
CORRELATION BETWEEN EXPERIENTIAL LEARNING AND MICRO-LEARNING APPROACHES IN ENHANCING LEARNING QUALITY

Eveline Siregar

Universitas Negeri Jakarta

Jl. R.Mangun Muka Raya No.11, RT.11/RW.14, Rawamangun, Jakarta, Indonesia 13220

esiregar@unj.ac.id

Dedy Aswan

Universitas Negeri Makassar

Jl. A.P. Pettarani Gunungsari, Kec. Rappocini, Kota Makassar, Sulawesi Selatan, Indonesia 90222

dedy_aswan@unm.ac.id

Mohammad Adning

Pusat Data dan Teknologi Informasi

Kementerian Pendidikan, Kebudayaan, Riset dan Teknologi

Jl. R. E. Martadinata Km 15,5 Ciputat, Kota Tangerang Selatan, Banten, Indonesia 15411

adning@kemdikbud.go.id

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ABSTRAK: Penelitian ini bertujuan untuk mengkaji hubungan antara kualitas pembelajaran, Micro-learning, dan pembelajaran pengalaman dalam rangka mengoptimalkan pendidikan melalui pendekatan inovatif. Analisis menunjukkan hubungan positif yang signifikan di antara ketiga variabel tersebut, yang menggarisbawahi pentingnya integrasi metodologi baru dalam pendidikan. Pertama, ditemukan korelasi yang kuat antara kualitas pembelajaran dan Micro-learning ($r = 0.590^{**}$, $p < 0.01$). Hal ini menunjukkan bahwa Micro-learning yang efektif mampu meningkatkan hasil pembelajaran secara keseluruhan. Kedua, korelasi antara kualitas pembelajaran dan pembelajaran pengalaman juga signifikan ($r = 0.726^{**}$, $p < 0.01$). Hal ini menegaskan dampak positif pengalaman belajar langsung terhadap pemahaman dan penerapan pengetahuan siswa. Ketiga, Micro-learning dan pembelajaran pengalaman menunjukkan korelasi yang signifikan ($r = 0.694^{**}$, $p < 0.01$). Hal ini menunjukkan peran saling melengkapi dalam meningkatkan pengalaman belajar yang holistik. Implikasi praktis dari penelitian ini meliputi pengoptimalan pembelajaran melalui integrasi mendalam antara Micro-learning dan pembelajaran pengalaman, yang dapat mendukung pemahaman konseptual sekaligus mengembangkan keterampilan praktis siswa. Temuan ini mendorong pengembangan kurikulum berbasis bukti untuk meningkatkan kualitas pendidikan. Para pendidik dapat menyesuaikan strategi pengajaran dengan memanfaatkan Micro-learning untuk penyampaian konten yang terstruktur dan pembelajaran pengalaman untuk aplikasi di dunia nyata. Penelitian ini menekankan pentingnya metodologi pendidikan berkualitas tinggi untuk mencapai hasil belajar yang optimal dan mempersiapkan siswa menghadapi tantangan masa depan. Penelitian lanjutan dapat mengeksplorasi dampak spesifik dari berbagai format Micro-learning serta efek jangka panjang dari pendekatan pembelajaran terintegrasi terhadap keberhasilan siswa dan kesiapan karier mereka.

Kata Kunci: kualitas pembelajaran; micro-learning; pembelajaran pengalaman

ABSTRACT: The study investigates the relationship between the quality of learning, micro-learning, and experiential learning designed to improve education via innovative approaches. The analysis indicates a noteworthy positive correlation among these variables, highlighting the necessity of incorporating innovative strategies in education. A significant relationship is found between the quality of learning and micro-learning ($r = 0.590^{**}$, $p < 0.01$), indicating that effective micro-learning improves overall learning outcomes. In a similar vein, the correlation between the quality of learning and experiential learning is noteworthy ($r = 0.726^{**}$, $p < 0.01$), underscoring the beneficial effect of practical experiences on students' comprehension and utilization of knowledge. Additionally, there is a significant correlation between micro-learning and experiential learning ($r = 0.694^{**}$, $p < 0.01$), highlighting their synergistic contributions to enhancing comprehensive learning experiences. The results indicate that combining micro-learning with experiential learning can enhance educational outcomes by fostering knowledge comprehension and hands-on skill acquisition. The results support the development of curriculum grounded in empirical evidence to enhance the quality of learning. Educators have the ability to customize approaches by employing micro-learning for organized content dissemination and experiential learning for practical application in real-world scenarios. This study highlights the importance of creative instructional methods in attaining the best results and equipping learners for upcoming challenges. Future studies may investigate various micro-learning formats and the enduring effects of integrated approaches on student achievement and career preparedness.

