

How Physical Education through TikTok Makes a Difference: The Use of TikTok to Promote Learning Activities

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Abstract The rapid development of advanced learning technology requires teachers to make various innovations in the learning activities. The use of social media-based technology is one of the alternatives. This study aimed to investigate the Physical Education teacher's perspectives on using TikTok social media in the learning activities. The study was conducted through a survey method of 125 physical education teachers in Jakarta, Bogor, Tangerang, and Bekasi (Jabotabek), Indonesia. The study findings showed that 45.6% of physical education teachers used TikTok social media accounts; 44.5% stated that the TikTok application could be used in teaching and learning activities; 45.8% emphasized that the TikTok application attracts students' attention; 53.6% affirmed that the TikTok application is more user-friendly compared to other social media applications; 49.2% answered that teaching material was provided using the TikTok application; only 37.8% showed that the lack of existing features was the reason respondents did not use the TikTok application, and 50.2% had used the TikTok application for rhythmic gymnastics activities. According to the study results, it can be concluded that physical education teachers have used TikTok social media in learning activities but they are still limited to rhythmic

gymnastics activities. It is recommended that physical education teachers develop other teaching materials for different sports units, not only limited to rhythmic gymnastics activities, so that students can explore their learning activities more diversely.

Keywords Physical Education, TikTok, Social Media, Learning Technology

1. Introduction

Technology is continuously growing and becoming more sophisticated. Many individuals worldwide use technology to assist various activities that do not support access to employment in any field. The use of internet technology via innovation in the form of social media allows for the sharing and exchange of information and ideas in networking groups, allowing for social contact with many individuals who have different opinions and knowledge [1, 2]. According to Marius et al., the availability of diverse educational materials has boosted social services, attracting the academic environment to

give correct, applicable, and constantly updated knowledge [3].

According to Bahrin's research, information and communication technology (ICT) and social media platforms may be used as a learning tool [4]. Tubagus study employs social media in the classroom to help students learn English [5]. In China, Chengyan Zhu et al. used social media TikTok to communicate health to the provincial health department [6], Awal Kurnia et al. discuss how to include social media into generation Z learning [7], Kirsi Silius et al. conducted a study on how to use social media to foster social communication among new students on campus [8]. According to Rahmawati, social media usage in learning activities given enjoyable learning materials such as videos, photographs, captions, and others that may be used in their learning activities [9].

TikTok is one of the social media applications founded in 2017 that allows users to create short videos with a duration of a few seconds to a few minutes with the fastest growth in the world [10]. According to Sensor Tower, trusted source of enterprise-grade market intelligence and performance metrics in the mobile app ecosystem, TikTok achieved the highest popularity rating as a social network application, making it the second most downloaded in 2019 [11]. Conghui Su stated that various ages and genders actively use TikTok, and their motives for using it were because of the application is currently trending among the public [12]. Many studies about TikTok have been carried out for certain purposes in various fields of study, such as the use of TikTok among athletes during the COVID-19 pandemic, the effect of browsing TikTok for 20 minutes on patients' preoperative anxiety, analysis on TikTok's development in China, the psychological responses and persuasive outcomes associated with TikTok video, and the gratification niches of TikTok [13–17]. In the education sector, the use of TikTok in the context of learning objectives at various levels of education and existing academic units has attracted authors to examine how social media TikTok can be used in learning activities. However, there were limited studies on how to leverage social media in education.

Very few studies that discuss about developing learning materials using TikTok. Risma Galuh have explored how TikTok helps middle and high school students expand their English vocabulary [18]. Paloma et al. recommended TikTok to be introduced as a teaching and learning tool for college sport-students because the existing teaching content can describe the expression of physical movements creatively. The music helps the performance become more enjoyable [19]. Based on the literature review, the authors were interested in studying how TikTok was used in the learning process, particularly in physical education, including how physical education teachers used TikTok to develop learning materials in their classrooms.

2. Materials and Methods

The study was conducted to discover how physical education teachers used TikTok in supporting learning activities. The study used a descriptive study of 125 physical education teachers at the elementary, middle, and high school levels in Jakarta, Bogor, Tangerang, and Bekasi (Jabotabek) Indonesia. The study used a closed questionnaire with indicators adjusted to the research objectives. These indicators include 1) the use of the TikTok application, 2) the advantages of the TikTok application, and 4) the disadvantages of the TikTok application, where the answer scale used in the questions was the answer Yes, No, and Maybe. The authors used an open questionnaire to collect respondents' answers regarding the selection of materials taught by physical education teachers using TikTok.

