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EFFECTIVENESS OF MICROLEARNING-BASED LEARNING MEDIA TIKTOK AND YOUTUBE SHORTS: REVIEW CRITICAL TOWARDS KNOWLEDGE TRANSFER AND DEPTH UNDERSTANDING DRAFT

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Abstract: Development of digital technology has brought significant change in practice learning, especially through the utilization of social media platforms, short video-based platforms like TikTok and YouTube Shorts. This platform the more popular for its use as a learning medium, microlearning-based based because its content characteristics are short, visual, and easily accessible. Research This aim For review in a way critical effectiveness of microlearning-based TikTok and YouTube Shorts in support of knowledge transfer and in-depth understanding draft participant education. Research This uses a Systematic Literature Review (SLR) approach with analyzing 20 articles relevant published in the range 2018–2025 and obtained through academic databases such as Google Scholar and Scopus. The results of the study show that microlearning is based on short videos, effective in increasing motivation, learning, engagement, participant education, and understanding, and beginning to draft learning, which supports the knowledge transfer process. However, research has also found existence limitations in the depth of understanding concepts, especially in material that is complex, with brief content, and fragmented material. Therefore , TikTok and YouTube Shorts-based microlearning should be positioned as a learning medium supporting and integrated with learning strategies, such as blended learning, so that the learning process can be ongoing optimally. Findings. These expectations can become references for educators and researchers in developing more microlearning learning structures and be effective in the digital era.

Keywords: Microlearning, TikTok, YouTube Shorts, Knowledge Transfer, Comprehension Draft

INTRODUCTION

The development of digital technology has brought significant change in the world of education, in particular in the method of participant education access and consuming information. One of the growing phenomena is the use of social media short video-based based like TikTok and YouTube Shorts. These platforms not only function as a means of entertainment, but also start to be utilized as a learning medium based on *microlearning*, namely the delivery of material in short, focused, and easy units accessible (Meliana & Seli, 2023) .

TikTok No only functioning as source entertainment but also facilitates experience meaningful learning, possible users For explore topic like algorithms and problems social events that occur Good around maupul reachable far. Many features of interactive TikTok that can increase creativity and engagement make it a very effective tool for learning.

Trends increasing the use of TikTok and YouTube Shorts by Generation young strengthen the relevance of this platform as a microlearning medium. (Monica Anderson et al., 2023) Stating that the short video platforms on TikTok and YouTube Shorts are promising mediums for microlearning because their capabilities serve very easy short multimedia content accessed by young users. Use of this platform increases rapidly: surveys show percentage of teenagers who access TikTok and YouTube together is very high daily (e.g., 58% of teenagers) use TikTok every day, and TikTok is also used by the majority of teenagers every day. Besides that, (Pitriani et al., 2025) also explains that the average time spent daily on short video platforms like TikTok shows

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numbers of dozens of minutes to several hours per day, indicating intense exposure to intense content among young users. Thus, learning media short videos based own potential to maximize knowledge transfer because it adapts self with the pattern of consuming information in today's digital generation.

Appear question critical about the depth of understanding that can be achieved through microlearning-based media behind the promising potential . Characteristics: very short, concise, and fast content can help facilitate understanding beginning or introduction concept, but not yet Of course capable of developing a greater understanding of complex, analytical, and in-depth. In addition that is, the algorithm that prioritizes entertainment and engagement can shift the focus of participant education from participant educative to more content entertaining, which causes a dilemma in implementation learning. (Muhamad Nur Fitrianto, 2025)

With consideration of opportunities and challenges, the article aims to review in a critical way the effectiveness of TikTok and YouTube Shorts-based microlearning, in particular in the context of knowledge transfer and in-depth understanding. Through an approach review of literature, articles, this aim evaluates to what extent it is effective. Both short video platforms can increase experiential learning, and what just necessary limitations noticed in their use in the realm of formal and non-formal education.

METHOD

Method Study: this is the first one to use the Systematic Literature Review (SLR) approach to study in a systematic and comprehensive effectiveness of microlearning-based learning media TikTok and YouTube Shorts, in particular, in the context of knowledge transfer and depth understanding, draft participant Educate. The SLR method was chosen because it allows researchers to identify, evaluate, and synthesize results study previous studies in a structured and transparent way. (Rosyidah & Ahnaf, 2025) .