Keywords: experiential learning; learning quality; micro-learning

INTRODUCTION

In recent years, the education sector has undergone a significant paradigm shift towards utilizing innovative learning methodologies to enhance educational outcomes. Approaches such as Blended Learning and online learning have emerged as new trends in the world of education (Arnidah et al., 2022; Pattaufi et al., 2023; Siregar et al., 2024a, Siregar & Aswan, 2019). These methods have given rise to several new possibilities that can be modified by harnessing the internet and advanced technology. Two approaches that have garnered significant attention are experiential learning and micro-learning. Both approaches offer great potential to enhance learning quality in unique and effective ways.

The intersection of experiential learning and micro-learning presents a compelling area

of study, particularly in understanding how these approaches correlate and synergize to enhance learning quality (Ali & Negasi, 2021; Dan-Glauser & Gross, 2015; Fromm et al., 2021). While experiential learning immerses learners in real-world contexts to foster deeper understanding and application of knowledge, micro-learning complements it by providing bite-sized learning modules that cater to learners' immediate learning goals (Bair & Bair, 2018; Ekayana, 2023; Wijaya et al., 2023). Understanding this correlation is crucial for educators and policymakers aiming to optimize learning experiences and improve educational practices in diverse learning environments. Thus, the problem statement revolves around investigating how experiential learning and micro-learning interact to influence learning quality, aiming to provide insights that can inform effective educational strategies and practices.

In this digital era, education is no longer confined to traditional classrooms. Technological advancements have transformed how students learn and interact with knowledge (Aswan, 2024a). With the internet and educational technology, students have access to a wide range of learning resources that can be tailored to their needs and preferences (Susilana et al., 2022). However, the main challenge educators face is how to effectively utilize this technology to enhance the quality of learning and ensure that students not only understand concepts but are also able to apply them in real-life situations.

Experiential learning and micro-learning offer potential solutions to this challenge. By leveraging the strengths of each approach, educators can create a flexible, dynamic, and relevant learning environment (Brown, 2019; Smaldino, S. E., Lowther, D. L., & Russel, 2008). This research aims to further explore the relationship between these two approaches, focusing on how they can be integrated to create holistic and meaningful learning experiences. Thus, this study not only seeks to provide theoretical insights but also aims to inform better educational practices for the future.

This study explores the correlation between experiential learning and Micro-learning approaches in enhancing learning quality. By examining existing literature, empirical studies, and theoretical frameworks, this research seeks to uncover insights into how these methodologies can be effectively integrated and optimized to maximize educational outcomes. Understanding the dynamics of this correlation is crucial for educators, instructional designers, and policymakers seeking to innovate and improve educational practices in diverse learning environments.

METHOD

This study aims to explore the relationship between learning quality, experiential learning, and micro-learning among students enrolled in the Educational Technology program. Adopting a quantitative cross-sectional

research design, the study incorporated samples from 36 students who were randomly selected from different academic years within the program at Universitas Negeri Jakarta (Creswell, 2017). This approach allows for the examination of correlations between the specified variables at a specific point in time, providing valuable insights into the interplay of these educational methodologies.

The data collection process relied on three carefully developed instruments to comprehensively capture the dimensions of learning quality, experiential learning, and Micro-learning. The first instrument, a questionnaire, was designed to measure students' perceptions of learning quality. This questionnaire encompassed multiple aspects of the learning experience, including the students' understanding of course materials, interactions with instructors, and the relevance of the content to their academic and career goals. The Likert scale was employed for the questionnaire, enabling consistent and quantifiable responses across all participants. The second instrument, an experiential learning evaluation scale, assessed the degree to which students engaged in direct, practical learning activities and reflective practices. This scale incorporated elements of Kolb's experiential learning theory, focusing on the active participation of students in hands-on activities, critical reflection, and real-world problem-solving tasks. By addressing these aspects, the instrument provided a thorough understanding of how students experienced and internalized their learning through active engagement.

