

The Influence of Active Learning Models on the Learning Outcomes of PGSD Students in Semester 2

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ABSTRACT

Objective: This study aims to explore the impact of active learning models on student learning outcomes in the PGSD Study Program in semester 2 using a qualitative approach. **Method:** The method chosen was a qualitative survey through an open-ended questionnaire, combined with a phenomenological approach to deeply understand students' personal experiences of active learning. A total of 79 respondents participated in this study. Data were analyzed by thematic analysis to find meaning and patterns in the learning experience. **Result:** The results showed that the active learning model had a positive impact on increasing students' participation, understanding of the material, and sense of responsibility for learning. Students feel more cognitively and affectively fulfilled, and can connect learning with real-world experiences. **Novelty:** The findings confirm the importance of andragogy principles in higher education, where students as adult learners benefit more from participatory and reflective learning processes.

INTRODUCTION

Active learning is a learning method that directly involves students in the process of building knowledge, solving challenges, and forming new understandings through participation in thinking activities. Active learning designs aim to create closeness between teachers and students in a discussion or learning platform. The impact of learning models on student participation in the classroom plays a crucial role. "The context of the importance of student involvement and participation in the learning process is closely related to the understanding of students' active roles during learning" [1]. This aligns with the educational goals stipulated in national legislation aimed at developing life and shaping the character and civilization of the nation, as well as exploring students' potential to become individuals who are obedient and faithful to God Almighty, have good morals, are healthy, knowledgeable, skilled, creative, independent, and become responsible and democratic citizens (Law No. 20 of 2003: 6). With active involvement, students are encouraged to think critically and analyze data. They are encouraged to formulate arguments, solve problems, and make appropriate decisions. This contributes to the development of critical thinking skills, which are essential for their daily lives and future. Active participation includes group work, discussions, and social interactions. This provides opportunities for them to learn to collaborate, respect others' perspectives, build effective communication, and hone social skills essential for interacting with others.

According to [2]"learning outcomes describe the competencies of students who successfully apply content, information, ideas, and tools obtained in learning [3]." Therefore, learning outcomes are the abilities and skills that students must have and

acquire after participating in learning. With this active learning method, students can also find their learning style, resulting in better achievements after the learning process. Active learning strategies play an important role in improving the quality of learning. This model not only makes students more involved, but also fosters a sense of enthusiasm and direct participation in the learning process, creating an interactive, dynamic, and supportive classroom atmosphere for learning.

Within the framework of strengthening active learning processes, several recent studies have shown that methodological innovations such as flipped classrooms and audio-based media have great potential in optimizing learning outcomes and student engagement. [4] through their systematic literature review, emphasized that the flipped classroom approach has proven effective in developing students' critical thinking skills. This occurs because the flipped classroom places the responsibility for learning on students before face-to-face sessions, allowing class time to focus on discussion, problem-solving, and in-depth exploration of the material, which naturally reinforces the principles of active learning. Evaluation based on inclusion and exclusion procedures and a systematic literature review methodology in the study also showed that the flipped classroom can increase students' active participation and reflective abilities in understanding learning materials contextually.

On the other hand, research by [5] shows that the use of podcasts as an audio learning medium can significantly improve learning outcomes, especially in the context of flexible digital learning. The use of audio-based media is considered capable of reaching students' auditory learning styles, while providing flexibility to access material anytime and anywhere. Furthermore, the podcast-based learning model also supports learning autonomy and encourages student emotional engagement through audio that builds personal connections. Both studies strengthen the position of active learning as an approach that is not only relevant but also adaptive to the challenges of the digital era and the individual needs of students in higher education. By adopting evidence-based methods and technological innovation, the implementation of active learning strategies will be more contextual, responsive, and have a direct impact on improving the quality of learning outcomes.

A study conducted by [6] significantly contributes to our understanding of the effectiveness of active learning in higher education, particularly in science, engineering, and mathematics. This research is a meta-analysis of 225 studies and shows that active learning models can reduce student failure rates from 34% to 22% and increase average test scores by 6 percentage points. This fact underscores that active learning is not simply an alternative pedagogy, but an intervention that is empirically proven to improve learning outcomes. The findings [6] provide a strong foundation for strengthening the argument in this study that active student engagement not only contributes to a more meaningful learning process but also directly impacts their academic achievement. Thus, the research [6] is not only relevant as a scientific reference, but also reinforces that the active learning approach needs to be a pillar in higher education curriculum design, including in the context of PGSD as discussed in this study.

