Digitalization Learning Era: Electronic Module as An Interactive Learning Material

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Abstract
The goal of this study was to create an electronic module that would provide an engaging learning tool for eighth-grade students which primarily focused on recount text. This study was carried out in SMPN 2 Tanjungpinang during the second semester of the academic year 2022/2023, specifically in class 8.1, which had 35 students. Additionally, the research and development approach used in this study was a 4D model that included three stages: define, design, and develop. In order to obtain the data, the researcher utilized questionnaires, including the validation questionnaire for experts and the practicality questionnaire for students. The data analysis revealed that the students' practicality score was 85%, which was classified as "Very Practical," and the material and media validation score was 98%, which was classified as "Very Valid." These findings support the hypothesis that the product developed for this study was valid, practical, and eligible to be used in the learning process.

Keywords: Electronic Module, Interactive, Learning Material

I INTRODUCTION

When people from various origins come together, they must communicate using a common language as a lingua franca, and English is that lingua franca. According to (Crystal, 2006), English is used by more people today than any other language in history. Nowadays, understanding English is an obligation for students in any country (Chen, 2013), as well as in Indonesia. English is like a second language after Indonesian, or the third language for the vast majority of Indonesians who spoke both Indonesian and an indigenous language. English has been described as the first foreign language in Indonesia and it is officially taught to students in schools. By mastering English, students can improve their academic and life skills. Once the students encompass the skill, they will be one step ahead to get a decent job in the future. The advancement of time stimulates the quick development of English in Indonesia, where English proficiency is required in a variety of areas.

The teaching and learning process can be said to be a systematical process that involves many components. Learning resources are one of the components and learning material is one of the learning resources. In certain contexts, learning material is the core of the learning process, which means that the learning process is often interpreted as the process of delivering material. In other words, learning resources include all tools and materials that can be utilized to successfully support the learning process and the pursuit of goals. Based on this understanding, it is clear that instructional design and well-writing concepts must be applied when creating learning materials since teachers will use them to aid and support the learning process (Ruhimat, 2011).

In the foreign language classroom, the individual emotional factors like self-esteem, anxiety, attitudes and motivation were intensively examined as constructs having a substantial influence on the learning process (Muñoz, 2005). In certain specific EFL environments, such as Poland, Croatia, China, and Thailand, research on boredom in contexts of foreign language learning has just lately increased (Li, 2021). This proves that the same problem can possibly be experienced by students in other countries including Indonesia. Moreover, according to Fulcher (2003), students are often bored while studying English since the material and approach are boring.

In conducting the learning process and the learning objectives, teachers can use a variety of instructional resources such as learning material as the basis for teaching and learning activities in the classroom. Learning materials can be in several forms and one of the most used materials is a textbook (Ayu M, 2018). Basically, learning material is divided into two forms, which are printed and non-printed. Learning materials in printed form are textbooks, modules, handouts, articles, newspapers, etc. while learning materials in non-printed form include audio and video.

Learning materials are usually in the form of textbooks because in general almost the entire learning process is carried out by delivering material from books. In the learning setting in Indonesia, which is oriented on goals or competencies especially during the Curriculum 2013, learning is no longer solely focused on the teacher. It is now student-centered learning instead, where the students are forced to actively seek out information and develop their knowledge, character, and skills on their own. Therefore, the teacher is no longer only a source of information but also a facilitator and a motivator. Thus, the learning material can be taken from various sources.

As the sudden closure of offline classes and shift to the online system was not easy, the return to the old format of schooling seems now equally difficult for both students and teachers. Limited learning materials are a major challenge for teachers in the teaching-learning activities at schools since most schools only provide textbooks as the main learning material that must be studied. This condition makes students feel a very significant gap or difference when they are still learning online compared to learning offline. When learning online, teachers use various resources as additional learning material to improve the quality and effectiveness of online learning activity, considering that students are free to use their electronic devices in online learning at that time.