The third instrument, a micro-learning evaluation scale, measured students' acceptance and effectiveness of micro-learning approaches. This scale examined factors such as the accessibility, relevance, and engagement of small, focused learning units tailored to meet individual needs. The evaluation captured the extent to which students perceived micro-learning as a viable and effective strategy for achieving their academic objectives.

The instruments were distributed to participants through Google Forms, an online platform chosen for its accessibility and user-

friendly interface. Participants were briefed on the study's purpose and assured of the confidentiality of their responses before completing the forms. The data collection process emphasized voluntary participation, and students were given sufficient time to independently complete the forms within the specified deadlines. By using an online format, the study ensured that data collection was efficient, flexible, and inclusive of students' varied schedules.

The collected data underwent analysis using SPSS software, a robust tool for statistical evaluation in educational research. The first step of the analysis involved descriptive statistics, which provided an overview of the sample characteristics, including demographic information and the distribution of responses across the variables. This initial analysis ensured that the dataset was well-understood and met the assumptions necessary for further statistical testing (Creswell & Clark, 2018).

To investigate the relationships between learning quality, experiential learning, and micro-learning, Spearman's correlation analysis was employed (Ary et al., n.d.; Sudjana, 2002). This non-parametric method was selected due to its suitability for ordinal data and its ability to determine the strength and direction of monotonic relationships. The correlation coefficients derived from this analysis offered valuable insights into how experiential learning and micro-learning contribute to and interact with overall learning quality.

FINDINGS AND DISCUSSION

The use of innovative learning methodologies, such as experiential learning and micro-learning, is increasingly gaining attention in efforts to improve the quality of education. Experiential learning offers direct learning experiences that allow students to apply knowledge in real-world contexts, while micro-learning provides focused learning materials in small, manageable units. These approaches have been widely recognized for their potential to enhance both theoretical understanding and practical application,

making them highly relevant in today's rapidly evolving educational landscape.

Experiential learning is grounded in the concept of learning by doing, which emphasizes active participation and engagement in meaningful activities. This method not only helps students retain information better but also fosters critical thinking, problem-solving skills, and adaptability. For instance, students engaging in experiential learning might participate in internships, simulations, or collaborative projects that mirror real-world scenarios. These activities bridge the gap between theoretical knowledge and its practical application, enabling learners to gain a deeper understanding of the subject matter. Additionally, experiential learning encourages self-reflection, as students are often required to evaluate their experiences and draw meaningful conclusions from them, thereby reinforcing the learning process.

On the other hand, micro-learning focuses on delivering content in concise, targeted segments, often leveraging digital platforms and technology. This approach is particularly effective in addressing the needs of modern learners who may face time constraints or have shorter attention spans. By breaking down complex topics into smaller, more digestible units, micro-learning ensures that learners can absorb information at their own pace. Examples of micro-learning include short video tutorials, interactive quizzes, and mobile-based learning apps, which provide flexibility and accessibility for learners across diverse environments. The adaptability of micro-learning also makes it an excellent complement to other teaching methodologies, such as experiential learning, by offering foundational knowledge that students can build upon during practical activities.

To gain a deeper understanding of these relationships, the following presents the results of an SPSS analysis using the Spearman correlation method between learning quality, experiential learning, and micro-learning. This statistical approach allows researchers to evaluate the strength and direction of the relationships among these variables, providing valuable insights into their interplay.

Table 1. The Result of Spearman Correlation Correlations

Correlations			Kua litas pem bela jaran	Kua litas Micro Lear ning	Kua litas Experi mental lear ning
Spear man's rho	Kua litas pem bela jaran	Correl ation Coeffi cient	1,00 0	,590**	,726**
		Sig. (2- tailed)	.	,000	,000
		N	36	36	36
	Kua litas Micro Lear ning	Correl ation Coeffi cient	,590**	1,00 0	,694**
		Sig. (2- tailed)	,000	.	,000
		N	36	36	36
	Kua litas Experi mental lear ning	Correl ation Coeffi cient	,726**	,694**	1,000
		Sig. (2- tailed)	,000	,000	
		N	36	36	36

