

Dismantling The Effective Strategy of PGMI INSIP Learning Media In Increasing Interest In Learning Social Sciences

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ABSTRACT

Interest in learning is one of the determining factors for students' success in understanding Social Sciences courses in the PGMI Study Program. The purpose of the research is to analyse the condition of PGMI INSIP students' learning interests in Social Sciences courses. And identify the types of learning media that lecturers have been using in lectures. This study uses a qualitative approach with a descriptive case study. The sample consisted of 3 lecturers teaching Social Sciences courses, 12 PGMI students in semesters 2, 4, and 6, 1 Head of PGMI Study Program, and 1 Administrative Staff. The main instrument in qualitative research is the researcher himself (human instrument). To support data collection, auxiliary instruments were used in the form of Observation Guidelines, Semi-Structured Interview Guidelines, Documentation, and Field Notes. It is used by researchers to record important phenomena during the study. Data analysis uses the Miles, Huberman, and Saldana models, through the stages of Data Reduction, Data Presentation (Data Display), and Conclusion Drawn. The results of the study show that the effective strategy of learning media at PGMI INSIP lies in the use of interactive, visual, collaborative, and digital technology-based media such as Canva, Quizizz, learning videos, and digital social case studies. This study found that PGMI INSIP students are more interested in learning that combines visual elements, group discussions, gamification, and the relationship of the material with social realities in society. This research contributes in the form of a conceptual model of learning media strategies for the PGMI Study Program in increasing students' interest in learning in Social Sciences courses.

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Introduction

Interest in learning is one of the determining factors for students' success in understanding Social Sciences courses in the PGMI Study Program. Surprising facts show that more than half of students at some universities admit to getting bored quickly when lecturers only use lecture methods without supporting media (Meehan & Howard, 2024). If this condition continues to be left unchecked, Social Science learning has the potential to be considered a dry, theoretical, and irrelevant course to real life. Various studies show that the use of interesting, interactive, and technology-based learning media is able to increase student attention, engagement, and learning motivation (An, Xi, & Yu, 2024; Memon et al., 2022; Nuci, Tahir, Wang, & Imran, 2021). Digital media such as learning videos, interactive presentations, and gamification are effective strategies in building a more lively learning atmosphere (Kannan, Warriem, Majumdar, & Ogata, 2022).

In the context of PGMI INSIP, learning media have a strategic position because students are prepared to become prospective Madrasah Ibtidaiyah teachers who must be creative and adaptive to the development of the times (Lansing-Stoeffler & Daley, 2023). Ironically, prospective teachers in the 21st century will be left behind if they are still learning with the 20th-century pattern during college (Brosens, Raes, Octavia, & Emmanouil, 2023; Ng, Leung, Su, Ng, & Chu, 2023). Without learning media innovation, PGMI graduates are at risk of having difficulty competing and are less prepared to face the digital generation in elementary school. Therefore, the application of media such as Canva, Quizizz, Google Classroom, interactive PowerPoint, and educational YouTube not only increases students' interest in learning but also provides real experience on how to teach MI students innovatively (Cavanagh & Kiersch, 2023; López-Martínez, Meroño, Cánovas-López, García-de-Alcaraz, & Martínez-Aranda, 2022). Students tend to be more active in discussing, asking questions, and collaborating when learning is supported by visual and digital media.

In addition to the technological aspect, the effective strategy of learning media also lies in the suitability between media, materials, and student characteristics (Terzieva, Bontchev, Dankov, & Paunova-Hubenova, 2022; Tetzlaff, Schmiedek, & Brod, 2021). Social Science courses are often considered theoretical and boring if they are only delivered through lectures. The results of several studies show that the use of interactive media can increase class participation by up to 68%, increase concept comprehension by 54%, and increase student learning motivation by 61% (Campos-Mesa, Castañeda-Vázquez, DelCastillo-Andrés, & González-Campos, 2022; Mohammed & Ozdamli, 2021; Tani, Manuguerra, & Khan, 2022). When lecturers use social simulations, digital case studies, infographics, interactive maps, and educational games, the material becomes more contextual and easier to understand. This confirms that varied learning media are able to increase students' curiosity and active participation in social studies learning (An et al., 2024).

In general, what is known is that the success of increasing the learning interest of PGMI INSIP students is greatly influenced by the innovation of learning media used by lecturers. Empirical data show that classes that utilise digital media have an average student attendance rate of 82%, while conventional classes are only 64% (Mubaidilla, 2025). In addition, student learning satisfaction increases by up to 73% when learning uses visual and collaborative media (Liu, Wang, Pi, & Yang, 2024; Nuci et al., 2021;

Wong, Hung, Bayuo, & Wong, 2023). The more creative, relevant, and interactive the media is applied, the higher the students' interest in learning Social Sciences. Therefore, the development of modern learning media strategies is an urgent need for universities to be able to produce PGMI graduates who are competent, innovative, and ready to face the challenges of 21st-century education (Holman & Švejdarová, 2023).

Although many studies explain that digital learning media is able to increase students' interest in learning, it is not widely known which media is the most effective specifically for PGMI INSIP students in Social Sciences courses (Al-Rahmi et al., 2022; Jiang, Lam, Chiu, & Ho, 2023). Some studies are still general and carried out in the context of elementary schools or other universities, so they have not described the needs, characteristics, and learning culture of PGMI INSIP students. As a result, lecturers often use trend-based media, rather than being based on empirical evidence that suits campus conditions (Çeken & Taşkın, 2022; Cukurbasi & Kiyici, 2021; Yeung et al., 2022).