There are some criteria for good learning materials (Hutchinson et al., 1987). First, good materials do not teach instead, they motivate students to learn. Second, good learning materials will include engaging texts, fun activities that challenge students' cognitive abilities, opportunities for students to use their knowledge and skills, and content that both students and teachers can understand. Furthermore, good materials should have an impact, help students to feel comfortable and confident, and provide the students an opportunity to communicate with one another in the target language (Richards, 2001). It can be concluded that good learning materials contain appealing design, attractive content with well-suited text and colorful animation, and encourage students to be involved actively and unleash their abilities in learning process. Moreover, a good learning material will maximize learning potential by encouraging intellectual and emotional involvement, not rely too much on controlled practice and provide opportunities for outcome feedback.

A module is one of the learning materials that is presented in a concise and systematic manner so that students can study it independently. Nana Sudjana (2007) defines a module as a complete and neatly arranged learning program that contains various important components such as methods, objectives, media, teaching materials, and learning evaluations for independent learning. Modules that are designed must comply with the characteristics of the current condition so then the modules are designed electronically. An electronic module is a tool or a way for learning information, techniques, restrictions, and how to assess competencies that are attractively created and well considered through electronic devices.

While printed modules have images, narratives, and graphics, e-modules can have a variety of features like audio, music, animation, and video. This allows students to learn independently and access materials from anywhere. It also changes how students read and consume information by allowing them to interact with it. As an interactive module, the product is designed with colorful design, online quiz, audio, illustrations, and supported with videos. Moreover, the product is designed based on Curriculum 2013 and the current syllabus.

Furthermore, based on the preliminary observation in SMPN 2 Tanjungpinang, it was discovered that many eighth graders are less capable and less interested in learning with textbooks. Students learn the material only when their teacher urges them to study at certain times, for example before giving students an exercise. Furthermore, they are using an English textbook and LKS from the government as their only learning sources, which is very limited. This condition causes a lack of input obtained by students in producing an output both in written and oral form. They find it difficult to create both written and oral text even if it is related to actual events or even to their own stories. In this case, the researcher intended to design an electronic module focusing on recount text as an interactive learning material.

Recount text can be said to be the simplest text among other texts (Knapp, 2005). Recount text is a text that tells what happened (Hayland, 2003). Moreover, recount text is written to provide a description of an experience involving several events that happen in the past and aims to provide information and entertain readers (Saragih et al., 2014). In other words, it can be said that recount text is a writing that describes an event that someone has experienced in the past, such as a holiday, an accident, fun activities, etc. Recount text has two purposes. In

addition to retelling some events that someone experienced in the past, recount text also aims to entertain readers and keep them engaged with the story.

To retell or inform readers about certain events, recount text must contain some information, at the very least must contain 5W + 1H. For instance, what happened, where the event took place, when the event happened, and other information related to the events. As to entertain readers, recount text occasionally describes humorous events which will entertain readers. In the curriculum in Indonesia, recount text has been taught to junior and senior high school students. Although considered to be the simplest text, recount text still needs to be taught effectively. This is because the students are expected to be able to master this material and create their own recount text to improve their English.

Based on the background described above, it is necessary to develop engaging, user-friendly, and effective interactive learning materials for teaching and learning processes. The interactive learning material can be utilized to increase student motivation and help them to comprehend the subject matter. That is why the researcher put great interest in conducting this research.

II METHOD

The research conducted by the researcher was a type of development research or usually called Research and Development (R&D). Research and Development is a research method used to develop a specific product and evaluate its efficiency (Sugiyono, 2014). It means that this research is a process to create products that aim at education matters. The focus of this research was designing an electronic module as an interactive learning material in teaching recount text at 8th grade.

In conducting Research and Development research for educational purposes, the researcher focused on using 4D Model by Thiagarajan. This model has 4 stages of development which are define, design, develop, and disseminate but in this study the researcher only used the first 3 stages of this model. The development of the 4D model is a more concise development but includes a complete development process (Mulyatiningsih, 2012). The define stage is frequently referred to as requirement analysis. The first activity the researcher did in define stage was defined the learning needs by conducting preliminary analysis and material analysis. It aimed to find out the needs based on the problems and defined the suitable material and product. The material used in this study was recount text as one of the materials that taught in eighth grade in the current syllabus.