** . Correlation is significant at the 0.01 level (2-tailed).

Table 1 illustrates the statistical relationships between three key variables in the context of education: learning quality, micro-learning quality, and experiential learning quality. This analysis was conducted using Spearman's rho correlation coefficient, which allows us to understand the strength and direction of the relationships between these variables. The correlation analysis between learning quality, micro-learning, and experiential learning reveals significant relationships among the three primary variables in modern educational contexts. Firstly, the relationship between learning quality and micro-learning quality shows a strong positive correlation ($r = 0.590^{**}$, $p < 0.01$). This indicates that higher quality micro-learning correlates with better overall learning quality. This result suggests that effective micro-learning approaches can contribute positively to the overall improvement of

learning quality in educational settings. Secondly, the correlation between learning quality and experiential learning quality also shows a significant and strong relationship ($r = 0.726^{**}$, $p < 0.01$). This confirms that direct learning experiences obtained through experiential learning contribute positively to the enhancement of students' understanding and application of the material. This approach allows students to gain not only conceptual knowledge but also to apply it in real-world contexts, thereby improving overall learning effectiveness. Thirdly, the correlation between micro-learning quality and experiential learning quality also demonstrates a significant relationship ($r = 0.694^{**}$, $p < 0.01$). These findings suggest that using both approaches simultaneously can complement each other to strengthen students' holistic learning experiences. micro-learning aids in delivering content in a structured and adaptive manner, while experiential learning provides deep and practical contexts for the application of knowledge. Figure 1 further examines the relationship of the relationship between learning and micro-learning

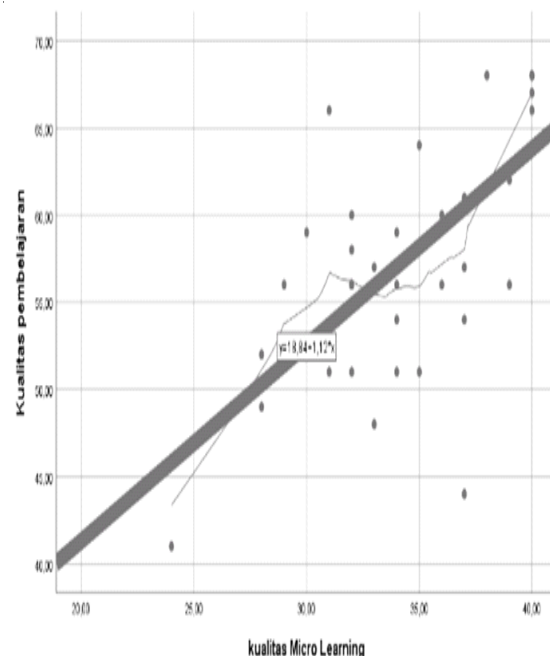


Figure 1 Correlation Quality of Teaching and Micro Learning

The interpretation of the Spearman's rho correlation coefficients used in this analysis underscores the strength of the relationships between these variables. High correlations, exceeding 0.5, indicate that the interactions between learning quality, micro-learning, and experiential learning have a significant impact in the context of education. This provides valuable guidance for curriculum developers and educators in designing more effective and adaptive learning strategies, which can enhance student engagement, comprehension, and knowledge retention. The following graph illustrates the relationship between learning quality and experiential learning.

Figure 1 illustrates the relationship between experiential learning quality and learning quality. On the horizontal axis (X), the "Experiential Learning Quality" indicator ranges from 35 to 60, indicating variations in the quality level of experience-based learning methods. On the vertical axis (Y), the "Learning Quality" indicator ranges from 40 to 70, reflecting the overall learning quality. The upward-sloping trend line indicates a positive relationship between experiential learning quality and learning quality. The trend line equation, $y = 5.16 + 1.1x$, shows that each one-unit increase in experiential learning quality results in a 1.1 unit increase in learning quality. The intercept of 5.16 indicates that, theoretically, if the experiential learning quality were zero, the learning quality would still be at 5.16. Overall, this graph demonstrates a fairly strong positive relationship between experiential learning quality and learning quality. Improvements in experiential learning quality tend to be followed by improvements in learning quality. This underscores the importance of ensuring high experiential learning quality to achieve optimal learning outcomes.

