

THE USES OF AI AND TECHNOLOGY IN MEDIA AND MATERIAL DEVELOPMENT OF MERDEKA BELAJAR

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Abstracts

The advancement of AI and Technology has increased in numerous fields of our lives, and the education field has dealt with it. On the other hand, our national curriculum for education, called Kurikulum Merdeka, has flexibility in terms of learning, sources, and developing the material for the teaching and learning process. Along with the advancement of educational material in curriculum merdeka, numerous kinds of sources are utilized, like books, e-learning tools, media of teaching, and so on. There was also an effect of AI and Technology as platforms for learning sources, particularly English as one of the languages taught within the Indonesian Education field. The objective of this research is to determine the significance of AI and technology in the development of Merdeka Belajar learning resources for teachers. Furthermore, the purpose of this research is to investigate AI and technology which may be used as a variety of learning methods and material development utilizing a Merdeka Belajar curriculum, to make learning in class more enjoyable. This research employs library research as an approach to determining which AI technologies are employed in the advancement of English resources based on the Merdeka Belajar curriculum. Data is collected from previous studies on related subjects. Based on the findings of this study, we can identify the use of AI and technology to build English learning media and materials based on the Merdeka Belajar Learning Guidelines.

Keyword:

AI Technology, Curriculum Merdeka Belajar, English Language

Introduction

English is an important subject to be taught in many elements of education study. Nowadays, English as an international language has become an important language to be mastered by all people around the world as a tool for communicating with foreigners. Globalization era has supported English as important to be mastered in improving all human aspects including economic, politics, culture, education, and many more. By mastering english

education well at school, students will have more important knowledge for their study and it can support them in having good communications with foreigners.

Teaching English as a foreign language in society era 5.0 has a goal that the graduate students could have competed with the international graduate students (Andariyani & Nurhajati, 2016). In addition, the concept of society 5.0 is a forecast of future societies by the Japanese government which suggests that the general public 5.0 places more accentuation on effort to place human beings as the focuses of innovation (human focused) as technological progress is exploited for improving the quality of life, social responsibility and evolving sustainability (Fukuyama, 2018). Our country has a regulation that English teaching is done in almost every field of study. Nowadays, Indonesia's education has undergone a fundamental change for the ministry of "Merdeka Belajar". Kemendikbud (2021) explains that Merdeka Belajar is an idea that comes from the changing era of revolution industries 4.0 to the society era 5.0, where the significance of the society era 5.0 was introduced by the Japanese government in 2019 on anticipation of the disruptive upheaval resulting from the 4.0 revolution worry about weakening human values. In university or collage level, 'Merdeka Belajar' was clearly used for the students, where it was aimed to develop students' readiness of competition towards society era 5.0. There are some characteristics of the society 5.0 era in education field such as first, educators minimized the role of learning material provider. Second, educators are an inspiration for the growing creativity of learners. Then, educators serve as facilitators, tutors and inspiration. In development of society 5.0, it is claimed to have a good impact on education (Faulinda & Aghni Rizqi Ni'mal, 2020).

Teachers must have a thorough understanding of the Merdeka Belajar concept. They also need to alter the way they think about the reforms that have been made to this curriculum. In light of curriculum changes, it's also important to take into account the desire of instructors to innovate and grow personally. The expected educational goals won't be attained to their full potential if the instructor refuses to adapt and is unable to put the curriculum's concepts into practice. Based on the findings of library research that used the Merdeka Belajar curriculum as the curriculum of learning, it was discovered that many kinds of facilities being used on the teaching learning activities. Throughout from the instruction of education policy who have been implemented in Indonesia by minister of education. Teachers could used many literature to widely presented the material of learning to the students.

Moreover, based on concept of curriculum merdeka belajar that used the growth of technology now days as the one of sources media of learning in Indonesia as program of minister of education (Kementerian Pendidikan dan Kebudayaan, 2019). Digitalization implemented into digitalization of school as a logical consequent of globalization. Through this program, almost all of the level of education had implemented into their school. However, the covid-19 also impacted though the program who pushed the teachers to be more actively used technology to delivered their material. Technology proposed new environment of learning.

