a previous bibliometric review study on TikTok, Rejeb et al. (2024) identified six themes of research related to TikTok and found that topics related to education ranked second. While traditional social media platforms such as Facebook and Twitter have been extensively studied (Aydin, 2012; Hew, 2011; Yu & Yu, 2022), research specifically exploring short-form social media as a tool in educational contexts remains limited.

TikTok's rapid rise reflects broader societal shifts towards visual and participatory modes of communication. Rooted in the dynamics of user-generated content and algorithmic promotion, TikTok enables the democratisation of knowledge, offering a space where educational content can coexist with entertainment. This participatory culture, as theorised by Jenkins (2006), positions TikTok as a site for informal learning, creativity, and engagement. Boyd's (2008) discussion on the nuanced dynamics of networked publics provides a lens to understand how TikTok fosters micro-communities, enabling niche educational content to thrive. The platform's algorithm-driven personalisation further complicates its role as a learning tool, as it simultaneously enhances engagement and risks creating echo chambers.

As TikTok continues to gain popularity and influence, it is crucial to understand how it is being used for educational purposes, the trends and best practices emerging, and their potential impact on teaching and learning strategies. However, its educational use raises critical questions about accessibility, digital literacy, and the potential for misinformation. This study, therefore, not only examines TikTok's role in formal education but also situates its applications within the broader framework of digital culture and social media's evolving impact on learning practices. TikTok's participatory nature aligns with the concept of 'Participatory Culture' as outlined by Jenkins (2006), where users not only consume content but actively create and share it. This participatory framework underscores how TikTok democratizes access to knowledge and reshapes traditional educational hierarchies by enabling informal, peer-to-peer learning.

To bridge the knowledge gap in understanding TikTok's role in education, this study undertakes a bibliometric analysis of the existing literature on the platform's educational applications. Through an exploration of citation patterns, influential works, and emerging research trends, this study aims to construct a comprehensive overview of this rapidly evolving field. Specifically, it investigates the current trends in scholarly literature concerning TikTok's use for educational purposes, the potential advantages and limitations of employing TikTok as an educational tool, and the opportunities for future research in this domain. To guide this inquiry, the following research questions are addressed:

i. What are the major trends and patterns in the academic literature concerning TikTok's use in education?

ii. Which works, authors, and journals have been most influential in shaping the scholarly discourse on TikTok in education?
iii. What are the documented benefits and challenges associated with using TikTok as an educational tool?
iv. What are the key gaps and future research directions in the study of TikTok's educational applications?

By addressing these questions, the study aspires to enrich academic discourse on the intersection of social media and education. Furthermore, it provides actionable insights for educators, institutions, and content creators striving to harness TikTok's potential to enhance teaching and learning outcomes.

2. Literature review

With the continuous expansion of user base, TikTok has become one of the most popular social media platforms (Darvin, 2022; Zulli & Zulli, 2022). This has also drawn researchers' attention to the platform, leading to a significant amount of research in recent years. Although TikTok is primarily a social and entertainment platform, studies have found that it holds considerable educational potential beyond entertainment (Escamilla-Fajardo et al., 2021; Hayes et al., 2020; Lampe, 2023; Rach & Lounis, 2021). However, research in this area is still quite limited and remains in its early stages.

Current research on the educational aspects of TikTok includes a few topics, such as higher education (Hu & Du, 2022; Lampe, 2023; Syarifuddin & Sinta, 2022), public health information dissemination (Basch et al., 2020; O'Sullivan et al., 2022; Zenone et al., 2021), and classroom education for adolescents (Rajan & Ismail, 2022; Yang, 2020). Particularly during the COVID-19 pandemic, TikTok served as an essential means for both formal and informal education (Heyang & Martin, 2022; Radin & Light, 2022).

Researchers compared the learning environment of TikTok with other social media platforms such as Twitter and Instagram and found that the average view time on TikTok is significantly higher than on other platforms. Additionally, it can be easily shared on various other social platforms, offering vast promotional potential (Hayes et al., 2020). As a result, many researchers considered that TikTok has more advantages than other social media (Hayes et al., 2020; Sari et al., 2022). TikTok can positively increase learning interests and learners' curiosity. Syarifuddin and Sinta (2022) examine TikTok as an online learning medium for universities. They found that it can transform dull and difficult-to-understand content into an enjoyable format.

2.1. TikTok and Participatory Learning in Digital Culture

TikTok exemplifies the principles of participatory media by allowing users to create, share, and interact with educational content in dynamic ways. Unlike traditional platforms, TikTok's algorithm fosters micro-learning by curating content tailored to individual preferences, amplifying its potential as a tool for engagement (Escamilla-Fajardo et al., 2021). However, as Zeng and Abidin (2021) argue, the platform also introduces challenges, such as algorithmic bias and the risk of echo chambers. Its visual-centric and gamified features redefine educational interactions, encouraging creativity but also raising concerns about the depth and accuracy of learning materials. The theoretical lens of participatory culture provides a foundation for understanding TikTok's impact on education. As Boyd (2014) highlights in *It's Complicated: The social*

lives of networked teens, the dynamics of social media platforms reflect broader cultural shifts, including how digital tools mediate learning, identity, and engagement. These frameworks help situate TikTok within the broader narrative of digital media studies.

Researchers also noted that this improved understanding can enhance learners' motivation and contribute to diversified learning (Tan et al., 2022). Some educators use the platform to acquire resources and inspiration for their ideas (Carpenter et al., 2024). Derkach et al. (2022) state that content on TikTok can be learned unlimited times, which becomes a useful tool to improve learning ability. Dasoo (2022) discussed that the amount of learning content is unlimited, which provides an efficient and enjoyable means to learn. It diverges from the traditional teacher-centred approach, helping to prevent student anxiety. She also claimed that TikTok play an innovative role in changing the educational landscape in online-learning. Rach and Lounis (2021) have similar findings and indicate that, due to TikTok's interaction affordance, learning has shifted from an "exclusive learning" model to a "democratized learning environment."

Due to its extensive learning resources and free accessibility (Gao et al., 2023), researchers consider TikTok not only a teaching tool for formal educators but also recommend it for learning and information gathering in daily life. Fiallos et al. (2021) found that the most popular knowledge content on TikTok are medicine, food and drink, health, science/chemistry, and technology. People are eager to obtain scientific knowledge and information about diseases from social media. Especially during the COVID-19 pandemic, the #hashtag related to COVID-19 and other diseases ranked highly in popularity (Zenone et al., 2021). Many scholars have studied the type and quality of this information and developed tools to measure and evaluate it (Shoemaker et al., 2014).

Most scholars have affirmed the role of TikTok in education and information propagation, acknowledging its effectiveness in enhancing learning motivation and curiosity through interactive support, editing strategy, and algorithmic promotion (Conde-Caballero et al., 2024; Hayes et al., 2020; Ostrovsky & Chen, 2020). Nevertheless, there still challenging to use it. Hu and Du (2022) claimed that although using TikTok can improve learning ability, Previous researchers have been overly optimistic about the learning outcomes on TikTok. It cannot achieve the same learning effects as traditional methods. Yang (2020) argued that while TikTok learning can be intuitively understood by learners, it is not suitable for all learning domains, especially for complex tasks. Heyang and Martin (2022) also suggested that TikTok may be appropriate only for specific majors and cultural contexts. Additionally, researchers found that this type of learning is not suitable for individuals who are not familiar with technology (Rendón et al., 2022) and those who prefer traditional learning mode (Dasoo, 2022).

Scholars have also expressed concerns about the lack of curation and authoritativeness of information on the platform, with the potential for misinformation and erroneous content to mislead knowledge transmission (Conde-Caballero et al., 2024). Yeung et al. (2022) found that more than half of the content in their analysed samples contained false information. Learning from this misinformation can easily lead to negative consequences for users (O'Sullivan et al., 2022). Additionally, excessive use may lead to addiction, distraction, and adverse effects on adolescents' visual health (Chao et al., 2023; Xu et al., 2024; Yang, 2020). In summary, research on TikTok in the field of education is still in its infancy. Currently, there is a lack of systematic and bibliometric literature reviews to investigate the relevant studies in this area. There is a need for

comprehensive reviews to identify important research, future trends, and gaps in the educational use of TikTok. These findings highlight the need to situate TikTok within broader frameworks of digital culture and participatory media to better understand its educational implications.

2.2. Digital Culture and TikTok's Educational Potential

TikTok's rise as a short-form video platform highlights its dual role as a social media tool and a cultural artefact, reshaping how information is consumed and shared in the digital age. Central to this is Jenkins' (2006) concept of *participatory culture*, where individuals now play an active role in generating and sharing content, rather than simply consuming it. TikTok exemplifies this phenomenon by providing users with accessible tools for creating engaging, creative, and educational videos, fostering informal peer-to-peer learning environments (Escamilla-Fajardo et al., 2021).

