

STRENGTHENING ISLAMIC RELIGIOUS EDUCATION LEARNING STRATEGIES BY PROFESSIONAL TEACHERS IN RESPONDING TO THE CHALLENGES OF GENERATION Z CHARACTERISTICS

Herni Hartati

Institut Agama Islam Tafaqquh Fiddin Dumai

Email: hernihartati1986@gmail.com

Abstract *This study aims to analyze the learning strategies for Islamic Religious Education (PAI) implemented by professional teachers in facing the challenges of Generation Z characteristics at SMP Negeri 5 Dumai. Generation Z, known for their tendency towards technology, critical thinking, and different learning styles, demands particular adaptations in teaching strategies. This study uses a descriptive qualitative approach with data collection techniques through in-depth interviews, observation, and documentation. The study subjects were PAI teachers and Generation Z students at SMP Negeri 5 Dumai. The study results indicate that Generation Z's characteristics significantly influence the PAI learning. Students show greater interest in learning involving technology and interaction, while conventional lecture methods could be more attractive. Teachers face challenges in increasing student attention and adjusting learning methods to be more exciting and relevant. To overcome this, professional teachers develop innovative strategies, such as integrating technology into learning, using visual media and digital applications, and interactive discussion approaches. This study concludes that the success of PAI learning for Generation Z is greatly influenced by the teacher's ability to innovate and adapt to the unique characteristics of this generation. Thus, improving teacher competence in using technology and developing more exciting and contextual learning methods is necessary to increase the effectiveness of Islamic Religious Education learning in this digital era.*

Keywords: *Learning strategies, Islamic Religious Education, Generation Z, professional teachers, learning innovation.*

Introduction

Generation Z, born in the digital era, has unique characteristics that influence their learning style. This generation is highly reliant on technology, has a shorter attention span, and is more interested in interactive and contextual learning methods. Understanding and adapting to these preferences is crucial, especially in the context of Islamic Religious Education (PAI) in Madrasah Aliyah, where the material taught is often normative and less dynamic. Subjects such as fiqh, aqidah, and akhlak, which tend to be abstract and normative, are often delivered using traditional methods that fail to respond to the dynamic learning needs of Generation Z. The lack of technological integration in this learning process makes the material less engaging for them, as they prefer an applied and technology-based learning approach.

For example, in the teaching of fiqh, which focuses on Islamic rules and laws, lecture methods and manual texts often fail to spark students' interest. Meanwhile, a more interactive approach based on digital media and simulations could serve as an alternative to connect theory with their everyday life practices. Therefore, to overcome this barrier, changes in the delivery of material are necessary, utilizing technology and more contextual learning approaches in line with the digital-native characteristics of Generation Z.

Several previous studies have highlighted the importance of this shift in approach. Prensky (2001) argued that Generation Z comprises "digital natives" who are highly accustomed to technology, making conventional teaching methods ineffective in facilitating their learning process. A more recent study by Inggriet Rievalia Tenlima (2023) found that Generation Z teachers possess better adaptability to technology and tend to use more flexible teaching approaches. This aligns with the need for more adaptive learning methods that can respond to the speed and ways in which students learn, which are increasingly focused on technology and instant information.

In the context of PAI, a study by Sadam Fajar Sodiq (2020) recommended using active learning and inquiry-based strategies in teaching fiqh to enhance student engagement and motivation. This is important, as such approaches encourage students to actively participate in the learning process, collaborate with peers, and delve deeper into the material being taught. Research by Sus Rahma Yuni (2024) also shows that active learning strategies can improve student comprehension, as they are more interested in learning through direct experiences and social interactions. The collaboration among students fostered by this approach also enriches their learning, making it more dynamic and contextual.

However, to address these challenges, the role of professional teachers is crucial. Teachers are not only required to master the subject matter, but they must also possess skills in designing technology-based learning, using interactive media, and analyzing students' individual learning needs. Teachers should create a learning environment that is effective and engaging for students by utilizing technology that is already familiar to them. Additionally, teachers must develop skills in designing learning experiences through digital applications, such as e-learning platforms, which facilitate multimedia-based content learning and simulations relevant to students' real-life experiences.