The respondents' answers were then processed using descriptive statistics method by first calculating the results of each respondent's answer based on the existing answer scale. The respondents' answers to each question item were calculated to obtain the average total percentage based on the answers of all respondents on each existing indicator and analyzed according to the results obtained. Descriptive analysis was carried out by describing the percentage of respondents' answers according to the criteria for interpreting the percentage of questionnaire answers as follows: 75.01% - 100% very good, 50.01% - 75.00% good, 25.01% - 50.00% good enough, and 0.01% - 25.00% poor [20].

3. Results and Discussion

According to the research indicators that were transformed into questions, the following research data were collected based on the total responses of the respondents:

Table 1. Questionnaire Percentage Results on Question No. 1

Statement Items	Yes	No	Maybe	Average Percentage Per Item
1. Do you know/use TikTok social media accounts?	72	43	10	45.6%
	57.6%	34.4%	8%	

According to the Table 1, there was a small proportion of respondents answered maybe (8%) for respondents to know/use TikTok social media accounts. Meanwhile, almost half of the respondents answered yes (57.6%) and no (34.4%) for respondents who knew or used TikTok social media accounts. The average percentage of respondents' answers to item number 1 was 45.6%.

Table 2. Questionnaire Percentage Results on Question No. 2

Statement Items	Yes	No	Maybe	Average Percentage Per Item
2. Is the TikTok application better than other social media applications?	16	30	85	53.6%
	12.8%	24%	68%	

According to the Table 2 there was a small proportion of respondents answered yes (12.8%), no (24%), and respondents answered maybe (68%) for the TikTok application better than other social media applications. The average percentage of respondents' answers to question item number 2 was 53.6%.

Table 3. Questionnaire Percentage Results on Question No. 3

Statement Items	Yes	No	Maybe	Average Percentage Per Item
3. With the various features provided, can the TikTok application be used in teaching and learning activities?	56	10	61	44.5%
	44.8%	8%	48.8%	

According to the Table 3, there were a small number of respondents answered no (8%) respondents answered yes (44.8%), and maybe (48.8%) for the TikTok application can be used in teaching and learning activities. The average percentage of respondents' answers to question item number 3 was 44.5%.

Table 4. Questionnaire Percentage Results on Question No. 4

Statement Items	Yes	No	Maybe	Average Percentage Per Item
4. Can the features of the TikTok application help you in teaching and learning activities?	47	17	64	42.2%
	37.6%	13.6%	51.2%	

According to the Table 4, there were a small number of respondents answered yes (37.6%), answered no (13.6%), and respondents answered maybe (51.2%) for features in the TikTok application can help respondents in teaching and learning activities. The average percentage of respondents' answers to question item number 4 was 42.2%.

Table 5. Questionnaire Percentage Results on Question No. 5

Statement Items	Yes	No	Maybe	Average Percentage Per Item
5. Is the TikTok app easy to use?	72	9	46	47.2%
	57.6%	7.2%	36.8%	

According to the Table 5, the results obtained that respondents answered yes (57.6%), and a small proportion of respondents answered no (7.2%). Respondents answered

maybe (36.8%) that the TikTok application was easy to use. The average percentage of respondents' answers to question item number 5 was 47.2%.

Table 6. Questionnaire Percentage Results on Question No. 6

Statement Items	Yes	No	Maybe	Average Percentage Per Item
6. Can the TikTok application attract the attention of students to take part in teaching and learning activities properly?	69	10	48	45.8%
	55.2%	8%	38.4%	

According to the Table 6, the results obtained that most of the respondents answered yes (55.2%), a few respondents answered no (8%), and respondents answered maybe (38.4%) for the TikTok application to be interesting. The attention of students to participate in teaching and learning activities was well. The average percentage of respondents' answers to question item number 6 was 45.8%.

Table 7. Questionnaire Percentage Results on Question No. 7

Statement Items	Yes	No	Maybe	Average Percentage Per Item
7. Will students find it helpful to use the TikTok application in teaching and learning activities?	49	14	67	45.3%
	39.2%	11.2%	53.6%	

According to the Table 7, there were the respondents answered yes (39.2%), a small part of the respondents answered no (11.2%), and respondents answered maybe (53.6%) for students will feel helped by using the TikTok application in teaching and learning activities. The average percentage of respondents' answers to question number 7 was 45.3%.

