ANALYSIS OF THE USE OF ARTIFICIAL INTELLIGENCE (AI) IN ENHANCING STUDENTS' LEARNING MOTIVATION AT SMP ADVENT TONDANO

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ABSTRACT

This study explores the use of Artificial Intelligence (AI) in enhancing students' learning motivation at SMP Advent Tondano. Using a qualitative descriptive approach, interviews were conducted with five informants, including the Principal, two teachers, and two students, to examine the implementation, benefits, and challenges of AI-based learning. The findings indicate that AI contributes positively to students' motivation by providing interactive, adaptive, and personalized learning experiences. Features such as real-time feedback, adaptive practice modules, and personalized materials foster greater engagement, curiosity, and independent learning. Both teachers and students highlighted that AI makes learning more enjoyable, challenging, and efficient. However, challenges such as limited devices, unstable internet connections, and varying digital literacy require strategic interventions, including teacher guidance and training. The study concludes that AI, when effectively integrated into classroom instruction, has significant potential to improve learning motivation and outcomes.

Keyword : *Artificial Intelligence (AI), Students' Learning Motivation*

INTRODUCTION

Education is a fundamental foundation in shaping the quality of human resources who are competent, creative, and innovative. The success of the educational process is greatly influenced by students' active engagement in learning, which in turn is determined by learning motivation. Learning motivation is an internal or external drive that affects students' desire to learn, actively participate, and achieve academic goals (Listriyanti Palangda, 2023). High motivation enables students to be more focused, consistent, and resilient in facing learning challenges, while low motivation can lead to boredom, lack of self-confidence, and declining academic performance (Tasya Cindy Hanna et al., 2025).

In the current digital era, students' attention is often diverted by social media and various technologies, making learning motivation a challenge that modern education must address.

The development of information technology has introduced various innovations in education, one of which is the use of Artificial Intelligence (AI). AI can provide an adaptive, personalized, and interactive learning experience. For example, AI-based learning applications can adjust the difficulty level of materials according to students' abilities, provide real-time feedback, and offer engaging challenges to enhance learning interest. Additionally, AI allows teachers to monitor students' progress individually and identify learning difficulties more quickly, enabling timely interventions (Nirmala Ardana et al., 2025). Thus, AI not only facilitates the learning process but also has the potential to significantly improve students' learning motivation.

At SMP Advent Tondano, the implementation of AI in learning is still limited and mostly in the experimental stage. Some teachers have utilized AI-based interactive quiz applications and adaptive learning systems to increase student engagement, but there has not yet been a systematic evaluation of their impact on learning motivation. Based on initial observations and interviews with several teachers and students, learning motivation still varies, with some students showing interest in technology, while others still struggle to focus and fully utilize AI features. This indicates a need to analyze the extent to which AI use is truly effective in enhancing students' learning motivation.

Furthermore, supporting and inhibiting factors in AI implementation also need to be considered. Infrastructure support, teacher readiness, students' technological skills, and the availability of engaging digital content are important variables affecting the effectiveness of AI in learning. On the other hand, limitations such as insufficient devices, unstable internet connections, and differences in students' digital literacy skills can pose serious challenges. Therefore, this study is expected to provide a comprehensive overview of the real conditions in the field and offer recommendations for appropriate AI usage strategies to improve students' learning motivation.

The study conducted by Ramadhani et al. (2025) specifically examined the impact of Artificial Intelligence (AI) on students' learning motivation during the learning process. The study also identified several challenges in implementing AI, including the potential decrease in students' intrinsic motivation when they become overly dependent on AI technology. Low learning motivation greatly affects students' enthusiasm and focus during the learning process. Academic pressures, such as assignment deadlines, encourage students to seek alternative solutions that can assist them in overcoming learning difficulties. This process of exploration introduces students to the latest artificial intelligence technology, which they begin to use as a means to help address challenges in learning.

Based on the description above, this study focuses on addressing several main issues: first, what is the level of students' learning motivation at SMP Advent Tondano before and after the implementation of AI in learning; second, to what extent AI use can enhance students' learning motivation; third, what are the supporting and inhibiting factors affecting the effectiveness of AI in improving learning motivation; and fourth, what AI usage strategies or models are most effective in increasing students' learning motivation. This study is expected to serve as a reference for teachers, schools, and educational stakeholders in optimizing the use of AI to sustainably enhance students' learning motivation.

