AN ANALYSIS OF STUDENTS' AND TEACHERS' NEEDS OF MICROLEARNING-BASED LEARNING MATERIALS FOR ENGLISH IN SENIOR HIGH SCHOOL

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Abstract: The purpose of this research is to determine the students' requirements for microlearning-based English teaching materials for grade 12 senior high schools and to discover what the teacher demands on microlearning-based English teaching materials in senior high schools. This research goal was due to the COVID-19 pandemic that had a tremendous influence on Indonesian education, necessitating adaption and the use of technology. Various variables contributed to learning loss among 12th-grade students. Based on explanation above, the respondent of this research consists of 203 12th-grade students and 84 English teachers in Senior High School located mainly in West Jakarta. A need analysis is required because adequate teaching materials are critical for effective English language acquisition. For first research instrument, writer use questionnaire with Likert Scale to ensure trustworthiness and data reliability and conducting interview for second research instrument. This research uses descriptive qualitative method to analyze the demands of students and teachers for microlearning-based learning materials in senior high school English, emphasizing the potential of microlearning for English language instruction. Providing concentrated information that can improve learning and fulfil the requirements of students, which also critical to improve English learning in Indonesia's 2013 curriculum.

Keywords: Microlearning, Post COVID-19 Pandemic Education, Learning

Abstrak: Tujuan dari penelitian ini adalah untuk mengkaji kebutuhan murid kelas 12 akan bahan ajar Bahasa Inggris berbasis Microlearning dan menemukan kebutuhan guru akan bahan ajar bahasa Inggris berbasis Microlearning di Sekolah Menengah Atas. Penelitian ini dilakukan berdasarkan dampak pandemi COVID-19 memiliki pengaruh yang luar biasa terhadap pendidikan Indonesia, sehingga memerlukan adopsi dan penggunaan teknologi. Berbagai variabel berkontribusi terhadap hilangnya pembelajaran di antara siswa kelas 12. Responden penelitian ini terdiri atas 203 murid kelas 12 dan 84 guru bahasa Inggris tingkat SMA di Jakarta Barat. Analisis kebutuhan diperlukan karena bahan ajar yang memadai sangat penting untuk penguasaan bahasa Inggris yang efektif. Untuk pengambilan data menggunakan metode kuisioner dengan skala Likert. Penelitian ini dilakukan dengan metode deskriptif kualitatif yang bertujuan untuk mengalaisis kebutuhan murid dan guru untuk bahan ajar Bahasa Inggris berbasis microlearning di SMA, dengan focus pada potensi microlearning untuk Pendidikan bahasa Inggris. Menyediakan informasi terkonsentrasi yang dapat meningkatkan pembelajaran dan memenuhi kebutuhan siswa, dimana juga sangat penting untuk meningkatkan pembelajaran bahasa Inggris dalam kurikulum Indonesia tahun 2013.

Kata Kunci: Microlearning, Pendidikan Pasca Pandemi COVID-19

INTRODUCTION

The COVID-19 pandemic has greatly impacted education in Indonesia, necessitating adaptability and technology use in the learning process. The post-pandemic era requires flexible and adaptive learning methods with proper teaching materials designed using instructional principles for effective English learning (OECD, 2021; UNESCO, 2020; Rahmatika & Nohantiya, 2020; Lestari, 2013; Howard & Major, 2004). To address learning loss among twelfth-grade students during the pandemic, educational institutions need to consider factors like lack of technology access, motivation, social connections, and support (Reich & Mehta, 2021; Ariani & Tawali, 2021; Ismail et al., 2020; Ali, 2020; Sundarasen et al., 2020; Toto, 2021; Alawamleh et al., 2020; ZÜDORU, 2021). This is especially critical for twelve graders in senior high school who are expected to have a high level of knowledge and skills as they prepare for higher education or the workforce (Lailatunnikma & Nastiti, 2021). Therefore, there should be a new way to learn English in this era.

Post-pandemic education in Indonesia should focus on adaptability, flexibility, and the use of technology, emphasizing the importance of microlearning as an effective approach (UNESCO, 2020; Ayu et al., 2013; Pupah & Sholihah, 2022; Sudjana & Rivai, 1991; Giurgiu, 2017; C. Wang et al., 2020; Mosel, 2005). Incorporating microlearning into the 2013 Curriculum for 12th-grade English language instruction can improve learning outcomes (Lestari, 2018; Leene, 2006; Langreiter & Bolka, 2005; Hugh, 2005; Pusawiro, 2006; Allela, 2021; Mayer & Moreno, 2003).