In addition to its participatory culture, TikTok's algorithmic design plays a pivotal role in shaping user engagement and content exposure. The platform's recommendation system personalises content delivery by analysing user preferences, enhancing engagement through tailored learning experiences (Hayes et al., 2020). While this personalisation facilitates micro-learning, it also introduces challenges. Algorithmic curation risks creating echo chambers that limit exposure to diverse perspectives, thereby reinforcing existing biases (Zeng & Abidin, 2021). This dynamic complicates TikTok's educational potential, as learners may be exposed to misinformation or content that lacks pedagogical rigour.

Moreover, TikTok's capacity for blending entertainment with education positions it as a unique tool for informal learning. The platform encourages bite-sized educational content, making complex topics more accessible to diverse audiences (Hu & Du, 2022). However, the prevalence of misinformation, particularly in fields such as health and science education, underscores the need for digital literacy initiatives to empower users to critically evaluate the credibility of the content they engage with (Yeung et al., 2022).

TikTok's role within digital culture further intersects with its capacity for fostering inclusivity. By providing a platform for diverse voices and culturally responsive pedagogy, TikTok creates opportunities for marginalised communities to access and contribute to educational discourse. This aligns with broader trends in digital culture, where social media platforms are increasingly leveraged to democratize access to information (O'Sullivan et al., 2022). However, the uneven distribution of technological access remains a critical barrier, particularly in low-resource settings.

2.3. Existing Research on Social Media in Education

Research on traditional social media platforms, such as Facebook and Twitter, has extensively examined their educational applications. Studies have highlighted their capacity to support collaborative learning, enhance student engagement, and facilitate the dissemination of educational resources (Aydin, 2012; Hew, 2011). However, short-form video platforms like TikTok represent a new frontier in social media education research. Unlike their predecessors, TikTok integrates visual, interactive, and algorithmic features that redefine how learners interact with content, making it a critical area for further exploration.

While existing research has highlighted TikTok's educational potential, much of the work remains fragmented, with limited emphasis on comprehensive reviews or theoretical synthesis. Key areas such as the platform's algorithmic implications, participatory dynamics, and impact on diverse learning contexts remain underexplored. Furthermore, the rapid growth of TikTok-related studies necessitates a systematic approach to understand the intellectual landscape of this emerging field. This study addresses these gaps by employing a bibliometric analysis to map trends, identify influential works, and uncover opportunities for future research. The following section outlines the methodology adopted for this analysis, providing a framework for understanding TikTok's evolving role in education.

3. Method

In this study, an analysis of the literature was conducted by using bibliometric analysis and visual representation strategy. The bibliometric concept refers to applying a valuable quantitative research methodology to leverage statistical analysis in characterising the research landscape and knowledge structure of a domain by investigating the associations among diverse scholarly elements (Donthu et al., 2021). Consequently, it is a reliable tool for examining emerging research trends (Su et al., 2019). As an initial step in the practical implementation, the study employed a systematic literature selection procedure based on the PRISMA guidelines to ensure transparency and rigour in data collection (Moher et al., 2009).

For the purpose of our study, the Web of Science (WoS) database was chosen, which is one of the best known and considered authoritative reference sources for scientific analysis (Donthu et al., 2021). It allows us to collect data from a broad range of disciplines (Kuo & Yang, 2015). We use VOSviewer and bibliometrix R-package to analyse the data, as they can pay special attention to graphical representation and network connections, making it a valuable methodological instrument (Aria & Cuccurullo, 2017; van Eck & Waltman, 2010). The bibliometric maps generated by these two programs guide our research in comprehending the worldwide semantic and conceptual framework of the research domain (Ortega et al., 2023; Rodriguez-Veras et al., 2023). These two software programs were employed to construct and analyse networks comprising diverse elements (such as publications, researchers, journals, and citations), linked through citation, co-citation, co-authorship, or co-occurrence connections. Additionally, they facilitated the creation, visualisation, and examination of research mapping visualisations (van Eck & Waltman, 2023).

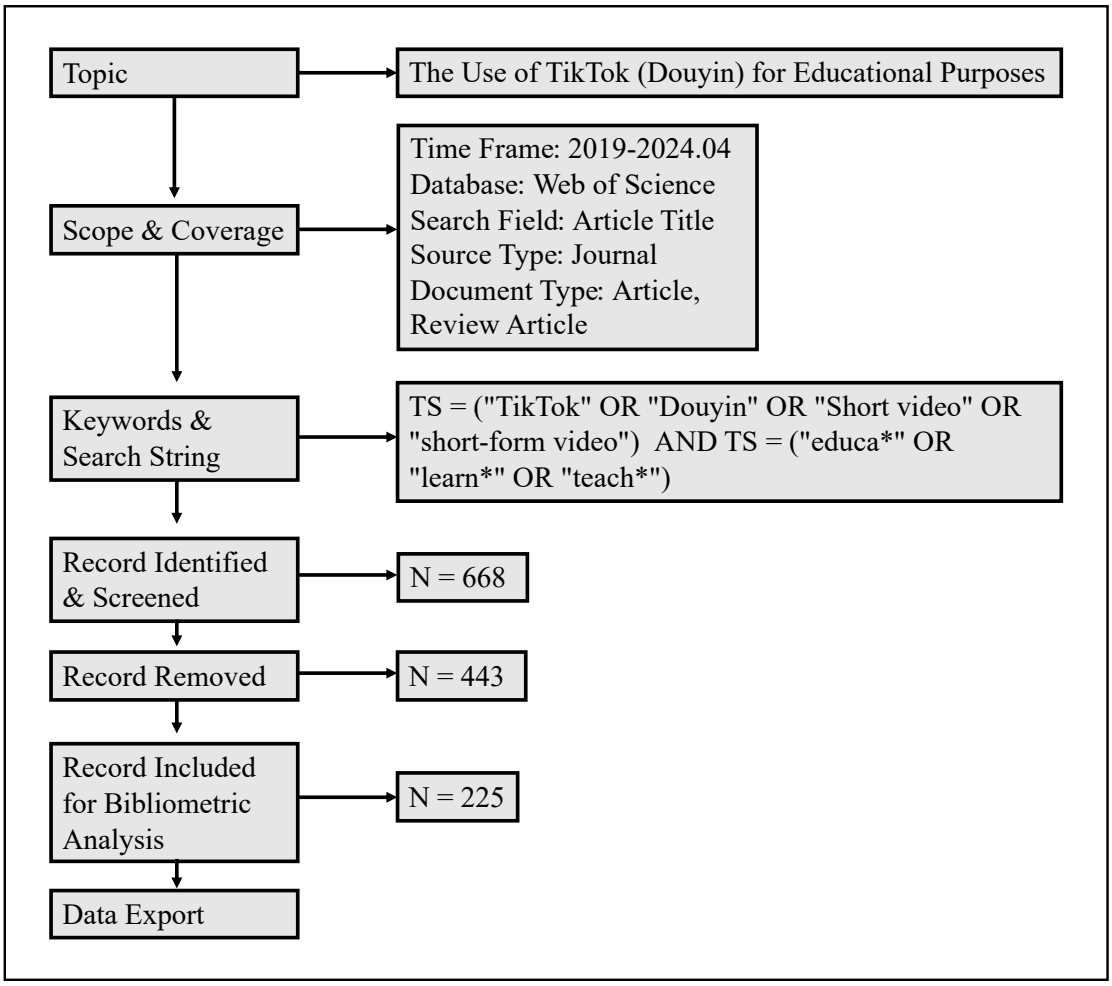
In accordance with PRISMA guidelines, we systematically conducted an initial literature search to identify relevant studies at the intersection of social media and education. We drew upon established keywords from prior literature in the field (e.g. Machado & Davim, 2022; Rejeb et al., 2024) to guide our search strategy. Specifically, we began with the terms 'TikTok,' 'tik tok,' and 'Douyin,' which yielded a total of 1,875 records from the WOS Core Database. A temporal filter was applied to exclude three articles published before the platform's official launch. Then we found that TikTok-related academic literature first emerged in 2018, so we restricted the publication date range to 2018–April 2024.

To assess subject relevance, we reviewed the database's classification categories. Notably, only 75 records were indexed under education-related categories—an insufficient number for thematic synthesis. To increase retrieval precision and recall, we

implemented a Boolean topic search: TS = ("TikTok" OR "tik tok" OR "Douyin") AND TS = ("educa" OR "learn" OR "teach*"). This revised query yielded 668 records published between 2019 and April 2024. We subsequently screened these results for eligibility based on file type and abstract content. After excluding 206 records that did not meet our inclusion criteria, 225 articles were selected for evaluation (Figure 1).

