



Microlearning in Bahasa Indonesia : Potential and Challenges in Facing The Bored Generation Z

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Abstract: This research aims to explore the potential and challenges of implementing microlearning in Indonesian as a learning method that suits the needs of Generation Z. The research used a descriptive qualitative approach involving 60 participants, consisting of university students and high school students in the Banyuwangi area, selected through a purposive sampling technique. Data were collected through in-depth interviews, questionnaires, and direct observation, then analyzed using thematic analysis and descriptive statistics. The results showed that microlearning has great potential in increasing Generation Z's learning engagement. As many as 80% of participants felt that short learning sessions helped them stay focused, while another 85% liked the flexibility offered by microlearning platforms. Observations also showed high engagement when interactive media such as quizzes and short videos were used. However, the study also uncovered some key challenges, including difficulties in simplifying complex material, internet access constraints in remote areas, and the need for greater learning independence. The discussion highlighted the importance of training educators to develop effective microlearning materials, technological solutions to overcome the digital divide, and the integration of gamification strategies to increase learning motivation. In addition, the development of Indonesian-based microlearning content is a great opportunity to increase the relevance of learning. This research concludes that with the right adaptation and support, microlearning can be an innovative learning solution for Generation Z in the digital era.

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Introduction

The rapid development of information and communication technology (ICT) has changed almost all aspects of human life, including education. One of the latest trends that is starting to be applied in education is microlearning, a learning approach that uses learning materials in a very short and compact format (Nugraha et al., 2021), often lasting only a few minutes. Microlearning is designed to adapt to a fast-paced lifestyle, especially for the younger generation who are used to multitasking and consuming information in small pieces (Santi et al., 2024). Along with the increasing dominance of technology in everyday life, microlearning-based learning is gaining attention among educators and curriculum developers.

However, despite its great potential, the application of microlearning in the context of education in Indonesia, especially to face the challenges of learning for Generation Z, still faces a number of problems. Generation Z, born between the mid-1990s and early 2010s (Pujiono, 2021), are known for their fast-paced characteristics in accessing information and are easily bored by conventional or overlong learning (Kusumaningtyas et al., 2020). This



creates its challenges for educators in designing effective methods (Surahman et al., 2020), which are not only able to overcome their boredom, but also still able to convey material in a deep and meaningful way.

In the context of education, the issue that arises is how to effectively adopt microlearning to meet the needs of fast and flexible learning without sacrificing the depth of the material (Frisnoiry, 2024). Generation Z, with its attention-switching characteristics and preference for concise and dynamic content (Sa'diya, 2017), requires a suitable approach to keep learning relevant and engaging. On the other hand, a major challenge arises when microlearning is seen as a method that is too simple or lacks depth in conveying complex concepts.

Ideally, microlearning should be able to overcome the boredom often experienced by Generation Z by offering shorter, more engaging and accessible learning (Sari, 2022). However, in practice, the implementation of microlearning in education often fails to meet these expectations. Many learning materials are cut into small segments but lose the context needed for deep understanding (Pebriantika et al., 2025). This creates a gap between expectations (easy-to-understand and engaging materials) and reality (overly simple or fragmented materials). Therefore, it is important to identify the factors that influence the success or failure of microlearning in this context (Lestari, 2020), and find suitable solutions to keep learning effective without compromising the quality of the content.

Several relevant theories can inform the study of microlearning and learning for Generation Z, such as Cognitive Theory and Social Learning Theory (Nurasiah et al., 2022). Cognitive Theory, for example, emphasizes the importance of short-term and long-term information processing, which relates directly to how microlearning can facilitate more structured and focused learning. Additionally, Social Learning theory emphasizes the importance of these Theories are relevant in the context of microlearning and learning for Generation Z. It reflects the way this generation learns through interaction with their digital and social environments (Leong et al., 2021).