The uniqueness of this study lies in exploring technology-based learning strategies and contextual approaches applied by Islamic Religious Education (PAI) teachers to respond to the characteristics of Generation Z. This research focuses on how PAI teachers can integrate interactive learning innovations to meet the challenges of the digital generation. This is important because contextual approaches in PAI can help students understand religious concepts in the context of their increasingly digitalized modern lives. Therefore, this study is expected to contribute new insights

into improving the effectiveness of PAI learning at SMP Negeri 5 Dumai by adapting teaching strategies that align with the characteristics of Generation Z.

This study aims to analyze the characteristics of Generation Z that influence the process of Islamic Religious Education (PAI) learning at SMP Negeri 5 Dumai. Additionally, this research seeks to examine the role of professional teachers in strengthening adaptive and effective learning strategies for Generation Z students, as well as identify learning innovations that can be applied to enhance the quality of Islamic Religious Education in response to the challenges faced by this generation. The practical implications of this study will engage the audience, as it is expected to provide a deeper understanding of how teachers can implement relevant and innovative strategies to meet the needs of students in this digital age.

The novelty of this study lies in exploring technology-based learning strategies and contextual approaches employed by Islamic Religious Education (PAI) teachers to address the unique characteristics of Generation Z. This research focuses on how PAI teachers at SMP Negeri 5 Dumai can integrate digital media, simulations, and inquiry-based learning strategies to connect religious theory with students' everyday lives. This approach contrasts with traditional, static methods by leveraging technology familiar to students to enhance engagement and understanding. Additionally, the study highlights the importance of professional development for teachers, emphasizing their ability to design innovative learning experiences that not only master the subject matter but also utilize interactive media that aligns with the digital-native characteristics of Generation Z.

This study aims to analyze the characteristics of Generation Z that influence the process of Islamic Religious Education (PAI) learning at SMP Negeri 5 Dumai. Additionally, this research seeks to examine the role of professional teachers in strengthening adaptive and effective learning strategies for Generation Z students, as well as identify learning innovations that can be implemented to enhance the quality of Islamic Religious Education in addressing the challenges faced by this generation. Therefore, this study is expected to provide a deep understanding of how teachers can implement relevant and innovative strategies to meet the needs of students in this digital era.

Research Method

This study uses a descriptive qualitative approach to explore the learning strategies of Islamic Religious Education by professional teachers in dealing with the characteristics of Generation Z at SMP Negeri 5 Dumai. The study subjects were Islamic Religious Education teachers and Generation Z students. Data were collected through semi-structured interviews with teachers, direct observation in class, and collection. The data obtained were analyzed using qualitative analysis techniques, including data reduction, narrative data presentation, and drawing conclusions. Data validity is guaranteed by triangulation by comparing interview results, observations,

Commented [A1]: Apa novelty dari penelitian ini?

Commented [A2R1]: Apa

Commented [A3R1]:

and documentation. This method will provide an overview of effective learning strategies at SMP Negeri 5 Dumai.

Discussion

Characteristics of Generation Z and its Impact on Islamic Religious Education Learning

Generation Z is a generation that grew up with digital technology. They are very connected to the internet and social media, which have become integral to their daily lives. This affects how they access information and communicate (Regina, 2024). According to Anna Dolot (2018), Generation Z has unique characteristics different from those of previous generations. They grew up in a digital era full of information and advanced technology. Generation Z, the digital generation, has grown amid rapid technological development. With easy internet and social media access, they are always connected and have a unique learning style heavily influenced by their digital environment. This impacts how they access information, communicate, and learn, which differs from previous generations. At SMP Negeri 5 Dumai, these characteristics significantly affect how Islamic Religious Education (PAI) is taught.