Next, the design stage is purposed to design the learning products. In the design stage, the researcher created the initial design of the selected product, which was an interactive e-module. The design process of interactive e-module was carried out after the researcher analyzed recount text as the suitable material to be taught in eight grades based on the current syllabus especially in basic competence number 4.11 which focused on enhancing students' writing skills. The e-module was designed with the Canva website and can be accessed with a web browser with the following link: www.canva.com. Canva is an online application that is used to create graphic designs (Miluniec & Miciuła, 2020). Typically, Canva is used for graphic purposes such as making posters, certificates, slides, infographics, etc. with appealing images and templates. In designing the e-module, the researcher entered the recount text material that has been made into a specific page, then inserted some video, audio, online quiz, and other elements in order to make the e-module more interactive. Furthermore, the researcher also put several pages before the material pages that showed the information of basic competencies, learning objectives, indicators, learning sources, using instructions, and welcoming page. Moreover, after the material pages, the researcher put Practice pages for students' learning evaluation, and followed by bibliography and writer's profile.

After finishing the initial product on design stage, the researcher entered the next stage which is the develop stage. The develop stage is a stage to develop the product based on two

steps, which are based on experts' validation and the product trial. Validation process involved a lecturer from English Language Education Study Program, Universitas Maritim Raja Ali Haji and an English teacher from SMPN 2 Tanjungppinang. Experts' validation was conducted after the initial design of e-module was made and before the e-module was tested to the students. Based on the input from the experts, the product was revised to make it more precise, valid, and easy to use. Once the product has been successfully revised, then the product is ready for trial. The product that has been validated and revised was tested on eighth grade students of class 8.1 of SMPN 2 Tanjungpinang that consists of 35 students. This trial was conducted to obtain direct input in the form of responses, reactions, and comments from students to find out the product's practicality through practicality questionnaire sheets.

III RESULT

The research conducted by the researcher was a type of development research or usually called Research and Development. In developing the product, the researcher used 4D Model by Thiagarajan which the 4D stands for Define, Design, Develop, and Disseminate. However, in this research, the researcher limited the development process to the develop stage, so that the development process that carried out by the researcher was 3D that consists of Define, Design, and Develop. The stage procedure is explained as follows:

3.1 Define Stage

Define stage was the first stage that conducted by the researcher. This step was aimed to determine the learning needs based on the problems faced by the students which were found in the preliminary observation. The researcher did several activities in this stage to collect the information, which were need analysis, curriculum and syllabus analysis, and determining the learning material. In need analysis, the researcher did preliminary observation to find the problems that faced by the students and need to be solved by this research. The preliminary observation was carried out by interviewing the teacher that responsible for English at Class 8.1 in SMPN 2 Tanjungpinang.

The researcher found that there are several problems that faced by the students, such as the Indonesian government policy which states the elimination of English lessons for elementary schools in the 2013 curriculum, made the students unable to understand basic English well and the material taught in junior high school, there was often a gap between the learning material presented in online and offline learning which made the students find it uninteresting to learn with textbook as the only learning material used in offline learning post-covid, and students' difficulties in producing written and spoken English due to the lack of input.

After conducting the need analysis process, the next process that carried out by the researcher was curriculum and syllabus analysis. In this process, the researcher did some research on the curriculum and syllabus used in the class. After that the researcher sorted several KD (Basic Competencies) on the current syllabus in curriculum 2013, the researcher chose the suitable KD and material to be taught for eighth grade students in the second semester based on the problem faced by the students. Then, the researcher determined the learning material. In the previous process, the researcher identified KD 4.11.1 and 4.11.2 which is about Recount Text as suitable subject matter. After that the researcher continued to design the learning material that will help the students' mastering their English. The designed learning material was an electronic module which created interactively with Canva considering the level of students' ability and students' interest in learning with proper audio, video, and online quizzes, that can be accessed everywhere and every time with electronic devices, so that the students can understand the subject matter well.

3.2 Design Stage

In this research, the design stage was the process of designing and developing the desired product, an electronic module as an interactive learning material focusing on Recount Text. The initial process of designing the e-module was using a web-based application called Canva and utilized the features in the app to make the product more interactive. The electronic module was designed according to the level of students' ability and students' interest in learning with audio, video, and online quizzes. Moreover, the electronic module also carried out several activities that students can do, which students will be introduced to the subject matter Recount Text in the form of text and video and continued to the various practices that utilized google form and online quizzes.