To ensure the successful implementation of microlearning, conducting a need analysis is crucial (Hariyadi & Yanti, 2019; Alsamadani, 2017). Understanding the specific needs of both teachers and students, especially under the 2013 Curriculum challenges, can help develop tailored materials that meet their requirements (Mardiana, 2021). In conclusion, by combining need analysis and microlearning, educators can create effective ELT and ESL teaching materials tailored to the specific needs of twelfth-grade students in Indonesia. This approach will contribute to better language learning outcomes, address the challenges posed by the pandemic, and prepare students for a post-pandemic educational landscape. Therefore, this study aims to explore the need of students and teachers to create the

the potential of microlearning as an effective approach for English language instruction for twelfth-grade students in Indonesia.

METHOD

Research Design

The research design for this study is a descriptive qualitative approach, which focuses on comprehensively explaining phenomena related to the research topic without relying on numerical data. It aims to understand the needs of students and teachers for microlearning-based learning materials in senior high school English. This method allows the researcher to delve into the behaviors, perceptions, motivations, and actions of the participants, providing in-depth explanations using words and phrases rather than statistical analysis.

To achieve this, the researcher will employ content analysis, a research approach used to make sense of unstructured content, such as text, pictures, symbols, or audio data. Content analysis will help identify and interpret the textual meaning in the collected data regarding the preferences and requirements of students and teachers for microlearning-based materials. By utilizing this approach, the researcher can draw meaningful conclusions from the gathered information, gaining insights into the participants' perspectives and needs. In summary, this study's research design combines a descriptive qualitative approach with content analysis to gain a comprehensive understanding of the needs of senior high school students and teachers concerning microlearning-based learning materials in English. By using this method, the researcher can effectively and efficiently explore and present the topic in a detailed and meaningful manner without relying on quantitative data.

This study focused on conducting a need analysis among students and teachers from several institutions The data collection process involved distributing questionnaires and conducting interviews. The study took place from March to May 2023, including the phases of data collection, data analysis, and report writing. The researcher was able to access these schools through their connections and acquaintances. According to Arikunto (2010), the research subjects can encompass various entities, including situations, objects, or people, that are investigated for data collection. In this study, the subjects consisted of 297 individuals, including teachers and students from multiple institutions. The study aimed to analyze the data collected based on the checklist of students' and teachers' needs for microlearning-based learning materials in English at the senior high school level.

The primary research instrument in this study is the researcher. The researcher performed the entire research process, including data acquisition, evaluation, filtering, selection, sorting, conclusion, and reporting. In qualitative research, researchers are considered essential instruments for evaluating, probing, and exploring the study suitably and flexibly. Therefore,

the researcher will utilize a questionnaire to identify the needs of high school students and teachers for microlearning-based English teaching resources. The questionnaire will be created using microlearning principles, language learning principles, and instructional material creation principles, with closed-ended items and a Likert scale. Before issuance, the questionnaire will undergo a validity test covering construct validity and content validity. The second instrument was interview. This method was chosen to ensure the trustworthiness and reliability of the data and to provide insight into the specific needs of high school students and teachers for microlearning-based resources.

