

Interactive Learning Using E-Learning Module in Learning English for Senior High School: A Review of Related Articles

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ABSTRACT

Technological advances affect people's working lives and contribute to the education system, especially in the learning process for generation 4.0. Generation 4.0 is a generation that is fully exposed to technological developments even from birth, so learning using technology will have a very good effect on them. However, conventional learning in schools is still dominated by conventional learning that uses textbooks as teaching media. Therefore, this study was conducted to determine the benefits of implementing interactive learning using the E-Learning Module. The data was collected through a review of international journals starting from 2015 to 2019. The findings show that one of the appropriate media used to teach the current 4.0 generation is interactive learning or known as learning, which uses interactive multimedia with interesting materials to motivate students to learn when and anywhere. This study also found that learning using the interactive learning module has advantages in pedagogical aspects such as collaborative learning, mixed learning, interactive learning, experiential learning, and problem-based learning.

Keywords: E-learning; Interactive Learning Module; Multimedia; Motivation; and Generation 4.0.

INTRODUCTION

The development of the digital world forces the general public to adapt. This encourages people to switch functions from using traditional media to digital media in the hope of making it easier to help complete their activities (Santiana et al., 2021). One of the developments in the digital world that is currently so fast in the world of

education is E-Learning. E-learning uses information and communication technology to enable students to learn by accessing information flexibly without being limited by time and place (Apriani et al., 2022; Santiana et al., 2021; Lim, 2016).

E-learning is a system and media to assist the learning process for students, which is currently known as generation 4.0. Generation 4.0 is a generation that is exposed to learning about technological developments even from birth, so using technology will have a very good effect on them. Students are educated to be more active in the learning process, also known as the artificial intelligence (AI) era (Kemendikbud, 2019). E-learning can help shape learning experiences both culturally and as a means to manage the increasing amount of information in the world.

Along with the technology development, EF (Education First) studies show that English has become a core skill. Therefore, English should have been taught and tested at a level equivalent to reading skills in the mother tongue and mathematics. Given the growing importance of English in the last 20 years, a solid knowledge of this language will become even more important as children enter Middle School.

However, English is still considered by students a difficult subject to learn. English is still a frightening spectre for most students in Indonesia. Meanwhile, students receive the same number and content of English lessons each year. Teachers also teach them with the same qualifications and curriculum structure. According to Zaim (2017), it is difficult for students to be involved in class activities. Teachers must be more creative and innovative in the learning process in the classroom (Fatimah & Santiana, 2017). Creative and innovative teaching is expected to motivate students to be more active in learning. Unfortunately, teachers still use conventional methods, namely the teachers' method and textbook teaching materials that do not interest the students in learning. As a result, teachers expect students to learn the rest independently due to time constraints. However, students cannot expand their understanding of the material individually. They face difficulties and lose motivation to learn, and the learning process cannot run well.

The achievement of the teaching and learning process can be seen from various elements such as learning objectives, learning content, learning methods, learning tools, environment, educators, and students. From these elements, according to the researchers, two very important elements are learning methods and learning media. These two aspects are interrelated. As one of the factors in the process of implementing learning, a teacher is always required to improve the quality of learning. According to Mulyasa (2006), teacher quality can be viewed from two aspects, namely in terms of process and in terms of results.

In the learning process, as it is known so far, the lecture method is still dominantly used by most teachers at various levels of education. Of course, aside from being quite tiring for the teacher, it is also tedious for the students, especially if the teacher is not qualified. It is not enough to only use the sense of hearing, namely the delivery only by the lecture method or verbal sentences. Teaching aids, better known as learning media that the sense can see of sight, can also be implemented (Raharti, 2011).

Constraints often encountered when using conventional modules include students feeling bored quickly and less interested in studying the material contained in the module. This usually affects student learning outcomes. This response appears because students have to pay more to reproduce the module. In addition, smartphone users are currently increasing rapidly, and students also play with gadgets daily. This is an opportunity for teachers to innovate in developing technology-based learning to

meet current demands. Teachers also need to anticipate less positive things, such as students spending more time playing social media or online games (Fitriani & Indriaturrahmi, 2020).

To encounter such an adverse situation, Dewi and Naf'an (2018) show that using an e-module in an English Specific Purpose class effectively increases students' interest in learning English (the interest score increased from 68.33% to 79.7%). This result is higher than the control students, only 73.9% without using the e-module. In addition, the e-module also effectively increases student scores by 2.5 points (increasing the pre-test score by 4.3 points to 6.8 points during the post-test). It also implies that e-modules are very effective in making it easier for students to learn English, with is reflected by their score of 77.7%.

Based on the various descriptions above, it is necessary to conduct research and study the benefits of using interactive learning modules in improving student learning outcomes, including the factors that affect the effectiveness of their use. Therefore, the review was carried out to analyze problems in teaching-learning activities and the use of interactive e-learning modules in the learning process. In addition, this study also aims to find solutions to problems faced in using interactive learning in the learning process.