Gambar 1. 1 Stages of the Systematic Literature Review (SLR) Method (2021)

Question Research used in studies:

Question research (RQ) 1: How effective of microlearning-based- based learning media TikTok and YouTube Shorts in supporting participant education based on the results study previous studies?

Question research (RQ) 2: How influence of microlearning-based TikTok and YouTube Shorts against the depth of understanding draft participant, and what just identified in the previous study?

Stage second, namely search literature or identification, discussing search relevant journals and articles through academic databases such as Scopus, and Google Scholar. Based on title research, " Effectiveness of Microlearning- Based Learning Media TikTok and YouTube Shorts: An Overview Critical Towards Knowledge Transfer and Depth Understanding The concept of ". Identification literacy found containing description theories, articles, and journals from other sources in the activity discussion.

Stage three, search appropriate literature, discussing about determination whether the information obtained can be used as material for study or not. QA1: Selected journals published

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from 2020 to 2025. QA2: Journal the explanation of the use of microlearning-based TikTok and YouTube Shorts on knowledge transfer and depth understanding, draft participant education. And final stage concludes the study from the results discussion.

RESULT

No	Author and Year	Quality Assessment (QA)		Results
		QA1	QA2	
1	(Rosyidah & Ahnaf, 2025)	Yes	Yes	Accepted
2	(Mai Wanda Putri, Irwan, 2025)	Yes	Yes	Accepted
3	(Esti Andriani & Wahyuningrum, 2007)	Yes	Yes	Accepted
4	(Yulian et al., 2025)	Yes	Yes	Accepted
5	(Muhamad Nur Fitrianto, 2025)	Yes	Yes	Accepted
6	(Pitriani et al., 2025)	Yes	Yes	Accepted
7	(Monica Anderson et al., 2023)	Yes	Yes	Accepted
8	(Hasibuan et al., 2024)	Yes	Yes	Accepted
9	(Meliana & Seli, 2023)	Yes	Yes	Accepted
10	(Pebriantika et al., 2024)	Yes	Yes	Accepted
11	(Sukmawati et al., 2024)	Yes	Yes	Accepted
12	(Cynthia Octavania Putri Salma et al., 2025)	Yes	Yes	Accepted
13	(Lim et al., 2025)	Yes	Yes	Accepted
14	(Denojean-Mairet et al., 2024)	Yes	Yes	Accepted
15	(Aditya, 2025)	Yes	Yes	Accepted
16	(Febriyanti et al., 2024)	Yes	Yes	Accepted
17	(Pada et al., 2025)	Yes	Yes	Accepted
18	(Shofan & Razaqi, 2024)	Yes	Yes	Accepted
19	(Izzudin Hasan et al., 2022)	Yes	Yes	Accepted
20	(Seminar & Fkip, 2025)	Yes	Yes	Accepted

Based on the results table above, it can be clarified that there are 20 journals published in 2021-2025 that are related to the keyword "micro learning", all journals found fulfill the condition as secondary data and are analyzed in the table following :

No	Researchers	Title	Research result
1	(Rosyidah & Ahnaf, 2025)	Analysis of TikTok as a Micro-Learning-Based Learning Media in Indonesian Language Learning	The research results show that using TikTok as a micro-learning-based learning medium can increase student motivation in Indonesian language subjects. Students become more active in learning because the short, visual, and easily accessible content through TikTok facilitates repeated and contextualized comprehension of the material. Furthermore, the use of TikTok also contributes to increased student engagement and facilitates

