



The Use of *Micro Video* to Support Student Engagement in Online Learning

Sella Mawarni^{1*}, Hartoto²

¹ Educational Technology, Makassar State University

Email: sella.mawarni@unm.ac.id

² Elementary School Teacher Education, Makassar State University

Email: hartoto@unm.ac.id

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Abstract. One of the challenges in online learning is the lack of student engagement in independent learning. The role of learning content can significantly influence student involvement in accessing the material presented. This issue can be addressed by utilizing learning content in the form of microvideos. Microvideos are short-duration videos designed to deliver content concisely. This study aims to explore the use of microvideos in online learning and to assess student participation and completion rates. A qualitative descriptive research method was employed, with 167 students enrolled in Information and Communication Technology courses as participants. The participants were selected using purposive sampling. Data were analyzed using descriptive analysis techniques to provide qualitative insights. The results of the study indicate a student participation rate of 90.42%, with a learning completion rate of 100%. The use of microvideos, packaged in short durations, effectively reduces students' cognitive load.

Keywords:

Micro video ;

Engagement ;

Student;

Learning completion

Corresponding author:

Sella Mawarni

Address: Jl. Tamalate No.14, Karunrung, Rappocini District, Makassar City, South Sulawesi 90222,

Email: sella.mawarni@unm.ac.id



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INTRODUCTION

Online learning or online learning is a type of distance learning that is carried out with the help of the internet. In the online learning pattern, educators and students are not in the same place as in face-to-face learning or known as offline (on-site). Online learning can be defined as a learning method that uses digital technology and the internet as the main media for delivering material, interacting, and

evaluating learning (Anderson, 2008). This model allows flexibility in learning access, because students can access material anytime and anywhere without being limited by physical classrooms.

Online learning has become a learning trend that has been widely adapted after the COVID-19 pandemic, due to its high level of flexibility. Online learning offers advantages such as time efficiency, accessibility from various locations, and the ability to access

various learning resources (Wibawa et al., 2023). The implementation of online learning can be grouped into 2 types, namely purely online and blended. Purely online is learning that is carried out entirely online, starting from the provision of materials, activities, and interactions carried out online. Meanwhile, blended learning is a combination of face-to-face learning and online learning with a proportion carried out online of 25% or more (Means et al., 2013).

Post-COVID-19 pandemic, lecture activities at Makassar State University are carried out using a blended learning model. Based on Rector Regulation Number: 401/UN36/HK/2019 concerning UNM academic regulations, lecture activities are carried out using an online system of 30%. This is a reference for the implementation of blended lectures, namely a combination of face-to-face lectures and online learning using the LMS platform or other online applications. Online learning is not the same as face-to-face learning, because lecturers and students do not meet in person and may not even be at the same time. The lack of direct interaction limits the lecturer's control, while students are required to have high independent learning skills. Some obstacles to interaction in online learning can be overcome through face-to-face explanations by lecturers, but the level of student involvement in learning independently through the LMS platform needs to be continuously improved.

One of the obstacles in implementing online and blended learning is the lack of learner involvement (Nur Fitria, 2023) (Mykhalchuk et al., 2023). This lack of involvement means that they are not fully involved in all the learning activities that have been prepared on the platform. learning management system (LMS). The implementation of online learning that only leads to passive absorption of content rather than active participation, monotonous learning experiences, lack of social interaction, and challenges in independent learning, make learners have low learning engagement (Mvuyana & Ngcobo, 2024; Rada et al., 2023). This can certainly have an impact on low learning completion.

Efforts to address these problems can be done by providing online learning content that is able to maintain focus and can provide stimulus for interaction between learners,

educators, and the learning content itself. Through the development of interesting and diverse learning content, it can make the learning experience more in-depth and effective in the online learning environment (Kiryakova, 2022) (Shepherd & Alpert, 2013).

One of the online learning content that is considered effective for conveying learning messages online is through learning videos. Learning videos are able to convey messages both audio and visual, so they can explain the material more clearly. Video content allows students to hear and watch simultaneously, provides a realistic classroom feel, and can be adapted to various learning styles (Badamjav & Tudevtagva, 2022). Content with multimedia formats such as videos, animations, and interactive elements can encourage student participation (Adriyanto et al., 2020). Research by Qhaliza & Kharisma (2024) shows that 58.3% of respondents prefer video content in online learning because it is considered more effective in improving understanding.