Recent research has revealed that, although microlearning has the potential to increase engagement and learning effectiveness for Generation Z (Hidayat & Kautsar, 2024), many challenges need to be overcome, such as difficulties in maintaining the quality of the material and ensuring that each piece of learning is connected and provides a full understanding. The research shows that microlearning based on digital and interactive content is very suitable for Generation Z which has a preference for fast, visual, and technology-based learning is research by Santi et al., (2024). This is in line with the theory of digital constructivism, which emphasizes that technology-based learning allows students to build understanding through independent exploration and active interaction with digital content (Rahmani et al., 2023). Previous research by Santi et al., (2024) confirmed that content segmentation in microlearning helps improve memory and concept understanding. With content designed to be short, relevant and visually appealing, Generation Z is more motivated to learn without feeling overwhelmed. In line with research developed by Adyawati & Hum, (2023) Interactive microlearning strategies, such as short quizzes and animated videos, significantly reduce students' boredom levels compared to traditional learning methods.

This research offers novelty in the application of microlearning for Indonesian language learning, especially for Generation Z who are known to have short attention spans and tend to get bored quickly. The main focus of this research is to explore how microlearning can be adapted to the characteristics of Generation Z which has not been widely discussed in previous research. In addition, this research highlights the aspect of long-



term retention and boredom in learning, something that is still rarely the main focus in microlearning research. As such, this research not only contributes to the academic literature, but also provides practical insights for educators and curriculum developers in designing more effective and relevant learning strategies.

In addition, this research fills a gap in the study of microlearning, especially in the context of Indonesian language learning. Most previous studies have focused on microlearning in higher education or professional training, while research on its application in language learning for Generation Z is limited. Furthermore, while microlearning is known to be effective, research specifically examining its impact on burnout and long-term engagement is minimal. The lack of practical recommendations for educators in designing microlearning-based curricula is also one of the gaps that this study attempts to address. Therefore, this research is expected to contribute to the development of more adaptive, engaging and effective learning methods in enhancing the Indonesian language learning experience for Generation Z.

The main objective of this research is to identify the potential and challenges of implementing microlearning in Indonesian language learning for generation Z, as well as to explore ways that microlearning can be more effective in improving engagement, comprehension and retention of materials. In addition, this research aims to provide practical recommendations for educators in developing learning methods that can meet the needs of generation Z who are bored quickly and want to get information in a short but concise manner.

Research Method

This research used a descriptive qualitative approach to explore the potential and challenges of implementing microlearning as a learning method that suits the characteristics of Generation Z. The participants consisted of 60 university and high school students in the Banyuwangi area, who were selected using a purposive sampling technique. Purposive sampling is one of the methods in sampling techniques used in research, where samples are selected purposively based on certain criteria relevant to the research objectives (Subhaktiyasa, 2024). Participant criteria included those who were familiar with digital technology and had experience using microlearning platforms.

Data collection was conducted through three main methods: in-depth interviews, questionnaires, and direct observation. A total of 15 participants were interviewed to explore their opinions in depth, while the other 45 participants filled out an online questionnaire containing open and closed questions related to their experience in using microlearning. Observations were conducted during short microlearning learning sessions (15-30 minutes) to record the level of engagement, usage time, and participants' responses.

The instruments used included an interview guide focusing on the advantages and constraints of microlearning, a questionnaire covering participants' satisfaction and preferences, and an observation checklist to record behavior and responses during learning. Qualitative data from interviews were analyzed using thematic analysis method with the help of NVivo software, thematic analysis is a qualitative method used to identify, analyze, and report patterns or themes in data (Adam & Munasir, 2023). In practice, the use of software such as NVivo could help facilitate the thematic analysis process (Fitriani et al., 2022). NVivo is designed to analyze qualitative data by supporting various data formats, such as interview transcripts, audio files, videos, or PDF documents (Muksin et al., 2024).