In addition, there is still a lack of information about internal student factors that affect the success of using learning media (Nguyen & Chen, 2023; Scheel, Vladova, & Ullrich, 2022; Udeozor, Russo-Abegão, & Glassey, 2023). It is not yet known in depth whether the increase in interest in learning is more influenced by media design, lecturers' teaching styles, students' digital literacy, or the students' personal motivations. This condition is important to research because the same media can produce different impacts on different groups of students (Jiang et al., 2023). Without an understanding of these factors, learning strategies risk not being on target.

Another thing that has not been widely revealed is the sustainability of the influence of learning media on students' interest in learning in the long term (Hoque, Yasin, & Sopian, 2022; Memon et al., 2022). Many studies only measure student enthusiasm after one or two meetings, but have not explained whether such interest remains high for an entire semester (Maluenda-Albornoz, Berríos-Riquelme, Infante-Villagrán, & Lobos-Peña, 2022). It is also not known whether learning media only causes a momentary effect due to the element of technological novelty, or really forms consistent learning habits in PGMI INSIP students (Fazia et al., 2023).

In addition, there are still a few studies that examine the real obstacles to the implementation of learning media strategies within PGMI INSIP (Milla, Zulkipli, Sahar, Reliubun, & Amri, 2024). It is not clear how the limited campus facilities, internet access, lecturer competence, curriculum readiness, and institutional support affect the effectiveness of learning media. This knowledge gap shows the need for in-depth research so that the precise strategies designed are not only ideal in theory, but also realistic, applicable, and according to field needs (Ali & Dahlhaus, 2022; Arvidsson Segerkvist et al., 2021; Peykani et al., 2022).

Literatur Review

Addina, Murwandini, Fatkhulilah, & Takiddin (2025) researched the Utilisation of Social Media Among PGMI Students. The results of the study showed that PGMI students actively use WhatsApp, TikTok, and Instagram for group discussions, sharing materials, and accessing learning resources. Social media is considered to increase creativity and academic connectivity, but it also has the risk of distraction if not managed properly. These findings are relevant because they show that digital media can be a strategic means of increasing the learning interest of PGMI students (Morris-Eyton & Pretorius, 2023).

Muskita & Muskita (2022) in a study on the Influence of Social Media Use on Student Learning Interests found that social media had a positive and significant effect

on students' learning interests, with an influence contribution of 54.5%. This study confirms that the proper use of digital media can be an important factor in increasing student motivation and involvement in the learning process (Ginzburg & Barak, 2023).

Azizah, Afifi, & Nisa (2024) examined the Relationship of PGMI Students' Interest in the Use of Augmented Reality (AR) Technology. The results of the study show that students have a high interest in the use of AR as a learning medium because they can visualise abstract concepts and make learning more interesting. This indicates that immersive technology innovations have great potential to be applied to Social Sciences courses at PGMI INSIP (Walkington, Nathan, Huang, Hunnicutt, & Washington, 2024).

Ramadhani et al. (2025) examined the Role of Quizizz Media in increasing PGSD Students' Learning Interest. The results show that gamification-based media is able to increase students' enthusiasm, activeness, and motivation in attending lectures. These findings reinforce the assumption that interactive media strategies such as Quizizz can also be adapted to the Social Science learning of PGMI students (Kozanitis & Nenciovici, 2023).

Sari, Rasam, & Karlina (2023) examined the Application of Online Learning Media to Students' Learning Interests. The study compared the use of Zoom and Google Classroom and found that the use of online media in a structured manner can increase students' interest in learning during lectures. This study shows that the combination of synchronous and asynchronous platforms can be an effective strategy in Social Science learning at PGMI INSIP (Heilporn, Lakhal, & Bélisle, 2021; Noguera Fructuoso, Albó, & Beardsley, 2022).

This research is urgently carried out to find the right learning media strategy to increase the learning interest of PGMI INSIP students. The novelty of this research lies in the focus of the study that specifically examines PGMI INSIP students as research subjects, because most of the previous studies still researched elementary schools, public schools, or other universities. This research presents the local context of the institution so that the results are more relevant and applicable. The purpose of this study is to analyse the condition of PGMI INSIP students' learning interests in Social Sciences courses. And identify the types of learning media that lecturers have been using in lectures. As well as knowing the influence of learning media on increasing the learning interest of PGMI INSIP students. In addition, it also found the most effective, creative, and innovative learning media strategies in Social Science learning.

Method

This study uses a qualitative approach with a descriptive case study type (Lexy J. Moleong, 2006) This approach was chosen to understand in depth the phenomenon of the use of learning media in the PGMI INSIP Study Program in increasing students' interest in learning in Social Sciences courses. The research location was carried out in the PGMI INSIP Study Program. The research time is planned for 3 months, starting from initial observation, field data collection, and analysis of findings. The research population is the entire academic community involved in the Social Science learning process in the PGMI INSIP Study Program (Amirullah, 2015), including lecturers in Social Sciences courses and active PGMI students. The research sample used a purposive sampling technique. The sample consisted of: 3 lecturers in Social Sciences courses, 12 PGMI students in semesters 2, 4, and 6, 1 Head of PGMI Study Program,

and 1 Administrative Staff. Total informants: 17 people. The main instrument in qualitative research is the researcher himself (Suharsimi Arikunto, 2013). To support data collection, auxiliary instruments are used in the form of: 1. Observation Guidelines, used to observe the learning process, media use, lecturer-student interaction, and student enthusiasm, 2. Semi-Structured Interview Guidelines, Used to lecturers, students, and study program leaders to explore information about learning media strategies, obstacles, and their impact on learning interests, 3. Documentation; Including RPS, photos of learning activities, presentation media, learning videos, student assignment results, and related academic archives. 4. Field Notes, Used by researchers to record important phenomena during the study. The data analysis uses a model (Miles, M. B. & Huberman, 1992) through the following stages: a). Data Reduction: Selecting, focusing, and simplifying data from interviews, observations, and documentation relevant to the research. Data Display (Data Display): Organise data in the form of descriptive narratives, matrices, theme tables, and categories so that they are easy to understand. Conclusion Drawn: Finding patterns, themes, causal relationships, and formulating a precise strategy for PGMI INSIP learning media in increasing interest in learning Social Sciences, d). Data Validity Test; Using the technique of Triangulation of sources (lecturers, students, heads of study programs), Triangulation techniques (interviews, observations, documentation), Member checks (confirmation of results to informants), Peer debriefing (discussions with peers).