RESULTS

The findings and discussion of the Students' and Teachers' Need Analysis for Microlearning-Based Material in Senior High School English are presented in this chapter. It contains a full analysis of the questionnaire and interview findings, as well as data visualization charts. In today's technology-driven society, the study underlines the desire for microlearning-based content in English instruction among students and teachers.
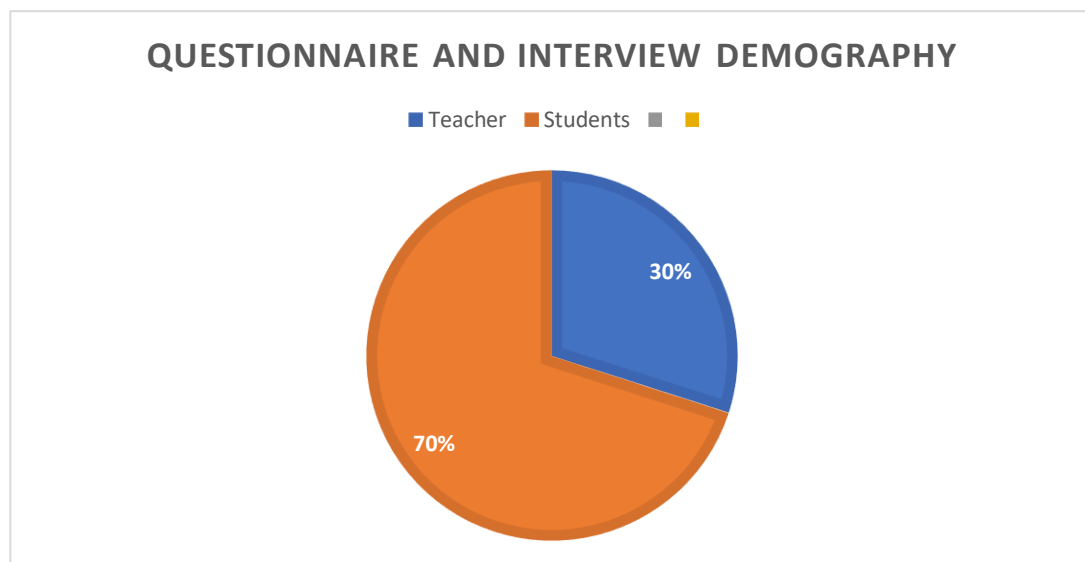

Figure 1. The questionnaire, Interview Demography

A questionnaire and interviews were used to collect data for this investigation. The questionnaire elicited 85 replies from teachers and 189 responses from students, resulting in a comprehensive picture of senior high school students' choices for microlearning-based resources. The interviews included four teachers and nineteen students, confirming the data's legitimacy and authenticity while also providing insights into their needs.

Both approaches were used in numerous schools, yielding 89 teacher replies and 189 student responses in total. This large dataset allowed the researcher to acquire a thorough grasp

of the demands of learners and teachers in senior high school education for microlearning-based products. The data collected from the interviews and questionnaire were analyzed based on four components: learning objectives, learning content, learning exercises, and learning assessment. This systematic approach allowed the researchers to identify the specific needs and preferences of teachers and students regarding microlearning-based materials effectively. It provided valuable insights for potential improvements and customization to cater to their requirements more effectively.

Learning Objectives

Data from student interviews showed that students face difficulties in meeting learning objectives, especially in topics involving complex mathematical calculations that require more time. However, subjects like Civics and Islamic Studies are comparatively easier for them to understand. Students suggested that defining clear learning objectives could improve comprehension, and they emphasized the importance of providing clear and comprehensive explanations to achieve learning goals effectively. Additionally, time constraints may pose challenges in achieving learning objectives within the specified timeframe.
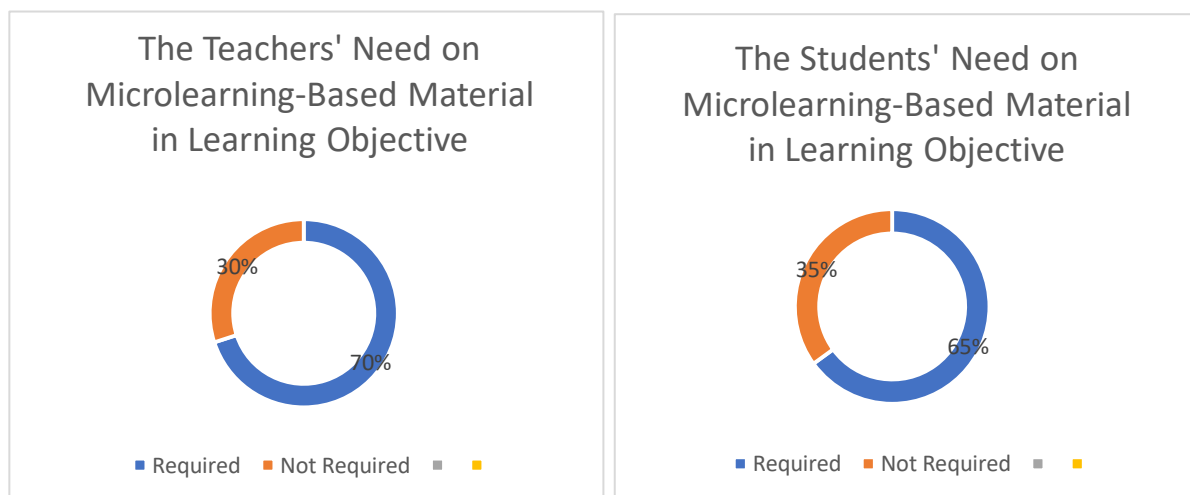