METHOD

This research is a qualitative descriptive study using secondary data. Secondary data is a source that does not directly provide data to data collectors, either through other people or documents (Sugiyono, 2016). Literature research and library research, although they can be said to be similar, are different. In library research, research activities are carried out by collecting information and data with the help of various materials. In the library are book references, previous research similar, articles, notes, and various journals related to the problem to be solved. The activity is carried out systematically to collect, process, and conclude data using certain methods/techniques to find answers to problems faced (Danandjaja, 2014)

Although it is a study, research with literature studies does not have to go down to the field and meet with respondents. The data needed in the research can be obtained from library sources or documents. According to (Zed, 2014), in library research, library research is not only the initial step of preparing a research framework (research design) but also utilizing library sources to obtain research data.

The data in this study were collected through a review of international journals. Data collection will be carried out in 2021 and analyzed qualitatively.

RESULTS AND DISCUSSION

RESULTS

E-Learning

The use of e-learning-based learning is believed to improve and support the teaching and learning process, from textbooks to interactive multimedia. This is because e-learning makes the teaching and learning process more effective (Azrai & Refirman, 2013). In addition, Jingjit (2015) states that e-learning makes learning easier to monitor than traditional classrooms and saves costs.

In terms of its prevalence, the use of e-learning is more frequent. Various studies conducted in this field show that e-learning is more encouraged to apply learning to teaching and learning in various fields of study. The results of Flynn's research (2018)

show that the use of technology, especially learning using e-learning, is being embedded in teaching and learning activities throughout the university. In addition, the results of research conducted by Hutahaean (2019) at SMA Negeri 6 Pematangsiantar show that this high school uses the 2013 curriculum where the implementation emphasizes the use of media and innovative learning strategies. Based on the characteristics of cognitive development, class X students can learn to use Contextual Teaching and Learning. In addition, students and teachers are enthusiastic about developing a more interactive learning model. This research is part of developing CTL-based interactive e-modules as a learning medium for class X high school students to improve their learning outcomes.

Meanwhile, Mohammed (2017) said that E-learning makes it possible to learn anywhere and anytime, regardless of geographic location. E-Learning is a type of teaching and learning that allows the delivery of teaching materials to students using the internet or computer network media to access learning materials anywhere and anytime. Students can carry out learning and complete it at any time according to a predetermined schedule.

Interactive Learning

Interactive Learning usually refers to digital products and services on computer-based systems that respond to user actions by presenting content such as text, moving images, animation, video, audio, and video games, known as interactive multimedia. Interactive Learning usually refers to digital products and services on computer-based systems that respond to user actions by presenting content such as text, moving images, animation, video, audio, and video games, known as interactive multimedia. Many experts have put forward various definitions of interactive Learning, including Hariguna & Akmal (2019), who state that innovative Learning does not mean finding or creating something new but doing something to improve existing methods; in this case, students are directly involved in various types of learning activities in class. Interactive Learning makes students interact with each other in doing and thinking (hands-on and minds-on), resulting in direct feedback on the subject matter.

This learning model can handle individual student differences because students can advance according to their abilities without waiting for their classmates. The learning process in the interactive learning model allows students to exercise the flexibility to study independently, without being disturbed by others and take tests for each unit of discussion they have studied and continue to progress according to their abilities with the help and direction of the teacher or repeat the learning process in the same unit until achieving minimum mastery according to the set targets.

Therefore, it can be concluded that interactive Learning can create a pleasant atmosphere in the teaching and learning process. This learning model makes students active and interactive in Learning. This model also supports and develops students' potential so that there is no difference in the treatment of students. All students can compete with their respective abilities. Students are also encouraged to learn from their curiosity by asking and exploring answers to those questions.

Interactive Learning Module

An interactive learning module is multimedia learning that contains sound, text, and images. It can also take the form of readings, animations, simulations, educational games, tests, quizzes and assignment collections. Interactive learning is an interactive

web-based visualization tool (Bojevik, 2016). Bai also revealed in a study entitled *Effects of Web-Based Interactive Modules on Engineering Students' Learning Motivations* that participants significantly increased their learning motivation after using interactive modules (Johnston & Finney, 2010).

According to Lim (2016), multimedia technology can create several initiatives for students to continue learning. This is also supported by Zaim (2016) in their research *From Need Analysis to Multimedia Development: Using Exe-Learning in Developing Multimedia Based Listening Materials*. The results of his research show that interactive multimedia is a form of technological development that affects system changes in learning. Moreover, Zaim (2016) also says that several explanations and examples must be considered input in using interactive multimedia for students. It needs to be following the tasks/activities that really help improve their knowledge and skills. The interactive multimedia model consists of four parts: a general information section, an audio section, and a video section. They also add appropriate interactive multimedia that can be used effectively in the learning process.

