








## Exploring the potential of TikTok as a learning resource for enhancing scientific writing skills in physical education

\*<sup>1abcde</sup>Aref Vai , <sup>1abcd</sup>Elsya Desviyanti , <sup>2bcde</sup>Japhet Ndayisenga , <sup>3abcd</sup>Dedi Ahmadi , & <sup>4abde</sup>Nevitaningrum 

<sup>1</sup>Department of Sport Education, Faculty of Teacher Training and Education, Universitas Riau, Pekanbaru, Indonesia

<sup>2</sup>Institute of Physical Education and Sport, University of Burundi, Bujumbura, Burundi

<sup>3</sup>Department of Physical Education, Faculty of Teacher Training and Education, Universitas Pahlawan, Bangkinang, Indonesia

<sup>4</sup>Department of Physical Education, Health, and Recreation, Faculty of Teacher Training and Education, Universitas Doktor Nugroho, Magetan, Indonesia

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### ABSTRACT

Technological advancements have permeated the field of education, including the use of multimedia-based learning materials in the learning process. This study aims to help students of the Department of Physical Education at Universitas Riau overcome the obstacles they face when writing scientific papers, especially when preparing a thesis. By harnessing the potential of TikTok social media as a learning resource, it is anticipated that students' interest and motivation, especially in scientific writing, will be enhanced. This research adopts a quantitative descriptive approach and employs the survey method, utilizing a questionnaire as the research instrument and descriptive statistics as the data analysis technique. The population and sample of this study consisted of 26 students from the 2020 class of the Department of Physical Education at Universitas Riau. Findings showed that 9 students (34.6%) strongly agreed, 10 students (38.5%) agreed, and 7 students (26.9%) expressed neutrality towards utilizing TikTok social media as a learning medium. The results suggest that TikTok social media can serve as a catalyst for students' curiosity, facilitating the learning of scientific writing, and fostering increased enthusiasm and interest in the learning process. Future research should consider expanding the sample size and incorporating comparison groups to gain further insights in this field. This study contributes by providing initial evidence on the potential of TikTok as a learning resource, highlighting its impact on students' motivation and interest in scientific writing, and identifying opportunities for integrating social media in higher education to overcome writing obstacles.

**Keywords:** TikTok; multimedia-based learning; learning resources; thesis; physical education

**\*Corresponding Author**

Email: [aref.vai@lecturer.unri.ac.id](mailto:aref.vai@lecturer.unri.ac.id)



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## INTRODUCTION

The field of education has entered the era of Society 5.0, where innovative solutions from the previous Industrial Revolution 4.0 are utilized to address various challenges. Society 5.0 emphasizes a balanced approach that integrates technology and human components (Wintle, 2019). This era, which began in 2019, is marked by significant advancements in artificial intelligence (AI) adopted by the Japanese government (Hu &

Du, 2022). It caters to the Z generation, born between 1995 and 2010, and the Alpha generation, born between 2011 and 2025 (Krause et al., 2019). However, the rapid progress in science and technology within society 5.0 necessitates a heightened awareness of changes in all aspects of life, particularly in education (Cooper et al., 2022). Educational institutions and teachers play a vital role during this era, as learning processes now involve not only traditional sources but also the internet and social media (Subandowo, 2022). To adapt to the changing landscape, educators must be open to receiving information from various sources, including the internet and social media platforms (Tan et al., 2022).

The utilization of multimedia learning media has gained popularity in education, particularly in the era of society 5.0. This approach facilitates effective communication between teachers and students, providing a wide range of engaging teaching materials (Sari et al., 2022). Multimedia involves the integration of multiple senses through different media elements in the learning process, enhancing the overall learning experience (Girwidz et al., 2019). Previous research has demonstrated the positive impact of audio-visual resources on learning outcomes. For example, studies have shown the effectiveness of audio-visual materials in improving skills such as round-off gymnastic movements and basketball dribbling (Rahmadani et al., 2022; Ramadhan et al., 2020). These findings highlight the benefits of incorporating audio-visual media in the learning process. Furthermore, other studies have applied multimedia approaches, such as using image media in volleyball games and animated video media in the context of physical education (Vai et al., 2021; Pratiwi & Ridwan, 2021). Collectively, these studies underscore the positive role of multimedia in supporting effective learning across various domains.