Results and Discussion

1. Results

- a. The following are the results of in-depth interviews with research informants consisting of PGMI INSIP students and lecturers:
 - (1) Tuesday, May 12, 2026. Time: 13.04 WIB. Student Interview Sdr. Tahsa Semester 2 said, "Previously, I felt that the Social Science course was quite boring because of a lot of theory and memorisation. But after the lecturer used Quizizz and learning videos, I became more enthusiastic about participating in the class because the atmosphere was more fun."
 - (2) Wednesday, May 13, 2026. Time: 09.06 WIB. An Interview with Students. Mamluatul S. and Lia Yulianah Saputri (Semester 4) expressed the same thing, that "The Canva media used by lecturers is very interesting because it looks good and is easy to understand. I understand the material faster when the explanation is accompanied by images, colours, and infographics."
 - (3) Wednesday, May 13, 2026. Time: 11.09 WIB. Interviews with three students, Fajar Firmansyah, Putri Alya Marshanda, and Zahwa Lailatul Safitri (Semester 6), also revealed the same thing: "When lecturers provide social case studies through news videos and group discussions, I feel that the material becomes close to daily life. So I'm more interested in having an opinion and discussion."
 - (4) Tuesday, May 12, 2026. Time: 12.01 WIB. An interview with Lecturer Mr Mochamad Afroni (Lecturer in Sociology and Educational Anthropology) revealed that "Students now tend to be more responsive if learning uses digital media. If it's just ordinary talk, they get bored quickly. So I try to combine interactive PowerPoint, online quizzes, and discussions."

- (5) Interview with two lecturers, Mr Zainul I and Mr Anas. A Social Sciences Lecturer said the same meaning that "The success of learning media is not only in the application, but also in how the lecturer packages the material. Even simple media can be effective if used with the right strategy and according to the needs of students."
- (6) Tuesday, May 12, 2026. Time: 12.29 WIB. Interview with Mrs Oni Marlina Susianti. Head of PGMI Study Program. Also commented, "We see that the use of innovative learning media has a positive impact on student activity. In the future, the study program will encourage training in digital media making so that lecturers are more creative and professional."
- b. Tabulation of Students' Learning Interest Levels Before and After the Use of Innovative Media

Table 1. Students' learning interests before and after

No	Learning Interest Indicators	Before	After	Improvement
1	Attendance in class	68%	89%	+21%
2	Asking activity	45%	81%	+36%
3	Enthusiastic discussion	52%	86%	+34%
4	Accuracy of task collection	61%	88%	+27%
5	Interest in Social Science material	49%	84%	+35%

Source: Data processing using SPSS V 29.

The data showed a significant increase in interest in learning, where attendance in class increased by 21%, the activeness of asking questions increased by 36%, the enthusiasm for discussion increased by 34%, the accuracy of task collection increased by 27%, and interest in Social Science materials jumped by 35%, thus overall reflecting the success of learning strategies in increasing student motivation, participation, and involvement.

- c. Students' Favourite Learning Media

Table 2. Learning Media that Students Like

No	Media Type	Number of Votes	Percentage
1	Quizizz	5	42%
2	Learning Videos	3	25%
3	Canva Interactive	2	17%
4	PowerPoint Interactive	1	8%
5	Google Classroom	1	8%

Source: Data processing using SPSS V 29.

The data shows that the learning media that students choose the most is Quizizz (42%), followed by Learning Video (25%), then Canva Interactive (17%), while PowerPoint Interactive and Google Classroom are only chosen by 8% each. This shows a strong preference for gamification-based and interactive media, which can increase student engagement and motivation to learn compared to more traditional media.

- d. Students' Favourite Media

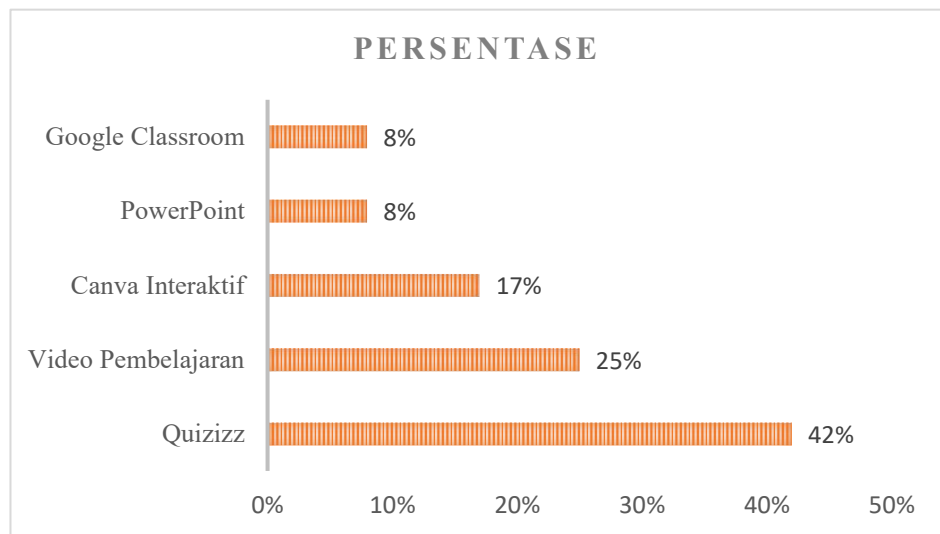


Fig. 1. Learning Media That Is Widely Interested in INSIP Students

The data results show that Quizizz is the most popular media (42%), followed by Learning Videos (25%), then Canva Interactive (17%), while PowerPoint Interactive and Google Classroom are only 8% each. Overall, this preference confirms the tendency of students to choose gamification-based and interactive media that are more interesting and able to increase learning motivation compared to traditional media.

