Proceeding of 2nd International Conference on Education, Society and Humanity
e-ISSN : 2986-5832
p-ISSN : 2986-6979
Vol. 02 No. 02 (2024)
Available online at https://ejournal.unuja.ac.id/index.php/icesh

ARTIFICIAL INTELLIGENCE AS A CATALYST OF CHANGE: IMPLICATIONS FOR INCLUSIVE EDUCATION

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Abstract:

This research focuses on the modernization of madrasas through optimizing communication to build a positive image of educational institutions. This study was carried out at MA Miftahul Ulum Besuki, using a qualitative approach with a case study research type. Data were collected through observation, interviews with the head of the madrasah, teachers, and students, and documentation. Data analysis follows the stages of data reduction, data presentation, and verification, using content analysis and interpretation methods to explore the relationship between communication practices and institutional image.The research results show that strategic communication implemented through digital media and direct interaction can increase transparency, share student and alums success stories, and convey superior madrasa programs effectively. This has a positive impact on public perception of madrasas. However, challenges were also found in the consistent delivery of information and use of technology by all stakeholders.

Keywords: *Artificial intelligence, AI, Inclusive Education*

INTRODUCTION

Inclusive education is an approach in the world of education that emphasizes the acceptance, participation and progress of all students, including those with special needs, in an inclusive learning environment (Sulaiman et al., 2024). Inclusive education in the digital era is a challenge and opportunity for education providers, especially for students with special needs. Inclusive education providers are required to improve themselves and develop learning innovations for students with special needs. Learning must be adapted to current circumstances and in line with the era of digitalization (Paramansyah & Parojai, 2024). Inclusive education means providing equal opportunities for all students, regardless of their background, abilities or challenges (Mustika et al., 2023). However, achieving this goal is not easy. Many education systems still use a rigid approach and often fail to meet the needs of diverse students (Purnomo & Solikhah, 2021). Issues such as lack of resources, lack of teacher training, and inflexible curricula often hinder efforts to create welcoming learning environments for all. In this case, artificial intelligence offers innovative and interesting solutions to help bridge the gap between educational theory and classroom practice (Sahrudin et al., 2023).

Artificial intelligence has enormous potential to change the way we approach learning. With the right technology, we can create learning experiences that suit each student's needs. For example, an adaptive learning system platform can analyze students' progress in real time and provide immediate feedback and customized resources to help them understand the material better. Artificial intelligence systems

can provide extra support for students who might struggle in a conventional classroom environment, so they don't fall behind. In addition, data analysis can help teachers understand student performance patterns, so they can carry out timely and effective interventions (Oktavia & Suseno, 2024).

However, although the potential of artificial intelligence is promising, there are still many questions that need to be answered. Research on how these technologies can be effectively integrated to support diverse students is limited. We also need to consider emerging ethical issues, such as data privacy, bias in algorithms, and the digital divide that may exist. Therefore, it is important for us to explore and understand more about how we can use artificial intelligence in a fair and responsible way.

This journal aims to contribute to our understanding of AI and its role in inclusive education. Through case studies, research, and best practices, we hope to provide insights and practical recommendations for educators, policymakers, and all parties involved in education. We want to inspire a shared vision for the future of education – a vision that not only drives innovation, but also listens to and meets the needs of all students. By exploring the potential of artificial intelligence, we hope to help create a more inclusive educational environment where every student has the opportunity to thrive and succeed.

RESEARCH METHODS

This research uses the Library Research research method which is carried out by searching, reading and analyzing articles from various journals that discuss artificial intelligence (AI) and inclusive education. This is based on Bahrum Subagiya's explanation, that research using library research methods limits research activities only to library collections or through articles or books only, without requiring field research (Subagiya, 2023). The following are several steps in the author's process in carrying out research using the library method: (1)Determine the topic of discussion, (2)Collect literature sources that are relevant to the topic of discussion, (3)Review and analyze the articles that have been collected to develop a discussion about artificial intelligence and inclusive education, (4)Provide conclusions and recommend suggestions regarding the results of the discussion.