The development of e-module stands for the electronic module as a source of Indonesian language subjects as an alternative learning method by utilizing technology. The module itself is in the form of a book or diktat, packaged in such a way as to contain materials or components of teaching materials to evaluations that can be used independently by students without teacher guidance (Majid, 2013). Modules used so far in the form of books or dictations printed and distributed manually are called conventional modules. In contrast, e-modules are teaching materials or teaching media that utilize information technology. Modules with e-modules have different forms in presenting teaching materials or materials. E-modules are arranged in a systematic and structured manner and equipped with multimedia elements (animation, audio, sound, navigation), making the material in e-modules more interesting and interactive for students. Students to achieve learning objectives (Prayudha, 2017).

In addition, Nyoman and Jayanta (2017) state, that the differences between e-modules and conventional modules include: (1) e-modules are more interactive and have navigation features to provide convenience, (2) teaching materials are presented and displayed in the form of animation, video, sound. Videos and animations, (3) equipped with evaluations in the form of quizzes or formative tests that allow direct feedback in real-time. The purpose of developing e-modules is to improve the quality of existing learning resources in schools, increase student independence and provide innovation in learning by adding media for teachers to carry out learning activities in the classroom.

Therefore, the interactive learning module is proposed to be applied in the teaching and learning process. In addition to having advantages, especially for pedagogical implications, which have tremendous assistance for teachers in the teaching and learning process, it is also believed to improve creative and innovative learning processes. It is the right choice because teachers face problems like today, where generation 4.0 is educated to be more active and innovative. The interactive learning module is the latest model of technology used in the education system, which provides a software platform to add and organize the materials needed by students.

Interactive Learning Using E-Learning Module

The characteristic of the interactive learning model is using multimedia, especially e-learning modules, in the learning process. Interactive learning is more attractive to students if technology is involved in the learning process. It is in line with research conducted by Li (2016), which compares learning outcomes through 3 methods, namely (1) face-to-face teaching using PowerPoint, (2) mixed learning using multimedia learning modules and (3) web learning using multimedia. The results showed that multimedia technology could attract students' attention easily. The students are interested in multimedia presentations; they are motivated to continue exploring presentations. When this process takes place, students are involved in the learning process. Therefore, multimedia technology can create several initiatives for students to continue learning (Muthmainnah et al., 2022).

Based on Hutahaeen et al. (2019) found at SMA Negeri 6 Pematangsiantar that the use of the 2013 curriculum where the implementation emphasized the use of media and innovative learning strategies. From the characteristics of cognitive development, class X SMA students can learn to use Contextual Teaching and Learning.

In addition, Hutahaeen (2019) also said that students and teachers were enthusiastic about developing a more interactive learning model. The material taught is the material of Basic Economic Concepts concerning the syllabus used by the school. This research finds that the economic learning outcomes of SMA Negeri 6 Pematangsiantar students improve. This research is part of developing an interactive CTL-based e-module as a learning medium for class X high school students to improve student economic learning outcomes.

According to Li (2016), the web learning environment can contribute to increasing student performance, implying that students have succeeded in absorbing content by using this web-based learning module. Tiarina et al. (2019), in their research *Students' Need on Basic English Grammar Teaching Materials Based on Interactive Multimedia: An Innovative Design*, also show that interactive e-learning module-based teaching materials are needed by students who have different learning styles and interests. Students are active during class and show a positive attitude. Their attitude is strongly supported by how the teacher delivers the material and guides students to learn. Thus, it can be concluded that learners must be motivated to match their attitudes towards the teaching and learning process and the teacher as a facilitator is a key to maintaining student motivation.

DISCUSSION

The results of the study show that there are several problems in interactive learning teaching. This follows the purpose of this research: to find problems and solutions to problems in teaching and to learn interactive learning. The researcher highlights that the problem of disruptive innovation predicted by Christensen in the 90s has become a reality Christensen (2011) and now emerges the theory of disruptive innovation in education.

As the name implies, disruptive innovation is difficult to manage for conventional teachers who are reluctant to use technology in education. In this era, a teacher has at least five roles: serving as an educator, demonstrator, motivator, facilitator, evaluator/assessor, and sometimes a designer. Teachers should not only rely on teaching materials in books or printed form but must design other techniques that utilize technology.

In the process of teaching and learning interactive learning, several problems are found that teachers cannot implement interactive learning in the learning process both in the classroom and outside the classroom. Hariguna & Akmal (2019) said, being innovative does not mean finding or creating something new but doing something to improve existing teaching methods, media or materials.

CONCLUSION

The others problem is that media used by teachers in transferring material is one of the reasons for the failure of the teaching and learning process. The teachers admit that the media used are limited and uninteresting. Teachers need teaching materials that promote visual, verbal and kinesthetic learning by using innovative media and following current technological developments in delivering material. The use of innovative learning media in the classroom is learning that refers to scientific explanation-based learning (Moreno and Valdez, 2015).

Thus, alternative solutions can be offered to deal with the above phenomena by designing and developing suitable media for teaching. One way is to design media close to the latest technological innovations. Considering the right media is part of setting the way of teaching. Thus, teachers must be creative in preparing and designing media for students. Soliman (2014) also researched the use of e-learning in learning English. His research results show that using e-learning can improve students' English skills in independent learning.

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