e. Trend Interest in Learning

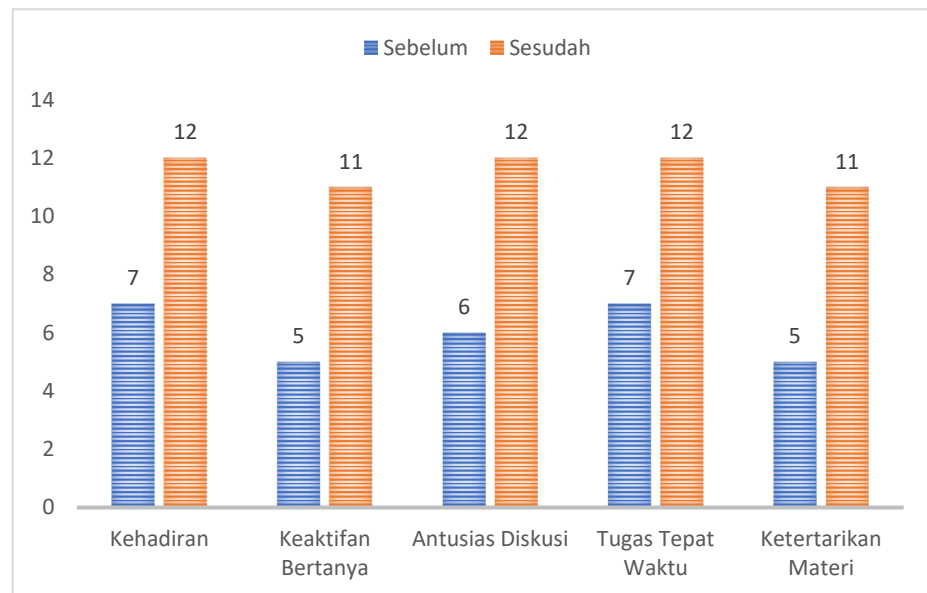


Fig. 2. Interest in Learning From INSIP Students

The interest in learning of INSIP students is very high, with the majority stating that they are very satisfied (58%) and satisfied (27%), so that the total satisfaction reaches 85%. Only a small percentage feel satisfied (10%) and dissatisfied (5%). This shows that the learning programs or services provided are able to meet students' expectations dominantly, while reflecting the quality

of education delivery that is effective, relevant, and has a positive impact on their learning experience.

f. Student Satisfaction

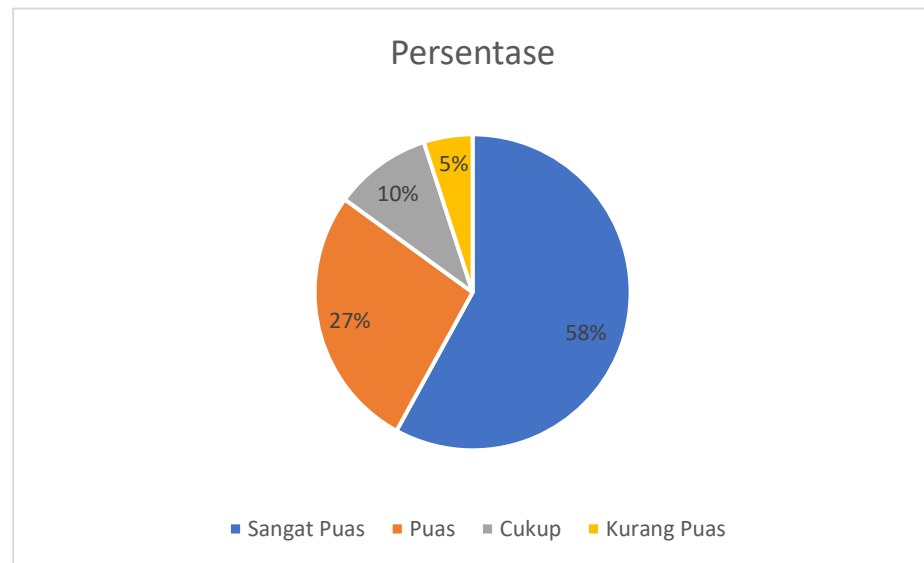


Fig. 3. Student Satisfaction INSIP

INSIP student satisfaction is classified as very positive, with the majority of respondents stating that they are very satisfied (58%) and satisfied (27%), so that the total satisfaction reaches 85%. Only a small percentage feel satisfied (10%) and dissatisfied (5%). These findings show that the services or learning experiences provided can meet the expectations of students dominantly, while affirming the quality of learning that is effective and relevant to their needs.

2. Discussion

- a) Other findings show that the main obstacles to the implementation of learning media at PGMI INSIP lie in facilities, digital literacy, and institutional readiness. Some students experience internet network constraints, device limitations, and uneven ability to use learning applications (Aroonsrimarakot, Laiphrakpam, Chathiphot, Saengsai, & Prasri, 2023; Barrot, Llenares, & del Rosario, 2021). On the lecturer side, there is still a need for training in digital media development. This answers a question that has not been previously revealed: that the right strategy for learning media must be supported by campus policies, improving infrastructure facilities, and strengthening the digital competence of lecturers so that the results are optimal in increasing interest in learning Social Sciences (Esteve-Mon et al., 2023; Ng et al., 2023; Vodă et al., 2022; Wohlfart & Wagner, 2023).
- b) In addition, research reveals that the influence of learning media on learning interests is sustainable if used variously and consistently. At first, students were interested because of the element of technological novelty, but this interest persisted when lecturers continued to present media variations, collaborative assignments, social case studies, and educational game-based evaluations (Agbo, Olaleye, Bower, & Oyelere, 2023; Awidi & Paynter, 2024). Thus, the answer to the previous *unknown issue* is that learning media does not only have

a momentary effect, but can foster an active learning culture if designed sustainably (Cheung, Wang, & Kwok, 2021; Schneider, Beege, Nebel, Schnaubert, & Rey, 2022; Tani et al., 2022).