This research can be strengthened by the application of triangulation, which ensures the credibility and reliability of the research results. Triangulation of methods was applied by combining various data collection techniques, such as interviews, surveys, and observations of digital usage in microlearning. This approach allows for verification of data from various sources, thus providing a more accurate picture of the effectiveness of microlearning for Generation Z. In addition, triangulation of data sources was conducted by comparing the perspectives of various stakeholders, such as Generation Z students who are microlearning participants, educators who design digital-based curriculum, and experts in the field of education and technology. By involving various parties, this research can provide more comprehensive insights and is not limited to one point of view only.

Furthermore, theoretical triangulation was used to relate the research findings to various digital learning theories, cognitive theories of information retention, as well as theories of Generation Z characteristics. This approach ensures that the research results have a strong academic foundation and do not rely solely on one theoretical perspective. In addition, if possible, this research can also apply researcher triangulation by involving more than one researcher in the data analysis process. With more than one perspective in interpreting the findings, the potential for bias can be minimized, so that the research results become more objective and reliable. Thus, the application of triangulation in this study will increase the validity of the data and ensure that the conclusions produced truly reflect the effectiveness of microlearning in facing the challenges of Generation Z who are quickly bored in learning Indonesian.

Results and Discussion

The concept map of Microlearning research in Bahasa Indonesia: Potential and Challenges in Facing the Bored Generation Z can be explained systematically in several main sections. At the core of the concept, Microlearning in Bahasa Indonesia is the main focus of this research, which explores digital-based learning methods with material delivery in small units and short time. From this main concept, five main aspects become pillars in the research, namely Generation Z in the Learning Context, Microlearning Potential, Implementation Challenges, Research Methodology, and Results and Implications.

The first aspect, Generation Z in the Learning Context, discusses the characteristics of this generation, such as their short attention span, the need for flexible learning methods, and the challenges they face in learning Indonesian. Understanding these characteristics is the basis for designing an effective microlearning strategy. Furthermore, the potential of microlearning is explained through three main benefits, namely increasing student motivation and engagement, facilitating long-term retention and understanding, and providing more adaptive learning according to individual preferences. With a more interactive and technology-based approach, microlearning can overcome boredom in traditional learning.

However, microlearning also faces various implementation challenges, including boredom due to digital distraction, difficulty in designing material that remains in-depth despite being presented in a short duration, and limitations in deeper interaction between students and educators. These challenges need to be addressed for microlearning to be optimally implemented. In this study, the Research Methodology relied on a case study approach to the use of digital in microlearning. Data was collected through interviews, surveys and observations of Generation Z students as well as educators implementing this method. The validity of the research is strengthened by triangulation, both in terms of methods, data sources, theories, and analysis.



Finally, the Results and Implications of this research include an evaluation of the effectiveness of microlearning in enhancing Generation Z's learning experience, strategies to overcome challenges that arise in its implementation, as well as practical recommendations for educators and curriculum developers. Thus, this research is expected to contribute to the development of Indonesian language learning methods that are more innovative, engaging, and in line with Generation Z's needs.

Table 1. Potential and Challenges in Facing the Bored Generation Z

Category	Findings	Percentage/Observation
Microlearning Potential		
Time effectiveness	Short learning sessions help participants stay focused and less bored.	80% of participants felt more focused.
High engagement	Interactive media such as quizzes or short videos increase engagement.	Observations showed high engagement during the sessions.
Flexibility	Participants can learn anytime and anywhere as needed.	85% of participants favored flexibility.
Microlearning Challenges		
Material adjustment	Difficulty simplifying complex material without losing the point of learning.	Reported by 70% of teachers/facilitators.
Infrastructure support	Uneven internet access hinders the learning experience.	40% of participants from remote areas faced obstacles.
Learning independence	It is difficult to maintain learning motivation without direct direction from the teacher.	30% of participants admitted that they found it difficult.

