ANALYSIS OF THE EFFECTIVENESS OF INTERACTIVE LEARNING METHODS USED BY LECTURERS IN IMPROVING STUDENT ACHIEVEMENT

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Abstract

This study aims to analyse the effectiveness of interactive learning methods applied by lecturers in improving students' academic achievement. Through this study, it was found that the implementation of interactive learning methods had a positive and significant impact on student engagement and achievement. The method, which involves discussion, group work, and multilevel activities, is proven to improve students' understanding of the material and critical thinking skills. The role of the lecturer as a facilitator is crucial in ensuring the effectiveness of this method, with good activity design and clear direction identified as key to success. In addition, physical and social environments that support interaction also contribute positively to a conducive learning atmosphere. In conclusion, interactive learning methods are effective in improving student achievement, provided they are implemented with appropriate strategies and a supportive environment.

Keywords: Effectiveness, Interactive Learning Methods, Student Achievement.

Introduction

Higher education plays a vital role in producing competent human resources who are ready to compete in the era of globalisation. In this context, the learning methods used by lecturers are one of the key factors that influence student learning outcomes (Sitopu et al., 2024). Basically, effective learning methods do not only focus on knowledge transfer, but are also able to increase student engagement and motivation to learn.

Currently, interactive learning methods are gaining more attention among academics and educational practitioners because they are claimed to be able to

increase student participation and learning achievement. This method puts forward the dialogical aspect in the teaching-learning process, which involves active interaction between lecturers and students. Interactive learning methods include various techniques, such as group discussions, case studies, simulations, and the use of information and communication technology (ICT) in the classroom (Castro & Tumibay, 2021); (Guna et al., 2024).

Interactive learning plays a crucial role in higher education as it is able to increase student engagement and active participation in the teaching-learning process. This method allows for a dynamic and collaborative learning environment, where students are not only passive recipients of information, but also play an active role in the discussion and exploration of the material (Sancar et al., 2021). By using techniques such as group discussions, simulations, and the use of digital technology, interactive learning can stimulate curiosity, improve critical thinking, and build problem-solving skills that are indispensable in the world of work. In addition, intense interaction between lecturers and students can also create closer relationships and strengthen students' learning motivation (Fawait et al., 2024); (Syakhrani & Aslan, 2024).

In addition to the direct benefits to academic engagement and achievement, interactive learning can also help students in developing essential soft skills, such as communication skills, teamwork, and adaptability. In this era of fast-paced and complex information, these abilities are important assets that university graduates must possess. Thus, the implementation of interactive learning aims not only to improve short-term learning outcomes, but also to prepare students to be better equipped to face the challenges and dynamics in the professional world. This makes it highly relevant and important in the context of modern higher education (Rawashdeh et al., 2021).

Evaluating the effectiveness of interactive learning methods is essential to ensure that the techniques used actually have a positive impact on students' learning experiences and outcomes. This evaluation can cover various aspects, such as the level of student engagement, improved understanding of the material, and the development of important skills such as critical thinking and problem-solving (Lampos et al., 2021). Without systematic evaluation, educational institutions will not have a clear picture of how effective their interactive learning methods are, and this may impact the quality of education provided. Therefore, the use of evaluation tools such as satisfaction surveys, pre- and post-learning tests, and classroom observations are important steps to obtain objective and relevant feedback (Jr et al., 2021).

Furthermore, evaluating the effectiveness of interactive learning methods also allows teachers to make necessary improvements and adjustments to make the learning process more efficient and relevant. By identifying the strengths and weaknesses of the applied methods, teachers can develop new strategies that are more adaptive to students' needs and learning styles (Setyabudhi & Veza, 2022). This not only improves the quality of classroom learning, but also contributes to the creation of an academic environment conducive to students' intellectual and personal development. Ultimately, continuous and evidence-based evaluation will help educational institutions maintain high quality standards and adapt to the latest innovations and developments in pedagogy (Hooda et al., 2022).

However, despite the abundant literature on the advantages of interactive learning methods, not many studies have specifically analysed their effectiveness in the context of higher education in Indonesia. Some lecturers still tend to use conventional methods such as lectures, which are considered simpler and easier to implement, but are often less able to maintain student attention and engagement (Hongsuchon et al., 2022); (Judijanto et al., 2024); (Sartika & Fransiska, 2024).

Therefore, this study aims to analyse the effectiveness of interactive learning methods used by lecturers in improving student achievement.