For analysing collected data, we employ descriptive results, publication output, key articles & journals, country analysis, co-citation analysis on cited references and thematic examinations. The purpose of the descriptive analysis is to provide a fundamental overview of TikTok studies within the educational sphere by recognising significant publications, journals, countries, references of influential publications, and themes. This analysis benefits research by presenting a view of the most engaged and leading figures in the area, consequently creating the basis for enhanced analysis.

Figure 1: PRISMA Flowchart of Literature Selection and Screening Process



This study provides a comprehensive overview of the present landscape of TikTok-related research while simultaneously highlighting emerging trends and potential future pathways, offering significant value to both academic researchers and industry professionals. These quantitative approaches contribute to a more objective analysis by delivering clear, data-informed perspectives on the structural and dynamic aspects of TikTok research in educational contexts. By employing bibliometric analysis, this study goes beyond quantitative measures to uncover the intellectual structure and thematic trends in TikTok-related educational research. This approach not only highlights key

contributors and influential works but also situates TikTok's applications within the broader cultural and societal implications of digital education

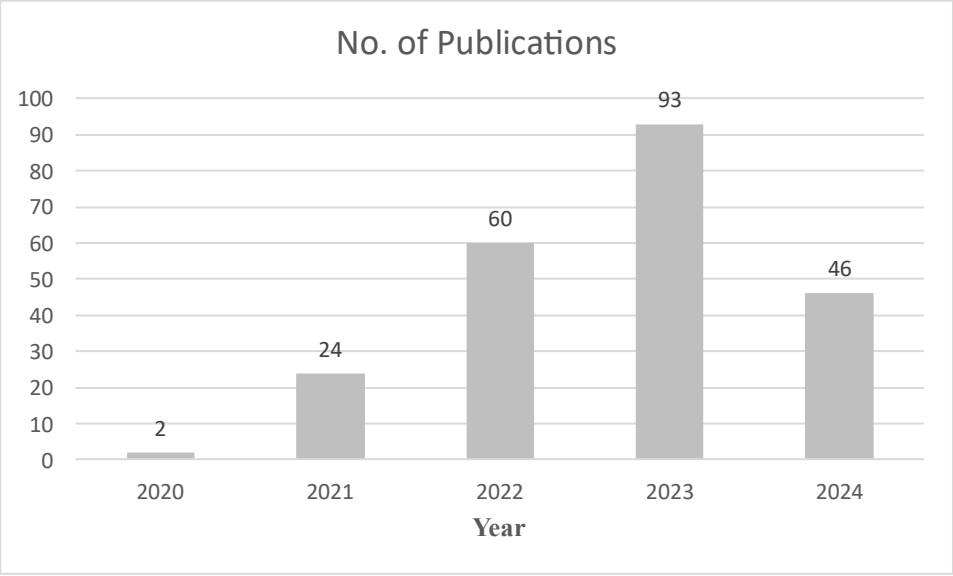
4. Results

4.1. Temporal and geographic trends in TikTok educational research

4.1.1. Publication output trends

The articles obtained related to TikTok (including Douyin) and the education domain in the core collection database of Web of Science amount to a total of 225 articles. As an emerging platform, based on the findings of Rejeb et al. (2014), scholarly articles related to TikTok have only been published within the past five years. However, it has quickly garnered attention from researchers, as evidenced by Figure 2, which illustrates that articles examining the use of TikTok in education began to appear in 2020 and experienced a significant increase in the subsequent year. It is noteworthy that the number of articles published in 2024 may appear to exhibit a slight decline due to the data collection being conducted before the end of that year, resulting in an incomplete dataset for the current year. Overall, this finding is significant in academia since the field of analysing TikTok's impact on education is still in its nascent stages. The rapid increase in the number of published articles from 2020 to 2023 demonstrates a burgeoning research interest around this emerging platform and its pedagogical applications.

Figure 2: Publication Over Time



4.1.2. Geographic distribution

TikTok is a global short video platform that serves over 150 countries with 39 languages (Zulli & Zulli, 2022). We conducted an analysis on countries to understand how many regions are concerned about this research field and which countries are the most outstanding contributors to this research field. Figure 3 displays countries involved in this field. According to the data, most regions globally, including Africa, are involved in this field of research, though with varying levels of contribution. The map clearly shows that the United States is the most significant contributor, with 89 documents published on the topic of TikTok in education. This dominance shows TikTok's popularity in the US

market and the attention paid by US researchers to this field. China is the second highest contributor, which aligns with TikTok's origins as a Chinese app and the country's focus on education and technology (Knox, 2020).

Figure 3: Countries in the Research Field of TikTok in Education

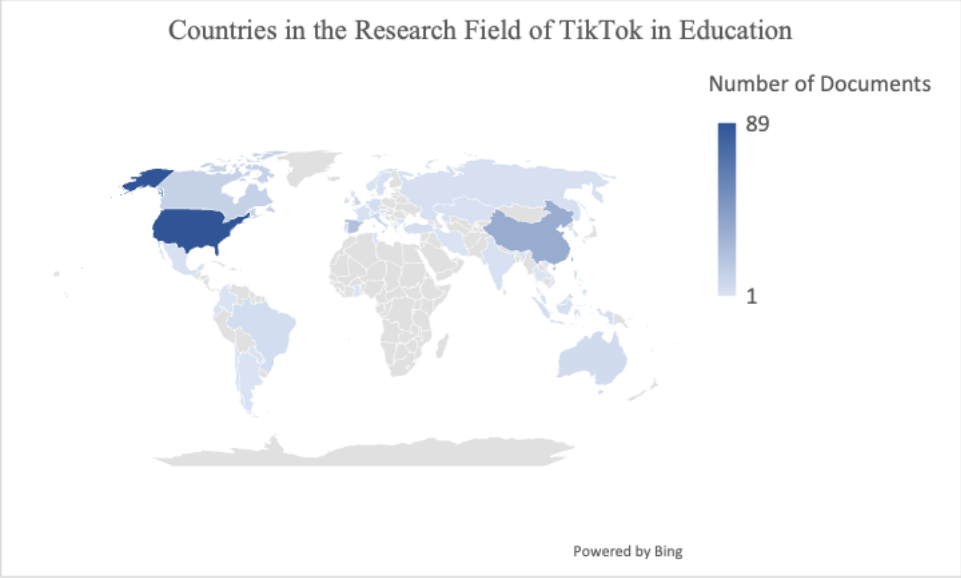
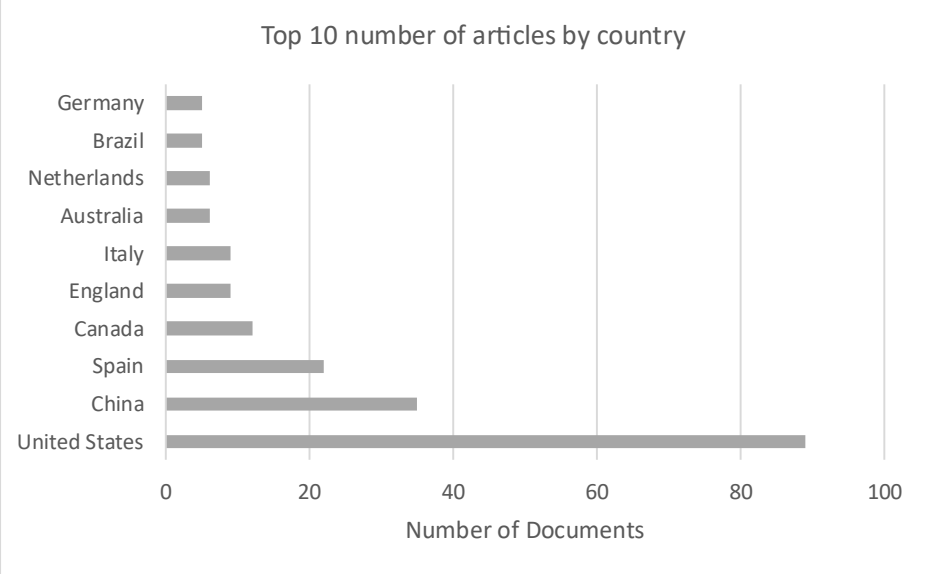


Figure 4 shows the top 10 countries by number of publications. Apart from the United States and China, most of the top 10 countries are concentrated in Europe.