RESEARCH METHOD

This study applies a qualitative approach with a qualitative survey method combined with phenomenological methods to investigate the subjective experiences of respondents regarding a particular phenomenon. Data collection was carried out through a questionnaire using an online questionnaire with a Likert scale of 1–5 covering perceptions of active and student-centered learning, levels of engagement in learning, perceptions of learning outcomes, individual and group learning experiences. By providing opportunities for respondents to express their ideas, feelings, and experiences in narrative form. The phenomenological method is used to understand the meaning contained in the experience, as felt directly by respondents without any intervention or assessment from the researcher. The data obtained will be analyzed thematically to identify emerging patterns of meaning, so as to describe the core of the shared experience felt by the research participants. From the data obtained, the data is presented in the table below.

Table 1. Presentation data.

Theme	Main Sub-Theme	Percentage of Number of Respondents
Positive Perception of Active Learning	Increased engagement, motivated	80%
Individual Experience	Highly focused, but needs guidance	60%
Group Experience	Helps understanding, but not evenly distributed	70%
Method Preference	Prefer a combination of self-directed & guided	90%

Qualitatively, of the 110 respondents, 80% stated that "the majority of students are helped by active learning in class," while 60% of students felt that individual learning was more effective for focus but also required guidance from a lecturer. 70% of students stated that "Group discussions are considered to strengthen understanding, but must be managed so that all members contribute." And finally, 90% of students preferred a combined approach (independent + lecturer guidance) in the learning process.

From the presented data, we can draw a behavioral perspective from second-semester students, who state that active learning can create an inclusive and directed learning process. Furthermore, the research approach conducted by [7] in the context of distance science learning also demonstrates the relevance of qualitative methodology in measuring students' emotional and cognitive dimensions. They examined the effects of active learning on emotions, self-efficacy, and learning outcomes, using a measurement approach based on students' perceptions. The implications of this study strengthen the justification for using the phenomenological method in this research, where

understanding students' subjective experiences is the main focus of data collection. Through narrative-based and reflective data collection, researchers were able to capture students' emotional and motivational dynamics in depth, which cannot be fully represented by a quantitative approach alone.

As technology integration in education increases, the use of artificial intelligence (AI) has become a strategic direction that continues to be studied in depth. [8]in their study highlighted that the trend of AI implementation in education not only brings innovation but also raises serious challenges related to ethics, data validity, and gaps in technology access. Their findings reinforce the urgency for educational researchers to adopt rigorous and transparent methodologies in analyzing these developments, so that the results can make valid and sustainable contributions to digital education policy and practice.

Furthermore, the systematic approach based on the PRISMA protocol, widely applied in recent meta-review studies, can also be an important reference in designing an evidence-based education methodology. The principles of transparency and rigor in developing an inclusion-exclusion framework, as well as a rigorous literature search strategy, provide a high standard of validation for the quality of the data obtained. Although this study did not fully adopt the PRISMA framework, awareness of the importance of a systematic methodological structure provides a basis for considering the integration of similar models in further studies. Thus, a combined approach that combines the depth of phenomenology and the systematics of PRISMA can be a strategic step in strengthening the validity of the findings of experiential and participatory education.

RESULTS AND DISCUSSION

From the feedback from second-semester PGSD students, the majority of students stated that learning strategies that include active participation, such as group discussions, presentations, and solution-based learning, make them more engaged in classroom interactions. [9] "They not only function as listeners, but also as individuals who play an active role in constructing knowledge. This view is in line with what was expressed by" [10], which stated that active learning encourages students to participate in activities that stimulate them to think critically, discuss, and analyze information directly, rather than just passively receiving it. Students feel that they can master the material better when contributing to activities that require critical thinking and reflection. One participant stated that he understood the material better when asked to present it to his peers, because he had to master the information before providing an explanation. This is in line with the constructivism theory proposed by [11], which emphasizes that knowledge is actively constructed by individuals through social interactions and learning experiences [12].