LITERATURE REVIEW

Learning Motivation

The word motivation originates from the Latin word *movere*, which means "to move" or "to drive." In general, motivation can be defined as the drive that stimulates a person to act or perform certain activities in order to achieve specific goals. In the context of education, motivation is an important factor that determines the extent of students' engagement in the learning process, their consistency in facing challenges, and their ability to achieve optimal learning outcomes. Motivation is a drive that comes from within an individual (internal) or from external factors, which encourages a person to take action or achieve specific goals (Lukita et al., 2021). This drive is not merely a desire, but also encompasses

commitment, enthusiasm, and energy that are consistently directed toward completing certain activities or tasks. In the field of education, motivation plays a crucial role as it determines the extent to which students actively engage in the learning process, face academic challenges, and achieve optimal learning outcomes. Students with high motivation tend to be more focused, diligent, and proactive in seeking information and completing tasks, whereas students with low motivation often struggle to maintain concentration, overcome learning obstacles, and tend to become easily bored or lack self-confidence.

According to Sardiman (2014), students with high learning motivation are characterized by eight main traits. First, they are diligent in completing tasks, able to work continuously for long periods, and do not stop until the task is finished. Second, they are persistent in facing difficulties and do not give up easily. Third, they show interest in various problems. Fourth, they prefer to work independently. Fifth, they do not quickly become bored with routine tasks. Sixth, they are able to maintain their own opinions. Seventh, they do not abandon beliefs they have already held, and eighth, they enjoy seeking and solving problems. These characteristics indicate that high motivation is closely related to students' perseverance, independence, and critical thinking abilities.

Artificial Intelligence (AI)

Along with the rapid development of information technology, various digital innovations have begun to be applied in the field of education to enhance the quality of learning. One of the most prominent technologies is Artificial Intelligence (AI), which is capable of providing a more adaptive, interactive, and personalized learning system. The use of AI in education not only facilitates the teaching and learning process but also creates opportunities for teachers and students to utilize technology as an innovative supportive too.

Definisi Artificial Intelligence (AI) pertama kali diperkenalkan oleh John McCarthy, seorang ahli komputer asal Amerika Serikat, pada tahun 1956. Menurut McCarthy, AI merupakan mesin cerdas yang dikembangkan dari bidang ilmu komputer dan memiliki kemampuan teknologi untuk secara mandiri memperoleh, memproses, dan menyajikan informasi (Budhi, 2022). AI has the potential to

innovate various aspects of education, such as evaluating students' abilities, solving problems, and providing accurate solutions (Tereshchuk & Slobodianiuk, 2023).

Artificial Intelligence (AI) is a system that demonstrates intelligent behavior to achieve specific goals. AI can be implemented as standalone computer programs or embedded within hardware devices with specialized functions (Sulaeman et al., 2025). This technology enables machines to mimic human abilities in decision-making, information processing, and problem-solving automatically. Consequently, AI can be applied across various fields, including education, where it can assist students in understanding material, provide real-time feedback, and support a more personalized and effective learning process.

Although AI technology provides various conveniences in learning, it also has several limitations. AI is less capable of forming its own opinions because the information it processes often relies on outdated and limited sources. Moreover, AI is prone to mathematical errors and has limited capacity for creativity and critical thinking (Sullivan et al., 2023). These limitations suggest that AI should be used as a supportive tool in the learning process rather than as a replacement for teachers or students' thinking abilities. Wise use of AI should be accompanied by human guidance to maximize its benefits while minimizing the risks of errors and over-dependence.

RESEARCH METHOD

This research employs a qualitative approach with a descriptive type to analyze the use of Artificial Intelligence (AI) in enhancing students' learning motivation at SMP Advent Tondano. The informants or sources of this study consist of the Principal, two teachers, and two students, selected purposively to obtain relevant and representative data regarding AI-based learning practices. The data collection technique used is in-depth interviews. Interviews are conducted to gather informants' perspectives on the implementation of AI and its impact on students' learning motivation, while observations are carried out to directly examine students' interactions with AI technology during the learning process. Document studies help to strengthen the data and provide a more comprehensive

contextual overview.