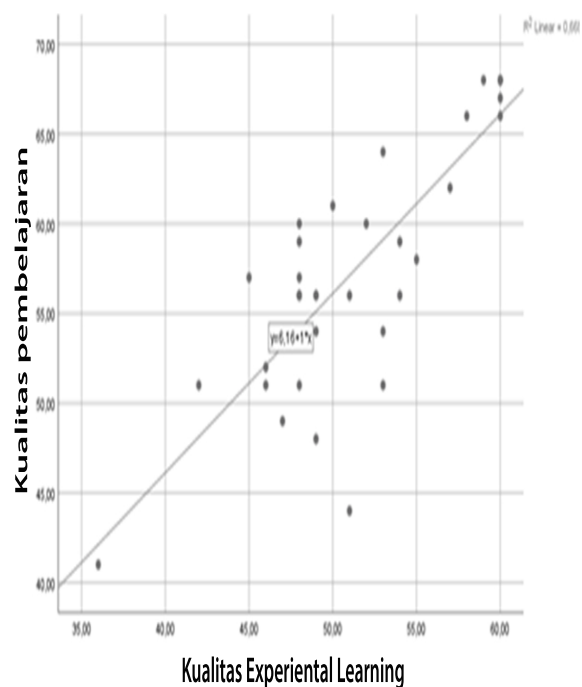


Figure 2. The Correlation Quality of Teaching and Experiential Learning

The presented graph illustrates the relationship between the quality of experiential learning and overall learning quality. On the horizontal axis (X), the indicator "Quality of Experiential Learning" ranges from 35 to 60, reflecting the varying levels of quality in experiential learning methods. On the vertical axis (Y), the indicator "Overall Learning Quality" ranges from 40 to 70, representing the overall quality of learning. The upward-sloping trend line indicates a positive relationship between the quality of experiential learning and overall learning quality. The trend line equation, $y = 5.16 + 1.1x$, suggests that for each unit increase in the quality of experiential learning, the overall learning quality improves by 1.1 units. The intercept of 5.16 indicates that, theoretically, if the quality of experiential learning were zero, the overall learning quality would still be at a value of 5.16. Overall, this graph demonstrates a robust positive correlation between the quality of experiential learning and overall learning quality. Improvements in the quality of experiential learning are likely to be followed by enhancements in overall learning quality. This underscores the importance of ensuring

high-quality experiential learning to achieve optimal educational outcomes.

The correlation analysis as illustrated by Figure 1 and Figure 2 offers significant insights into the interplay between learning quality, micro-learning, and experiential learning within modern educational contexts. By using Spearman's rho correlation coefficients, we can discern the strength and direction of these relationships, which provides a robust foundation for enhancing educational strategies and practices. The practical implications of these findings are manifold. Firstly, the deep integration of micro-learning and experiential learning can maximize students' learning potential, both in conceptual understanding and in the development of practical skills.

This dual approach caters to the diverse needs of learners, enabling them to engage with material in a manner that is both structured and contextually rich. micro-learning, with its focus on delivering content in small, digestible units, ensures that students can learn at their own pace, reinforcing their understanding incrementally (Samala et al., 2023; Taylor & Hung, 2022; Yuniarsih et al., 2022). This method is particularly effective in an age where attention spans are often short, and the need for flexible learning schedules is paramount. By breaking down complex subjects into manageable segments, micro-learning allows students to build a solid foundation of knowledge that they can then apply in more comprehensive experiential learning scenarios. Experiential learning, on the other hand, emphasizes learning through direct experience and application. This approach allows students to engage with the material in a real-world context, fostering deeper understanding and retention. The strong positive correlation between learning quality and experiential learning quality ($r = 0.726^{**}$, $p < 0.01$) underscores the effectiveness of this method in enhancing educational outcomes. By providing students with opportunities to apply theoretical knowledge in practical settings, experiential learning bridges the gap between abstract concepts and real-world applications, making learning more relevant and impactful (Liu &

Elms, 2019; Mamatha, 2021; Tanduklangi et al., 2018).