In line with the utilization of multimedia in education, one interesting study explored the use of TikTok and YouTube social media to develop regional creation gymnastics (Tumaloto et al., 2022). This intriguing approach has motivated researchers to consider employing TikTok social media as a learning resource for students in the Physical Education Department, particularly in supporting the writing of scientific papers, such as theses. TikTok is a user-friendly platform that allows the creation and sharing of videos with music, stickers, and other features (Hu & Du, 2022; Rahardaya & Irwansyah, 2021). The challenges faced by Physical Education Department students in scientific writing include difficulties in developing theories, lack of writing knowledge, structuring thesis discussions, describing research results, and determining suitable titles (Yang et al., 2020). These challenges can arise from internal factors such as students' health, motivation, time management, and writing skills, as well as external factors like support from their close circles and adherence to updated thesis writing rules and procedures (Rusitayanti et al., 2021).

Scientific paper writing is a crucial component of the Physical Education Department's curriculum, emphasizing the principles of good and proper writing. While educational institutions provide libraries and digital resources to facilitate thesis preparation (Bailey, 2018), many students still struggle and express confusion about the process (Girwidz et al., 2019). By incorporating the TikTok application into distance learning, lecturers can create engaging and easily comprehensible content, promoting students' curiosity and increasing interest and motivation in scientific writing (Puspitasari, 2021; Braga et al., 2016). TikTok is often accessed via smartphones, and it has been shown that if accessed appropriately, it can have a positive impact on their knowledge acquisition (Wintle, 2019). Researchers aim to utilize TikTok as a means of educating students by presenting simplified and understandable videos on scientific writing. The novelty of this study lies in utilizing TikTok social media as a trigger for

students' curiosity, facilitating the learning of scientific writing, and fostering increased enthusiasm and interest (Hill et al., 2018).

Considering previous research on TikTok's potential as a distance learning tool for students at Indraprasta PGRI University (Goad et al., 2019), researchers aim to explore similar applications for Physical Education students at Riau University. By distributing questionnaires to these students, who are already TikTok users, educational benefits can be provided through simplified and visually appealing video presentations on scientific writing. The purpose of this study is to help students in the Department of Physical Education in overcoming obstacles in writing scientific papers, especially in preparing a thesis. The use of TikTok social media is emphasized as a means to spark curiosity, increase motivation, and support the learning process in scientific writing.

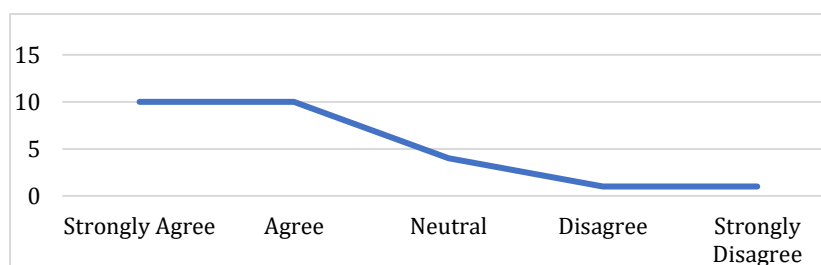
## METHOD

This research is a type of quantitative descriptive research, using a survey method. Descriptive research is an approach taken to explore and understand the symptoms of a phenomenon (Puspitasari, 2021). Another opinion states that descriptive research is carried out by researchers in utilizing the conditions of real objects that have a natural nature (Nainggolan et al., 2022). Data collection used a research instrument in the form of a questionnaire. Sugiono states that a questionnaire is a technique used to collect data that presents several questions or statements to respondents (Supriyatni & Hasmarita, 2022).

Population is all objects used in research. The population in question has certain characteristics determined by the researcher (Supriyatni & Hasmarita, 2022). The criteria in question consist of (i) students of the Riau University Physical Education Study Programme class of 2020; (ii) currently preparing a thesis; and (iii) experiencing problems in preparing the thesis. The research population consisted of 26 students of Physical Education, University of Riau, Class of 2020. So that the sample used is the entire total population, which is 26 people, or is called total sampling. The data obtained were analyzed using descriptive statistics by calculating the relative frequency distribution so that the results can be described in the form of a bar chart.

## RESULTS AND DISCUSSION

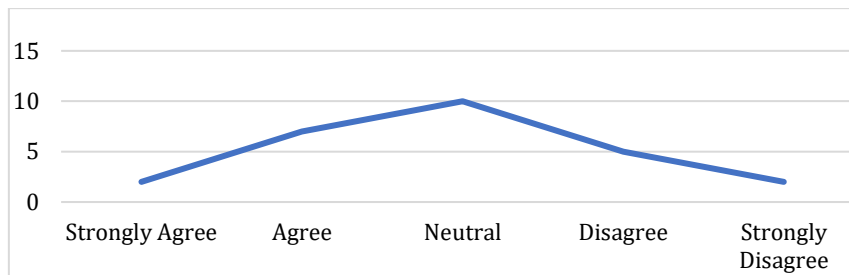
The research shows that physical education students are TikTok social media users. In the statement "I am a TikTok social media user" the data results are obtained as attached.