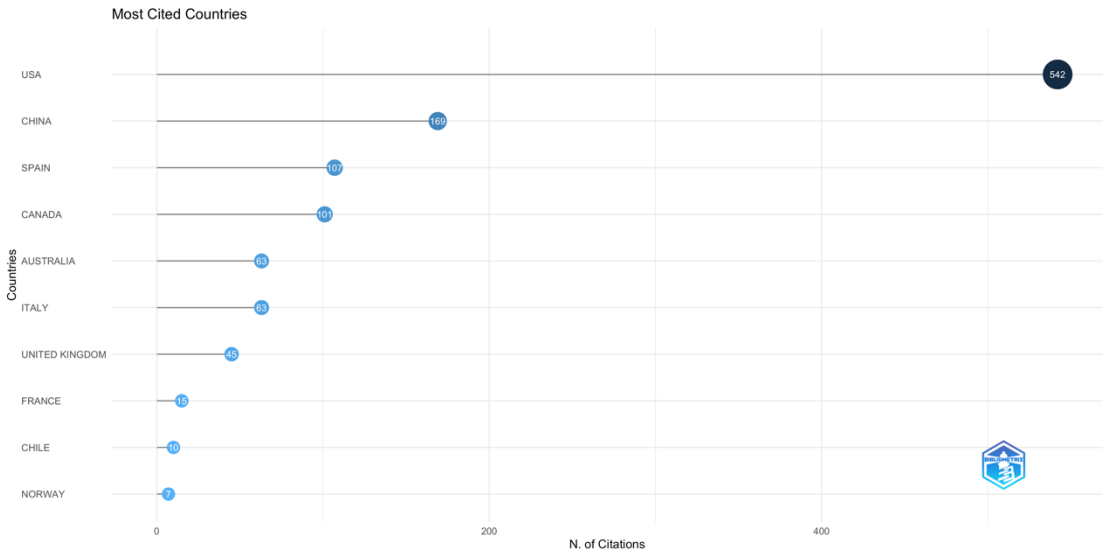
Figure 4: Top 10 number of articles by country



Additionally, we investigate the most cited countries in Figure 5, it can show the outcome contributors that the countries reflect in the research field. The data shows that the top 3 influential countries based on citations are the USA, China, and Spain. This finding aligns with the countries that have the highest number of publications on this topic. These three countries have emerged as the top contributors both in terms of publication output and citation impact, reinforcing their leadership in driving research around TikTok's educational uses. Australia's presence among the most cited countries,

despite having fewer total publications, suggests that its research in this area has garnered significant attention and influence within the academic community.

Figure 5: Most cited Countries



4.2. Intellectual structure: Key works, authors, and journals

4.2.1. Key Articles & Journals

Table 1 shows the top 10 most cited articles in this field. It reflects the most popular research trends in educational applications within the TikTok platform, which include diverse applications in formal education and informal information learning, such as health/medical education, adult learning, higher education, and education for the younger generation. Among these, health and medical education hold the most prominent position. The first cited article *Is TikTok the Next Social Media Frontier for Medicine?* (Comp et al., 2021), with 81 citations, focuses on the importance of TikTok for medical education. TikTok's use for health information and medical education has significantly attracted researchers' attention. For example, articles ranked 3rd, 4th, 6th, 8th, and 10th are all related to medical and health education on the platform. The 3rd ranked article investigate TikTok's role in addressing mental health and eating disorders (Herrick et al., 2021). The 4th ranked article examines social media addiction among Italian adolescents during the pandemic (Marengo et al., 2022), while the 6th ranked paper investigates the quality of acne-related content on TikTok (Zheng et al., 2021). Article 8 evaluates the reliability and accuracy of TikTok videos as a source of health information on chronic obstructive pulmonary disease (Song et al., 2021), and the 10th ranked publication analyses themes related to sex education on TikTok (Fowler et al., 2022). We believe this trend's popularity is closely related to the occurrence of the COVID-19 pandemic.

Formal online learning has also attracted significant academic interest, as evidenced by the 2nd ranked article, *Teachers Act Like We're Robots: TikTok as a Window Into Youth Experiences of Online Learning During COVID-19* (Literat, 2021) with 73 citations, which examines TikTok's role in youth experiences of online learning during the pandemic. And the article ranked 7th incorporating TikTok as a higher education pedagogy (Escamilla-Fajardo et al., 2021).

Except for using TikTok as a formal education tool, it is also considered as a knowledge and information acquisition platform, where users enhance their engagement to obtain useful information. Such as the article ranked 9th, *Making Every Second Count: Utilizing TikTok and Systems Thinking to Facilitate Scientific Public Engagement and Contextualization of Chemistry at Home* (Hayes et al., 2020). Meanwhile, researchers are concerned about the quality of content on this platform and examine the validity and credibility of related information, as seen in *Acne and social media: A cross-sectional study of content quality on TikTok* (Zheng et al., 2021), ranked 6th.

Table 1: Top 10 most cited articles in the research field of the use of TikTok in education

Rank	Title	Journal	Year	Citation count
1	Is TikTok The Next Social Media Frontier for Medicine?	AEM Education and Training	2021	81
2	Teachers Act Like We're Robots: TikTok as a Window Into Youth Experiences of Online Learning During COVID-19	Aera Open	2021	73
3	This is just how I cope: An inductive thematic analysis of eating disorder recovery content created and shared on TikTok using #EDrecovery	International Journal of Eating Disorders	2021	60
4	Smartphone and social media use contributed to individual tendencies towards social media addiction in Italian adolescents during the COVID-19 pandemic	Addictive Behaviors	2022	59
5	TikTok and Attention-Deficit/Hyperactivity Disorder: A Cross-Sectional Study of Social Media Content Quality	Canadian Journal of Psychiatry-revue Canadienne De Psychiatrie	2022	58
6	Acne and social media: A cross-sectional study of content quality on TikTok	Pediatric Dermatology	2021	55
7	Incorporating TikTok in higher education: Pedagogical perspectives from a corporal expression sport sciences course	Journal of Hospitality Leisure Sport & Tourism Education	2021	54
8	Short-Video Apps as a Health Information Source for Chronic Obstructive Pulmonary Disease: Information Quality Assessment of TikTok Videos	Journal of Medical Internet Research	2021	46
9	Making Every Second Count: Utilizing TikTok and Systems Thinking to Facilitate Scientific Public Engagement and Contextualization of Chemistry at Home	Journal of Chemical Education	2020	45
10	Sex Education on TikTok: A Content Analysis of Themes	Health Promotion Practice	2022	44

According to Sajovic and Boh Podgornik (2022), identifying the most published journal resources can help researchers find related research and choose a suitable source for their own publishing. Furthermore, journals with a higher number of published articles and citations in a particular field tend to have a more significant impact within that academic domain. Therefore, this study investigates the top 10 important journals with their number of publications and a total citations in Table 2. The journals cover a diverse range of subject areas related to education, including medical education (*Cureus Journal of Medical Science*), information technologies in education (*Education and Information Technologies*), public health education (*Frontiers in Public Health*, *BMC Public Health*, *International Journal of Environmental Research and Public Health*, *Zeitschrift fur Sexualforschung*), aesthetic education (*Aesthetic Surgery Journal*) and chemical education (*Journal of Chemical Education*). The number of publications per journal ranges from 2 to 7, with *Cureus Journal of Medical Science* having the highest number of publications (7) in this field. In terms of total citations, the *International Journal of Environmental Research and Public Health* has the highest citation count (95), followed by the *Journal of Chemical Education* (57 citations) and *Frontiers in Public Health* (38 citations).

Table 2: Top 10 journals in the research field of the use of TikTok in education

Rank	Journal	Publications	Citations
1	Cureus Journal of Medical Science	7	14
2	Education and Information Technologies	5	23
3	Frontiers in Public Health	4	38
4	Aesthetic Surgery Journal	3	6
5	BMC Public Health	3	13
6	International Journal of Environmental Research and Public Health	3	95
7	Journal of Burn Care & Research	3	0
8	Journal of Chemical Education	3	57
9	Zeitschrift Fur Sexualforschung	3	5
10	Analisi-quaderns De Comunicacio I Cultura	2	0

We observed that the journal ranked 10th, *Analisi-quaderns De Comunicacio I Cultura*, only has two publications, indicating that a large number of journals have only 1-2 articles on TikTok's applications in education. These articles are dispersed across various journals. The presence of diverse journals from various disciplines indicates that the research on TikTok's applications in education is an emerging and interdisciplinary area of study, attracting attention from multiple academic domains. While with the same results as the most cited papers, health and medical education appear to be the primary concern at the moment, as evidenced by the top ranked *Cureus Journal of Medical Science* and the high citations received by journals like the *International Journal of Environmental Research and Public Health*.

