TECHNOLOGY EDUCATION AND INNOVATION OF CHAT GPT AND AI AT SMPS RK DELI MURNI BANDAR BARU MIDDLE SCHOOL STUDENTS

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ABSTRACT

Education in the Industrial Revolution 4.0 era demands innovation in the application of technology to improve the quality of learning. One increasingly popular innovation is the use of Chat GTP (Generative Pre-trained Transformer) and artificial intelligence (AI) in the educational context. This research aims to investigate the impact of implementing Chat GTP and AI in learning for students at SMPS RK Deli Murni Bandar Baru, North Sumatra in the era of the Industrial Revolution 4.0. The research method used is a case study involving junior high school students as research subjects. Data was collected through observation, interviews and questionnaires to evaluate students' perceptions and performance in using Chat GTP and AI in the learning process. Apart from that, data is also analyzed to identify the benefits, challenges and opportunities of implementing this technology. The research results show that the application of Chat GTP and AI in learning can increase learning interest, student involvement, and understanding of technology concepts. Students also show a positive response to the use of this technology in the learning process. However, some challenges such as technology accessibility and anxiety regarding changing teacher roles still need to be addressed. These findings provide an important contribution in developing learning strategies that are more innovative and responsive to the demands of the Industrial Revolution 4.0 era. The practical implication of this research is the need for a holistic approach to integrating technology into the curriculum, as well as adequate training for educators to utilize the potential of Chat GTP and AI technology effectively in the learning process.

Keywords: *Technology Education, Innovation, GTP Chat, Artificial Intelligence, Middle School Students, Industrial Revolution 4.0*

1. INTRODUCTION

In the 21st century, the world has moved towards Era 4.0, where the digital revolution and technological innovation greatly influence all aspects of life. In the midst of these changes, education must also plan strategies to implement new technologies such as Chat GTP and AI so that students can develop competencies that are relevant and competitive in the global job market. Chat GTP is one of the popular AI solutions today, which allows natural interaction between humans and AI systems through dialogue. Meanwhile, AI itself has great potential to drive transformation in the education sector, including optimizing the learning process, providing educational content, and evaluating learning outcomes.

In the era 4.0, where the digital revolution and technological innovation are becoming a hallmark, education plays a very important role in preparing future generations to face the challenges and opportunities offered by an increasingly connected world. In this context, the application of new technologies such as Chat GTP and artificial intelligence (AI) is an important strategy to improve the quality of education and develop relevant competencies for students so they can compete in an increasingly competitive global job market. (Sudibyo, 2011)

GTP Chat as an AI Solution: GTP Chat is one example of an artificial intelligence solution that is popular today. This technology enables natural interactions between humans and AI systems through dialogue. With its ability to produce almost human-like responses, Chat GTP can be used in various contexts, including learning. For example, GTP Chat can be used as a virtual assistant to answer student questions, provide personalized learning assistance, and stimulate creative thinking through interactive dialogue.

AI's Potential in Educational Transformation: Apart from Chat GTP, artificial intelligence as a whole has great potential to drive transformation in the field of education. (Destiana., 2019) Here are some areas where AI can make a significant contribution: Learning Process Optimization: AI can be used to create learning programs tailored to individual students' needs and learning styles. Adaptive learning systems that use AI can identify students' weaknesses and strengths, and provide learning materials appropriate to their level of understanding.

Providing Educational Content: AI can be used to create interesting and interactive educational content, such as learning videos, simulations and customized learning materials. By utilizing technology such as big data analysis, AI can help teachers and educational institutions in compiling relevant and effective learning materials. Evaluation of Learning Outcomes: AI can be used to automatically evaluate student learning outcomes, both through online exams and other formative assessments. (Sutopo, 2012) By utilizing natural language processing techniques and data analysis, AI can provide accurate feedback quickly and accurately regarding student learning progress, as well as helping teachers in designing more effective learning strategies. In-depth on Topic: To understand more deeply about the application of Chat GTP and AI in education, further research and exploration needs to be carried out on: Integration Methods: How can Chat GTP and AI technology be integrated into existing curriculum and learning strategies? Ethics and Privacy: How can education ensure the ethical use of AI technology and respect for student privacy? Teacher Training and Development: How can teachers be empowered and trained to use AI technology effectively in the learning process?

Impact Measurement: How can the effectiveness of using AI technology in improving student learning outcomes be measured and evaluated objectively? By exploring these aspects, education can harness the full potential of GTP Chat technology and AI to create more innovative, adaptive and relevant learning experiences for students in the 4.0 era.