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No	Researchers	Title	Research result
			understanding of Indonesian language learning concepts through a more flexible and engaging learning model.
2	(Mai Wanda Putri, Irwan, 2025)	The Influence of Digital Literacy on Students' Critical Thinking and Creative Thinking Skills in Sociology Learning	Digital literacy has a significant influence on students' critical and creative thinking skills, with the greatest influence on digital skills and digital ethics towards critical thinking, as well as the contribution of digital literacy towards the development of students' creative ideas.
3	(ESTI ANDRIANI & WAHYUNINGRUM, 2007)	Short video-based micro-learning design to improve the digital literacy of elementary school students	Short video-based microlearning designs have been proven to improve elementary school students' digital literacy by increasing focus, engagement, and the ability to interpret digital information through concise and interactive short videos.
4	(Yulian et al., 2025)	Trends in Microlearning and Literacy Integration in Digital Learning	It was concluded that microlearning effectively increases student motivation, engagement, and learning outcomes. However, material that is too brief can potentially limit in-depth understanding if not designed in an integrated manner.
5	(Muhamad Nur Fitrianto, 2025)	Analysis of the Influence of TikTok's Recommendation Algorithm on Content Consumption Behavior Using Data Mining and Machine Learning Methods	TikTok's recommendation algorithm significantly influences users' content consumption patterns, primarily through personal relevance, engagement levels, and frequency of content exposure.
6	(Pitriani et al., 2025)	The Influence of TikTok Usage Intensity on UPI Students' Learning Outcomes in Purwakarta The	The intensity of TikTok use has been shown to have a positive impact on student learning outcomes. The longer the duration of TikTok use for learning activities, the greater the improvement in student learning outcomes.
7	(Monica Anderson et al., 2023)	Technology 2023 Teenagers, Social Media, and YouTube, TikTok, Snapchat, and Instagram remain the most used.	Research shows that YouTube, TikTok, Snapchat, and Instagram are the most popular platforms among teens. Most teens access TikTok and YouTube daily, indicating a high level of exposure to short-form video content among the younger generation.
8	(Hasibuan et al., 2024)	Analysis of the Influence of Short Videos (TikTok/Reels) on	Research results show that the use of short videos like TikTok and Reels has a positive impact on students' understanding of mathematical concepts. The concise, visual,

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No	Researchers	Title	Research result
		Understanding Mathematical Concepts	and contextual presentation of material helps students grasp concepts more quickly, although further explanation is still required for complex material.
9	(Meliana & Seli, 2023)	Microlearning: In TikTok Social Media Videos	Research shows that using TikTok as a microlearning medium can increase student motivation, interest in learning, and engagement in the learning process. While short video content is considered effective as a medium for delivering initial material, mentoring, and further materials are still needed for deeper conceptual understanding.
10	(Pebriantika et al., 2024)	The Effectiveness of Implementing the Microlearning Method to Improve Student Learning Outcomes Author:	The research results show that the application of microlearning methods significantly improves student learning outcomes. The gradual presentation of material in small units increases conceptual understanding and learning engagement, especially on complex topics, compared to conventional learning methods.
11	(Sukmawati et al., 2024)	Utilization of Short Video Learning Media for Supporting Self-Paced Learning Methods	Research results show that short video learning is an effective support for learning *self-paced*. This media helps students study independently, improve motivation, as well as understand material. Because content can be accessed and repeated according accordance need the individual.
12	(Cynthia Octavania Putri Salma et al., 2025)	The Effectiveness of Learning Japanese Through Short Videos (YouTube Shorts, TikTok, and Reels) Cynthia	Research results show that the use of short videos effectively increases interest in learning, motivation, and understanding Japanese vocabulary. Content short, visual, and contextual helps students understand the material faster compared to the lecture method alone.
13	(Lim et al., 2025)	A Comparison of the Fun of Watching Short Videos from TikTok, Instagram Reels, and YouTube Shorts	The study found that TikTok was considered the most fun and engaging platform compared to Reels and YouTube Shorts. The main factors influencing the perceived "fun" were relevant content recommendations, short video length, and ease of user interaction.
14	(Denojean-Mairet et al., 2024)	A literature review on the integration of microlearning and social media	The study results showed that integrating microlearning with social media effectively increased motivation, learning engagement, and flexible learning access. However,