Figure 2. Charts of students and teachers' need on microlearning, learning objective

Based on the shared questionnaire, 65% of the 189 students expressed a desire for Microlearning-based learning objectives. Additionally, teachers agreed with the idea of condensing learning goals into smaller, manageable chunks that can be completed in a short timeframe. This approach was believed to be more effective and purposeful for the student learning process. Breaking down content into smaller chunks allows students to concentrate better, gradually grasp concepts, and achieve learning objectives more effectively. The alignment between students' needs and teachers' agreement highlights the potential benefits of

using Microlearning-based materials in the educational setting. In summary, student interviews revealed difficulties in meeting learning objectives, while teachers agreed that breaking down objectives into smaller chunks could improve the learning process. The convergence of students' needs and teachers' agreement supports the potential benefits of using Microlearning-based resources in teaching. According to the data, 65% of students and 70% of teachers desire Microlearning-based learning objectives, emphasizing the potential usefulness of this approach in education.

Learning Content

Learning content should be given in short portions (3 to 7 minutes), aesthetically appealing with interactive components, and suited to real-life scenarios for better understanding to make it more engaging and effective. Allowing students to pick topics of interest and providing simple access to high-quality educational resources also helps to reduce boredom and improve learning efficacy.
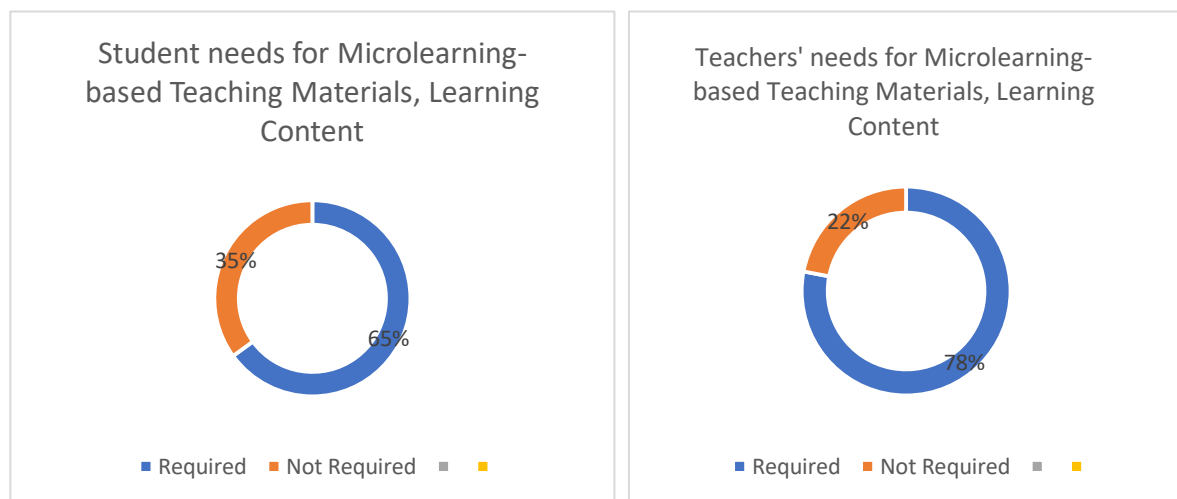

Figure 3. Charts of students and teachers' need on microlearning, learning content

Based on the findings of the shared questionnaire, 65% of the 189 students expressed a need for Microlearning-based learning content. While the other 35% said that it was not required for their learning. During the interviews with teachers, several key factors contributing to the effectiveness of learning through a Microlearning-based approach were discovered. Teachers recognized that breaking down learning content into shorter and targeted segments significantly improved the learning process. Additionally, the inclusion of visual media, such as illustrations and multimedia elements, was found to be beneficial in enhancing students' attention and motivation.