4.2.2. Co-citation analysis on cited references

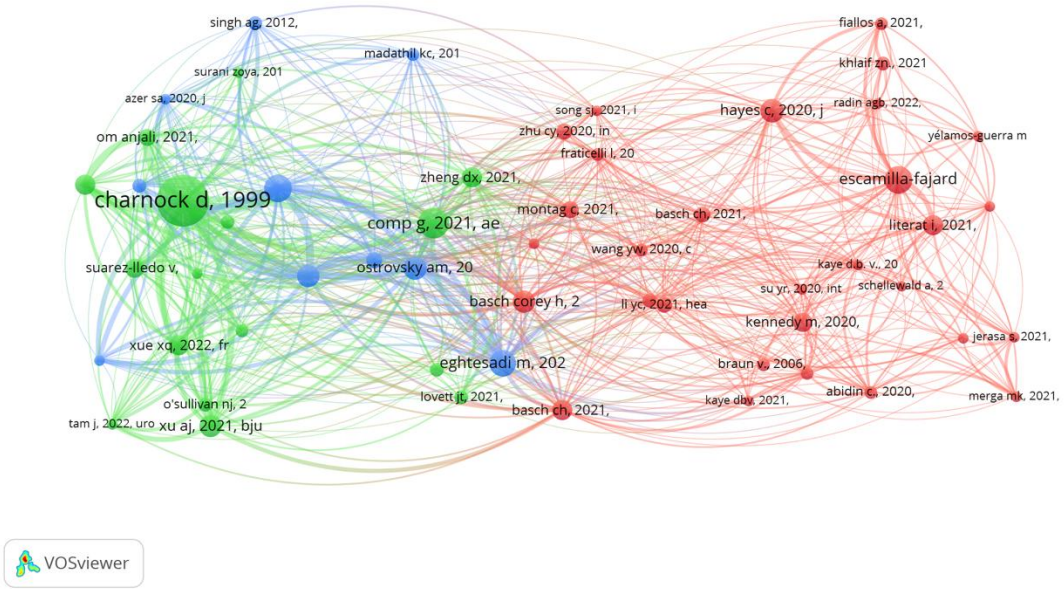
The VOSviewer tool enables cluster analysis to be conducted in the co-citation network (van Eck & Waltman, 2023). We performed a co-citation study of referenced sources to clearly delineate the structure of this research domain and its cited trends (Surwase et al., 2011). Our investigation yielded a collection of 8018 cited references. By implementing a threshold of 6 citations, which signifies that a referenced source must be cited at least 6 times, we obtained a set of 56 references suitable for co-citation analysis,

resulting in three clusters with three different colours (Figure 6). We also list the top 10 co-citation references in Table 3.

Table 3: Top 10 co-cited references. Source: Author's interpretation based on VOSviewer analysis

No.	Documents	Citation	Total link strength
1	Charnock et al. (1999)	34	140
2	Comp et al. (2021)	19	82
3	Escamilla-Fajardo et al. (2021)	17	31
4	Kong et al. (2021)	17	87
5	Eghtesadi & Florea (2020)	16	69
6	Hayes et al. (2020)	14	30
7	Ostrovsky & Chen (2020)	14	75
8	Basch et al. (2022)	13	59
9	Xu et al. (2021)	13	63
10	Song et al. (2021)	13	60

Figure 6: Co-citation of cited references



The most cited references are Charnock et al. (1999) (34 times), Comp et al. (2021) (19 times), Escamilla-Fajardo et al. (2021) (17 times), Kong et al. (2021) (17 times), and Eghtesadi & Florea (2020) (16 times). The co-citation analysis revealed three discernible clusters, each characterised by a distinct thematic orientation. These clusters represent assemblages of related and thematically analogous publications. Publications exhibiting similarities are congregated within the same cluster, which is denoted by nodes of a congruous hue.

Cluster 1 (red) has 30 publications that are related to the technology and learning environment of TikTok. These publications consider TikTok's technological affordances to support an online learning environment and suggest that learning within TikTok benefits the curiosity and understanding of learners. Escamilla-Fajardo et al. (2021) argued that TikTok becomes a positive tool for the innovation of education. Hayes et al. (2020) conducted empirical research by creating short videos to implement teaching practices. They claimed that TikTok can increase public engagement and interest in learning. Khlaif and Salha (2021) also considered that TikTok is a potential educational tool to separate content into small learning units.

The second cluster (green) has a total of 16 publications, concerns about the quality and reliability of information. The most co-cited publication, by Charnock et al. (1999) highlights the critical importance of providing high-quality information to participants, examining the quality levels of health information sources available to consumers. Comp et al. (2021) suggest that TikTok and other social media are ideal platforms for disseminating public health information and medical education. However, they indicated that there is a lack of an assessment system to evaluate the reliability of these materials. O'Sullivan et al. (2022) express concerns about the reliability of information, noting that misinformation can have harmful impacts on users.

The third cluster (blue) contains 10 publications and is closely connected with cluster 2, focusing on the role of TikTok in the context of COVID-19 and other diseases. These studies indicate a significant demand from users for searching information and seeking knowledge on TikTok, especially during the COVID-19 pandemic. Eghtesadi and Florea (2020) claim that social media especially TikTok is an effective channel for information communication during COVID-19. Zenone et al. (2021) report that the hashtag #Covid19 has been viewed 83.6 billion times on TikTok which ranking first among health-related hashtags.

These three clusters highlight research concerns spanning three key aspects related to the citation trends: the TikTok platform's educational potential, the concern of information disseminated quality, and TikTok's role during the special period of the COVID-19 pandemic. Collectively, these clusters underscore the multifaceted nature of research on TikTok, encompassing its learning environment, information quality concerns, and its emerging role as an information-sharing platform, particularly in times of crisis.

4.3. Dominant themes in TikTok's educational applications

We first analysed research themes of TikTok in education by building a word cloud, as shown in Figure 7, where the size of keywords is determined by their occurrence. We adjusted the parameters to include keywords with a frequency greater than 2, resulting in a total of 79 keywords. Consequently, we displayed the keywords based on their contribution and identified several key research themes.

The first and most contributed theme is social media usage and engagement which included social media, engagement, usage, Facebook, Twitter, YouTube, and Instagram. It indicates a significant focus on examining how TikTok, alongside other social media platforms, is being used and engaged with in educational settings. The second theme we identified is information and communication, with keywords such as information, knowledge, misinformation, communication, perceptions, and knowledge. This theme

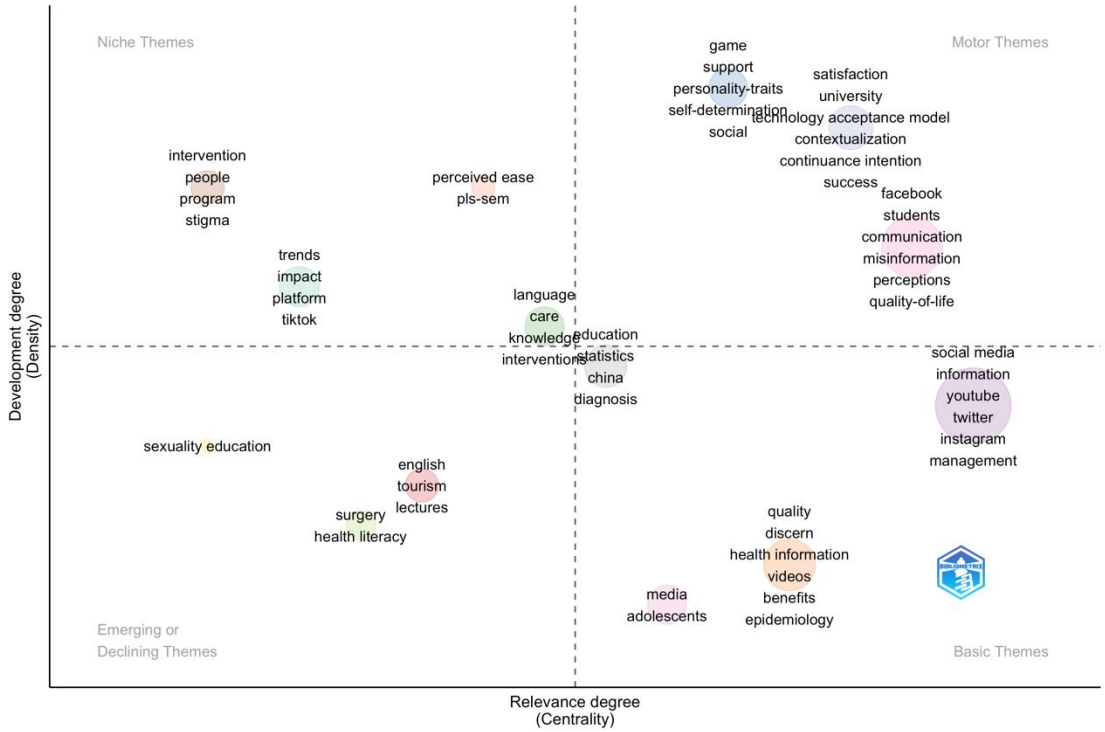
encompasses TikTok as a channel for information and knowledge transmission, as well as addressing issues related to misinformation. Educational applications form the third theme we identified, including keywords like students, education, online, university, language, and visibility. Through this theme, we found that TikTok is already being considered as a pedagogical tool for formal education. The last theme we recognised is medical and healthcare, the inclusion of words like surgery, health, health information quality-of-life and COVID-19. Similar to the second theme, this theme also examines information engagement on TikTok but focuses specifically on health and medical topics. This reflects people's need to acquire knowledge related to their health, especially during the COVID-19 pandemic.