- c) This study also found that the success of learning media is not only determined by its technology, but is greatly influenced by the competence of lecturers in managing learning. Students stated that even simple media can be interesting if lecturers are communicative, able to connect material with actual social issues, and provide space for discussion (Bryant, 2023; Garcia-Mila et al., 2021; Schnell & Podeschi, 2022). On the other hand, advanced media is not always effective when used monotonously. These findings answer the previous uncertainty about the dominant factors for increasing interest in learning, namely not the media alone, but the synergy between media, teaching methods, and lecturer-student interaction (Fernández-Rodríguez, Arenas-Fenollar, Lacruz-Pérez, & Tárraga-Mínguez, 2023; Ho, Zhang, Li, & Zhang, 2023).
- d) Although learning media have been widely used in the lecture process, the results of the study show that not all types of media are effective for PGMI INSIP students in the Social Sciences course. Field findings show that students are more interested in visual-interactive media such as learning videos, Canva, Quizizz, and digital simulations than in conventional text-based presentation media (Mason et al., 2022; Schorn, 2022; Sutherland et al., 2024; Tani et al., 2022). This answers the previous problem, namely that the most suitable media turns out to be the media that is able to present an active, collaborative, and contextual learning experience with students' daily social lives (Nagarajan & Sen, 2022; Oyarzun & Martin, 2023).

Conclusion

The results of the study show that the effective strategy of learning media at PGMI INSIP lies in the use of interactive, visual, collaborative, and digital technology-based media such as Canva, Quizizz, learning videos, and digital social case studies. The media has been proven to be able to increase the attention, participation, and enthusiasm of students in participating in Social Science lectures. Thus, learning media that is designed creatively and according to the character of students can significantly increase the interest in learning Social Sciences. The more innovative and relevant the media used by lecturers, the higher the motivation and involvement of students in the learning process. This study found that PGMI INSIP students are more interested in learning that combines visual elements, group discussions, gamification, and the relationship of the material with social realities in society. This condition shows that interest in learning grows when students feel that learning is meaningful, fun, and participatory. In addition to digital media, the success of increasing learning interest is also influenced by lecturers' competence in choosing methods, managing classes, and creating active academic interactions. This means that learning media is optimal if it is supported by good pedagogic skills of lecturers. This research contributes in the form of a conceptual model of learning media strategies for the PGMI Study Program in increasing students' interest in learning in Social Sciences courses. In addition, this research enriches the study of Islamic higher education related to the integration of learning technology in preparing prospective Madrasah Ibtidaiyah teachers who are adaptive to the digital era. Theoretically, this research strengthens the theory of constructivism and the theory of learning motivation, which asserts that an interactive learning environment can increase student engagement. Practically, the results of this research can be used as a reference for PGMI INSIP lecturers to choose learning media that

are effective, creative, and meet the needs of students. Institutions can also use the results of this research as a basis for lecturer training, procurement of digital facilities, and the development of educational technology-based curricula. This research has limitations on the number of informants, who are limited to the PGMI INSIP environment, so that the results cannot be generalised to all universities. In addition, the research focuses more on the subjects' perceptions and experiences, so it has not measured the quantitative impact of increasing learning interest statistically in the long term.

References

- Agbo, F. J., Olaleye, S. A., Bower, M., & Oyelere, S. S. (2023). Examining the relationships between students' perceptions of technology, pedagogy, and cognition: the case of immersive virtual reality mini games to foster computational thinking in higher education. *Smart Learning Environments*, 10(1), 16. <https://doi.org/10.1186/s40561-023-00233-1>
- Al-Rahmi, A. M., Shamsuddin, A., Wahab, E., Al-Rahmi, W. M., Alyoussef, I. Y., & Crawford, J. (2022). Social media use in higher education: Building a structural equation model for student satisfaction and performance. *Frontiers in Public Health*, 10. <https://doi.org/10.3389/fpubh.2022.1003007>
- Ali, B., & Dahlhaus, P. (2022). Roles of Selective Agriculture Practices in Sustainable Agricultural Performance: A Systematic Review. *Sustainability*, 14(6), 3185. <https://doi.org/10.3390/su14063185>
- Amirullah. (2015). *Metode Penelitian Manajemen*. Bayumedia Publishing.
- An, F., Xi, L., & Yu, J. (2024). The relationship between technology acceptance and self-regulated learning: the mediation roles of intrinsic motivation and learning engagement. *Education and Information Technologies*, 29(3), 2605–2623. <https://doi.org/10.1007/s10639-023-11959-3>
- Aroonsrimarakot, S., Laiphrakpam, M., Chathiphot, P., Saengsai, P., & Prasri, S. (2023). RETRACTED ARTICLE: Online learning challenges in Thailand and strategies to overcome the challenges from the students' perspectives. *Education and Information Technologies*, 28(7), 8153–8170. <https://doi.org/10.1007/s10639-022-11530-6>
- Arvidsson Segerkvist, K., Hansson, H., Sonesson, U., & Gunnarsson, S. (2021). A Systematic Mapping of Current Literature on Sustainability at Farm-Level in Beef and Lamb Meat Production. *Sustainability*, 13(5), 2488. <https://doi.org/10.3390/su13052488>
- Awidi, I. T., & Paynter, M. (2024). An Evaluation of the Impact of Digital Technology Innovations on Students' Learning: Participatory Research Using a Student-Centred Approach. *Technology, Knowledge and Learning*, 29(1), 65–89. <https://doi.org/10.1007/s10758-022-09619-5>
- Barrot, J. S., Llenares, I. I., & del Rosario, L. S. (2021). Students' online learning challenges during the pandemic and how they cope with them: The case of the Philippines. *Education and Information Technologies*, 26(6), 7321–7338. <https://doi.org/10.1007/s10639-021-10589-x>
- Brosens, L., Raes, A., Octavia, J. R., & Emmanouil, M. (2023). How future proof is design education? A systematic review. *International Journal of Technology and Design Education*, 33(2), 663–683. <https://doi.org/10.1007/s10798-022-09743-4>
- Bryant, P. (2023). Student experience and digital storytelling: Integrating the authentic interaction of students work, life, play and learning into the co-design of university teaching practices. *Education and Information Technologies*, 28(11), 14051–14069. <https://doi.org/10.1007/s10639-022-11566-8>
- Campos-Mesa, M.-C., Castañeda-Vázquez, C., DelCastillo-Andrés, Ó., & González-Campos, G. (2022). Augmented Reality and the Flipped Classroom – A Comparative Analysis of University Student Motivation in Semi-Presence-Based Education Due to COVID-19: A Pilot Study. *Sustainability*, 14(4), 2319. <https://doi.org/10.3390/su14042319>