Table 8. Questionnaire Percentage Results on Question No. 8

Statement Items	Yes	No	Maybe	Average Percentage Per Item
8. Can the material be conveyed properly using the TikTok application?	33	19	79	49.2%
	26.4%	15.2%	63.2%	

According to the Table 8, the results obtained were respondents answered yes (26.4%), a small part of respondents answered no (15.2%), and respondents answered maybe (63.2%) for the material can be conveyed well if TikTok application be used. The average percentage of respondents' answers to question number 8 was 49.2%.

Table 9. Questionnaire Percentage Results on Question No. 9

Statement Items	Yes	No	Maybe	Average Percentage Per Item
9. Can the learning objectives be adequately achieved using the TikTok application?	33	19	80	50.2%
	26.4%	15.2%	64%	

According to the Table 9, the results obtained were respondents answered yes (26.4%), a small part of respondents answered no (15.2%), and respondents answered maybe (64%) for learning purposes can be achieved well if using the TikTok application. The average percentage of respondents' answers to question item number 9 was 50.2%.

Table 10. Questionnaire Percentage Results on Question No. 10

Statement Items	Yes	No	Maybe	Average Percentage Per Item
10. Can the advantages of existing features be your reason for using the TikTok application in learning activities?	41	22	64	40%
	32.8%	17.6%	51.2%	

According to the Table 10, the results obtained were respondents answered yes (32.8%), a small proportion of respondents answered no (17.2%). Respondents answered maybe (51.2%) that the advantages of existing features can be the motives of respondents using the TikTok application in learning activities. The average percentage of respondents' answers to question item number 10 was 40%.

Table 11. Questionnaire Percentage Results on Question No. 11

Statement Items	Yes	No	Maybe	Average Percentage Per Item
11. Can the lack of existing features be your reason for not using the TikTok application in learning activities?	45	23	58	37.8%
	36%	18.4%	46.4%	

According to the Table 11, the results obtained were respondents answered yes (36%), while a small proportion of respondents answered no (18.4%). Respondents answered maybe (46.4%) that the lack of existing features can be respondents' reasons for not using the TikTok application in learning activities. The average percentage of respondents' answers to question item number 11 was 37.8%.

From the calculation results of eleven questions, the average respondents' answers showed that nine questions

were in good enough category ranging from 25.01% - 50%, including: (1) respondents knew or used TikTok social media accounts, (3) TikTok applications can be used in teaching and learning activities, (4) features of the TikTok application help in teaching and learning activities (5) the TikTok application is easy to use, (6) the TikTok application can attract the attention of students to take part in teaching and learning activities well, (7) students will find it helpful to use the TikTok application in teaching and learning activities, (8) the materials can be conveyed well if using the TikTok application, (10) the advantages of the features that can be a reason for respondents to use the TikTok application in learning activities, (11) the lack of existing features can be a reason for respondents not to use the TikTok application in learning activities. Then two questions were in the good category ranging from 50.1% - 75%, including: (2) the TikTok application is better than other social media applications, (9) learning objectives can be achieved if using the TikTok application.

In addition to quantitative data with closed questionnaires, the authors were more involved in following up on the teaching materials chosen by physical education teachers while using TikTok application. Physical education teacher respondents (n=125) indicated that they used TikTok in rhythmic gymnastics teaching materials, and 50.2% of physical education teachers used TikTok in the context of rhythmic gymnastics teaching materials due to convenience of using movements, music, or songs that were trending on TikTok. The rest was applied in the material of physical fitness.

According to the respondents' answers on the statement item number three and four, physical education teachers in this study, they have utilized TikTok social media in their learning process. Social media is an option in the learning process because the activities can be well conducted, and can motivate students during learning process. Southwick et.al stated TikTok has the potential to inform its users of messages for various information needed [21]. Ryan et al. underlined that information in the form of videos on TikTok is easier to understand than other platforms such as Facebook and YouTube [22]. Du Su argued that TikTok provides an excellent opportunity for users to view and advantage existing content [23]. By using TikTok, physical education teachers are able to explain movement learning to children and to summarize learning activities carried out by students with short videos displayed. Teachers can easily add captions or descriptions in the video.