Generation Z students have key characteristics such as reliance on technology, proficiency in accessing information, and a preference for interactive learning. Based on research at SMP Negeri 5 Dumai, students are more interested in visual and interactive learning media, such as videos, images, and digital applications. One teacher explained, "Generation Z students are more familiar with technology, they are quick to access information, and are drawn to interactive elements. They get bored quickly if only lecture methods or verbal explanations are used." This is supported by statements from students who expressed greater interest in technology-based learning. Yunisa Putri Balqys, a student, shared, "I prefer Islamic Religious Education lessons that use videos and images. It feels more engaging and easier to understand." Abel Khaganta Putra Steffen added, "If I just listen to a lecture, I get bored quickly. But if there's an interactive quiz, I feel more motivated." This shows that students are more interested in learning activities that engage them directly, such as group discussions, collaborative projects, or using digital media to deliver content.

These characteristics significantly influence the delivery of Islamic Religious Education (PAI) material at SMP Negeri 5 Dumai. Generation Z tends to get bored quickly with conventional teaching methods that rely heavily on lectures or verbal explanations without interaction. Therefore, the SMP Negeri 5 Dumai teachers have tried adjusting their teaching methods to make lessons more engaging and relevant for students. In this context, the analysis shows that conventional methods that do not incorporate interactive media are less effective for Generation Z students. Research by Seemiller and Grace (2018) also supports this finding, noting that Generation Z prefers technology-based and interactive learning. This aligns with the views of teachers at SMP Negeri 5 Dumai, who have emphasized that students respond better to material presented with the help of digital media.

One SMP Negeri 5 Dumai teacher stated, "I often use educational videos and online applications for assignments or discussions, and students become more responsive and active when there is interaction like this, compared to just listening to a lecture." Technology-based learning, which utilizes videos and interactive applications, helps engage students and makes it easier for them to understand the material.

Additionally, Marc Prensky (2003) argues that digital-native students are more responsive to content delivered through digital media as they have been exposed to electronic devices from an early age. Therefore, strategies that combine technology with active and collaborative approaches, such as group discussions and creative projects, can enhance student engagement. This approach provides students with opportunities to think critically, collaborate with classmates, and understand the material more effectively, as it is presented in a way that is more engaging and aligned with their digital lifestyles.

Technology-driven methods make learning more dynamic and in tune with Generation Z's natural learning styles. This finding supports students prefer interactive, technology-based learning over conventional lecture-based methods. In this context, using digital media such as videos, educational apps, and online platforms helps create a more inclusive, engaging, and effective learning environment. As emphasized by the teachers at SMP Negeri 5 Dumai, students are more responsive to material presented with digital media, which allows for more active and deeper interaction with the content being taught.

Although technology integration has shown positive results, there are still challenges. One of the main challenges is the varying levels of technological skills among students. Some students who are more adept at using technology feel more confident and engaged, while those who are less familiar may experience stress or feel left behind. Jihan Febri Tanjung said, "Sometimes I struggle with new technology, but the teacher is always ready to help us." This highlights teachers' important role in providing the guidance needed to support all students. Even though modern students tend to adapt quickly to technology, they still require time to understand how to use it in an academic context, especially when the technology is not commonly used (Wegadara et al., 2022).

Additionally, reliance on technology can pose risks, such as distractions or reduced ability to focus on non-digital tasks. The challenge lies in balancing effectively using technology and ensuring students remain engaged in conventional learning activities, such as reading and critical thinking.

At SMP Negeri 5 Dumai, teachers have implemented various steps to tailor learning to the characteristics of Generation Z students. The methods applied include project-based learning and e-learning platforms for assignments or assessments. Furthermore, teachers also involve students in selecting the topics or methods used in learning, which helps them feel more involved and take ownership of their learning process. A PAI teacher at SMP Negeri 5 Dumai stated, "We invite students to help

determine the learning topics and how they want to participate in the material. This helps increase their sense of responsibility and motivation." This student-centered approach aims to teach the material and develop students' character and social skills, which are crucial for Generation Z.