Figure 7: Word cloud of terms

We then developed a thematic map with keywords plus algorithm to analyse the prominence of publication keywords to identify current research strengths and potential gaps in the field. As depicted in Figure 8, these keywords have two coordinate axes: relevant degree (centrality) and development degree (density). As Figure 8 shows, the motor theme in the upper-right quadrant is characterised by both high centrality and density. Rejeb et al. (2024) state that themes in this section are well-researched and represent the core of current research development. Topics in this section appear to be three bubbles. The size of the bubbles indicates the number of occurrences of each selected keyword. These three bubbles contain educational applications (e.g. games, support systems), user experience/adoption (e.g. satisfaction, personality factors, technology acceptance) and social media usage (e.g. student communication, misinformation).

Many researchers compare TikTok with other platforms such as Facebook, Twitter, and YouTube in their studies (Eghtesadi & Florea, 2020; Tam et al., 2022). However, except for Facebook in the motor theme section, these platforms are placed in the basic theme section with higher centrality but lower density, which means their attention is reduced. This no longer aligns with Rejeb et al.'s (2024) findings that research related to these other platforms remains essential. In addition, compared with misinformation, keywords such as quality discern benefits, China and adolescents have attracted researchers' attention but have not yet been fully researched.

Figure 8: Thematic map of TikTok's educational research



In the upper-left quadrant, keywords such as intervention, perceived ease and language emerged, these topics have been well-developed with low importance. Finally, keywords found in the lower-left quadrant, such as sexuality education, English, and surgery, represent emerging and underdeveloped topics. Overall, this visualisation maps out the key established areas of research on TikTok in education to date, as well as emerging subtopics and niche applications that have been studied according to the literature captured in this analysis. It provides a comprehensive overview of how researchers are exploring the educational uses, impacts, and dynamics of the TikTok platform within teaching and learning contexts.

5. Discussion: Research gaps and future directions

This comprehensive analysis reveals TikTok's complex duality in educational contexts, simultaneously serving as an innovative pedagogical tool while presenting significant challenges that must be addressed. Our findings illuminate critical opportunities for leveraging TikTok's unique affordances while identifying pressing gaps in current research and practice.

5.1. Key Findings and Theoretical Implications

The study demonstrates TikTok's remarkable capacity to foster participatory learning cultures, particularly through its micro-learning format and user-generated content features. These findings strongly support Jenkins' (2006) conceptualisation of participatory culture in digital environments, where learners transition from passive consumers to active creators of educational content. The platform's algorithmic personalisation presents a double-edged sword - while enhancing engagement through tailored content delivery, it simultaneously risks creating epistemic bubbles that may limit exposure to diverse perspectives.

Notably, our analysis reveals significant disciplinary imbalances in current research, with disproportionate focus on health education and higher education contexts. This narrow scope overlooks TikTok's potential applications in arts education, vocational training, and other domains where its visual storytelling capabilities could prove transformative.

5.2. Critical Challenges and Research Gaps

Three fundamental challenges emerge from our investigation. First, the platform's open participatory nature, while democratizing content creation, raises serious concerns about information quality. Our synthesis confirms Yeung et al.'s (2022) findings regarding the prevalence of misinformation, particularly in health-related content. This reliability crisis underscores the urgent need for robust verification mechanisms within educational implementations. Second, TikTok's recommendation algorithms, though effective for engagement metrics, frequently marginalise minority voices and perspectives (Zeng & Abidin, 2021). This algorithmic bias creates significant barriers to achieving truly inclusive digital learning environments and warrants immediate attention from both researchers and platform developers. Third, current scholarship suffers from notable methodological limitations. The predominance of short-term studies and small-scale implementations leaves crucial questions unanswered about longitudinal learning outcomes and the scalability of TikTok-based pedagogies.

5.3. Practical Recommendations for Stakeholders

The findings of this study yield concrete implications for both educators and policymakers seeking to leverage TikTok's potential while mitigating its risks. For educators, the platform's algorithmic personalisation and participatory features demand a proactive pedagogical approach. Rather than relying on TikTok's default content delivery, instructors could design activities that explicitly challenge algorithmic biases—for example, by assigning 'algorithmic audit' exercises where students compare personalised feeds and reflect on how content filtering shapes their learning. TikTok's strength in micro-learning and visual storytelling also supports innovative assessment methods; educators might integrate the platform into flipped classrooms, asking students to create short videos distilling complex concepts, thereby fostering digital literacy and peer-to-peer knowledge exchange (Tan et al., 2022).

For policymakers, the study underscores the need for collaborative governance to address systemic issues like misinformation and algorithmic opacity. Given the platform's role in public health communication (e.g. during COVID-19), regulatory bodies could work with TikTok to implement embedded fact-checking tools—such as pop-up warnings for contested health claims—while incentivising the creation of verified educational content channels through partnerships with universities and research institutions. Additionally, policies promoting algorithmic transparency, such as requiring TikTok to disclose basic parameters of its recommendation system for independent audit, could help balance personalisation with educational equity. These measures would align with broader efforts to frame social media platforms as accountable digital learning infrastructures rather than mere entertainment spaces.

5.4. Future Research Agenda

Building on identified gaps, we outline four priority areas for future investigation:

i. Longitudinal studies tracking learning outcomes across extended implementation periods
ii. Cross-cultural comparisons examining platform use in diverse educational contexts
iii. Research exploring TikTok's potential in currently understudied disciplines
iv. Development of ethical frameworks for social media-based learning

Particular attention should be paid to how TikTok's evolving features (e.g. Live streaming, extended video formats) might expand its educational applications. Additionally, research must address the digital divide implications of TikTok-based pedagogy to ensure equitable access to emerging learning opportunities.

This study ultimately calls for a more nuanced, research-informed approach to TikTok's educational integration - one that capitalises on its unique affordances while proactively addressing its limitations through collaborative efforts across academia, education practice, and platform governance.

6. Conclusion

This study explored the knowledge landscape surrounding TikTok's application in the education discipline through a bibliometric analysis of 225 articles sourced from the WoS database. Unlike qualitative reviews, bibliometric methods provide a systematic and objective mapping of research trends, influential works, and thematic gaps within a field. By reducing subjective biases in the selection and analysis of literature, this approach enables researchers to obtain a comprehensive understanding of TikTok's educational applications across existing publications, influential journals, co-citation networks, and research themes. Our findings reveal that this emerging field has already garnered substantial attention from researchers across diverse disciplines, highlighting its significant potential for future exploration.

The analysis identified current trends, including TikTok's growing role in micro-learning, health education, and informal pedagogy, while also shedding light on the platform's unique benefits and challenges. The participatory nature of TikTok encourages creative and learner-centred educational practices, but concerns such as misinformation and algorithmic biases persist. Based on these findings, we proposed several directions for future research, emphasising interdisciplinary approaches, algorithmic transparency, and culturally responsive pedagogy.

However, this study has several limitations. First, as an emerging field of inquiry, the dataset for bibliometric analysis remains limited, and the exclusive reliance on the WoS database may have excluded relevant studies indexed in other platforms, particularly Chinese databases. Although the keyword 'Douyin' was included to capture publications related to TikTok's origin in China, further research incorporating regional databases would provide a more comprehensive perspective. Second, the search keywords used in this study were restricted to education-related terms, which may have excluded studies focusing on broader or tangential themes. Expanding the scope of keywords in future research could enhance the breadth of analysis. Third, while bibliometric methods provide valuable insights into citation patterns and thematic trends, they cannot fully capture the qualitative impact or contextual relevance of certain studies. Incorporating content analysis or mixed methods approaches could address this limitation and deepen understanding of TikTok's role in education.

Despite these constraints, this study offers valuable insights into the current state of TikTok-related educational research. It highlights key trends, potential benefits, and ongoing challenges in this rapidly evolving field, while providing actionable recommendations and future research directions. As TikTok continues to redefine how knowledge is disseminated and consumed, this study underscores the importance of leveraging its participatory and algorithmic features to foster more inclusive, engaging, and innovative learning environments.

Ethics Approval and Consent to Participate

This study is a review article that does not involve human participants. As such, it is exempt from the ethics approval requirements of the University of Malaya.

Acknowledgement

The authors would like to express their sincere gratitude to the anonymous reviewers for their valuable feedback and constructive suggestions, which have greatly enhanced the quality and rigour of this manuscript.