In other words, the student interviews highlighted effective elements of learning content, such as short and clear segments (3 to 7 minutes) that improved understanding and learning quality. Visual media, interactive techniques, and real-life adaptations increased student engagement and comprehension. Allowing students to choose their learning themes and ensuring easy access to high-quality resources also enhanced learning experiences. Discussions with teachers emphasized the significance of segmenting learning information and incorporating visual media to accommodate different learning styles. The focus on micro competencies and offering flexibility in learning materials were seen as essential factors in boosting student engagement and achieving learning goals more efficiently.

According to the shared questionnaire, 65% of students expressed a need for Microlearning-based learning resources, while 78% of teachers also showed a desire for such materials. This alignment between student and teacher preferences highlights the potential benefits of incorporating Microlearning-based materials in education, leading to a more effective and engaging learning environment for all.

Learning Exercise

Data from student interviews revealed that the efficiency of learning is influenced not only by the length of the exercise but also by the difficulty of the content and the knowledge acquired. Exercises with clear objectives are more interesting and facilitate content comprehension. The effects of adaptation characteristics on learning activities vary among individuals. When students can choose activities aligned with their interests and needs, they feel more engaged and effective in their learning. Access to learning exercises also enhances learning effectiveness.
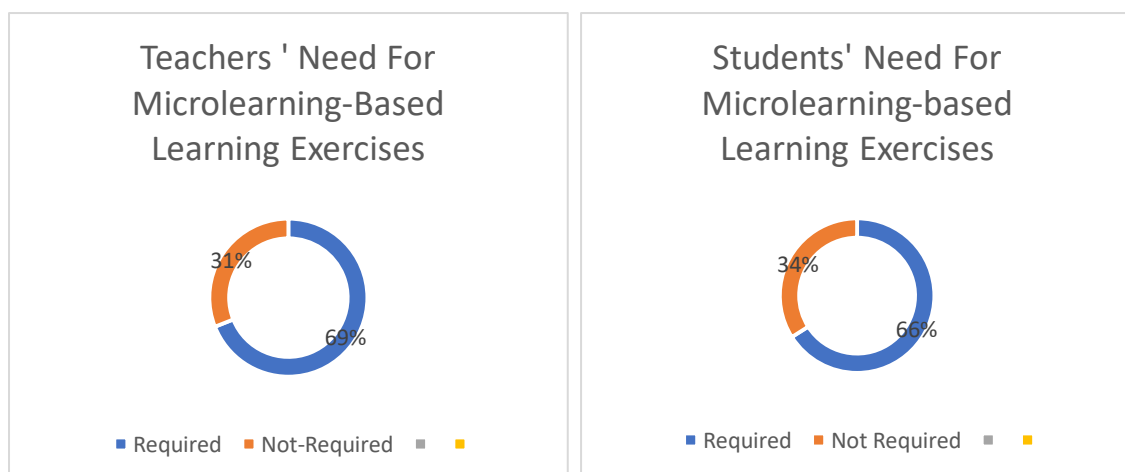

Figure 4. Students' and teachers' need in microlearning, learning excersise

From the results of the distributed questionnaire, 66% of students expressed a need for Microlearning-based learning exercises. The 34% of students believed that it was not required for those exercises. During interviews with teachers, the researcher found that learning exercises presented in an interesting and challenging format, coupled with direct feedback and consideration of students' interests and abilities, can increase learning effectiveness. Flexibility in exercise selection and ease of access are crucial for maintaining students' attention. Additionally, a short, focused learning approach tailored to specific skills can improve student learning outcomes.

According to the teacher interviews, presenting learning tasks in an engaging and demanding format using multimedia, offering immediate feedback, and taking into account students' interests and skills can all improve learning effectiveness. Flexibility in exercise selection and convenience of access were both mentioned as crucial aspects in keeping students' attention and enhancing learning results. Furthermore, 69% of teachers in the questionnaire indicated a need for Microlearning-based learning tasks. These findings highlight the necessity of designing interesting, accessible, and adaptable learning activities to improve the overall success of the Microlearning-based method in education.

Learning Assessment

In this aspect, data from student interviews conducted by researchers and questionnaires discovered that no students nor teachers covered this topic since they were just following the school rules.