RESULTS AND DISCUSSION

Implementation of inclusive education

The implementation of inclusive education supported by artificial intelligence (AI) aims to create a friendly and accessible learning environment for all students, including those with special needs. By utilizing this technology, we can customize the learning experience to suit the unique needs of each individual (Susanti et al., 2024). One way AI contributes is through adapting teaching methods. By analyzing students' learning styles and levels of understanding, AI helps teachers find the most effective approaches. For example, technologies such as Perplexity AI and Bard AI can make teaching materials more interactive and interesting, so that students with special needs can more easily understand the concepts being taught.

In addition, AI also enables more specific resource provisioning. For example, students with autism may need additional visualization, while children with dyslexia can get interactive exercises designed specifically for them. With AI support, teachers can create relevant and interesting content, so that all students feel involved and motivated in the learning process (Yulianti et al., 2023). AI also functions as a support for adaptive learning. This means students can learn in the way that best suits them, with the help of AI providing explanations in a simpler or more concise form. This allows students to learn independently and feel more confident in understanding the material.

Accessibility is another important aspect of inclusive education. AI helps ensure that students with limited mobility or who live in remote areas can still access quality education. With the existence of AI-supported online learning platforms, students from

various backgrounds can learn without geographical limitations, opening up wider opportunities for them (Trianggara et al., 2024).

Collaboration between teachers, students and parents is also getting easier thanks to AI. Through the same platform, teachers can share real-time student progress reports, while parents can provide necessary input and support. This creates closer relationships and mutual support in the educational process.

However, while AI offers many benefits, we must also be aware of the challenges it presents, such as technology accessibility, teacher training, and student data security. It is important to ensure that the use of AI does not reduce students' critical thinking skills and that their personal data remains secure.

With the right approach, implementing inclusive education powered by AI can create a more equitable and supportive learning environment for all students. This is a step towards a better educational future, where every student has the opportunity to develop and reach their best potential.

Benefits of artificial intelligence (AI) for inclusive education

Artificial intelligence (AI) in the field of education, especially inclusive education, has broad and profound positive effects. Among the main contributions of AI is its ability to align methodology with the learning strategies of students with special needs. Through data analysis, AI can determine each student's level of understanding and present learning material directly according to their needs. This not only allows students with special needs to gain knowledge easily and quickly, but can also create a learning environment that is conducive, inclusive, and can optimize the development of students with special needs (Rochmawati et al., 2023).

Additionally, the integration of AI into inclusive education processes enables the implementation of adaptive teaching methodologies. This system is able to adapt the curriculum and teaching methodology in response to the abilities and developmental progress of students with special needs. As a result, students are better prepared to overcome learning obstacles and are encouraged to develop greater interest and motivation in learning.

Furthermore, AI virtual assistants can make educators' work easier in dealing with students with special needs. By offering guidance on effective pedagogical approaches, providing resources, and even helping monitor individual students' progress, AI frees up teachers' time and resources to focus on deeper interactions and developing strong relationships with students. This is very important in implementing inclusive education.

Analyzing education data using AI allows institutions to identify trends and patterns in student performance. With this understanding, institutions can make better informed decisions, develop curricula, improve teaching methods, and meet overall student needs.

Furthermore, AI facilitates access to global education through access to online learning platforms. Students from various backgrounds, especially students with special needs, can access high-quality educational resources without being constrained by physical limitations.

Lastly, AI stimulates the development of critical and creative thinking skills by designing challenging assignments and immersive learning experiences. This equips students with skills relevant to the demands of an increasingly technologically advanced world (Alrayes et al., 2024).

The point is that the use of AI in education not only optimizes the learning process, but also makes students become individuals who are ready to face challenges and innovation in a world that continues to develop rapidly, especially in terms of technology.

Application of artificial intelligence (AI) in inclusive education

The application of artificial intelligence (AI) in the world of education has brought many significant benefits. One of the main ways AI is used is to personalize learning, where this technology can adapt teaching materials to each student's needs.