Funding

This study received no financial support for this article's research, authorship, and publication.

Conflict of Interest

The authors declare that they have no conflicts of interest related to the research, authorship, or publication of this article. No potential conflicts of interest were reported.

References

Abidin, C. (2020). Mapping Internet Celebrity on TikTok: Exploring Attention Economies and Visibility Labours. *Cultural Science Journal*, *12*(1), 77–103. https://doi.org/10.5334/csci.140

Aria, M., & Cuccurullo, C. (2017). bibliometrix: An R-tool for comprehensive science mapping analysis. *Journal of Informetrics*, *11*(4), 959–975.

Aydin, S. (2012). A review of research on Facebook as an educational environment. *Educational Technology research and development*, 60, 1093-1106. https://doi.org/10.1007/s11423-012-9260-7

Basch, C. H., Hillyer, G. C., & Jaime, C. (2020). COVID-19 on TikTok: Harnessing an emerging social media platform to convey important public health messages. *International Journal of Adolescent Medicine and Health*, *34*(5), 367–369.

Boyd, D. (2008). Why youth (heart) social network sites: The role of networked publics in teenage social life. In D. Buckingham (Ed.), *Youth, Identity, and Digital Media* (pp. 119–142). Cambridge, MA: MIT Press.

Boyd, D. (2014). *It's complicated: The social lives of networked teens*. Yale University Press.

Carpenter, J. P., Morrison, S. A., Shelton, C. C., Clark, N., Patel, S., & Toma-Harrold, D. (2024). How and why educators use TikTok: Come for the fun, stay for the learning? *Teaching and Teacher Education*, *142*, 104530. https://doi.org/10.1016/j.tate.2024.104530

Chao, M., Lei, J., He, R., Jiang, Y., & Yang, H. (2023). TikTok use and psychosocial factors among adolescents: Comparisons of non-users, moderate users, and addictive users. *Psychiatry Research*, *325*, 115247.

Charnock, D., Shepperd, S., Needham, G., & Gann, R. (1999). DISCERN: An instrument for judging the quality of written consumer health information on treatment choices. *Journal of Epidemiology & Community Health*, *53*(2), 105–111. https://doi.org/10.1136/jech.53.2.105

Comp, G., Dyer, S., & Gottlieb, M. (2021). Is TikTok the next social media frontier for medicine? *AEM Education and Training*, *5*(3). https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8155692/

Conde-Caballero, D., Castillo-Sarmiento, C. A., Ballesteros-Yanez, I., Rivero-Jimenez, B., & Mariano-Juarez, L. (2024). Microlearning through TikTok in Higher Education. An evaluation of uses and potentials. *Education and Information Technologies*, *29*(2), 2365–2385. https://doi.org/10.1007/s10639-023-11904-4

Darvin, R. (2022). Design, resistance and the performance of identity on TikTok. *Discourse, Context & Media*, *46*, 100591. https://doi.org/10.1016/j.dcm.2022.100591

Dasoo, N. (2022). The Innovative use of social media for teaching and learning: A case study at the University of Johannesburg. *International Conference on Multidisciplinary Research*, *2022*, 23–31. https://myres.net/conferences/index.php/myres/article/view/3

Derkach, S., Vitovska-Vantsa, I., Melnyk, M., Matuzko, A., Kolpashchykova, A., & Iudova-Romanova, K. (2022). The Trend of Tick-Tock Video as a New Tool for Motivating the Educational Activities of Students of Kyiv University of Culture: Analytical and Prognostic Aspect. *Journal of Higher Education Theory & Practice*, *22*(14). https://search.ebscohost.com/login.aspx?direct=true&profile=ehost&scope=site&authtype=crawler&jrnl=21583595&AN=160517022&h=7CiO2K1MXXCieqhmt6%2FtAfKf5mIYhrbS%2BqxJBh1mlmf6o2sgPdAWcutmmoBND53ONpalvJl0NePxzJi9wkUi9g%3D%3D&crl=c

Donthu, N., Kumar, S., Mukherjee, D., Pandey, N., & Lim, W. M. (2021). How to conduct a bibliometric analysis: An overview and guidelines. *Journal of Business Research*, *133*, 285–296. https://doi.org/10.1016/j.jbusres.2021.04.070

Eghtesadi, M., & Florea, A. (2020). Facebook, Instagram, Reddit and TikTok: A proposal for health authorities to integrate popular social media platforms in contingency planning amid a global pandemic outbreak. *Canadian Journal of Public Health*, *111*, 389–391.

Escamilla-Fajardo, P., Alguacil, M., & López-Carril, S. (2021). Incorporating TikTok in higher education: Pedagogical perspectives from a corporal expression sport sciences course. *Journal of Hospitality, Leisure, Sport & Tourism Education*, *28*, 100302.

Fiallos, A., Fiallos, C., & Figueroa, S. (2021). Tiktok and education: Discovering knowledge through learning videos. *2021 Eighth International Conference on EDemocracy & EGovernment (ICEDEG)*, 172–176. https://ieeexplore.ieee.org/abstract/document/9530988/

Fowler, L. R., Schoen, L., Smith, H. S., & Morain, S. R. (2022). Sex Education on TikTok: A Content Analysis of Themes. *Health Promotion Practice*, *23*(5), 739–742. https://doi.org/10.1177/15248399211031536

Gao, S.-Y., Tsai, Y.-Y., Huang, J.-H., Ma, Y.-X., & Wu, T. (2023). TikTok for developing learning motivation and oral proficiency in MICE learners. *Journal of Hospitality, Leisure, Sport & Tourism Education*, *32*, 100415.

Hayes, C., Stott, K., Lamb, K. J., & Hurst, G. A. (2020). "Making Every Second Count": Utilizing TikTok and Systems Thinking to Facilitate Scientific Public Engagement and Contextualization of Chemistry at Home. *Journal of Chemical Education*, *97*(10), 3858–3866. https://doi.org/10.1021/acs.jchemed.0c00511

Herrick, S. S. C., Hallward, L., & Duncan, L. R. (2021). "This is just how I cope": An inductive thematic analysis of eating disorder recovery content created and shared on TikTok using # EDrecovery. *International Journal of Eating Disorders*, *54*(4), 516–526. https://doi.org/10.1002/eat.23463

Hew, K. F. (2011). Students' and teachers' use of Facebook. *Computers in human behavior*, *27*(2), 662–676. https://doi.org/10.1016/j.chb.2010.11.020

Heyang, T., & Martin, R. (2022). Teaching through TikTok: A duoethnographic exploration of pedagogical approaches using TikTok in higher dance education in China and Norway during a global pandemic. *Research in Dance Education*, 1–16. https://doi.org/10.1080/14647893.2022.2114446

Hu, H., & Du, K. (2022). TikTok in mobile-assisted english language learning: An exploratory study. *International Journal of Information and Education Technology*, *12*(12), 1311–1320.

Jenkins, H. (2006). *Fans, bloggers, and gamers: Exploring participatory culture*. New York University Press.

Khlaif, Z. N., & Salha, S. (2021). Using TikTok in education: A form of micro-learning or nano-learning?. *Interdisciplinary journal of virtual learning in medical sciences*, *12*(3), 213-218.

Knox, J. (2020). Artificial intelligence and education in China. *Learning, Media and Technology*, *45*(3), 298–311. https://doi.org/10.1080/17439884.2020.1754236

Kong, W., Song, S., Zhao, Y. C., Zhu, Q., & Sha, L. (2021). TikTok as a health information source: Assessment of the quality of information in diabetes-related videos. *Journal of Medical Internet Research*, *23*(9), e30409.

Kuo, C. W., & Yang, Y. H. (2015). The Bibliometric Analysis Of Literature On Museum Studies. *ISPRS Annals of the Photogrammetry, Remote Sensing and Spatial Information Sciences*, *II-5-W3*, 159–164. https://doi.org/10.5194/isprsannals-II-5-W3-159-2015

Lampe, N. M. (2023). Teaching with TikTok in Online Sociology of Sex and Gender Courses. *Teaching Sociology*, *51*(4), 323–335. https://doi.org/10.1177/0092055X231159091

Literat, I. (2021). "Teachers Act Like We're Robots": TikTok as a Window Into Youth Experiences of Online Learning During COVID-19. *AERA Open*, *7*, 233285842199553. https://doi.org/10.1177/2332858421995537

Machado, C. F., & Davim, J. P. (2022). Higher education for sustainability: a bibliometric approach—what, where and who is doing research in this subject?. *Sustainability, 14*(8), 4482.

Marengo, D., Fabris, M. A., Longobardi, C., & Settanni, M. (2022). Smartphone and social media use contributed to individual tendencies towards social media addiction in Italian adolescents during the COVID-19 pandemic. *Addictive Behaviors*, *126*, 107204.