Based on many literature stated that merdeka belajar not only used book as the contextual media of learning, there were also used Artificial technology to presented the activities of learning. For example, teachers could use *quizziz*, *moodle*, google classes, or soon to create a new experience of learning. In addition, artificial intelligences used in merdeka belajar curriculum widely impacted on teaching learning activities in many ways. In this articles the authors presented the investigate AI and technology which may be used as a variety of learning methods and material development utilizing a Merdeka Belajar curriculum, to make learning in class more enjoyable.

Literature Review

AI Technology in Education

The Greek words "techno" and "logos"—which signify science, word, learning, and mental state—are the origin of the English word "technology."(Stošić, 2015) Numerous

research findings demonstrate the advantages of technology use, with the sector of education being one of them. Technology plays a significant part in raising educational quality. Technology has been utilized to facilitate and improve learning, particularly in the study of languages.

Emerging technologies have also changed how teaching and learning are done in the educational sector. As AI technology has flourished, so have its applications in education, with tremendous potentials to deliver dynamic assessments, provide personalized learning, and support meaningful interactions in online, mobile, or mixed learning experiences. More exciting, some experts have suggested replacing some teacher duties with robots or AI in response to the teacher shortage, for instance in the USA (Edwards & Cheok, 2018). Artificial intelligence (AI) has the potential to address some of the major issues facing education today, revolutionize methods of teaching and learning, and hasten the achievement of SDG 4. Though many risks and issues are unavoidably brought on by quick technological advancements, they have so far surpassed regulatory structures and policy discussions.

A human-centered approach to AI is naturally required by the UNESCO mandate (UNESCO, 2019). In order to ensure that AI does not exacerbate the technical gaps inside and between nations, it strives to reframe the discourse to include AI's role in addressing present inequities over access to knowledge, research, and the diversity of cultural expressions. The goal of "AI for all" must be to ensure that everyone has access to the benefits of the current technology revolution, particularly in terms of innovation and knowledge.

Merdeka Curriculum

Merdeka Belajar curriculum is a concept of the curriculum that requires learners to have self-reliance (Vhalery et al., 2022). The self-reliance involved is that each learner is given freedom to access the knowledge gained from both formal and formal education. Each learner had his or her expertise in his own field, so that the learner was set free to search out or select any areas of interest (Siskha Putri Sayekti, 2022). On Merdeka Belajar curriculum, learners are given opportunities to develop the potential within themselves. This curriculum was held to encourage learners in their development, by shaping a caring attitude toward the environment around them, and by encouraging their confidence to adapt to their surroundings (Mulyadi et al., 2022). There also, Merdeka Belajar curriculum was developed to print a generation of milineal to understand quickly taught materials, and it was not just good at remembering the things learned. Merdeka Belajar curriculum is being raised to face the development of a digital technology or era that requires learners to be more competent (Kementerian Pendidikan dan Kebudayaan, 2019). So that learners are the center of attention and learners are also objects in the learning process. Learners are taught to know how to collaborate both with associates and with the education. Educators can also undertaking the learning process more meaningfully, so that learners can then apply their learning in their lives and are expected to be able to actively participate in their social environment. So the educators must also determine learning media to support the learning process by collaborating technology with the learning process to create learners who have the expertise in critical thinking, communication, collaboration, and creative thinking

English Language

Indonesia is one of the many countries in the globe where English is learned. English is now a required subject at the secondary level. Due to this, English education must begin at a young age (Nursalam et al., 2020). There are several learning English at a young age has benefits, one of which is that it is compared to adults, children learn at a younger age (Sugiharyanti, 2022). In order to be ready, children should be familiar with the fundamentals of English so they won't be taken aback when they begin studying English.