DISCUSSION

Based on questionnaire responses, the demands of Senior High School students and teachers for microlearning-based English teaching materials can be categorized into four key areas: learning objectives, learning content, learning activities, and learning assessment. Microlearning, as defined by Hug et al. (2006), involves the use of small, well-structured, bite-sized learning units or tasks that are accessed briefly and repeated over time to enhance retention and comprehension. Hughes (2015) emphasized the importance of accessibility, highlighting that microlearning should be readily available on mobile devices and accessible at all times. Additionally, Mohammed et al. (2018) noted that microlearning allows students to tailor their learning pace to their preferences.

The Demands Of Senior High School Students For Microlearning-Based English Teaching Materials

Based on the data from findings, student interviews revealed that students encounter difficulties in meeting learning objectives, especially in topics involving complicated mathematical calculations. However, they suggested that defining straightforward and unambiguous learning objectives might enhance comprehension. On the other hand, Civics and Islamic Studies were found to be easier for students to understand. For example, in the conversation between the researcher in the RMV-13 and RMV-10 interview sessions about the learning objective. Speaker 1 represents the researcher while Speaker 2 represents the students who participate in the interview session.

> Speaker 1: "Have you ever felt difficulty in achieving learning objectives in a predetermined time?"
> Speaker2: "Yes, it is often difficult." (RMV-13 Dialogue)
> Speaker 1: "Have you ever found it difficult to achieve certain learning objectives?
> Speaker2: "For some lessons, yes, if it's like mathematics, it might take more time, just for those who like to study ordinary things like PKN or Islamic studies like that, it's easier to understand." (RMV-10 Dialogue)

The dialogue implies that In the first dialogue, Speaker 2 expressed that they often find it difficult to achieve learning objectives within the given time frame. While In the second dialogue, Speaker 2 mentioned that certain lessons, like mathematics, may take more time to understand, while subjects like PKN or Islam are easier for them to grasp. Regarding learning content, the data highlighted several characteristics of engaging and effective materials, those highlights were (1) short duration: Content lasting 3 to 7 minutes was easier to understand, allowing for more concentrated learning and higher quality, (2) colours, decorations, and participatory ways made learning more interesting and minimized monotony, (3) adapting learning content to everyday life helps students comprehend concepts better, making them more relevant, (4) allowing students to select their learning subjects boosted their involvement and excitement for the learning process, and (5) ease of Access: Making high-quality instructional resources easily accessible improves learning efficacy.

These highlights correspond to the discussion from interview sessions RMV-1, RMV-10, RMV-19, and RMV-11. The researcher simply questioned the respondents "What do they think about the learning content that can be understood in three to seven minutes?" Do they believe that engaging learning materials can keep students engaged in the lesson? What if the content is made as applicable to real-life situations as possible, making it easier to understand? Do they feel more effective when they can select their learning content? Finally, how does it affect

students' learning performance if the researcher provides simple access to all of the learning content?"

The answer to the researcher's questions is summarized down below:

- Speaker 2 prefers learning content that is detailed but not boring, even if the duration is long. They find the process of understanding such content requires repetition.
- Visual elements like eye-catching colors and decorations make learning more interesting and engaging.
- Examples that relate to everyday life make it easier for Speaker 2 to understand the material, as they can relate it to their own experiences.
- Speaker 2 dislikes content that is too wordy and prefers shorter explanations.
- Having the freedom to choose learning content allows Speaker 2 to filter and select topics they are interested in, making learning more enjoyable and effective.

From the answer wes can imply that students prefer detailed and engaging learning content, even if it is long, as they find the process of understanding it requires repetition. Visual elements like eye-catching colors and decorations make learning interesting. Examples related to everyday life help the students grasp the material better. They dislike wordy content and prefer shorter explanations. Having the freedom to choose learning content allows students to filter and select topics of interest, making learning more enjoyable and effective.

Learning efficiency was assessed not only by the length of the learning exercise but also by the complexity of the topic and the information obtained. Exercises with clearly specified objectives were shown to be more engaging and to aid in subject absorption. Individual differences in the influence of adaption features on learning exercises were observed. Just like when Speaker 2 stated in RMV-1 which said "I think the adaptation feature depends on the conditions or situations that I feel at the time of doing the learning exercises so that sometimes it helps me understand the material better." From this statement, we can imply that learning efficiency was found to be influenced not only by the length of the exercise but also by the complexity of the topic and the information acquired. Exercises with clearly specified objectives were more engaging and facilitated better subject absorption. Individual differences in the impact of adaptation features on learning exercises were observed, as mentioned by Speaker 2 in RMV-1, where they stated that the effectiveness of adaptation depends on their current conditions or situations during the learning process, sometimes aiding in a better understanding of the material.