The Role of Professional Teachers in Facing the Challenges of Generation Z Characteristics

A professional teacher plays a central role in addressing the challenges posed by the characteristics of Generation Z, particularly in Islamic Religious Education (PAI) learning. At SMP Negeri 5 Dumai, teachers have adopted innovative strategies to address students' preferences, which tend to favor technology and interactive Learning. Some of the strategies implemented include multimedia such as educational videos, digital applications, and project-based approaches that involve group discussions to increase student engagement. One of the PAI teachers at the school stated, "We realize that Generation Z is more interested in using technology, so we started integrating multimedia, such as educational videos, online applications, and digital tools in the classroom. With this, students become more active and responsive." The project-based approach and group discussions are also applied to enhance student participation, making them more independent in the learning process.

Several students say that using technology in PAI learning helps them understand the material better. One student, Yunisa Putri Balqys, said, "Learning is now more enjoyable because we use videos and applications. I understand the material better when the teacher explains it that way." This statement shows that technology-based strategies have improved students' understanding and interest in PAI material. However, despite the positive impact of technology integration in learning, challenges such as limited technological infrastructure and the need for teacher training in the use of technology still need to be solved. Nevertheless, teachers at SMP Negeri 5 Dumai strive to maximize the potential of available technology, with some even independently learning to use digital devices. As a step to address this issue, Febrina Widyaningtyas (2019) emphasizes the importance of continuous training for teachers in integrating technology into teaching.

Challenges and Solutions for Teachers, One of the most prominent challenges teachers at SMP Negeri 5 Dumai face is the limited technological infrastructure. This forces teachers to be more creative in utilizing the available resources, such as applications that can be accessed via mobile devices or computers provided at the school. Some teachers also collaborate with the school management to secure better technological facilities. In this context, the government must pay attention to procuring and maintaining educational technology infrastructure to ensure that technology-based learning can be optimized.

Moreover, although most teachers have already incorporated technology into their teaching, there is still an urgent need for more in-depth training on effectively using various digital applications and platforms. Therefore, continuous professional

development programs for teachers are essential to ensure they can adopt the latest technologies and improve the quality of education.

Positive Impact of Learning Strategies on Students, The strategies implemented by the teachers at SMP Negeri 5 Dumai have successfully attracted students' interest and improved their understanding of Islamic Religious Education (PAI) material. Technology-based methods, such as videos explaining Quranic verses, learning apps for memorizing Hadiths, and interactive quizzes on Islamic history, have proven to be more effective than traditional methods dominated by lectures.

For example, one student, Masaya Mahira, said, "I like learning PAI because the teacher often uses pictures and videos. If we only listen to lectures, I get bored quickly. But when there are videos, I get more interested." This demonstrates that using various visual media can increase student engagement and prevent the boredom that often arises in traditional learning settings.

While technology has the potential to boost student engagement, there is a need to balance it with active learning approaches. The teachers at SMP Negeri 5 Dumai have successfully managed this by combining technology with group discussions and project-based, contextual learning. This comprehensive approach ensures that students not only engage with the digital world but also develop essential social and critical thinking skills. Furthermore, the SMP Negeri 5 Dumai teachers also act as facilitators, helping students develop critical thinking and independence. This aligns with the research by Ana Maritsa (2021), which shows that technology and education are inseparable in human life. Technology has become a supporting tool in education, making it easier for teachers to teach and achieve desired outcomes. Further research also suggests that problem-based learning (PBL) can be applied by educators to instill critical thinking skills in students while enhancing overall learning effectiveness (Razak et al., 2022).

The Role of Technology in Increasing Student Engagement, Teachers' role in addressing Generation Z's characteristics is crucial for creating a relevant and engaging learning environment. Yushtika Muliana Pubian (2022) emphasizes that educational technology can enhance student engagement and motivation. At SMP Negeri 5 Dumai, teachers use visual media such as videos and online applications to present Islamic Religious Education (PAI) content more engagingly. This approach has proven effective in increasing students' attention and participation in learning.