The growing sense of responsibility in active learning models encourages students to become independent learners. Of the 79 respondents, 70 admitted they were more disciplined in preparing themselves before class because they needed to directly

participate in discussions or group activities. This indicates an increased sense of responsibility for the learning process, which [13] is one of the main characteristics of adult learners: the ability to manage and direct their own learning process [14]

The active learning model refers to a comprehensive set of learning strategies, encompassing various approaches to foster student engagement. In active learning, each new concept taught to students must be connected to their prior knowledge and experience. New material is taught interactively, incorporating existing knowledge into the learning process, enabling students to engage directly. Teachers must develop effective strategies to foster strong motivation to learn. One of the principles of active learning is that learning can occur anywhere and at any time. Student learning outcomes are activities teachers need to undertake to evaluate student competency achievement based on the learning process. Information gathered by educators during the teaching process is compiled through assessment procedures and tools appropriate to the competencies or indicators being measured.

With the existence of learning outcomes, this information will be useful for improving the quality of the learning process. Conversely, if errors occur in the assessment of learning outcomes, then information about the quality of the learning process can also be disrupted, which can result in the actual educational goals being not achieved. From the explanation above, it can be concluded that the implementation of the Active Learning method among PGSD students in the second semester contributes significantly to their learning activities, which is able to change the mindset of students to be more critical when facing problems and play an active role in the learning process, so that the learning outcomes obtained are very satisfactory. This is also in line with the learning activities that occur in the PGSD study program in the second semester of UMSIDA which is currently being studied. This research was conducted for approximately three weeks, starting from the beginning of April 2025 to May 2025 in the PGSD study program in the second semester of UMSIDA.

The emphasis on the importance of learning outcomes is also reflected in a study by Armiami and Hidayat, which showed that audio media such as podcasts can be an effective learning stimulus to improve learning outcomes. In the context of active learning, the use of adaptive and flexible media not only expands access to information but also creates emotional engagement that can strengthen material absorption. Furthermore, [4] highlighted the importance of learning structures such as flipped classrooms, which provide space for students to develop deeper understanding before face-to-face learning, thus making interactions during the learning process more meaningful and reflective. These two findings reinforce the urgency to continuously evaluate and refine active learning strategies so that they impact not only the cognitive dimension but also the overall readiness and empowerment of students.

The findings of this study are further strengthened by a multi-institutional study conducted by Sundstrom et al. (2025), which showed that various active learning methods such as ISLE, Peer Instruction, Tutorials, and SCALE-UP significantly improved students' conceptual understanding in physics. Among the four methods, SCALE-UP

produced the highest improvement, indicating that direct and collaborative engagement significantly contributed to learning outcomes. This finding is further supported by [15], who showed that students in computer classes with active learning environments performed better academically than those learning in conventional formats. Furthermore, [16] emphasized that the effectiveness of active learning is not only seen cognitively but must also be measured using a rigorous and contextual evaluation methodology. These three studies expand the scope of local findings, while demonstrating that active learning models have a cross-disciplinary impact and are capable of creating meaningful learning experiences. Consequently, the implementation of active learning strategies in second-semester PGSD classes is not only appropriate but also supported by scientific evidence from a national and global scale.

In the journal [8] provides a significant contribution in terms of the application of the research & development (RnD) approach, specifically by using the ADDIE model (Analysis, Design, Development, Implementation, Evaluation). This approach shows that in the development of learning media or active methodologies, a systematic structure is essential so that educational innovation is not only theoretical, but also applicable and can be evaluated for its effectiveness comprehensively. In the context of active learning in higher education, this ADDIE structure can be a framework that supports the achievement of quality learning oriented towards student learning experiences. By designing measurable learning from the needs analysis stage to the evaluation of results, the ADDIE-based RnD approach can strengthen the implementation of active learning strategies to be more contextual and effective.

CONCLUSION

Fundamental Finding: This study revealed that active learning methods significantly improved the learning outcomes of PGSD students in the second semester. Students felt more mentally and emotionally engaged and demonstrated increased responsibility and discipline during learning activities. Activities such as group discussions, presentations, and problem-based learning helped students hone their critical thinking, communication, and collaboration skills. **Implication :** Most participants tended to prefer methods that combined independent learning with lecturer guidance, which reinforces the andragogical approach in higher education. These findings emphasize the importance of implementing active learning to create an inclusive, interactive, and responsive learning environment for students as mature learners. Active learning has been shown to positively impact student motivation and learning outcomes, particularly second-semester PGSD students at UMSIDA. By directly involving students in the learning process through discussions, group work, presentations, and problem-solving, they become more critical, responsible, and active in constructing knowledge. **Limitation :** Most respondents stated that this method encouraged them to learn independently, was more prepared to learn, and created an inclusive and conducive classroom atmosphere. However, the study did not explore long-term impacts or challenges in implementation. **Future Research :** The active

learning approach also enabled students to identify their learning styles, build positive social interactions, and produce better academic results. Therefore, future research can further explore longitudinal impacts, diverse learning contexts, or comparative studies with passive learning models to strengthen the findings.