- Cavanagh, T. M., & Kiersch, C. (2023). Using commonly-available technologies to create online multimedia lessons through the application of the Cognitive Theory of Multimedia Learning. *Educational Technology Research and Development*, 71(3), 1033–1053. <https://doi.org/10.1007/s11423-022-10181-1>
- Çeken, B., & Taşkın, N. (2022). Multimedia learning principles in different learning environments: a systematic review. *Smart Learning Environments*, 9(1), 19. <https://doi.org/10.1186/s40561-022-00200-2>
- Cheung, S. K. S., Wang, F. L., & Kwok, L. F. (2021). The Continuous Pursuit of Smart Learning. *Australasian Journal of Educational Technology*, 37(2), 1–6. <https://doi.org/10.14742/ajet.7207>
- Cukurbasi, B., & Kiyici, M. (2021). Instructional design and instructional effectiveness in virtual classrooms: Research trends and challenges. *Australasian Journal of Educational Technology*, 156–174. <https://doi.org/10.14742/ajet.6882>
- Esteve-Mon, F. M., Postigo-Fuentes, A. Y., & Castañeda, L. (2023). A strategic approach of the crucial elements for the implementation of digital tools and processes in higher education. *Higher Education Quarterly*, 77(3), 558–573. <https://doi.org/10.1111/hequ.12411>
- Fazia, T., Bubbico, F., Nova, A., Buizza, C., Cela, H., Iozzi, D., Calgan, B., Maggi, F., Floris, V., Sutti, I., Bruno, S., Ghilardi, A., & Bernardinelli, L. (2023). Improving stress management, anxiety, and mental well-being in medical students through an online Mindfulness-Based Intervention: a randomized study. *Scientific Reports*, 13(1), 8214. <https://doi.org/10.1038/s41598-023-35483-z>
- Fernández-Rodríguez, C. A., Arenas-Fenollar, M. C., Lacruz-Pérez, I., & Tárraga-Mínguez, R. (2023). Teaching Methods in Medical Education: An Analysis of the Assessments and Preferences of Students. *Sustainability*, 15(11), 9044. <https://doi.org/10.3390/su15119044>
- Garcia-Mila, M., Miralda-Banda, A., Luna, J., Remesal, A., Castells, N., & Gilabert, S. (2021). Change in Classroom Dialogicity to Promote Cultural Literacy across Educational Levels. *Sustainability*, 13(11), 6410. <https://doi.org/10.3390/su13116410>
- Ginzburg, T., & Barak, M. (2023). Technology-Enhanced Learning and Its Association with Motivation to Learn Science from a Cross-Cultural Perspective. *Journal of Science Education and Technology*, 32(4), 597–606. <https://doi.org/10.1007/s10956-023-10048-x>
- Heilporn, G., Lakhal, S., & Bélisle, M. (2021). An examination of teachers' strategies to foster student engagement in blended learning in higher education. *International Journal of Educational Technology in Higher Education*, 18(1), 25. <https://doi.org/10.1186/s41239-021-00260-3>
- Ho, C.-H., Zhang, H., Li, J., & Zhang, M. (2023). Development and Application of Interactive Teaching Systems for Online Design Courses. *International Journal of Distance Education Technologies*, 21(2), 1–28. <https://doi.org/10.4018/ijdet.317365>
- Holman, D., & Švejdárová, E. (2023). The 21st-Century Empowering Wholeness Adaptive (EWA) Educational Model Transforming Learning Capacity and Human Capital through Wholeness Systems Thinking towards a Sustainable Future. *Sustainability*, 15(2), 1301. <https://doi.org/10.3390/su15021301>
- Hoque, F., Yasin, R. M., & Sopian, K. (2022). Revisiting Education for Sustainable Development: Methods to Inspire Secondary School Students toward Renewable Energy. *Sustainability*, 14(14), 8296. <https://doi.org/10.3390/su14148296>
- Jiang, M., Lam, A. H. C., Chiu, D. K. W., & Ho, K. K. W. (2023). Social media aids for business learning: A quantitative evaluation with the 5E instructional model. *Education and Information Technologies*, 28(9), 12269–12291. <https://doi.org/10.1007/s10639-023-11690-z>
- Kannan, V., Warriem, J. M., Majumdar, R., & Ogata, H. (2022). Learning dialogs orchestrated with BookRoll: effects on engagement and learning in an undergraduate physics course. *Research and Practice in Technology Enhanced Learning*, 17(1), 28. <https://doi.org/10.1186/s41039-022-00203-0>