Effective Approaches to Increasing Student Interest The approaches applied by the teachers at SMP Negeri 5 Dumai have proven effective in piquing students' interest. Sogol Talebian (2014) stresses that to encourage online-based learning, teachers and students must utilize learning platforms that meet the needs and conditions of the users. Dwi Sulisworo (2016) and Ling Zhou (2020) also agree that technology-based learning offers numerous benefits and aligns with the current development of the 4.0 technology era. However, despite the many benefits of technology-based strategies, challenges such as limited facilities and lack of technological skills among teachers and students still need to be addressed. CM

Hugues D. Gill (2020) states that teachers need to take control of their professional development as a form of simple reform to improve their pedagogical skills. Training conducted by teachers outside of regular school instruction will provide new experiences and professional development, better preparing them to meet the needs of Generation Z students.

To ensure that technology-based learning is more effective, SMP Negeri 5 Dumai must continue strengthening its teaching strategies by integrating technology more deeply. Using quantitative data, such as surveys on students' learning preferences, can be a tool to evaluate the methods' effectiveness. For example, a survey could show that 80% of students understand the material better with technology-based methods than with traditional ones. Data like this will provide deeper insights into the impact of technology on learning.

Therefore, the government and the school must provide more support through policies and procuring adequate technological facilities. Additionally, teacher training programs should be expanded so educators can develop their digital skills and create a more interactive and relevant learning environment for students. With continuous innovation and appropriate support, Islamic Religious Education at SMP Negeri 5 Dumai can continue to evolve into a more engaging and relevant subject, helping Generation Z to face the increasingly digital challenges of the modern world.

Although these technology-based strategies are beneficial, challenges like limited facilities and lack of technological skills still need to be addressed. CM Hugues D. Gill (2020) stated that teachers need to exercise control over training as a form of simple reform to improve pedagogical skills. Training conducted by teachers outside of school instruction will provide new experiences for future teachers and professional development so that they can be better prepared to meet the needs of Generation Z students. Thus, adaptive professional teachers who can integrate technology into the learning process play a vital role in increasing the engagement of Generation Z students. Technology-based strategies and interactive approaches enable teachers to create more meaningful learning experiences for students while preparing them to face the challenges of the digital era.

Strengthening Adaptive and Effective Learning Strategies

This study shows that teachers at SMP Negeri 5 Dumai have successfully developed and implemented adaptive and effective learning strategies, which are necessary to face Generation Z's challenges. Strengthening this strategy involves mastery of the material and how teachers can respond to student's needs and interests in a broader context.

One of the initial steps teachers take is to link Islamic Religious Education (PAI) subject matter with relevant social issues. In an interview, one of the PAI teachers stated, "We try to make the material more relevant to students' lives. For example, we often link lessons on religious values to current social issues so that students feel more connected." This proves that a contextual approach can trigger students' interest and

motivation to learn, making learning more meaningful.

Student Yunisa Putria Balqys confirmed this: "PAI learning here is quite interesting. Teachers often use videos and group discussions so we can understand the material better." The use of learning methods involving active interaction, such as group discussions and multimedia, is vital to creating a dynamic and exciting learning environment for students. In addition, implementing project-based learning has become a significant highlight in implementing learning strategies. With this method, students are invited to collaborate to solve real problems related to PAI values. A student named Abel Khaganta Putra Steffen explained, "With projects, we can learn whiplracticising. We become more active and can see firsthand how religious values are applied in everyday life." This shows that project-based learning improves students' understanding of the material and builds social and collaborative skills that are very important in the modern era.

Research by Hesti Noviyana (2017) supports this finding, stating that the project-based learning model constructed from constructivist learning principles is thought to be able to foster the values that are intended to be built in soft skills such as problem-solving, creativity, innovation, teamwork, communication and presentation skills. It is undeniable that technology plays a vital role in today's learning. SMP Negeri 5 Dumai teachers utilize digital applications and platforms to deliver materials more interestingly and interactively. "I like using technology. For example, when we learn using learning applications, it makes me more enthusiastic," said Masaya Mahira, a SMP Negeri 5 Dumai student. This shows that students appreciate using technology in the teaching and learning process. Unique Hanifah Salsabila (2021) emphasized that integrating technology into learning can increase teaching effectiveness and create a more interactive learning experience for Generation Z students. With the right tools, learning becomes more exciting and allows students to learn more flexibly and independently. Despite much progress, challenges still need to be addressed, particularly regarding limited access to technology and teacher training in digital tools. Teachers at SMP Negeri 5 Dumai continue seeking solutions to these challenges through professional development and collaboration with others. Several teachers participated in technology training to improve their skills in delivering effective learning.