By analyzing data in depth, AI can understand each student's learning style, level of understanding, and preferences, thereby creating a more appropriate learning experience for them(Julien, 2024).

In addition, an adaptive teaching system powered by AI can allow adjusting the level of difficulty and learning pace according to each student's abilities. This creates a learning environment that supports optimal development, so that students can overcome challenges or deepen their understanding according to individual needs (Sudarta, 2022).

AI has also increased efficiency in grading assignments and exams through automatic evaluation. This process provides instant feedback to students, helping them understand their strengths and weaknesses better. On the other hand, AI-based virtual assistants also help teachers by providing suggestions on effective teaching methods, providing additional materials, and helping plan the curriculum (Fauzi et al., 2024).

The integration of AI in education also helps students develop digital skills that are important in the modern era. They not only learn how to use AI technology, but also practice critical and creative thinking skills through well-designed tasks. Thus, the application of AI in education is not just about technology, but also about creating more adaptive, inclusive and relevant learning experiences, which prepare students to face the challenges of an ever-changing world (Ramadhani, 2023).

Artificial intelligence as a catalyst for change

Artificial intelligence (AI) has become a force that is changing the face of education in very exciting ways. Imagine a classroom where every student gets attention tailored to their needs. AI makes this possible by personalizing the learning experience, adapting materials and teaching methods to suit each individual's learning style. With the ability to analyze data, AI can help teachers understand student progress in more depth, so they can provide the right support at the right time (Liriwati, 2023)

One way AI improves efficiency is by automating routine, often time-consuming tasks, such as assessment and data management. This gives teachers more time to interact with students, listen to their questions, and provide more personalized guidance. When teachers can focus on teaching and relationships with students, the learning atmosphere becomes more lively and meaningful (Saifudin, 2024).

AI is also bringing innovation to the way we learn. With adaptive learning, students can learn at their own pace, making the learning process more comfortable and effective. For example, if a student is having difficulty understanding a concept, AI can provide additional explanations or more appropriate exercises. Additionally, technology such as chatbots and interactive applications make learning more fun, encouraging students to engage and participate actively. Artificial intelligence also plays an important role in creating an inclusive learning environment. Students with special needs can receive tailored materials, so they don't feel left behind. With AI-powered online learning platforms, students from various backgrounds and locations can access quality education, opening up wider opportunities for them.

However, we also have to be careful. The use of AI in education brings challenges, especially regarding the privacy and security of student data. We need to ensure that their personal information is well protected. In addition, it is important to ensure that all schools and students have equal access to this technology, so that no one is left behind (Santoso, 2023). Overall, artificial intelligence is not just a tool; it is a catalyst that drives positive change in education. With the right approach, AI can create a more adaptive, inclusive and efficient learning environment, where every student has the opportunity to thrive and reach their full potential.

CONCLUSION

Based on the results of the research that has been conducted, it can be concluded that artificial intelligence (AI) plays a role as a catalyst for significant change in inclusive education, with the potential to create a more equitable and accessible learning environment for all students. With the ability to personalize the learning

experience, AI can meet the unique needs of each student, including those with special needs. This allows teachers to better understand the progress and challenges faced by individual students, so they can provide more appropriate and effective support.

Implementing AI in education can also improve teaching efficiency by automating routine tasks, such as assessment and data management. By reducing administrative burdens, teachers can focus more on direct interactions with students, creating a more interactive and inspiring learning atmosphere. When teachers have more time to connect with students, they can build stronger relationships and support students' social-emotional development.

However, to ensure that all students can benefit from these innovations, challenges such as data privacy and technology access gaps need to be addressed. With an inclusive and careful approach, artificial intelligence can be an invaluable tool in creating responsive and effective education systems. Ultimately, the use of AI in inclusive education can help create an environment where every student feels valued and supported, giving them the opportunity to thrive and reach their full potential.

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