Learning videos can be packaged in a micro format, which is then called micro video. Micro video is a video format that is presented in a short duration, generally microvideos have a duration of between 15 seconds and 2 minutes. Micro video is an adaptation of the principle of microlearning into video media. Microlearning is the presentation of information in small and short sections to achieve certain learning objectives, usually lasting 1-10 minutes without a standard time limit (Valamis, 2025). Micro learning videos can be used effectively for learning because they present content in a concise and focused manner, making it easier for students to understand, remember and store information (Bou et al., 2023) (Fitri et al., 2023). Although there is no agreement on the duration of micro videos, everyone agrees that micro videos are presented in short durations and depend on the audience segment and the message to be conveyed. Several video platforms have used this format such as commercial break services on television, Youtube shorts, Instagram reels, and Tiktok videos. Some literature shows that micro videos are very effective in maintaining learners' attention because they are in line with the attention span of modern learners (Erdur Harman & Alper, 2024) and can enhance the

learning experience with clear and engaging content (Boonmapan & Janchidfha, 2024).

Research related to micro videos in the context of online learning conducted at the university level in Indonesia is still ongoing. It focuses on the study of development research. Several studies discuss the steps of developing and implementing microlearning principles in the format of learning videos to support the delivery of materials online (Awrus et al., 2020; Ekayana, 2023; Sudrajat et al., 2022). This study has a different focus from previous studies, namely this study analyzes how micro videos are implemented and their impact on the level of student engagement in online learning. The micro videos studied is a type of interactive micro video. Different from micro videos in general which are only defined as short-duration videos, in this study the micro video used was delivered in an interactive format using the H5P application. The interactivity feature is not only capable of increasing student involvement but can also be used as an indicator from learning completion.

The Information and Communication Technology course in the PGSD study program has online classes on the campus LMS. Students can access learning resources, materials, and activities that have been provided at meetings 1 to 16. Students can study the material through e-modules, micro videos, presentation slides, articles, and infographics. Based on the results of interviews with students, data was obtained that the majority of students prefer short materials such as in micro video format.

This study aims to describe the use of micro video in online learning that is implemented in a blended manner. The micro video content studied is the content in the Information and Communication Technology course in the Elementary School Teacher Education (PGSD) study program at UNM. This study is expected to be used as a reference in developing interesting and effective online learning content in increasing student engagement.

METHOD

This study is a qualitative descriptive study that describes the use of micro videos in online learning conducted through LMS. Qualitative research is a study that will produce descriptive data in the form of written or spoken words

from objects observed during the study (Meleong, 2019). The study was conducted on the Information and Communication Technology course in the Elementary School Teacher Education (PGSD) study program, Makassar State University, for the 2023/2024 Even Academic Year. Micro video content is one of the variations of Learning Object Material (LOM) embedded in the course. Lectures are conducted online in a blended learning format using the Makassar State University Learning Management System (LMS) Platform. Data were collected using documentation techniques. The data collection instrument consists of activity logs in the LMS. Data related to the level of student participation and learning completeness were then analyzed using descriptive statistical techniques, then interpreted into qualitative form.

RESULTS AND DISCUSSION

Micro Video Formats Used

The micro video used in this study is presented in interactive video format using the H5P application as shown in Figure 1. The micro video used discusses the topic about introduction to right creation. The video was developed by the Director General of Intellectual Property of the Indonesian Ministry of Law and Human Rights, then packaged in the H5P format. The H5P format was chosen because it allows it to be divided into segments and interactive quizzes added. Micro videos used in online learning are effectively able to attract learners' attention, increase engagement and enhance the learning experience (Gao, 2024). These advantages can be achieved if micro videos are developed systematically.

Micro video in this study consists of 4 segments. The first segment discusses the general definition of copyright, the second segment is about protected creations, the third segment is about the protection period of creations, and the last segment is a multiple-choice quiz to measure students' understanding of the topics discussed.

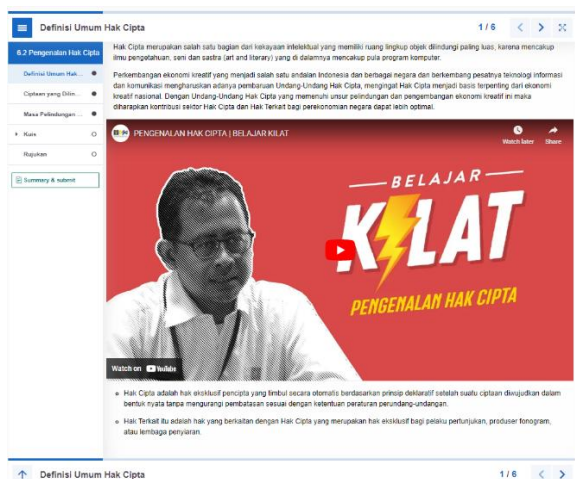


Figure 1. Micro Video Introduction Copyright

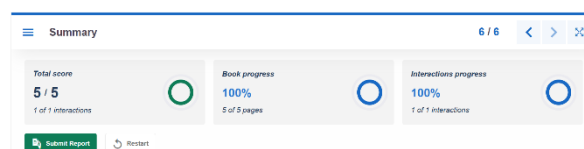


Figure 2. Summary of Student Learning Completion in LMS

Students can access or watch micro videos on the LMS and every activity carried out by students will be summarized by the system so that their level of learning completion can be monitored. Students are

said to have completed if they can answer the interactive quizzes that appear during the video display and achieve a score above the predetermined passing grade .