Furthermore, the collected data are analyzed thematically through the steps of data reduction, data display, and conclusion drawing. To ensure data validity, this study employs the triangulation technique, which involves comparing data from multiple sources and methods, thereby making the findings more accurate and reliable. In addition, the research findings are supported by references from literature and previous studies related to the use of AI in education and students' learning motivation, making the analysis stronger and academically relevant (Miles & Huberman, 2014; Creswell, 2018).

FINDINGS AND DISCUSSION

FINDINGS

Table 1. Interview Instrument – Principal

Question	Answer
1. What is your view on the implementation of AI in the learning process at this school?	In my opinion, the implementation of AI at SMP Advent Tondano is an important and relevant innovation in line with the development of digital education today. AI can assist teachers in delivering material interactively and personally, making it easier for students to understand lesson concepts. Additionally, AI helps the school monitor students' learning progress in real-time and provides useful information for more effective lesson planning.
2. What types of AI technology have been used in the classroom?	Some of the AI technologies used include AI-based interactive quiz applications, adaptive learning systems that adjust the difficulty level of questions according to students' abilities, and educational chatbots that can answer students' questions automatically. Although still in the trial phase, the use of these technologies has begun to show positive results in student engagement.
3. In your opinion, does the use of AI affect students' learning motivation? How?	Based on my observation, the use of AI can increase students' learning motivation, especially for those interested in technology. AI makes learning more engaging and challenging because students can receive immediate feedback and practice material

Question	Answer
	according to their abilities. However, some students who are less familiar with technology require additional guidance to stay motivated.
4. What obstacles or challenges are faced in implementing AI at the school?	Some of the challenges include limited computer and tablet devices, unstable internet connections, and varying levels of digital literacy among students and teachers. In addition, some teachers still need training to maximize the use of AI in teaching.
5. What strategies or suggestions can be applied to maximize the use of AI in learning?	I suggest that the school provide regular training for teachers, supply adequate devices and internet connections, and develop AI-based learning materials that are more engaging and aligned with the curriculum. Furthermore, students should be given guidance on using AI so they can fully benefit from this technology in their learning.

Based on the interview with the principal of SMP Advent Tondano, the implementation of artificial intelligence (AI) in the learning process is considered an important and relevant innovation in line with the development of digital education today. AI assists teachers in delivering material interactively and personally, making it easier for students to understand lesson concepts. Additionally, AI allows the school to monitor students' learning progress in real-time and provides useful information for more effective lesson planning. Some of the AI technologies that have been used include AI-based interactive quiz applications, adaptive learning systems that adjust the difficulty level of questions according to students' abilities, and educational chatbots that can automatically answer students' questions. Although still in the trial phase, the use of these technologies has shown positive results in enhancing student engagement in learning.

From the perspective of learning motivation, the principal observed that AI can increase students' interest in learning, especially for those interested in technology, as learning becomes more challenging and students receive immediate feedback tailored to their abilities. However, several challenges exist, such as limited computer and tablet devices, unstable internet connections, and

varying levels of digital literacy among students and teachers. To address these issues, it is recommended that the school provide regular training for teachers, ensure the availability of adequate devices and internet connectivity, and develop AI-based learning materials that are more engaging and aligned with the curriculum. With these strategies, the use of AI can be maximized, thereby improving the overall effectiveness of learning and students' motivation to learn.

Table 2. Interview Instrument – Teacher (Informant 1)

Question	Answer
1. What has been your experience using AI in teaching?	My experience using AI has been quite positive. AI helps me tailor the material to students' abilities and makes learning more interactive. For example, AI quiz applications allow me to see students' understanding in real-time, enabling me to adjust my explanations for topics that are not yet fully understood.
2. Which AI features do you consider most effective in enhancing students' learning motivation?	The most effective features are the automatic feedback provided by AI after students complete tasks or quizzes. Additionally, adaptive learning features that adjust the difficulty of the material according to students' abilities boost their confidence. Interactivity and material visualization through AI also make students more engaged and interested in learning.
3. How do students respond to the use of AI in learning?	Most students show high enthusiasm. They enjoy learning in ways different from conventional methods, such as through interactive quizzes or adaptive modules. However, some students initially struggle to adapt to the technology and require additional guidance from the teacher.
4. Have there been changes in students' engagement or learning motivation after using AI? Explain.	Yes, there have been positive changes, especially among students who were previously less motivated. They become more active in asking questions, attempting additional exercises, and completing tasks more quickly. Their participation in class discussions also improves because AI provides a clearer knowledge base before discussions.
5. What obstacles have you encountered in	The main obstacles are limited devices and varying levels of digital literacy among