Generation Z is known to be dynamic, easily bored, and more connected to technology than previous generations. Microlearning, with its concise and interactive format (Munawarah & Kusumawardani, 2024), proved to be able to address their learning needs. The finding that 80% of participants felt more focused with short learning sessions supports the view that shorter learning duration is able to maintain Generation Z's attention, in line with the literature that shows their shorter attention span compared to previous generations.

The use of interactive media, such as quizzes, short videos, or simulations, also increased participants' engagement level during the learning session. Observations show that participants are more active when interacting with these elements, which supports the theory of experiential learning, an educational approach that emphasizes learning through direct experience (Suleman, 2024). Microlearning also provides flexibility, which is crucial for Generation Z who are often multitasking and need access to learning anytime and anywhere (Dedi, 2024). With 85% of participants favoring this flexibility, microlearning demonstrates its ability to provide a learning experience that suits the modern lifestyle of Generation Z (Syamsidar, 2024).

Despite its great potential, several challenges need to be overcome to ensure the successful implementation of microlearning. One of the main challenges is the difficulty in simplifying learning materials. Teachers or facilitators often feel that condensing complex material into short modules can lead to the loss of important information (Saputra & Stiawan, 2024). This suggests the need for specialized training for educators to design effective



microlearning content, while maintaining the essence of learning (Basith & Al-Bari, 2022). Teachers must also be innovative in the learning process so that learning is more attractive to students so as to reduce students' boredom in the learning process (Ridwan, 2022).

Internet access is also a big issue, especially in remote areas. As many as 40% of participants from areas with limited technology infrastructure reported difficulties in participating in microlearning-based learning. This problem shows that there is still a significant digital divide in Indonesia. To overcome this barrier, the development of offline-based microlearning platforms or data-efficient applications could be a solution.

Another challenge identified is the need for learning independence. Most Generation Z students are used to structured learning under the direction of a teacher. In the context of microlearning, as many as 30% of participants admitted to having difficulty maintaining motivation to learn independently. This shows that while microlearning can provide flexibility, the success of this method also depends on students' readiness to learn independently. One strategy that can be applied is gamification, which is the integration of game elements such as reward systems, challenges, or competitions in microlearning modules (Purwono et al., 2021). Gamification can help increase students' intrinsic motivation and keep them engaged in learning (Dwanda et al., 2024).

The research shows that digital and interactive content-based microlearning is very suitable for Generation Z which has a preference for fast, visual, and technology-based learning is research by Santi et al., (2024). This is in line with the theory of digital constructivism, which emphasizes that technology-based learning allows students to build understanding through independent exploration and active interaction with digital content (Rahmani et al., 2023). Previous research by Santi et al., (2024) confirmed that content segmentation in microlearning helps improve memory and concept understanding. With content designed to be short, relevant and visually appealing, Generation Z is more motivated to learn without feeling overwhelmed. In line with research developed by Adyawati & Hum, (2023) Interactive microlearning strategies, such as short quizzes and animated videos, significantly reduce students' boredom levels compared to traditional learning methods. And according to Hidayat & Kautsar, (2024) there are still many obstacles and challenges to microlearning learning that must be overcome so that microlearning can create learning that attracts the attention of students who always feel bored in classroom learning activities.

This research provides additional implications for technology-based learning theory. The finding that Generation Z is more responsive to gamified or challenge-based learning reinforces recent research emphasizing the importance of intrinsic motivation elements in digital learning design. Robinsar et al., (2023) point out that technologies, such as mobile apps and social media, provide space for personalizing learning, increasing engagement and building connectivity between learners. Furthermore, microlearning also shows effectiveness in interactive multimedia-based learning (Adinda et al., 2024). For example, the implementation of discovery learning model in microlearning is proven to encourage students' creativity by combining theory with applicable practice (Mahardika et al., 2024).