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No	Researchers	Title	Research result
			researchers also identified challenges such as distractions, fragmented material, and the need for a structured learning design to avoid superficial understanding.
15	(Aditya, 2025)	The Effectiveness of Microlearning Video Implementation in Improving Understanding of Network Infrastructure Administrative Subjects at Muhammadiyah Vocational School, Parepare	The research results showed that the use of microlearning videos significantly improved students' understanding of Network Infrastructure Administration. Students found it easier to grasp technical concepts because the material was presented concisely, visually, and step-by-step.
16	(Febriyanti et al., 2024)	The Effectiveness of Using Vertical Short Video (TikTok) as Additional Learning Media in the Research Methodology Course	The research results show that using short vertical videos (TikTok) as a supplementary learning medium effectively increases students' motivation and understanding of Research Methodology material. This medium helps students grasp concepts more simply and engagingly.
17	(Pada et al., 2025)	The Effectiveness of the Microlearning Method Assisted by the TikTok Platform in Learning Natural and Social Sciences in Grade IV in Elementary Schools	Research results show that the assisted microlearning method TikTok effectively increases motivation, interest in learning, and improves students ' understanding of the eye science lessons. Presentation material in short video format makes students more focused and easier to understand the draft base.
18	(Shofan & Razaqi, 2024)	Literature Review: The Impact of Augmented Reality on the Process	Research shows that Augmented Reality (AR) can increase student engagement, understanding of abstract concepts, and motivation through interactive 3D object visualization. However, using AR requires appropriate technological readiness and learning design to maximize its benefits.
19	(Izzudin Hasan et al., 2022)	The Influence of Critical Success Factors on the Success of E-Learning in Supporting Learning: A Systematic Literature Review	Study results show that the success of e-learning is greatly influenced by several factors. *Critical Success Factors* (CSFs) include the readiness of technology, the competence of lecturers and students, the quality of digital learning content, and support from institutions. Factors that play a direct role in satisfaction and effectiveness of online learning.

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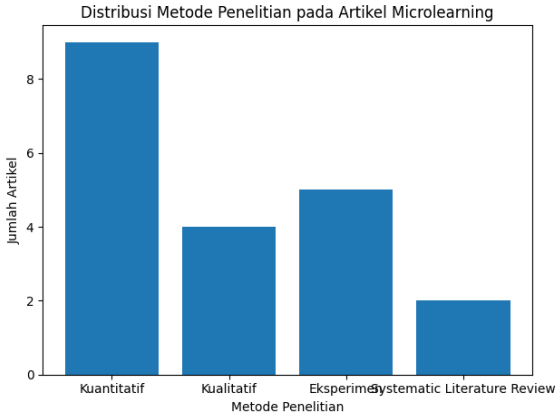
No	Researchers	Title	Research result
20	(Seminar & Fkip, 2025)	Students' Perceptions of the Effectiveness of TikTok-Based Microlearning in Basic Mathematics Material	The research results showed that the majority of students had a positive perception of TikTok-based microlearning. They found the material easier to understand, more engaging, and less boring. However, some students felt that the brief explanations still required further explanation from the teacher for more difficult concepts.

Based on results studies previously which include two dozen articles, the majority various study indicates that microlearning and short videos published on social platforms like TikTok and YouTube Shorts are proven effective in increasing student learning, participation, as well as knowledge about teaching materials at various levels of education, especially at the tertiary level of education. Characteristics typical of short, visual-based, and easy-to-read content accessible make students more focused and active during learning.

However, some research also shows that limited-duration content can obstruct depth understanding of concepts, especially for complicated material. Because of that, microlearning is more in accordance as a tool to help in the learning process that must be combined with various methods of teaching others and supported by digital skills and design systematic learning so that the results study become more effective.