Question	Answer
implementing AI, and how have you addressed them?	students. These are addressed by providing short training before using AI, offering user guides for the applications, and adjusting the material to match the average students' abilities.

Based on the principal's responses, the experience of using AI in teaching at SMP Advent Tondano has been largely positive. AI allows teachers to tailor lesson materials according to students' abilities and makes the learning process more interactive. Tools such as AI-based quiz applications enable teachers to monitor students' understanding in real-time, allowing for adjustments in explanations for topics that are not yet fully grasped. Furthermore, features like adaptive learning, automatic feedback, and material visualization enhance students' confidence and engagement, making learning more enjoyable and personalized. Students generally respond enthusiastically to AI-based learning, especially through interactive quizzes and adaptive modules, although some require additional guidance to adapt to the technology.

The implementation of AI has also positively influenced students' motivation and engagement. Students who were previously less motivated have become more active in asking questions, completing additional exercises, and participating in class discussions. Despite challenges such as limited devices and varying levels of digital literacy, these obstacles can be mitigated through teacher training, providing clear user guides, and adjusting learning materials to match students' capabilities. Overall, with proper support and resources, the use of AI in the classroom has proven to be an effective strategy to enhance both learning outcomes and students' motivation to learn**.**

Table 3. Interview Instrument – Teacher (Informant 2)

Question	Answer
1. What has been your experience using AI in teaching?	My experience has been quite interesting and challenging. AI helps me make the material more interactive, especially through quiz applications and adaptive exercises. With AI, I can quickly identify students' difficulties and adjust explanations according to their needs.

Question	Answer
2. Which AI features do you consider most effective in enhancing students' learning motivation?	The most effective features are real-time feedback, which immediately informs students of correct answers and mistakes. Additionally, adaptive modules that adjust question difficulty according to students' abilities help keep them motivated without feeling frustrated.
3. How do students respond to the use of AI in learning?	The majority of students are very enthusiastic and enjoy learning with this technology. They are more active in answering questions and attempting additional exercises. However, a small number need extra guidance as they are using AI technology for the first time.
4. Have there been changes in students' engagement or learning motivation after using AI? Explain.	Yes, an increase in engagement is observed. Students are more diligent in completing exercises, participate more in group discussions, and show greater curiosity. AI makes learning more challenging and engaging, so they stay more focused and motivated.
5. What obstacles have you encountered in implementing AI, and how have you addressed them?	The main obstacles are limited devices, unstable internet connections, and some students' unfamiliarity with technology. To address this, I provide AI usage guides, offer direct guidance, and adjust the learning material to match students' abilities.

Based on the interview with the teacher (Informant 2), the use of AI in learning provides an interesting and challenging experience. The teacher stated that AI helps make lesson materials more interactive, especially through quiz applications and adaptive exercise modules. With these features, teachers can quickly monitor students' difficulties and adjust explanations according to individual needs. The real-time feedback provided by AI after students complete tasks or quizzes is considered highly effective in boosting learning motivation, as students immediately know their correct answers and mistakes. In addition, adaptive modules that adjust the difficulty of the material according to students' abilities help maintain their confidence and keep them motivated without feeling frustrated.

Students' responses to the use of AI are generally positive. Most students

show high enthusiasm, actively answer questions, attempt additional exercises, and participate in group discussions. AI makes learning more challenging and engaging, increasing student involvement and helping them stay more focused in their studies. However, the teacher also identified some obstacles, such as limited devices, unstable internet connections, and some students being unfamiliar with technology. To overcome these issues, the teacher provides AI usage guides, offers direct guidance, and adjusts the material to match the average students' abilities. Overall, the teacher assesses that AI is effective in enhancing students' motivation and engagement in learning.