The findings reinforce that microlearning can be a key pillar in designing adaptive learning methods. However, the findings also challenge traditional theories about the need for long learning durations for the formation of deep understanding. By integrating the empirical data from this study, an opportunity arises to formulate a new theory of learning duration efficiency based on audience needs. In addition, this approach supports the modification of self-regulated learning theory, where the control of learning shifts completely to learners



through technology that empowers time flexibility and anytime, anywhere accessibility (Sucipto, 2017).

The main implication of this research is the need for educational policy makers to integrate microlearning in the formal curriculum. Providing training for educators to design content that suits Generation Z's learning style is necessary. In addition, there is a need to develop technology platforms that support content segmentation, gamification and collaboration-based learning to create a more effective learning experience. In general, this research confirms that microlearning is not only an alternative, but can be strategically integrated in the education system to answer the challenges of a generation that gets bored quickly and wants flexible and relevant learning in a digital world.

Conclusion

This research proves that microlearning is a relevant and adaptive learning method for Generation Z, with the ability to accommodate their learning preferences that tend to be dynamic, technology-based, and easily bored. Microlearning utilizes short learning duration and interactive content to increase learning engagement and effectiveness, as expected in the introduction. This potential is strengthened by the support of digital constructivism theory and cognitive load theory, which assert that microlearning is able to simplify complex learning into small units that are easier to understand.

However, the research also highlighted some significant challenges, such as the need for adaptation of complex materials, the need for equitable technological infrastructure, and the importance of encouraging students' learning independence. These findings reinforce the discussion on the need for strategic support, both in the form of training for educators and the development of data-efficient platforms that are accessible to students from diverse backgrounds.

This conclusion provides a foundation for formulating new theories on the efficiency of short-duration learning and the contribution of microlearning in enriching the theory of self-regulated learning. The long-term implication of this research is to encourage the widespread adoption of microlearning in the education system, including integrating gamification elements, AI-based content personalization, and adaptive learning design to support the evolving needs of Generation Z.

Recommendation

Based on the research results, there are several suggestions that can be the focus for future microlearning development. First, future research can develop microlearning content in Bahasa Indonesia that is relevant to Generation Z's learning style. The content needs to be interactive, engaging, and accessible offline to reach students in areas with limited internet access. In addition, special training for educators is also needed so that they can develop effective, short, yet information-rich microlearning modules.

The utilization of advanced technologies such as artificial intelligence (AI) is also a great opportunity. This technology can help tailor learning materials to individual student needs, so that learning outcomes are maximized. In addition, future research can also focus on strategies to increase students' self-learning motivation. For example, by adding gamification elements such as reward systems, weekly challenges or leaderboards to make learning more fun and challenging.

Obstacles such as limited participants from various regions, lack of variety of microlearning platforms, and limited duration of the study need to be considered. In the



future, research involving respondents with diverse backgrounds, using various microlearning platforms, and conducted over a longer period of time may provide more representative and in-depth results. By considering these recommendations, it is hoped that microlearning can continue to develop into a relevant, effective and inclusive learning method, especially for Generation Z.

Teachers play a crucial role in the successful implementation of microlearning, especially in facing the challenges of learning for Generation Z. Their dedication in understanding students' needs, developing engaging materials, and adapting to the latest technology should be appreciated. Teachers are not only conveyors of knowledge, but also creative facilitators in creating a more interactive and enjoyable learning experience. Teachers' ability to develop effective micro-learning modules shows how they continue to innovate to improve the quality of education. In addition, their openness to receiving training and mastering advanced technologies, such as artificial intelligence and gamification, is clear evidence that they always strive to provide the best for their students.

Despite facing challenges such as limited internet access for some students and a lack of variety in microlearning platforms, teachers are still trying to find the best solutions to keep learning inclusive and effective. Their efforts in understanding students' learning motivations and creating appropriate strategies are invaluable to the future of education. With their dedication and passion, microlearning can continue to evolve into a more relevant, innovative and beneficial learning method for Generation Z.

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