Micro video has five main elements to ensure the message is delivered well. An effective micro video in online learning must be able to attract attention emotionally (emotional pull) , provide an initial exposure to the topic (priming) , deliver concise and clear content (content) , encourage reflection on the material learned (reflection) , and end with an emotional push or invitation to learn more (emotional push) (Cavalier, 2017) .

Student Participation

The PGSD students who were the data source were those who programmed the Information and Communication Technology course in the Even Semester, totaling 167 students divided into 5 different classes. The level of participation was seen from the results of the analysis of student completion on the LMS platform through the H5P interactive video feature. Students were assigned to do independent learning on the LMS through materials packaged in the form of micro videos. Based on the analysis of student learning completion, the average level of student participation was 90.42% with details in table 1.

Table 1. Level of Student Participation in Accessing Micro Video

No	Class	Number of Students		Total	Percentage Participation
		Not Involved	Involved		
1	BC233	0	26	26	100.00%
2	BC234	3	34	37	91.89%
3	M236	10	26	36	72.22%
4	M237	2	33	35	94.29%
5	M238	1	32	33	96.97%
		16	151	167	90.42%

Students who are not involved are students who have not been active in the LMS since the beginning of the lecture. This includes those who are constrained by technical aspects so that they are not recorded by the video viewing system presented. The level of student

participation in online and blended learning is influenced by several things, namely: 1) self-efficacy; 2) support; and 3) motivation. Research shows that microlearning , which includes short video formats, effectively engages students by presenting information in

digestible segments, thereby increasing understanding and retention (Astiwardhani & A. Sobandi, 2024).

Learning Outcome Completion

The completion of student learning outcomes is assessed from the quiz scores. A total of 100% of students involved were able to answer correctly, with a score of 100.

Table 2. Student Learning Outcome Values After Watching Micro Video

No	Class	Number of Students Involved	Average Learning Outcomes
1	BC233	26	100
2	BC234	34	100
3	M236	26	100
4	M237	33	100
5	M238	32	100
	Total	151	100

This shows that the message conveyed in micro video can be well understood by students. Success micro video in understanding students is also in line with Horton's opinion regarding: 1) limited cognitive capacity; 2) the use of symbols ; and 3) learners are more interested, pay attention, and understand learning materials by watching long videos short (Slemmons et al., 2018).

Short videos also play an important role in problem solving in teaching and learning by facilitating independent and collaborative learning (Yang, 2017). Micro videos can convey targeted and non-redundant messages. Micro videos help students to understand specific information more easily and quickly, in addition to the combination of visual and auditory elements, making the content more relevant and easier to understand.

In order for micro video to be effective, it is necessary to reduce cognitive load. This is in accordance with Mayer's assumption about limited human memory. For this reason, simplification is needed, such as eliminating background music that is not relevant to the material being presented, using symbols instead of photos, using simple text, using narration instead of text, using sound effects that can emphasize animation.

CONCLUSION AND SUGGESTIONS

The use of micro videos in online and blended learning has been proven to have a positive impact on student engagement and understanding. This short video format is not only able to attract students' attention but also increases their motivation to learn. When the material is presented in the form of micro videos that are packaged interactively using H5P, students become more focused on the content of the material, especially with the quizzes or questions that are integrated during the video screening. The results of the analysis show that the majority of students are actively involved in learning through the platform Learning Management System (LMS) and achieve excellent learning completion rates. The concise and focused characteristics of micro videos suit the preferences of students who prefer easily digestible content. However, the positive impact of using micro videos depends on the quality of the content design and its integration with the right learning methods. Therefore, the development of micro videos must consider pedagogical, technical, and student needs aspects to provide optimal benefits in the online learning process.

Micro video is an effective medium for delivering material in the context of online learning, allowing students to learn independently without feeling excessive cognitive load. Further research is suggested to focus on innovation in developing learning materials in presenting more interactive and interesting content. Simplification of irrelevant elements in videos needs to be done to reduce students' cognitive load. In addition, the integration of interactive quizzes in videos can further increase active participation and help evaluate their understanding. Micro video can be adapted more widely in various courses, but still needs to be considered to strengthen student engagement and learning outcomes in all disciplines.

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