Table 4: Interview Instrument – Student (1)

Question	Answer
1. Have you ever used AI technology in the learning process? Please explain.	Yes, we have used several AI-based applications such as interactive quizzes and adaptive learning modules. With these applications, we can learn at our own pace and receive immediate answers or explanations if there is something we do not understand.
2. Which AI features help you the most in understanding the learning material?	The automatic feedback feature is very helpful because it immediately shows mistakes and provides explanations that are easy to understand. Additionally, the adaptive practice feature allows us to try questions according to our abilities without feeling too difficult or too easy.
3. Does the use of AI make you more motivated to learn? Why or why not?	Yes, AI makes learning more enjoyable and challenging. We feel curious to try new questions or material and are happy to see our learning progress directly. This makes us more enthusiastic compared to learning only through books or traditional lectures.
4. What difficulties do you experience when using AI in learning?	The difficulties we encounter include sometimes slow internet connections, limited devices, and some AI features being confusing at first. However, after guidance from the teacher, we gradually got used to it and were able to use the technology effectively.
5. What suggestions do you have to make AI use more engaging and helpful for learning?	We hope the school can provide enough devices for all students, make AI materials more interactive and creative, and give more practice time so that we can fully explore and

Question	Answer
	utilize the various AI features.

Based on the interview with the student (Informant 1), the use of AI technology in learning has been a positive and engaging experience. The student reported using AI-based applications such as interactive quizzes and adaptive learning modules, which allow them to learn at their own pace and receive immediate answers or explanations for concepts they do not understand. Features like automatic feedback are particularly helpful, as they instantly highlight mistakes and provide clear explanations, while adaptive practice exercises enable students to attempt questions suited to their ability level without feeling overwhelmed or bored. These features make learning more personalized and effective.

The student also noted that AI increases their motivation to learn because it makes the process more enjoyable, challenging, and interactive compared to traditional methods like textbooks or lectures. Students feel curious and enthusiastic to try new questions and track their own learning progress. However, some challenges exist, such as slow internet connections, limited devices, and occasional confusion with certain AI features, which can be mitigated through teacher guidance. To enhance the effectiveness of AI, students suggested providing sufficient devices, making AI materials more interactive and creative, and allowing more practice time to fully explore and utilize the available AI features. Overall, AI is seen as a valuable tool that boosts both understanding of learning materials and student motivation.

Table 5: Interview Instrument – Student (2)

Question	Answer
1. Have you ever used AI technology in the learning process? Please explain.	Yes, I have used AI through interactive learning applications and adaptive quizzes. With AI, I can learn at my own pace and receive instant answers or explanations if I encounter difficulties.
2. Which AI features help you the most in understanding the	The most helpful feature is real-time feedback from AI, as it shows which

Question	Answer
learning material?	answers are correct or incorrect and provides detailed explanations. The adaptive practice feature also helps me learn at a difficulty level that suits my ability.
3. Does the use of AI make you more motivated to learn? Why or why not?	Yes, I feel more motivated because learning with AI is more enjoyable and challenging. I can try various questions, track my own progress, and feel challenged to complete the material well.
4. What difficulties do you experience when using AI in learning?	The difficulties I encounter include occasionally slow internet connections, some features being hard to understand at first, and limited available devices. However, with the teacher's guidance, I am able to use AI more effectively.
5. What suggestions do you have to make AI use more engaging and helpful for learning?	I hope the school provides more devices so all students can learn with AI simultaneously, makes AI materials more interactive with animations or educational games, and provides additional practice time to better understand the material.

Based on the interview with the student (Informant 2), the use of AI technology in learning has been highly beneficial and supportive. The student shared that AI applications, including interactive learning tools and adaptive quizzes, allow them to learn at their own pace and receive instant feedback or explanations whenever they face difficulties. Real-time feedback is particularly valuable, as it clearly indicates correct and incorrect answers while providing detailed explanations. Additionally, adaptive practice features help students engage with material at a level appropriate to their abilities, making learning both manageable and effective.