**Graph 1. Percentage of physical education students as Tiktok social media users**

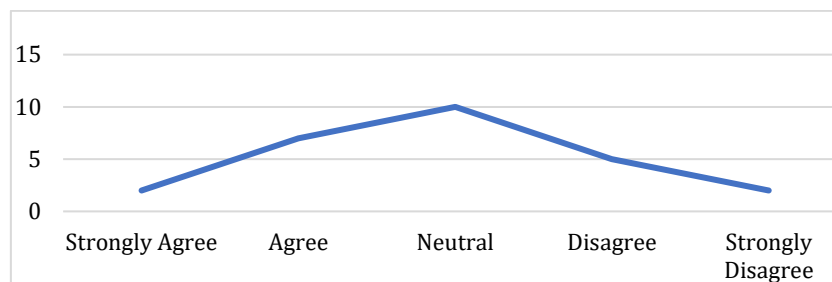
From the bar chart above, 10 students (38.5%) of physical education stated that they were highly social media users of TikTok, 10 students (38.5%) agree to be users of social media TikTok, 4 students (15, 4%) are neutral as social media users of TikTok, 1 student (3.8%) disagree as a user of social media TikTok and 1 student (3.8%) strongly disagree as a user of social media TikTok. So that the first statement concludes that more Physical Education students are TikTok social media users. Furthermore, in the

statement "I access TikTok for more than 5 hours every day" the data results are obtained as attached.



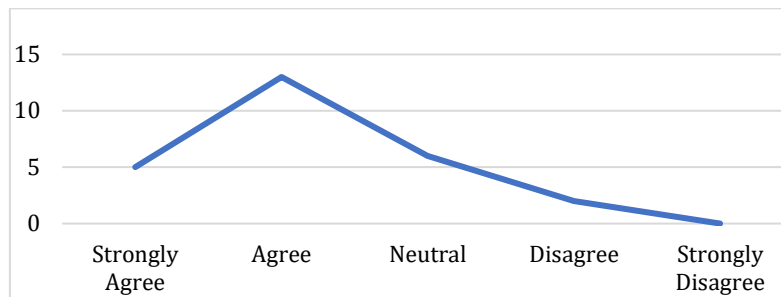
**Graph 2. I access social media TikTok more than 5 hours every day**

From the bar chart above, 2 students (7.7%) of physical education, health, and recreation strongly agree to access social media TikTok for more than 5 hours every day, 7 students (26.7%) agree to access social media TikTok for more than 5 hours every day, 10 neutral students (34.8%) access social media TikTok more than 5 hours every day, 5 students (19.2%) disagree to access social media TikTok more than 5 hours every day and 2 students (3.8%) strongly disapproved of accessing social media TikTok for more than 5 hours each day. So, it can be concluded that students of the Physical Education access social media TikTok not excessively. Concerning the statement above regarding the statement "I like being a viewer of content on TikTok rather than being a content creator which requires me to upload my own content." On average, students of the Physical Education are more spectators on social media than content creators on TikTok.



**Graph 3. Become a viewer of TikTok's social media content rather than being content creator**

TikTok social media also provides various types of learning according to the needs of its users. The social media algorithm of TikTok knows the needs of its users. When users access a lot of things related to education, TikTok will continue to display content about education on its users' homepage (Corbin et al., 2020). So that the statement "Through TikTok social media I get references to learning materials" shows 5 students (19.2%) strongly agree that TikTok social media is used for learning references, 13 students (50%) agree that TikTok social media is used for learning references, 6 students are neutral in using TikTok social media for learning references and 2 students disagree with using TikTok social media for study references.