Methods

In this study, library research was used. This design's objective is to present numerous comparisons of various theories that already exist. In this study, descriptive comparative learning was the strategy used. This technique is intended to make it simple for researchers to write the research reports (Creswell & Poth, 2016). Finding references and reading relevant literature is the first step in the process of gathering data. A thesis with the same variable serves as another source. The very final step is to compare something. Results or data can be found using these strategies.

Data is supported from contextual book of Merdeka Belajar Curriculum. Based on the statement above, library research uses words to present the result of the research. The researcher uses the library research that uses non- numeral data. It is obtained from the English elementary level books of *My Next Word*, some journal related to the title

Results and Discussion

Findings

The research finding is answering of the problem statements that formulated before. The data are presented based on definition of AI Technology which was interpreted on the figure 1. The data in this section were collected from the AI technology being used on the resource. After the data process by selection, categorized, and analysis with was suitable with the aim of the research. In this research would be discuss below.

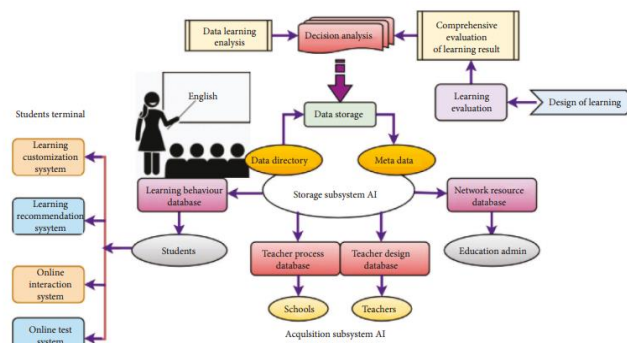


Figure 1. Process of AI technology as preparation tools of teaching

From the figure 1, the researcher could see the differences of English teaching that used AI as the media of learning (Liu, 2022). The figures also point out how the AI technology help out the teachers to prepare their material and media development. though the figure the researchers could presented the AI technology being used by the teacher on table 1 below.

Table 1. Source and AI Technology

Source	AI technology
Book	<ul style="list-style-type: none"> • Link reference into belajar.id • Internet based material
Journal	<ul style="list-style-type: none"> • E-learning • Zoom • Google workplace (Google Classroom Collaborative, Google Drive, G-mail, Google Sheets, Google Forms, Google Slides) • Quizizz • Quipper classroom • Skype • Youtube • Twitter

- Moodle
- Kahoot

Based on the data observation the researcher gain 12 AI technology being used related to the media development of Merdeka Belajar. The researcher used commonly used technology which was use by the English teacher on their media a media development. The data of AI technology used served into the table 1.

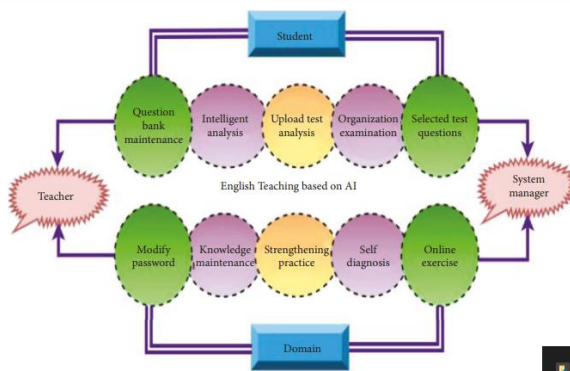


Figure 2. Media and material developing process by teachers using AI system

Based on figure 2, showed how the teacher’s prepared their media and material development of learning (Liu, 2022). Material development directly submit into the system of AI as the media of learning. From this we could figure out the uses and example of AI technology in media and material development as presented below.

Table 2. AI Technology in Media and Material Development

AI Technology used as	Example of
Media of learning	<ul style="list-style-type: none"> • Zoom • Skype • Youtube • Google search engine • E-book
Online exercises media	<ul style="list-style-type: none"> • Quizizz • Quiper classroom • Google workplace such as google classroom, google drive and so on. • Belajar.id • E-learning • Kahoot • Moodle

Table 2 show off the the used AI technology in media and material development that being collected from the journal and book. Also the example of AI technology that have been used on teaching learning activities.