The student also expressed that AI significantly increases their motivation to learn. Learning with AI is perceived as more enjoyable and challenging compared to conventional methods, as it allows them to try various questions, monitor their own progress, and feel a sense of accomplishment when completing tasks. Despite some challenges such as occasional slow internet connections, limited devices, and initial difficulty in understanding certain features, teacher

guidance helps students use AI more effectively. To further enhance learning, the student suggested providing more devices, making AI materials more interactive with animations or educational games, and offering additional practice time. Overall, AI is seen as a valuable tool that improves both understanding of the material and students' enthusiasm for learning**.**

DISCUSSION

The results of interviews with five informants at SMP Advent Tondano, consisting of the Principal, two teachers, and two students, indicate that the use of Artificial Intelligence (AI) in learning has a positive impact on students' learning motivation. According to the Principal, AI is considered an important innovation that is relevant to the development of digital education. The Principal emphasized that AI allows teachers to present material in an interactive and personalized manner, as well as to monitor students' learning progress in real-time. This aligns with the findings of Cindy Hanna Tasya et al. (2025), which show that the implementation of AI significantly affects students' motivation to learn, as AI provides a more interactive, adaptive, and personalized learning experience. Features such as real-time feedback, adaptive practice modules, and material tailored to each student's ability can increase student engagement, enthusiasm, and curiosity in the learning process. Students become more proactive in completing tasks, practicing exercises, and exploring materials independently, which in turn strengthens their understanding and self-confidence.

The two teachers interviewed confirmed that AI features, such as interactive quizzes, adaptive modules, and real-time feedback, are very helpful in enhancing students' learning enthusiasm. The first teacher emphasized that AI makes learning more challenging and enjoyable, which encourages students to be more active in completing tasks. The second teacher added that adaptive modules allow students to learn according to their individual abilities, so they do not feel overwhelmed and remain motivated. The factors influencing students' learning motivation are highly complex, encompassing internal aspects such as interest, goals, and self-confidence, as well as external aspects such as teacher support,

learning environment, and technology availability. Therefore, it is important to explore the dimensions of learning motivation related to AI utilization so that the technology can be applied optimally. With proper understanding, AI can be directed to overcome obstacles that may lower motivation, such as boredom, lack of interest, or difficulty understanding the material (Yurt & Kasarci, 2024).

The students interviewed also gave positive responses regarding the use of AI. Both students stated that the real-time feedback and adaptive practice features greatly helped them understand the learning material. They felt more motivated because learning became more engaging and challenging, and they could observe their learning progress directly. This aligns with the findings of Sardiman (2014) and Lukita et al. (2021), which indicate that active engagement and clear feedback are important indicators of learning motivation.

Nevertheless, the interviews also revealed several challenges in implementing AI. The Principal and teachers highlighted limitations in devices, unstable internet connections, and differences in students' digital literacy as major challenges. Students also mentioned initial difficulties in understanding some AI features and limited device availability. This aligns with the study by Sullivan et al. (2023), which states that AI has limitations in terms of creativity, critical thinking, and vulnerability to technical errors, making teacher guidance essential.

Overall, the interview results indicate that AI implementation at SMP Advent Tondano has great potential to enhance students' learning motivation, especially when supported by adequate devices, stable internet connections, and teacher guidance. Personalized and adaptive AI strategies can increase student engagement, enthusiasm, and learning ability. Previous research has shown that the use of AI in learning can improve students' motivation (Ronsumbre et al., 2023). These findings are supported by key factors such as personalized feedback from AI, which helps students understand their progress more effectively, and learning tailored to each student's learning style, thereby increasing their interest and engagement. Additionally, AI provides real-time assistance to address learning difficulties. Students' level of engagement in the learning process becomes an important indicator of their motivation. Explicit teaching strategies,

such as game-based learning and mobile learning, have also been proven to stimulate students' intrinsic motivation. With the right approach, the utilization of AI has great potential to enhance learning motivation, help students understand material better, and effectively overcome learning challenges.