REFERENCES

- [1] R. Kasi, "Pembelajaran aktif: Mendorong partisipasi siswa," *OSF Prepr.*, 2022.
- [2] I. Kristiyani, E., & Budiningsih, "Pengaruh strategi pembelajaran e-learning dan minat belajar terhadap hasil belajar akuntansi," *J. Teknol. Pendidik.*, vol. 1, no. 8, pp. 81–100, 2019.
- [3] E. Kristiyani and I. Budiningsih, "The Effect Of E-Learning Learning Strategy And Study Interest On Accounting Learning Outcomes," *Akademika*, vol. 8, no. 01, pp. 57–69, 2019.
- [4] Latifah et. al., "Optimalisasi kemampuan berpikir kritis melalui metode flipped classroom: Systematic literature review," *J. Ilm. Ilmu Pendidik.*, vol. 8, no. 7, pp. 8174–8184, 2024.
- [5] M. T. Armiami, & Hidayat, "Podcast Spotify sebagai media pembelajaran audio untuk meningkatkan hasil belajar siswa," *J. Penelit. dan Pengemb. Pendidik.*, vol. 1, no. 8, pp. 116–126, 2024.
- [6] Freeman, "Active learning increases student performance in science, engineering, and mathematics," *Proc. Natl. Acad. Sci.*, vol. 23, no. 111, pp. 8410–8415, 2014.
- [7] J. S. Jeong, D. González-Gómez, F. Cañada-Cañada, A. Gallego-Picó, and J. C. Bravo, "Effects of active learning methodologies on the students' emotions, self-efficacy beliefs and learning outcomes in a science distance learning course," *J. Technol. Sci. Educ.*, vol. 9, no. 2, pp. 217–227, 2023, doi: 10.3926/jotse.530.
- [8] R. S. Anam, S. Gumilar, I. N. Ainie, and F. A. Wibowo, "Tren dan Tantangan Penerapan Kecerdasan Buatan dalam Pendidikan: Analisis Artikel pada Jurnal Terakreditasi Nasional," *Kalam Cendekia J. Ilm. Kependidikan*, vol. 13, pp. 1–23, 2023.
- [9] J. R. Drake and others, "A critical analysis of active learning and an alternative pedagogical framework for introductory information systems courses," *J. Inf. Technol. Educ.*, vol. 11, no. 1, pp. 39–52, 2012.
- [10] J. A. Bonwell, C. C., & Eison, *Active learning: Creating excitement in the classroom (ASHE-ERIC Higher Education Report No. 1)*. Washington DC: George Washington University, 1991.
- [11] L. S. Vygotsky, *Mind in society: The development of higher psychological processes* (M. Cole, V. John-Steiner, S. Scribner, & E. Souberman, Eds.) (A. R. Luria, M. Lopez-Morillas, & M. Cole [with J. V. Wertsch], Trans.). Cambridge: Harvard university press, 1978.
- [12] Y. Tamrin, M., Sirate, S. F., "Teori belajar konstruktivisme Vygotsky dalam pembelajaran matematika. *Sigma (Suara Intelektual Gaya Matematika)*," vol. 3, no. 1, pp. 40–47, 2011.
- [13] M. S. Knowles, *The adult learner: A neglected species* (3rd ed.). Houston: Gulf Publishing Company, 1984.
- [14] R. Purnami, "Implementasi metode experiential learning dalam pengembangan softskills mahasiswa yang menunjang integrasi teknologi, manajemen, dan bisnis," *J. Penelit. Pendidik.*, vol. 1, no. 13, 2016.
- [15] Q. Hao, B. Barnes, E. Wright, and E. Kim, "Effects of active learning environments and instructional methods in computer science education," *SIGCSE 2018 - Proc. 49th ACM Tech. Symp. Comput. Sci. Educ.*, vol. 2018-January, pp. 934–939, 2018, doi: 10.1145/3159450.3159451.

- [16] S. Hartikainen, H. Rintala, L. Pylväs, and P. Nokelainen, "The concept of active learning and the measurement of learning outcomes: A review of research in engineering higher education," *Educ. Sci.*, vol. 9, no. 4, pp. 9–12, 2019, doi: 10.3390/educsci9040276.

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