Analysis

Based on data finding above, the researcher used data analysis method from Liu (2022). The data analysis focused on AI technology used and variety of learning method used by the teachers. As shown on the figure 2 the purpose of AI technology was help the teacher for assessing student ability of learning. In the other hand, AI technology also used as the media

of learning based on the figure 1. Classification of AI technology could divided into 3 things, media of learning, online exercises media, and source of knowledge (Golshan & Tafazoli, 2014).

AI technology as media of learning for example was zoom and skype. Zoom and skype used by the teacher for media of learning as the initial features of teacher with relation to the usage of learning media are the main topic of discussion. They considered prior students' issues with teleconferences and access to instructional tools. Researchers aim to understand more about the variety and application of learning media among students. The dominance of the media and the inclination of the time to access the instruments are the factors sought in this emphasis. This is done to examine more closely at the access issues that students ran across when online courses were implemented. The distribution of media that students often utilize when completing online courses is seen in the following. Constructivist learning may be implemented in the classroom through the usage of mobile learning (König & Wenzelburger, 2014). Applying problem-based learning techniques done this. As a consequence, students will take part in more historical dialogues and comprehend them by thinking, recalling, and disputing.

Next, AI technology as online learning The complicated effects of AI on learner-instructor interaction have recently been made clear by the launch of commercial AI systems for online learning (Seo et al., 2021). From the data finding above, the researcher found out that the teachers used quizziz, quipper classroom, google classroom, and so on. The interaction of teachers and students had a good environment on teaching learning active. It is related into the policy of Merdeka Belajar curriculum as proposed by the minister of education. Teachers should be able to make good use of progress rapid information technology to improve the quality of the learning to teach at each educational level (Kementerian Pendidikan dan Kebudayaan, 2019).

In the other hand, The Merdeka era of learning can be defined as a time in which teachers and students have liberty or freedom of thought, free from the burden of binding education to be able to develop self-contained contained education goals (Izza et al., 2020). Educational technology can help facilitate the Merdeka Belajar program. In this regard, educational technology can promote the quality of education. There are several roles of educational technology in the domain of education. Throughout the data finding and analysis of AI Technology could improve the quality of education by way: a) help teachers better allocate time, b) advance the learning steps, c) reduce the teacher's load of speaking, so that teachers can facilitate discussion and develop the learning process for learners (Yamin & Syahrir, 2020). Measurement of AI technology could made new environment of learning. Various activities of learning method by using AI technology will made the student more effectively.

Conclusion

Based on the above study, it has been suggested that the role of education technology in learning independent perspectives was particularly influential in making good use of the Merdeka Belajar program in real life, not only in the planning and process but in the management measures, use, development, and stage of assessment. The role of the educational technology in the Merdeka perspective of learning is crucial for teachers to understand the nature of this educational technology itself, teachers can not only dismiss the education technology as a device, machine, computer or other artifacts, but the education technology describes the systems and processes that lead to the desired results.

In accordance with the policy of the new "Merdeka Belajar" program as in the realm of ability: literacy, numeration and character surveys. Learning is expected to run effectively, efficiently, more, wider, faster, more meaningful to learners. Media and material development based on Merdeka Belajar curriculum pushed out the teachers' more actively used AI technology to support the widely also openly source of learning. Many kinds of AI technology

used as stated: zoom, skype, youtube, google search engine, e-book, quizizz, quiper classroom, google workplace (such as google classroom, google drive and so on), belajar.id, e-learning, kahoot, and moodle.

All those technology used by the teacher to support the teaching learning activities. Also give widely impacted to fulfil the goals of academic learning. From those AI technology give more new experience of teaching. Whether teachers' and students could find the best way of learning activities that could push their capabilities on mastering the topic of learning.

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