Gambar 1. 2 Distribusi tode Penelitian pada Artikel

The most common method implemented in the article previously is a quantitative approach, which is then followed by the experimental method. This indicates that studies regarding microlearning based on TikTok and YouTube Shorts in general aim to evaluate the impact of the media on motivation, learning, and learning outcomes, as well as understanding measurably. On the other hand, the approach Qualitative and Systematic Literature Review implemented in a larger

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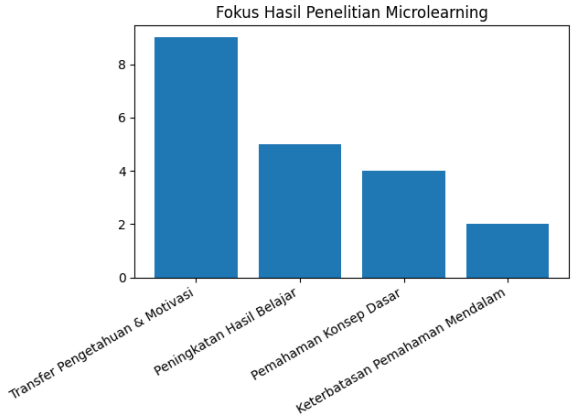
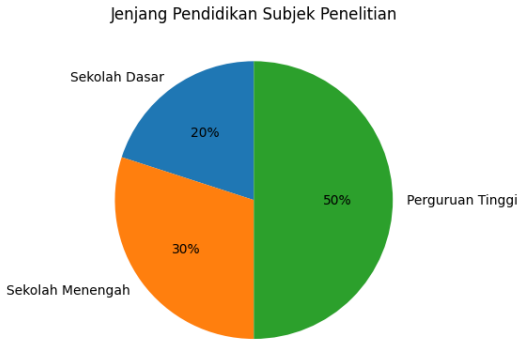
amount A for investigating perception, experience learning, as well as trend results study with more deep



Gambar 1. 3 Fokus Hasil Penelitian Microlearning

Research results previously part of a big focus on knowledge transfer and improvement motivation. Study through short video-based microlearning. In addition to that, some research also noted existence improvement in results learning as well as understanding basic concepts. However, there are still several studies that emphasize the lack of deep microlearning to get a deep understanding of concepts, especially in material that is of complex material.



Gambar 1. 4 Jenjang Pendidikan Subjek Penelitian

Most research on microlearning is carried out at the college level, followed by middle and high school basic. This shows that utilizing TikTok and YouTube Shorts as learning media has more impact on participants, educating them with levels of digital literacy and independence, learn more , even though positive results were also found at the level of education base.

DISCUSSION

Systematic Literature Review Results against 20 articles show that microlearning based on TikTok and YouTube Shorts is effective in supporting knowledge transfer, especially at the stage of introducing material and understanding the draft basics. The characteristics of short videos are

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short, visual, and easily accessible, proven to increase motivation, involvement, and focus. Study participants were educated at various levels of education. Findings. This confirms that microlearning is aligned with the habits of Study digital generation that tends to consume information in a fast and visual way.

In a way, theoretically, the effectiveness of microlearning in knowledge transfer can be explained through *Cognitive Load Theory* and *Dual Coding Theory*, where the presentation material is presented in small units, as well as visual and verbal integration helps reduce cognitive burden and strengthen understanding early. However, the results studies also show that duration-limited content potentially hinders in-depth understanding of concepts, especially in complex and demanding material ability to think level high, so that the resulting understanding tends nature surface-level.

Besides design content, the success of microlearning is influenced by the level of digital literacy of participants, education, and the characteristics platform ecosystem. Algorithm social media recommendations can influence pattern consumption content learning, so that the required directions are appropriate pedagogical. Therefore , microlearning-based TikTok and YouTube Shorts are more effectively positioned as a learning medium supporting and necessary integrated with methods, such as discussion or blended learning, to be able to produce meaningful and sustainable learning

CONCLUSION

Results of a Systematic Literature Review of 20 articles show that microlearning based on TikTok and YouTube Shorts is effective in supporting knowledge transfer, especially at the stage of introducing material and understanding a basic draft. The characteristics of short videos are short, visual, and easily accessible, proven to increase motivation, involvement, and focus. Study participants are educated, so that relevant to the characteristics of digital learners at various levels of education.

However, microlearning has limitations in building depth understanding concepts, especially in complex and demanding material ability to think level high. Therefore, microlearning-based TikTok and YouTube Shorts should be positioned as a learning medium supporting and integrated with method learning methods, such as discussion or blended learning, so that the learning process can ongoing in a more meaningful and sustainable way.

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