**Graph 4. TikTok social media as a learning reference**

The final question in the questionnaire is "Shouldn't TikTok be used as a medium for conveying learning material?". This question will strengthen the researcher's hypothesis to utilize TikTok social media as a learning resource for students of the Physical Education, especially in the preparation of scientific papers. Through content about writing scientific papers that are presented on social media, TikTok will add to students' reading sources in understanding the technical writing of scientific papers, namely theses. So that the obstacles for students of the Physical Education in writing their thesis will be overcome. The answers to these questions show that students of the Physical Education agree to utilize social media TikTok for learning media. A total of 9 students (34, 6%) strongly agree to make TikTok social media a learning medium or learning resource, 10 students (38.5%) agree to utilize TikTok social media as a learning medium, and 7 students (26.9%) are neutral about utilizing TikTok social media for learning media. So that TikTok social media can be used by health and recreational physical education students as a learning resource to support the preparation of scientific work, namely theses.

Based on research conducted on the TikTok application survey among Physical Education students, the questionnaire results show a significant number of users among students. The TikTok application is primarily used by young people to adults (Rahimullah et al., 2022). It is well-known that young individuals spend a significant portion of their lives in the digital realm, and social media platforms capture their attention through diverse content (Dalton & Crosby, 2013). While the TikTok application is predominantly used for entertainment purposes or to increase popularity through content creation, it can be harnessed for educational content to enhance students' knowledge and insights (Hu & Du, 2022). In the past, TikTok was temporarily blocked in Indonesia due to the dissemination of negative and hazardous content. However, TikTok later announced its campaign to combat negative online news and promote digital literacy (Rahardaya & Irwansyah, 2021).

Social media platforms offer convenient tools for integrating into the teaching process, as evident in the exploration of social media use in education, including studies conducted in South Africa (Bamigboye & Olusesan, 2017). Social media facilitates the formation of student groups engaged in high-potential activities, leading to perceived benefits, particularly in the context of learning (Greenhow & Lewin, 2016). Additionally, social media can serve as a valuable tool for language learning (Barrot, 2022). Furthermore, research on the utilization of the TikTok application as a distance learning medium for students at Indraprasta PGRI University concluded that the role of lecturers remains similar between offline and online learning. TikTok social media simplifies the delivery of engaging materials by lecturers, ensuring easy comprehension and acceptance by students (Puspitasari, 2021). Drawing from these findings, the researcher seeks to introduce innovative course specifications that utilize TikTok social media as means to trigger students' curiosity, facilitate scientific writing learning, and enhance students' enthusiasm and interest (Butz, 2018).

The questionnaire results indicate that physical education students primarily use the TikTok application to consume content rather than create it. On average, they spend approximately five hours per day browsing the application. If this time is devoted to accessing educational content, especially in scientific writing, it can significantly enhance students' writing skills. However, if the time is solely spent on entertainment content, it becomes a wasted opportunity. Therefore, it is essential to develop educational content that incorporates elements of entertainment to engage students and foster a positive learning experience. This represents an innovative learning approach aimed at increasing interest in learning through social media. Additionally, the TikTok application offers various enticing features that facilitate content editing for creators. Thus, the TikTok application holds the potential for continuously delivering positive impacts on its users.

## **CONCLUSION**

Based on questionnaires distributed to students of the Physical Education Department regarding the use of TikTok social media as a learning resource for preparing scientific papers, data were obtained that supported the researcher's hypothesis. The findings confirm that TikTok social media can effectively trigger students' curiosity, facilitate the learning process of scientific paper preparation, and increase students' enthusiasm and interest in this subject. The survey questions specifically asking whether TikTok should be utilized as a medium for conveying learning material yielded the following results: 9 students (34.6%) strongly agree, 10 students (38.5%) agree, and 7 students (26.9%) express neutrality towards using TikTok social media as a learning medium. These results suggest that TikTok social media can be a valuable resource for Physical Education students to foster curiosity, facilitate learning, and increase enthusiasm in the preparation of scientific papers.

However, it is important to acknowledge the limitations of this study, particularly in terms of sample size. The research only involved a limited number of students, which may not fully represent the broader population. To obtain more robust and generalizable findings, future researchers are recommended to expand the sample size and include comparison groups. By doing so, novel insights can be uncovered, providing a deeper understanding of the potential benefits and effectiveness of TikTok social media as a learning resource in the field of scientific paper preparation. The contribution of this research lies in providing evidence of the positive impact of TikTok social media in supporting the curiosity, enthusiasm, and interest of Physical Education Department students. This study adds to the existing literature on multimedia-based learning approaches and highlights the potential of social media platforms, such as TikTok, in educational settings. The findings suggest that the use of TikTok as a learning resource can enhance the learning experience for Physical Education students, potentially improving their scientific writing skills and overall engagement in the learning process.

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## **CONFLICT OF INTEREST**

The authors state no conflict of interest.

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