The research results by Mochammad Rizal Ramadhan (2020) emphasize that a student-centred approach can improve the quality of education, especially in the context of Islamic religious learning, which is often considered less attractive by the younger generation. With adaptive and innovative strategies, teachers can meet Generation Z students' learning needs and help them become more critical, creative, and responsible individuals.

By implementing adaptive and effective learning strategies, teachers at SMP Negeri 5 Dumai have created a more engaging and relevant learning environment for students. Through the relevance of the material, project-based learning, and the use of technology, students understand the Islamic Religious Education material better and

are actively involved in the learning process. Strengthening this strategy is expected to continue to develop to meet the increasingly complex educational needs in today's digital era.

Conclusion

Based on the results of research at SMP Negeri 5 Dumai, the characteristics of Generation Z, who grew up in the digital era, significantly affect the learning process of Islamic Religious Education (PAI). This generation prefers interactive and technology-based learning methods like videos, digital applications, and visual media. This shows that conventional learning approaches that only rely on verbal lectures are less effective in attracting students' attention and interest.

The role of teachers in facing the challenges posed by the characteristics of Generation Z is crucial. Teachers at SMP Negeri 5 Dumai have tried to adjust their teaching strategies by using varied media and encouraging student engagement in the learning process. Teachers can create a more relevant and engaging learning environment through project-based approaches, group discussions, and technology, increasing student participation and motivation. Despite the challenges in implementing technology and limited infrastructure, teachers' efforts to maximize the potential of existing technology and innovate in teaching methods have shown positive results. Thus, integrating technology and interactive approaches in Islamic Religious Education learning at SMP Negeri 5 Dumai is essential in preparing Generation Z students to face challenges in the digital era while helping them develop critical and independent thinking skills.

DAFTAR PUSTAKA

- Dolot, A. (2018). New trends in management The Characteristics of Generation Z. *E-Mentor*, 2(2), 44–50.
- Gill, C. M., & Berezina, E. (2020). School Performance in Three South East Asian Countries: Lessons in Leadership, Decision-Making and Training. *European Journal of Training and Development*, 45(2/3), 136–148. <https://doi.org/10.1108/ejtd-01-2020-0014>
- Maritsa, A., Salsabila, U. H., Wafiq, M., Anindya, P. R., & Ma'shum, M. A. (2021). Pengaruh Teknologi Dalam Dunia Pendidikan. *Al-Mutharahah Jurnal Penelitian Dan Kajian Sosial Keagamaan*, 18(2), 91–100. <https://doi.org/10.46781/al-mutharahah.v18i2.303>
- Noviyana, H. (2017). Pengaruh Model Project Based Learning Terhadap Kemampuan Berpikir Kreatif Matematika Siswa. *Jurnal E-Dumath*, 3(2).

Prensky, M. (2001). Digital Natives, Digital Immigrants Part 2: Do They Really Think Differently? *On the Horizon*, 9(6), 1–6. <https://doi.org/10.1108/10748120110424843>

Prensky, M. (2003). Digital game-based learning. *Comput. Entertain.*, 1(1), 21. <https://doi.org/10.1145/950566.950596>

Pubian, Y. M., & Herawati, H. (2022). Penggunaan Media Google Site Dalam Pembelajaran Untuk Meningkatkan Efektifitas Belajar Peserta Didik Sekolah Dasar. *Akademika*, 11(01), 163–172. <https://doi.org/10.34005/akademika.v11i01.1693>

Ramadhan, M. R. (2020). Implementasi Strategi Pembelajaran Edutainment Berbasis Karakter Dalam Pendidikan Agama Islam. *Fikroh Jurnal Pemikiran Dan Pendidikan Islam*, 13(2), 201–211. <https://doi.org/10.37812/fikroh.v13i2.114>