CONCLUSION

The results of this study demonstrate that the implementation of Artificial Intelligence (AI) at SMP Advent Tondano positively influences students' learning motivation. AI facilitates interactive, adaptive, and personalized learning experiences that engage students, foster curiosity, and promote independent learning. Both teachers and students reported increased motivation and active participation, particularly when AI provides real-time feedback and adjusts learning materials to students' individual abilities. Despite challenges such as limited devices, unstable internet, and varying levels of digital literacy, the effective use of AI, supported by teacher guidance and appropriate resources, can significantly enhance students' motivation to learn. Therefore, AI presents a promising tool for improving learning engagement, understanding of materials, and overall academic performance.

REFERENCES

Ardana Nirmala, Henny Indrawati & Fenny Trisnawati. (2025). Pengaruh Pemanfaatan Teknologi Artificial Intelligence terhadap Kemandirian Belajar (Studi pada Mahasiswa Jurusan Pendidikan IPS Universitas Riau). JIIP (Jurnal Ilmiah Ilmu Pendidikan). https://jiip.stkipyapisdompu.ac.id/jiip/index.php/JIIP/article/view/8758/6162

Creswell, John W & J. David Creswell. (2018). Research Design Qualitative, Quantitative, and Mixed Methods Approaches Fifth Edition. SAGE Publications, Inc

Lukita, D., & Sudibjo, N. (2021). Faktor-Faktor yang Mempengaruhi Motivasi Belajar Siswa di Era Pandemi Covid-19.Jurnal Teknologi Pendidikan. https://doi.org/10.36709/jppg.v10i3.591

Miles, M.B, Huberman, A.M, & Saldana, J. (2014). Qualitative Data Analysis, A Methods Sourcebook, Edition 3. USA: Sage Publications. Terjemahan Tjetjep Rohindi Rohidi, UI-Press

Palangda Listriyanti, Joseph P. Kambey & Jackline D. N. Kasangke. Pengaruh Efikasi Diri Dan Dukungan Sosial Terhadap Motivasi BerprestasiSiswa di SMKS Kristen Kawangkoan. INNOVATIVE: Journal Of Social Science Research. https://j-innovative.org/index.php/Innovative

Palangda Listriyanti. (2023). Pengaruh Penerapan Literasi Digital Dan Motivasi Belajar

Terhadap Efektivitas Pembelajaran Siswa Kelas X SMK N 2 Tondano. INNOVATIVE: Journal Of Social Science Research. https://j-innovative.org/index.php/Innovative

Ronsumbre, S., Rukmawati, T., Sumarsono, A., & Waremra, R. S. (2023). Pembelajaran Digital Dengan Kecerdasan Buatan (AI): Korelasi AI terhadap motivasi belajar siswa. Jurnal Educatio, 9(3), 1464 – 1474.

Sardiman. (2014). Interaksi & Motivasi Belajar Mengajar. Jakarta: PT. Raja Grafindo Persada

Sulaeman, M., Maulana, A. R., Hissi, F., & Alifah, P. (2025). Implementasi Teknologi Digital dalam Pendidikan Agama di Sekolah Dasar Juara : Upaya Meningkatkan Efektivitas Pembelajaran, 04(1)

Sullivan, M., Kelly, A., & McLaughlan, P. (2023). ChatGPT in higher education: Considerations for Academic Integrity And Student Learning. Journal of Applied Learning and Teaching, 6(1), 31–40. https://doi.org/10.37074/jalt.2023.6.1.17

Tasya Cindy Hanna, Khresna Bayu Sangka & Dini Octoria. (2025). Pengaruh Pemanfaatan Artificial Intelligence (Ai) Terhadap Motivasi Belajar Mahasiswa Dengan Literasi Digital Sebagai Variabel Moderating. Jurnal Pendidikan Ekonomi (JUPE). https://doi.org/10.26740/jupe.v13n2.p153-165

Tereshchuk, S., & Slobodianiuk, O. (2023). Artificial Intelligence As a Driver of Innovation in Education. Collection of scientific papers Kamianets-Podilsky Ivan Ohienko National University Pedagogical series, 29(045), 36–40. https://doi.org/10.32626/2307-4507.2023-29.36-40

Yurt, E., & Kasarci, I. (2024). A Questionnaire of Artificial Intelligence Use Motives: A Contribution to Investigating the Connection between AI and Motivation. International Journal of Technology in Education, 7(2), 308–325. https://doi.org/10.46328/ijte.725