Educators can use this information to adapt their teaching strategies, aligning them with the needs and preferences of their students to achieve optimal learning outcomes. Understanding that high-quality micro-learning correlates strongly with overall learning quality ($r = 0.590^{**}$, $p < 0.01$) allows educators to incorporate more Micro-learning elements into their teaching. This might include short, focused lessons, interactive digital content, and quizzes that reinforce learning incrementally. Simultaneously, recognizing the significant impact of experiential learning on learning quality enables educators to design more hands-on, practical learning experiences. This could involve lab work, field trips, internships, and project-based learning that allow students to immerse themselves in the subject matter actively. By balancing these two approaches, educators can create a dynamic learning environment that caters to various learning styles and needs.

Micro-learning plays a crucial role in creating flexible and focused learning experiences (Lee et al., 2021; Romero-Rodríguez et al., 2023). By leveraging modern technologies such as online learning platforms, interactive videos, and mobile applications, micro-learning offers an approach that can be tailored to individual needs. Concrete examples of micro-learning implementation include the use of short videos to explain fundamental concepts, interactive modules for independent practice, and adaptive quizzes designed to assess students' understanding in real-time (Aswan, 2024b; Meyer & Clifford, n.d.). This way, students can access learning anytime and anywhere, which is particularly valuable for those with busy schedules or additional responsibilities outside of formal education. Furthermore, micro-learning not only helps students understand basic concepts but also enables them to develop sustainable learning habits. By delivering information in small doses, this method reduces the risk of learning fatigue and enhances overall student engagement. In the long term, this strategy can build

students' confidence in understanding complex materials and prepare them for academic and professional success.

High correlations between the quality of micro-learning and experiential learning ($r = 0.694^{**}$, $p < 0.01$) highlight the complementary nature of these approaches. When used together, they can significantly enhance student engagement and retention. Micro-learning's ability to provide quick, accessible bursts of information keeps students engaged and allows them to learn at their own pace (Arnidah et al., 2023; Siregar et al., 2023; Siregar & Aswan, 2022). This is particularly beneficial for adult learners or those balancing education with other responsibilities. Experiential learning's immersive nature, on the other hand, fosters a deeper connection to the material. Students are more likely to remember and understand concepts they have applied in a real-world context (Arriany & Aswan, 2022; Pattaufi & Aswan, 2022). This approach also promotes critical thinking, problem-solving, and adaptability—skills that are highly valued in today's job market. While the findings from this study provide valuable insights, there are several areas for future research that could be explored further to enhance our understanding of the relationship between learning quality, micro-learning, and experiential learning. For instance, investigating how different types of (Aswan, 2022b, 2023b, 2023a) micro-learning content (e.g., videos, interactive modules, quizzes) impact learning quality could provide more detailed guidance for educators and curriculum developers.

Combining micro-learning and experiential learning creates an integrated approach that provides maximum benefits for students. In this approach, micro-learning can be used to build a strong knowledge foundation, while experiential learning allows students to apply that knowledge in practical contexts (Trowbridge et al., 2017). For example, students learning physics concepts through micro-learning videos can apply their knowledge in laboratory experiments to understand how those laws work in real-world situations. This integrated approach also provides educators with the flexibility to design

adaptive curricula (Aswan, 2022a; Liew et al., 2023; Siregar et al., 2024c). By using technology to deliver micro-learning and create deep experiential learning experiences, educators can address the needs of students with diverse learning styles. Furthermore, this approach can enhance student motivation by providing engaging and relevant learning experiences.

Exploring the long-term impact of integrating micro-learning and experiential learning on student learning outcomes is a crucial direction for future research. By delving into the sustainable effects of these approaches, educators and researchers can gain a comprehensive understanding of how these methods shape learners, not only in their academic journey but also in their professional and personal lives.

CONCLUSION AND RECOMMENDATION

Conclusion

The correlation analysis between learning quality, micro-learning, and experiential learning provides compelling evidence for the effectiveness of integrating these approaches in modern education. The significant positive correlations indicate that combining micro-learning's structured, incremental content delivery with experiential learning's hands-on, real-world applications can create a powerful educational experience. This combination enhances student engagement, understanding, and retention.

Recommendation

These findings offer valuable guidance for educators and curriculum developers aiming to design more effective and adaptive learning strategies. By leveraging the strengths of both micro-learning and experiential learning, educational institutions can better meet the diverse needs of their students and prepare them for the challenges of the future. This integrated approach not only improves educational outcomes but also fosters the development of well-rounded, capable individuals equipped with the knowledge and skills needed to succeed in an ever-evolving world.

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