Moher, D., Liberati, A., Tetzlaff, J., Altman, D. G., & PRISMA Group. (2009). Preferred reporting items for systematic reviews and meta-analyses: The PRISMA statement. *Annals of Internal Medicine,* 151, 264–269. https://doi.org/10.7326/0003-4819-151-4-200908180-00135

Ortega, R. D., Montero, A. A., & Sanchez, J. A. L. (2023). The conceptual bibliometric analysis applied to the tourism-culture binomial 1995-2020. *PASOS Revista de Turismo y Patrimonio Cultural*, 21 (1), 53–67. https://doi.org/10.25145/j.pasos.2023.21.004

Ostrovsky, A. M., & Chen, J. R. (2020). TikTok and Its Role in COVID-19 Information Propagation. *Journal of Adolescent Health*, *67*(5), 730. https://doi.org/10.1016/j.jadohealth.2020.07.039

O'Sullivan, N. J., Nason, G., Manecksha, R. P., & O'Kelly, F. (2022). The unintentional spread of misinformation on 'TikTok'; A paediatric urological perspective. *Journal of Pediatric Urology*, *18*(3), 371–375. https://doi.org/10.1016/j.jpurol.2022.03.001

Rach, M., & Lounis, M. (2021). The Focus on Students' Attention! Does TikTok's EduTok Initiative Propose an Alternative Perspective to the Design of Institutional Learning Environments? In T. Antipova (Ed.), *Integrated Science in Digital Age 2020* (Vol. 136, pp. 241–251). Springer International Publishing. https://doi.org/10.1007/978-3-030-49264-9_22

Radin, A. G. B., & Light, C. J. (2022). TikTok: An Emergent Opportunity for Teaching and Learning Science Communication Online. *Journal of Microbiology & Biology Education*, *23*(1), e00236-21. https://doi.org/10.1128/jmbe.00236-21

Rajan, S. T., & Ismail, H. H. (2022). TikTok Use as Strategy to Improve Knowledge Acquisition and Build Engagement to Learn Literature in ESL Classrooms. *International Journal of Learning, Teaching and Educational Research*, *21*(11), 33–53.

Rejeb, A., Rejeb, K., Appolloni, A., & Treiblmaier, H. (2024). Foundations and knowledge clusters in TikTok (Douyin) research: Evidence from bibliometric and topic modelling analyses. *Multimedia Tools And Applications*, *83*(11), 32213–32243. https://doi.org/10.1007/s11042-023-16768-x

Rendón, P. A., Jordán, N., Arias, D., & Núñez, G. (2022). Tik tok as a teaching tool: The motivation of university students in Ecuador. *2022 IEEE 2nd International Conference on Advanced Learning Technologies on Education & Research (ICALTER)*, 1–4. https://ieeexplore.ieee.org/abstract/document/9964670/

Rodriguez-Veras, A. del P., de las Heras-Pedrosa, C., & Lugo-Ocando, J. (2023). Exploring the role of Public Relations and Communication in Museums. A Science Mapping Analysis in Web of Science and Scopus. *Revista Internacional de Relaciones Publicas*, *13*(25), 111–132. https://doi.org/10.5783/10.5783/revrrpp.v13i25.810

Sajovic, I., & Boh Podgornik, B. (2022). Bibliometric Analysis of Visualizations in Computer Graphics: A Study. *SAGE Open*, *12*(1), 215824402110711. https://doi.org/10.1177/21582440211071105

Sari, E. F. N., Siregar, N. M., Sukiri, R. R. J., & Resza, A. M. (2022). How physical education through Tiktok makes a difference: The use of Tiktok to promote learning activities. *Journal of Human Movement and Sports Sciences*, *10*(2), 187–192.

Shoemaker, S. J., Wolf, M. S., & Brach, C. (2014). Development of the Patient Education Materials Assessment Tool (PEMAT): A new measure of understandability and actionability for print and audiovisual patient information. *Patient Education and Counseling*, *96*(3), 395–403. https://doi.org/10.1016/j.pec.2014.05.027

Song, S., Xue, X., Zhao, Y. C., Li, J., Zhu, Q., & Zhao, M. (2021). Short-video apps as a health information source for chronic obstructive pulmonary disease: Information quality assessment of TikTok videos. *Journal of Medical Internet Research*, *23*(12), e28318.

Su, X., Li, X., & Kang, Y. (2019). A Bibliometric Analysis of Research on Intangible Cultural Heritage Using CiteSpace. *Sage Open*, *9*(2), 2158244019840119. https://doi.org/10.1177/2158244019840119

Surwase, G., Sagar, A., Kademani, B. S., & Bhanumurthy, K. (2011, September 16–17). *Co-citation analysis: An overview.* In *Beyond librarianship: Creativity, innovation and discovery* [Conference presentation]. Mumbai, India. http://eprints.rclis.org/17524

Syarifuddin, & Sinta. (2022). The Development of Online Learning Media based on Tiktok for Teaching Local Wisdom Course during the COVID-19 Pandemic. *International Journal of Interactive Mobile Technologies (iJIM)*, *16*(22), Article 22. https://doi.org/10.3991/ijim.v16i22.36149

Tam, J., Porter, E. K., & Lee, U. J. (2022). Examination of information and misinformation about urinary tract infections on TikTok and YouTube. *Urology*, *168*, 35–40.

Tan, K. H., Rajendran, A., Muslim, N., Alias, J., & Yusof, N. A. (2022). The potential of TikTok's key features as a pedagogical strategy for ESL classrooms. *Sustainability*, *14*(24), 16876.

van Eck, N. J., & Waltman, L. (2010). Software survey: VOSviewer, a computer program for bibliometric mapping. *scientometrics*, *84*(2), 523–538. https://doi.org/10.1007/s11192-009-0146-3

van Eck, N. J., & Waltman, L. (2023). *VOSviewer Manual*. Universiteit Leiden.

Vázquez-Herrero, J., Negreira-Rey, M.-C., & López-García, X. (2022). Let's dance the news! How the news media are adapting to the logic of TikTok. *Journalism*, *23*(8), 1717–1735.

Xu, T., Gao, Q., Ge, X., & Lu, J. (2024). The relationship between social media and professional learning from the perspective of pre-service teachers: A survey. *Education and Information Technologies*, *29*(2), 2067–2092. https://doi.org/10.1007/s10639-023-11861-y

Yang, H. (2020). Secondary-school Students' Perspectives of Utilizing Tik Tok for English learning in and beyond the EFL classroom. *2020 3rd International Conference on Education Technology and Social Science (ETSS 2020)*, *1*, 162–183. https://www.clausiuspress.com/conferences/AETP/ETSS%202020/G7605.pdf

Yeung, A., Ng, E., & Abi-Jaoude, E. (2022). TikTok and Attention-Deficit/Hyperactivity Disorder: A Cross-Sectional Study of Social Media Content Quality. *The Canadian Journal of Psychiatry*, *67*(12), 899–906. https://doi.org/10.1177/07067437221082854

Yu, Z., & Yu, L. (2022). A Meta-Analytical Review on the Effect of Twitter Use in Education. *International Journal Of e-Collaboration*, *18*(1). https://doi.org/10.4018/IJeC.290295

Zeng, J., & Abidin, C. (2021). '#OkBoomer, time to meet the Zoomers': Studying the memefication of intergenerational politics on TikTok. *Information, Communication & Society*, *24*(16), 2459–2481. https://doi.org/10.1080/1369118X.2021.1961007

Zeng, J., & Kaye, D. B. V. (2022). From content moderation to visibility moderation: A case study of platform governance on TikTok. *Policy & Internet*, *14*(1), 79–95. https://doi.org/10.1002/poi3.287

Zeng, J., Schäfer, M. S., & Allgaier, J. (2020). Reposting "till Albert Einstein is TikTok famous": The memetic construction of science on TikTok. *International Journal of Communication*, *15*, 3216–3247. https://doi.org/10.5167/uzh-205429

Zenone, M., Ow, N., & Barbic, S. (2021). TikTok and public health: A proposed research agenda. *BMJ Global Health*, *6*(11), e007648. https://doi.org/10.1136/bmjgh-2021-007648

Zheng, D. X., Ning, A. Y., Levoska, M. A., Xiang, L., Wong, C., & Scott, J. F. (2021). Acne and social media: A cross-sectional study of content quality on TikTok. *Pediatric Dermatology*, *38*(1), 336–338. https://doi.org/10.1111/pde.14471

Zulli, D., & Zulli, D. J. (2022). Extending the Internet meme: Conceptualizing technological mimesis and imitation publics on the TikTok platform. *New Media & Society*, *24*(8), 1872–1890. https://doi.org/10.1177/1461444820983603