During the learning activities, how students were having fun with their learning activities, and how the ease of students receive teaching materials in different ways become an external motivation to improve their learning activities. Eka Fitri et al. stated that teachers should seek various exciting ways in the teaching process, modifying tools and using various media to seek exciting activities in the assessment process [23, 24]. The use of social media as a networking technology in its activities requires teachers to consider the ability of students to maximize the

technology. Abeer stated that the selection of technological devices could be effectively used in physical education teaching practice activities [26]. Appropriate technology that adapts the human resources of its users, both teachers and students, is a factor that needs to be considered. The ability of teachers and students to master existing devices and how students were also able to receive material quickly and pleasantly remain a physical education teacher's concern. Hasanuddin Jumareng stated that the selection of technology-based learning platforms, especially when the activities were conducted online, was how to keep paying attention to what students like the most [27].

Due to this research status as a preliminary study, there are some limitations. First, the total of the sample. Second, the authors did not conduct the exploration of video streaming. Third, what kind of technical and non-technical obstacles were encountered with TikTok. Forth, the advantages and disadvantages of using the TikTok application, and fifth, the selection of effective teaching materials varied according to the existing curriculum and school facilities.

The authors recommend that the future study should consider how teachers utilize the TikTok application features for a better learning experience. The perspective of students as a user should be explored as well.

4. Conclusions

According to the data collected from 125 physical education teachers from various levels of education starting from elementary, middle, and high school in Jakarta, Bogor, Tangerang, and Bekasi, the findings show that physical education teachers can successfully deliver learning activities using TikTok application. Students were motivated to participate in learning activities. TikTok application has been used in practical activities for rhythmic gymnastics subjects. It is necessary to optimize all the features provided. For example, how to optimize the live streaming feature on the TikTok application. It is important to find out what technical and non-technical obstacles were faced with TikTok application. The advantages and disadvantages of using the TikTok application and how to select better teaching materials varied according to the existing curriculum and other things that can still be explored or studied deeper.

REFERENCES

- [1] S. J. Yoo og S. Kim, «How and why college students use Web 2.0 applications: The role of social media in formal and informal learning», *Int. J. Web Based Communities*, bd. 9, nr. 2, s. 174–187, 2013.
- [2] Ç. H. ERDOĞAN, Z. BAHADIR, og R. TOPUZ, «Examining the Social Media Teacher-Student Interactions of Physical Education Teachers», *Turkish J. Sport Exerc.*, nr. 27, s. 129–135, 2019.
- [3] M. Stoicescu og M. Stănescu, «The 14 th International Scientific Conference eLearning and Software for Education Bucharest , April 19-20 , 2018 Social Media as a Learning Tool in Physical Education and Sports Area», nr. April, 2018.
- [4] H. Bahri, N. El Mili, O. N. Akande, A. Kerkeb, og M. Madrane, «Dataset of Moroccan nursing students' intention to use and accept information and communication technologies and social media platforms for learning», *Data Br.*, bd. 37, s. 107230, 2021.
- [5] T. Zam Zam Al Arif, «the Use of Social Media for English Language Learning: an Exploratory Study of Efl University Students», *Metathesis J. English Lang. Lit. Teach.*, bd. 3, nr. 2, s. 224–233, 2019.
- [6] C. Zhu, X. Xu, W. Zhang, J. Chen, og R. Evans, «How health communication via tik tok makes a difference: A content analysis of tik tok accounts run by Chinese provincial health committees», *Int. J. Environ. Res. Public Health*, bd. 17, nr. 1, s. 1–13, 2020.
- [7] A. Kurnia, P. Nasution, A. Tengah, K. A. Tengah, og C. Author, «<https://doi.org/10.24036/tip.v13i1>», bd. 13, nr. 277, 2020.
- [8] K. Silius, T. Miilumäki, J. Huhtamäki, T. Tebest, J. Meriläinen, og S. Pohjolainen, «Students' Motivations for Social Media Enhanced Studying and Learning Kirsi Silius * Thumas Miilumäki Jukka Huhtamäki Teemo Tebest Joonas Meriläinen Seppo Pohjolainen», *Knowl. Manag. E-Learning An Int. J.*, bd. 2, nr. 1, s. 51–66, 2010.
- [9] R. D. Handayani, M. Syafei, og A. R. P. Utari, «the Use of Social Media for Learning English», *Prominent*, bd. 3, nr. 2, s. 313–321, 2020.
- [10] L. Dai og P. Chen, «Reasons for the popularity of Tik Tok, the shortages and the ways forward», bd. 34, nr. Isemss, s. 544–548, 2019.
- [11] K. Williams, «TikTok Was Installed More Than 738 Million Times in 2019, 44% of its All_Time Downloads», *Sensor Tower*, 2020. .
- [12] C. Su, H. Zhou, L. Gong, B. Teng, F. Geng, og Y. Hu, «Viewing personalized video clips recommended by TikTok activates default mode network and ventral tegmental area», *Neuroimage*, bd. 237, s. 118136, 2021.
- [13] Y. Su, B. J. Baker, J. P. Doyle, og M. Yan, «Fan engagement in 15 seconds: Athletes' relationship marketing during a pandemic via TikTok», *Int. J. Sport Commun.*, bd. 13, nr. 3, s. 436–446, 2020.
- [14] S. Gu, J. Ping, M. Xu, og Y. Zhou, «TikTok browsing for anxiety relief in the preoperative period: A randomized clinical trial», *Complement. Ther. Med.*, bd. 60, s. 102749, 2021.
- [15] H. Hui, «Analysis on Tik Tok's Development in China», bd. 496, nr. Ichess, s. 105–108, 2020.
- [16] Y. Wang, «Humor and camera view on mobile short-form video apps influence user experience and technology-adoption intent, an example of TikTok