- Kozanitis, A., & Nenciovici, L. (2023). Effect of active learning versus traditional lecturing on the learning achievement of college students in humanities and social sciences: a meta-analysis. *Higher Education*, 86(6), 1377–1394. <https://doi.org/10.1007/s10734-022-00977-8>
- Lansing-Stoeffler, K., & Daley, N. (2023). Navigating the Spectrum of Conventionality: Toward a New Model of Creative Thinking. *Journal of Intelligence*, 11(2), 21. <https://doi.org/10.3390/jintelligence11020021>
- Lexy J. Moleong. (2006). *Metodologi Penelitian Kualitatif*. Remaja Rosdakarya.
- Liu, C., Wang, L., Pi, Z., & Yang, J. (2024). Interaction matters: Co-viewing facilitates learning from live video streaming for elementary students. *Education and Information Technologies*, 29(2), 2387–2411. <https://doi.org/10.1007/s10639-023-11920-4>
- López-Martínez, A., Meroño, L., Cánovas-López, M., García-de-Alcaraz, A., & Martínez-Aranda, L. M. (2022). Using Gamified Strategies in Higher Education: Relationship between Intrinsic Motivation and Contextual Variables. *Sustainability*, 14(17), 11014. <https://doi.org/10.3390/su141711014>
- Maluenda-Albornoz, J., Berríos-Riquelme, J., Infante-Villagrán, V., & Lobos-Peña, K. (2022). Perceived Social Support and Engagement in First-Year Students: The Mediating Role of Belonging during COVID-19. *Sustainability*, 15(1), 597. <https://doi.org/10.3390/su15010597>
- Mason, L., Tarchi, C., Ronconi, A., Manzione, L., Latini, N., & Bråten, I. (2022). Do medium and Context Matter when learning from multiple complementary Digital texts and videos? *Instructional Science*, 50(5), 653–679. <https://doi.org/10.1007/s11251-022-09591-8>
- Meehan, M., & Howard, E. (2024). The university mathematics lecture: to record, or not to record, that is the question. *Mathematics Education Research Journal*, 36(2), 285–310. <https://doi.org/10.1007/s13394-023-00444-2>
- Memon, M. Q., Lu, Y., Memon, A. R., Memon, A., Munshi, P., & Shah, S. F. A. (2022). Does the Impact of Technology Sustain Students' Satisfaction, Academic and Functional Performance: An Analysis via Interactive and Self-Regulated Learning? *Sustainability*, 14(12), 7226. <https://doi.org/10.3390/su14127226>
- Miles, M. B. & Huberman, M. (1992). *Analisis Data Kualitatif*. Universitas Indonesia Press.
- Milla, D., Zulkipli, Z., Sahar, A., Reliubun, A. S., & Amri, H. (2024). Penerapan Teknologi Pendidikan: Menghadapi Kendala, Menciptakan Solusi. *Indo-MathEdu Intellectuals Journal*, 5(6), 7416–7425. <https://doi.org/10.54373/imeij.v5i6.2109>
- Mohammed, Y. B., & Ozdamli, F. (2021). Motivational Effects of Gamification Apps in Education: A Systematic Literature Review. *BRAIN. BROAD RESEARCH IN ARTIFICIAL INTELLIGENCE AND NEUROSCIENCE*, 12(2). <https://doi.org/10.18662/brain/12.2/196>
- Moleong, L. J. (2007). *Metodologi Penelitian Kualitatif*. PT Remaja Rosdakarya.
- Morris-Eyton, H., & Pretorius, E. (2023). Cultivating a Digital Promise: Promoting Reflective and Reflexive Activities to Enhance Self-Directed Learning for the 21st Century. *Student Success*, 14(1), 88–99. <https://doi.org/10.5204/ssj.2659>
- Mubaidilla, I. A. (2025). Digital Media vs. Conventional Media: Effectiveness of Learning in Primary Education. *Pedagogik Journal of Islamic Elementary School*, 750–766. <https://doi.org/10.24256/pijies.v8i2.7762>
- Nagarajan, A., & Sen, A. (2022). Can Bloom's Higher Order Thinking skills be achieved by Gamified Learning through Social Networking Site (SNS) like Facebook? *Interaction Design and Architecture(S)*, 53, 144–160. <https://doi.org/10.55612/s-5002-053-007>
- Ng, D. T. K., Leung, J. K. L., Su, J., Ng, R. C. W., & Chu, S. K. W. (2023). Teachers' AI digital competencies and twenty-first century skills in the post-pandemic world. *Educational Technology Research and Development*, 71(1), 137–161. <https://doi.org/10.1007/s11423-023->