Research Methods

The study in this research uses the literature method. Literature research, also known as literature review, is a research method that involves collecting, evaluating and analysing information from existing written sources. This method is used to identify, analyse and synthesise published knowledge related to a particular topic or field, in order to gain a thorough understanding of the issue or problem being researched. The sources used in literature research can be books, journal articles, research reports, government documents, and other academic publications. (Helaluddin, 2019); (Sanusi, 2015).

Results and Discussion
Effectiveness of Interactive Learning Methods

The Interactive Learning Method is an approach to teaching that prioritises students' active participation in the learning process. This method aims to create a dynamic learning environment where students not only passively receive information, but are also directly involved in discussions, problem solving, critical thinking, and working together with fellow students and teachers. This approach involves various techniques such as group discussions, role plays, simulations, and

the use of interactive technologies to facilitate richer and more meaningful interactions between students and teachers (Alzahrani & Alhalafawy, 2022).

The basic concept of interactive learning methods is that the best learning occurs when students can relate new knowledge to the experiences and knowledge they already have. Thus, this method encourages students to build their own understanding through the process of exploration and discovery (Sefriani et al., 2021). In addition, interactive learning also focuses on developing social and emotional skills, such as the ability to communicate, co-operate and manage conflict, which are essential in real life. This interactive aspect of learning is expected to increase students' motivation and engagement, and help them develop the critical thinking skills needed to face future challenges (Lacka et al., 2021).

Group discussion is one of the interactive learning methods often used to build students' understanding and communication skills. In group discussion, students are divided into small groups and given a topic or problem to discuss. This method encourages students to think critically, express opinions, and listen to others' perspectives. The facilitator or teacher acts as a guide who helps direct the discussion and ensures every student has the opportunity to participate (Herman et al., 2022).

Simulation is a learning method that mimics a real situation or environment to provide hands-on experience to students. In simulation, students can play certain roles or perform activities similar to real-world conditions. An example is a business simulation, where students act as company managers and make strategic decisions. Simulations help students understand complex concepts in a more practical and applicable way, develop problem-solving skills, and increase learning engagement and motivation (Nurdiana et al., 2023); (Iksal et al., 2024).

Role-playing is an interactive method in which students act as characters in a given situation. The main purpose of role-playing is to help students understand the perspectives and emotions of others, as well as develop their social and emotional skills. For example, in a history class, students can role-play as a particular historical figure to explore important events from that figure's perspective. This helps students not only memorise information, but also experience the character they are portraying (Irwan et al., 2024); (Tamsah et al., 2021).

Educational technology plays an important role in interactive learning methods. The use of digital devices and applications allows students to engage in the learning process in a more flexible and interactive way. An example is the use of e-learning platforms that enable online discussions, interactive quizzes, and educational multimedia (Darling-Hammond et al., 2022). Tools such as interactive digital boards, simulation software, and augmented reality (AR) or virtual reality (VR) can provide a

more immersive and stimulating learning experience, and help students understand difficult concepts with clearer visualisation. The integration of technology in interactive learning not only makes the learning process more interesting but also provides personalised assistance according to each student's needs (Umar & Ko, 2022).

Collaborative project-based learning involves students in the creation of a project or the completion of a task that requires teamwork. Students work together to plan, implement and assess their project. This method helps develop teamwork, time management, and problem-solving skills. Students also learn to take responsibility for their individual roles within the team and make contributions towards a common goal. Examples of collaborative projects could be scientific research, model building, or report writing (Baidoo-Anu & Ansah, 2023).

Problem-based learning is a method in which students are given a real, complex problem to solve. Students must conduct research, gather information, and develop solutions based on the understanding they build during this process. The teacher acts as a facilitator who guides students in the problem-solving process. This method develops critical thinking, analysis, and decision-making skills, and makes the material more relevant to students' daily life experiences (Juliani & Aslan, 2024); (Zakiah & Aslan, 2024).

Inquiry-based learning puts students in control of their learning process. Students are invited to ask questions, formulate hypotheses, and conduct experiments or investigations to find answers. This method encourages students' natural curiosity and develops scientific research skills. For example, in science lessons, students can be encouraged to design and conduct experiments to find out more about certain concepts, such as photosynthesis or gravity (Polat & Karabatak, 2022).

Gamification involves using game elements in a non-game context to increase student motivation and engagement. These elements can include points, badges, leaderboards, and challenges. By incorporating game principles into the learning process, students can feel more motivated and engaged through fun and challenging experiences. Gamification not only increases active participation but also allows students to learn from failure and try again without fear (Pardosi & Utari, 2022).