- (DouYin)», *Comput. Human Behav.*, bd. 110, s. 106373, 2020.
- [17] S. Scherr og K. Wang, «Explaining the success of social media with gratification niches: Motivations behind daytime, nighttime, and active use of TikTok in China», *Comput. Human Behav.*, bd. 124, s. 106893, 2021.
- [18] R. G. P. Fahdin, «Student's Perception toward The Use of Tik Tok in Learning English Vocabulary», *Khazanah J. Mhs.*, bd. 12, nr. 2, s. 27458733, 2020.
- [19] P. Escamilla-Fajardo, M. Alguacil, og S. López-Carril, «Incorporating TikTok in higher education: Pedagogical perspectives from a corporal expression sport sciences course», *J. Hosp. Leis. Sport Tour. Educ.*, bd. 28, nr. January, 2021.
- [20] S. Arikunto, *Prosedur Penelitian Suatu Pendekatan Praktik*, Edisi Revi. Jakarta: PT Rineka Cipta, 2010.
- [21] L. Southwick, S. C. Guntuku, E. V. Klinger, E. Seltzer, H. J. McCalpin, og R. M. Merchant, «Characterizing COVID-19 Content Posted to TikTok: Public Sentiment and Response During the First Phase of the COVID-19 Pandemic», *J. Adolesc. Heal.*, bd. 69, nr. 2, s. 234–241, 2021.
- [22] R. Y. Tan, A. E. Pua, L. L. Wong, og K. Y.-L. Yap, «Assessing the quality of COVID-19 vaccine videos on video-sharing platforms», *Explor. Res. Clin. Soc. Pharm.*, bd. 2, s. 100035, 2021.
- [23] D. Su og Y. Lu, «Infer user preferences from aggregate measurements: A novel message passing algorithm for privacy attack», *Perform. Eval.*, bd. 145, 2021.
- [24] E. F. N. Sari, R. R. Julianti, N. M. Siregar, og Sukiri, «Locomotor basic movement levels in improving the health of elementary school students», *Int. J. Hum. Mov. Sport. Sci.*, bd. 8, nr. 6, s. 16–21, 2020.
- [25] E. F. N. Sari, «Locomotor basic movement skill instruments through games for elementary school», *J. Phys. Conf. Ser.*, bd. 1402, nr. 7, s. 0–7, 2019.
- [26] A. Rasheed, R. Abduljawad, S. Mabrouk, M. Jdaitawi, og M. Abdulmonem, «Physical fitness training program using electronic simulation games to foster psychological health among university students during COVID-19 pandemic», *Int. J. Hum. Mov. Sport. Sci.*, bd. 9, nr. 3, s. 421–427, 2021.
- [27] H. Jumareng, E. Setiawan, I. A. Patah, M. Aryani, Asmuddin, og R. A. Gani, «Online learning and platforms favored in physical education class during COVID-19 era: Exploring student' perceptions», *Int. J. Hum. Mov. Sport. Sci.*, bd. 9, nr. 1, s. 11–18, 2021.