10203-6

- Nguyen, V. T. T., & Chen, H.-L. (2023). Examining impacts of information system success and perceived stress on students' self-regulated learning mediated by intrinsic motivation in online learning environments: second-order structural equation modelling analyses. *Education and Information Technologies*, 28(10), 12945–12968. <https://doi.org/10.1007/s10639-023-11685-w>
- Noguera Fructuoso, I., Albó, L., & Beardsley, M. (2022). University students' preference for flexible teaching models that foster constructivist learning practices. *Australasian Journal of Educational Technology*, 38(4), 22–39. <https://doi.org/10.14742/ajet.7968>
- Nuci, K. P., Tahir, R., Wang, A. I., & Imran, A. S. (2021). Game-Based Digital Quiz as a Tool for Improving Students' Engagement and Learning in Online Lectures. *IEEE Access*, 9, 91220–91234. <https://doi.org/10.1109/ACCESS.2021.3088583>
- Oyazun, B., & Martin, F. (2023). A Systematic Review of Research on Online Learner Collaboration from 2012–21: Collaboration Technologies, Design, Facilitation, and Outcomes. *Online Learning*, 27(1). <https://doi.org/10.24059/olj.v27i1.3407>
- Peykani, P., Namazi, M., & Mohammadi, E. (2022). Bridging the knowledge gap between technology and business: An innovation strategy perspective. *PLOS ONE*, 17(4), e0266843. <https://doi.org/10.1371/journal.pone.0266843>
- Permadi, M. A. M. Muzhaffar, & Sya'ban, WKSJH (2025). Analisis perbandingan sistem pengajaran pesantren tradisional dan modern di Indonesia. *Journal of Islamic Transformation and Education Management*, 2(1), 25-31.
- Permadi, M. A. M., & Sya'ban, W. K. (2025). T Transformasi Pendidikan Islam: Studi Komparatif Sistem Pengajaran di Pesantren Tradisional dan Pesantren Modern: Transformasi Pendidikan Islam: Studi Komparatif Sistem Pengajaran di Pesantren Tradisional dan Pesantren Modern. *Transformation of Islamic Management and Education*, 2(1), 18-24.
- Permadi, M. A. M., Syaban, W. K., Habibi, M. I., Purnama, F., & Ampera, S. (2026). The Dynamics Of Learning Difficulties Among Students At Islamic Boarding Schools In The Digital Age: Between Tradition And Technological Limitations. *Al-Ulum: Jurnal Pendidikan Islam*, 7(1), 202-218.
- Permadi, M. A. M., & Hilalludin, H. (2025). Reaktualisasi Hukum Islam Dalam Menjawab Tantangan Moderasi Beragama Di Era Globalisasi. *IMANU: Jurnal Hukum Dan Peradaban Islam*, 1(03), 29-40.
- Scheel, L., Vladova, G., & Ullrich, A. (2022). The influence of digital competences, self-organization, and independent learning abilities on students' acceptance of digital learning. *International Journal of Educational Technology in Higher Education*, 19(1), 44. <https://doi.org/10.1186/s41239-022-00350-w>
- Schneider, S., Beege, M., Nebel, S., Schnaubert, L., & Rey, G. D. (2022). The Cognitive-Affective-Social Theory of Learning in digital Environments (CASTLE). *Educational Psychology Review*, 34(1), 1–38. <https://doi.org/10.1007/s10648-021-09626-5>
- Schnell, Z., & Podeschi, C. (2022). A novel methodology of international discourse: online joint course across cultures. *Humanities and Social Sciences Communications*, 9(1), 216. <https://doi.org/10.1057/s41599-022-01233-1>
- Schorn, A. (2022). Online explainer videos: Features, benefits, and effects. *Frontiers in Communication*, 7. <https://doi.org/10.3389/fcomm.2022.1034199>
- Suharsimi Arikunto. (2013). *Prosedur Penelitian: Suatu Pendekatan Praktik*. Rineka Cipta.
- Sutherland, K., Brock, G., de Villiers Scheepers, M. J., Millear, P. M., Norman, S., Strohfeltd, T., Downer, T., Masters, N., & Black, A. L. (2024). Non-traditional students' preferences for learning technologies and impacts on academic self-efficacy. *Journal of Computing in Higher Education*, 36(2), 298–319. <https://doi.org/10.1007/s12528-023-09354-5>

- Tani, M., Manuguerra, M., & Khan, S. (2022). Can videos affect learning outcomes? Evidence from an actual learning environment. *Educational Technology Research and Development*, 70(5), 1675–1693. <https://doi.org/10.1007/s11423-022-10147-3>
- Terzieva, V., Bontchev, B., Dankov, Y., & Paunova-Hubenova, E. (2022). How to Tailor Educational Maze Games: The Student's Preferences. *Sustainability*, 14(11), 6794. <https://doi.org/10.3390/su14116794>
- Tetzlaff, L., Schmiedek, F., & Brod, G. (2021). Developing Personalized Education: A Dynamic Framework. *Educational Psychology Review*, 33(3), 863–882. <https://doi.org/10.1007/s10648-020-09570-w>
- Udeozor, C., Russo-Abegão, F., & Glassey, J. (2023). Perceptions and factors affecting the adoption of digital games for engineering education: a mixed-method research. *International Journal of Educational Technology in Higher Education*, 20(1), 2. <https://doi.org/10.1186/s41239-022-00369-z>
- Vodă, A. I., Cautisanu, C., Grădinaru, C., Tănăsescu, C., & de Moraes, G. H. S. M. (2022). Exploring Digital Literacy Skills in Social Sciences and Humanities Students. *Sustainability*, 14(5), 2483. <https://doi.org/10.3390/su14052483>
- Walkington, C., Nathan, M. J., Huang, W., Hunnicutt, J., & Washington, J. (2024). Multimodal analysis of interaction data from embodied education technologies. *Educational Technology Research and Development*, 72(5), 2565–2584. <https://doi.org/10.1007/s11423-023-10254-9>
- Wohlfart, O., & Wagner, I. (2023). Teachers' role in digitalizing education: an umbrella review. *Educational Technology Research and Development*, 71(2), 339–365. <https://doi.org/10.1007/s11423-022-10166-0>
- Wong, A. K. C., Hung, T. T. M., Bayuo, J., & Wong, F. K. Y. (2023). The development and implementation of a blended video watching and peer learning model for master's nursing students: a quasi-experimental study. *BMC Nursing*, 22(1), 62. <https://doi.org/10.1186/s12912-023-01204-0>
- Yeung, A. W. K., Parvanov, E. D., Hribersek, M., Eibensteiner, F., Klager, E., Kletecka-Pulker, M., Rössler, B., Schebesta, K., Willschke, H., Atanasov, A. G., & Schaden, E. (2022). Digital Teaching in Medical Education: Scientific Literature Landscape Review. *JMIR Medical Education*, 8(1), e32747. <https://doi.org/10.2196/32747>