By applying various interactive learning methods such as group discussions, simulations, role plays, educational technology, collaborative projects, problem-based learning, inquiry-based learning, and gamification, teachers can create a dynamic and fun learning environment. These methods not only help students understand the subject matter better, but also develop important skills such as critical thinking, teamwork and communication. Combining some of these methods in learning can

provide a richer and more varied learning experience, according to students' needs and learning styles (Eldokhny & Drwish, 2021).

Interactive learning methods offer significant advantages in improving learning effectiveness. One of the strongest aspects of this method is its ability to increase student engagement. By getting students to actively participate in the learning process, whether through group discussions, role plays or collaborative projects, students are more interested in the material being taught. This active engagement helps students absorb information better than passive approaches such as lectures. Through dynamic interaction, students tend to be more motivated and challenged to think critically, ask questions, and express their opinions (Panigrahi et al., 2021).

In addition, interactive learning has a positive impact on the development of interpersonal and cognitive skills. Group work and discussions encourage students to develop the ability to communicate effectively, listen to others' opinions, and cooperate in achieving a common goal. Methods such as problem-based learning or inquiry train students to analyse situations, conduct independent research and develop solutions to complex problems. These skills are not only relevant for students' academic performance, but also essential in preparing them for future professional life (Özbay & Çınar, 2021).

However, implementing interactive learning methods also has its challenges and requires careful planning. Not all students have the same comfort level or social skills to actively participate, so adaptations are needed to ensure equitable participation. Teachers must be able to facilitate the class well, creating a safe and inclusive environment where every student feels valued and heard. By addressing these challenges, interactive learning methods can be effectively applied to maximise each student's learning potential.

Factors Affecting the Effectiveness of Interactive Learning

The effectiveness of interactive learning is influenced by various interrelated factors. One of the main factors is the role of the teacher as a facilitator. The teacher's skill in designing and managing interactive activities is very important. Teachers should be able to choose the appropriate method according to the learning objectives and students' profile, such as group discussion, role play or simulation. In addition, teachers need to provide clear and timely directions, and be able to encourage active participation from all students. Teachers' expertise in creating an inclusive and supportive environment also helps students feel more comfortable to actively participate in learning (Campillo-Ferrer & Miralles-Martínez, 2021).

Another influential factor is the characteristics of the students themselves. Students have different backgrounds, abilities and learning styles. These differences affect the way they participate and interact in learning activities. For example, students who have good communication skills may be more active in discussions, while more introverted students may need a different approach to participate. It is important for teachers to understand the characteristics of each student and adapt interactive learning strategies to cover all ability levels and learning styles (Hutasuhut et al., 2022).

The use of technology in interactive learning is also a factor that cannot be ignored. Technology can enrich the learning experience and facilitate interaction between students and teachers. For example, by using a web-based learning platform, students can have online discussions, take interactive quizzes or work on collaborative projects virtually. Technology provides flexibility and variety in learning methods, but its success depends on the accessibility and digital skills of both students and teachers. Therefore, adequate technological infrastructure and proper training are needed to support the implementation of technology-based interactive methods (Cai et al., 2022).

Finally, the physical and social environment of the classroom also plays an important role in the effectiveness of interactive learning. A classroom layout that allows easy interaction between students, such as group table arrangements, can help create a collaborative learning atmosphere. A positive social environment, where students feel safe to express themselves and are not afraid to fail, also encourages active participation. Teachers need to build good relationships with students and between students, and instil values such as mutual respect and co-operation. By paying attention to and managing these factors, interactive learning can be more effective in achieving educational goals.

Conclusion

Analysis of the effectiveness of interactive learning methods used by lecturers in improving student achievement indicates that the application of these methods has a significant positive impact. In this study, interactive learning methods were shown to be able to increase students' engagement in the learning process, which in turn contributed to improving their understanding of the material and their academic performance. Students who are actively involved in discussions, group work and other interactive activities tend to have deeper understanding and better critical thinking skills.

In addition, the role of lecturers as facilitators in interactive learning methods is very influential on the successful implementation of this method. Lecturers who are

able to design interactive activities well, provide clear directions, and create an inclusive learning environment can maximise student participation and support effective learning. Adaptation of learning strategies according to students' characteristics and needs is also a key factor in improving the effectiveness of interactive learning methods.

Supportive physical and social environments also contribute to the effectiveness of interactive learning methods. Classroom arrangement that allows easier interaction and positive relationship building between lecturers and students can create a conducive learning atmosphere. By considering these factors, interactive learning methods can be applied more effectively to improve students' academic performance, enrich their learning experience, and prepare them for real-world challenges.

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