The Demands Of Senior High School Teachers For Microlearning-Based English Teaching Materials

Based on the interview conducted, teachers agreed strongly with the notion of compressing learning objectives into tiny, digestible pieces for pupils. Teachers anticipated that this Microlearning-based method would improve the learning process by helping pupils to focus better, gradually absorb topics, and more successfully attain learning objectives. This finding is in line with the answer of one of the teachers who were interviewed respondents in RG-2 which the teacher said "If I am frankly more comfortable using as Mas said earlier, whose competence is small, compared to many direct ones, while we cannot achieve all the goals in the time we have set." The questionnaire findings reinforced this view even more, with 70% of instructors indicating a need for Microlearning-based learning goals and 78% expressing a need for Microlearning-based learning content.

Teachers highlighted important criteria for effectiveness, such as breaking down learning information into tiny chunks and employing visual media to engage students. It was discovered that interesting and demanding learning tasks, as well as direct feedback and consideration of students' interests and skills, improved learning efficacy. This finding is in line with one of the teacher's responses on the interview which said "It is important, because so that students know the reason they choose the correct answer is because of what so that their learning process is faster. And also the feedback from the teacher takes a long time in correcting the results of the exercise so that there is detailed direct feedback is very helpful" Student attention was also maintained by the flexibility of activity choices and quick access to resources. According to the questionnaire results, 69% of teachers reported a need for Microlearning-based learning tasks, confirming their importance in improving student learning outcomes.

CONCLUSION

This journal the way of researcher answered two research questions: students' and teachers' demands for microlearning-based English teaching materials in senior high schools. In which the researcher found that Student interviews highlighted challenges in reaching learning objectives, particularly in complicated areas such as mathematics. Defining explicit objectives, on the other hand, boosted understanding, and particular topics, such as Civics and Islamic Studies, were simpler to comprehend.

Students preferred detailed and engaging learning materials, even if they were longer. Visual cues, meaningful examples, and concise explanations were also preferred. The ability

to select learning content boosted students' participation and effectiveness. To promote learning, teachers emphasized breaking down learning information into smaller bits, employing visual media, and providing flexibility in activities. Direct feedback and student-centered initiatives were also regarded well. The questionnaire's results indicated that 70% of teachers desired microlearning-based teaching resources for learning goals and 78% desired learning content. It can be concluded that microlearning materials were deemed beneficial in terms of improving student learning outcomes and engagement.

RECOMMENDATIONS

The researcher offers the following recommendations based on the findings (1) develop Microlearning-Based Materials: Educators should produce microlearning-based materials that are aesthetically appealing, interactive, and relevant to real-life scenarios based on students' preferences for detailed and engaging materials. This approach can enhance student interest and motivation in learning, (2) establish Clear Learning Objectives: To address students' issues in reaching learning objectives, teachers should clearly outline learning objectives and ensure that they are attainable within the time limit provided. Giving pupils explicit objectives might help them focus and grasp the purpose of their learning exercises, (3) provide Learning Flexibility: Allowing students to pick their learning content and activities can boost their sense of autonomy and involvement in the learning process. Teachers can give a variety of alternatives that suit students' interests and learning preferences, (4) provide Timely and Detailed Feedback: As teachers have pointed out, providing immediate feedback on learning exercises is critical. Timely feedback assists students in identifying their faults and progress, creating a deeper comprehension of the content, (5) use Visual Media: Teachers should use visual media, such as graphics and multimedia components, in their instructional materials. Visuals may increase students' attention and knowledge, making the learning process more pleasurable and successful, and (6) consider Subject-individual Approaches: Recognizing that various subjects may necessitate distinct learning methodologies, educators should adjust their microlearning-based resources to each subject's requirements and expectations.

So, adopting microlearning-based techniques and putting these recommendations into practice can result in more successful and interesting English language education in senior high schools, fulfilling the different requirements and preferences of both students and instructors.

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