2. METHODS

The method used in the research is a descriptive qualitative method with the subject sources being students and teachers at SMPS RK Deli Murni. This research will continue and wants to see further how technological developments in the AI and Chat GTP framework have an influence on the student learning process. This of course also sees how the teachers, namely the teachers at SMPS Rk Deli Murni, accept this development as part of the way they teach and educate students at SMPS RK Deli Murni.

3. RESULTS & DISCUSSION

Integration of ChatGPT and AI at SMK RK Deli Murni Bandar Baru

The implementation of ChatGPT and AI at RK Deli Murni Bandar Baru Vocational School is carried out through several methods, starting from AI applications to create dynamic learning materials to ChatGPT as a means of assistance in carrying out students' final assignments. As a result, students can develop broader competencies and can integrate science with advanced technology.

Furthermore, Chat GTP has integrity. The integration of ChatGPT and AI at the RK Deli Murni Bandar Baru Vocational High School (SMK) is an initiative to encourage interactive, dynamic learning and create the possibility for students to develop broader competencies and be able to integrate science with technology. sophisticated. (Jamun, 2016) The following are some of these implementation methods:

1. AI Application to Create Dynamic Learning Materials. Use of machine learning algorithms to improve learning content and materials according to individual student needs.

2. ChatGPT as a means of assistance in carrying out students' final assignments This system provides practical solutions to problems students experience when completing final assignments, including ideas, concepts, and project structure.

The results of this integration include (Yuberti, 2015):

• More modern and effective education policies.

• Significant development of student competence.

• Increased student motivation and interest in learning.

• Adaptation of learning to suit individual student needs.

• Application of advanced technology in the education system.

This implementation also has positive impacts for teachers, such as:

• Facilitate teacher creativity in creating AI-based learning materials.

• Stimulate teachers to continue to master new knowledge and advanced technology.

• Make it easier for teachers to identify individual student needs.

With the integration of ChatGPT and AI at SMK RK Deli Murni Bandar Baru, students and teachers can develop broader competencies and be able to integrate science with advanced technology, which is very important in this digital era.

Positive impact

The integration of ChatGPT and AI at RK Deli Murni Bandar Baru Vocational School has several main benefits, (Munir, 2008) including:

1. Speed up the learning and studying process.

2. Make it easier for students to understand difficult material.

3. Increase student motivation in learning.

4. Facilitate a more efficient learning process.

Negative Impact

However not all aspects of the integration of ChatGPT and AI at SMK RK Deli Murni Bandar Baru have a positive impact. Some negative impacts include:

1. Dependent on AI technology.

2. Potential extreme dependency on ChatGPT and AI.

3. Risk of basic science concerns.

Solutions for Negative Impacts

To overcome these negative impacts, pedagogy and stakeholders must understand the risks and how to overcome them, including:

1. Train students to understand the limits and limitations of AI technology.

2. Design a curriculum that integrates AI technology with basic science.

3. Support students in understanding ethical and moral principles in using AI technology.

4. CONCLUSION

Technology Education and Innovation Chat GTP and AI among RK Deli Murni Bandar Baru Middle School Students in the 4.0 era illustrates the use of advanced technology in the context of education in a junior high school. The solution offered by the author is as follows: Teacher Training: Provide adequate training to teachers to understand and use Chat GTP and AI technology effectively in the learning process. Supervision and

Mentoring: Teachers need to provide adequate supervision and guidance to students in using this technology. This is important to ensure responsible and effective use of technology. Relevant Curriculum: Integrate the use of Chat GTP and AI in the curriculum so that it supports learning objectives and the development of student competencies in accordance with the needs of the 4.0 era. Evaluation of Impact: Conduct regular evaluations of the impact of the use of technology on the teaching and learning process and student academic achievement. Cultivating Soft Skills: Apart from focusing on academic aspects, it is also important to cultivate soft skills such as critical thinking, collaboration and communication skills in using this technology. Adjustment to Individual Needs: Ensure that the use of this technology can be adapted to individual student needs and ability levels so that all students can benefit from the use of this technology. By implementing the solutions above, SMPS RK Deli Murni Bandar Baru can make optimal use of Chat GTP and AI technology in education, while ensuring that the learning process remains relevant, effective and competitive in the 4.0 era.

5. ACKNOWLEDGMENTS

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