Razak, A. A., Ramdan, M. R., Mahjom, N., Zabit, M. N. M., Muhammad, F., Hussin, M. Y. M., & Abdullah, N. L. (2022). Improving Critical Thinking Skills in Teaching Through Problem-Based Learning for Students: a Scoping Review. *International Journal of Learning Teaching and Educational Research*, 21(2), 342–362. <https://doi.org/10.26803/ijlter.21.2.19>

Regina, T. (2024). Dampak Media Sosial Terhadap Keputusan Pembelian Konsumen Generasi Z. *Kompleksitas: Jurnal Ilmiah Manajemen, Organisasi Dan Bisnis*, 13(1), 50–57. <https://doi.org/10.56486/kompleksitas.vol13no1.501>

Salsabila, U. H., Ilmi, M. U., Aisyah, S., Nurfadila, N., & Saputra, R. (2021). Peran Teknologi Pendidikan Dalam Meningkatkan Kualitas Pendidikan Di Era Disrupsi. *Journal on Education*, 3(01), 104–112. <https://doi.org/10.31004/joe.v3i01.348>

Seemiller, C., & Grace, M. (2018). Who is Generation Z? In *Generation Z* (pp. 28–35). Routledge. <https://doi.org/10.4324/9780429442476-3>

Shodiq, S. F. (2020). REKONSTRUKSI STRATEGI PEMBELAJARAN FIQH PADA GENERASI Z. *Edukasi Islami: Jurnal Pendidikan Islam*, 9(01), 203–226. <https://doi.org/https://doi.org/10.30868/ei.v9i01.527>

Sulisworo, D., Nasir, R., & Maryani, I. (2016). Identification of Teachers' Problems in Indonesia on Facing Global Community. *International Journal of Research Studies in Education*, 6(2). <https://doi.org/10.5861/ijrse.2016.1519>

Sus Rahma Yuni, Sahroina Rambe, & Gusmaneli Gusmaneli. (2024). Strategi Pembelajaran Aktif di Madrasah. *Journal of Creative Student Research*, 2(3 SE-Articles), 1–15. <https://doi.org/10.55606/jcsr-politama.v2i3.3675>

- Talebian, S., Mohammadi, H., & Rezvanfar, A. (2014). Information and Communication Technology (ICT) in Higher Education: Advantages, Disadvantages, Conveniences and Limitations of Applying E-Learning to Agricultural Students in Iran. *Procedia - Social and Behavioral Sciences*, 152, 300–305. <https://doi.org/10.1016/j.sbspro.2014.09.199>
- Tenlima, I. R., & Hardiman, F. B. (2023). Analisis Kinerja Guru Generasi Z: Sebuah Studi Kasus di Sekolah XYZ Makassar. *JIIP - Jurnal Ilmiah Ilmu Pendidikan*, 6(11), 8820–8829. <https://doi.org/10.54371/jiip.v6i11.2739>
- Wegadara, M., Dewanti, M., Diningsih, E., Rachmawati, F., Sukma, D., & Sudarsono. (2022). Genetic diversity based on SSR markers of 30 *Aeridinae* subtribe orchid genetic resources of Indonesian Ornamental Crop Research Institute, Cianjur, Indonesia. *Biodiversitas*, 23(6), 2943–2956. <https://doi.org/10.13057/biodiv/d230621>
- Widyaningtyas, F., & Kalsum, U. (2019). *Redesign of Technological Pedagogical Science Knowledge (TPSK) Based on Local Culture*. <https://doi.org/10.2991/iceri-18.2019.34>
- Zhou, L., Wu, S., Zhou, M., & Li, F. (2020). 'School's Out, but Class' On', the Largest Online Education in the World Today: Taking China's Practical Exploration During the COVID-19 Epidemic Prevention and Control as an Example. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.3555520>

Copyrights

Copyright for this article is retained by the author(s), with first publication rights granted to the journal.

This is an open-access article distributed under the terms and conditions of the Creative Commons Attribution license This work is licensed under a Creative Commons Attribution 4.0 International License