3.3 Develop Stage

The develop stage was carried out after the design stage. This stage involved two activities to complete the product's development procedures, which were expert validation and product trial. In this study, there were two experts that were responsible in validating the content material on the e-module, which an English teacher from SMPN 2 Tanjungpinang and a lecturer from English Language Education Study Program, Universitas Maritim Raja Ali Haji. In the validating process. There were several aspects that need to be validated, such as learning objective, student activity, presentation, product's influence on student, product's display, and programming.

Table 3.1 Material Expert Validation Result

No.	Aspect	Validation Result (%)
1.	Learning Objective	100%
2.	Students Activity	100%
3.	Presentation	100%
4.	The Influence of the Product on Student	100%
5.	Display of the Product	92%
6.	Programming	98%
Average		**98% (very valid)**

Based on the validation result, the researcher gained 98% which categorized as "Very Valid" and with the note "The designed product is eligible for use in research" without additional revision. While Media validation experts are the same as the material validation experts, which an English teacher from SMPN 2 Tanjungpinang and a lecturer from English Language Education Study Program, Universitas Maritim Raja Ali Haji. Media validation also has several aspects that need to be validated, such as the size of e-module, the cover design of e-module, and the content design of e-module.

Table 3.2 Media Expert Validation Result

No.	Aspect	Media Validation Result (%)
1.	The Size of E-Module	100%
2.	Cover Design of E-Module	100%
3.	Content Design of E-Module	95%
Average		**98% (Very Valid)**

Based on the media validation result, the researcher gained 98% for the product's design, which categorized as "Very Valid" with the note "The designed product is eligible for use in research". Next, the product trial was carried out to find the practicalities of the e-module. It took place after the e-module had been validated and considered eligible for use in research. The researcher conducted two meetings to implement the e-module to the students. The first meeting was to introduce the e-module and how to use the feature on the e-module. Then the second meeting was to evaluate the practice that students had submitted and gave the questionnaire to test the practicality of the e-module. The practicality test of the e-module had several aspects, which are inquisitiveness, satisfaction, attentiveness, and students' interest. The practicality test of the e-module was carried out by 35 students of class 8.1 of SMPN 2 Tanjungpinang.

Table 3.3 Students' Practicality Validation Result

No.	Aspect	Practicality Test Result (%)	Criteria
1.	Inquisitiveness	84%	Very Practical
2.	Satisfaction	87%	Very Practical
3.	Attentiveness	83%	Very Practical
4.	Students' Interest	84%	Very Practical
Average		**85%**	**Very Practical**

Based on table above, the practicalities of the e-module carried out by students was 85% which categorized as "Very Practical" with no revision. This result indicated that the e-module was practical, and it helped students to understand the subject matter well. The students gave comments about the e-module on the practicality sheets, said it was interesting and the students had fun in the learning process.

IV DISCUSSION

In this research, the researcher has designed an interactive learning material for eighth grade students in the form of an e-module. Based on the results described in this research's findings, the e-module can be used as an interactive learning material for eighth graders considering several aspects. First, the e-module was interesting enough to encourage students to learn recount text. This result is in line with the statement expressed by Iriyanti (2016) that the use of interactive e-module increased students' interest and motivation in the learning process, because interactive e-modules can be accessible at any time and from any location, supported by adequate resources, and lack of difficulty for students to use. Additionally, in order to attract students' interest, the interactive e-module was furnished with evaluations and learning strategies that have been made as valid and practical as possible. As a result, students have more opportunity to select and elaborate on the knowledge that the students wish to acquire and master thanks to the integration of interactive e-module with attractive displays (Rita, 2014).

Second, the use of the e-module helped students to study independently. In its application, the interactive e-module required an electronic device to utilize its features in which it can provide a more effective circumstances for students to study creatively and individually at their own pace, so that an interactive e-module is expected to be one of the learning tools that supports the concept of independent learning for students (Imansari and Sunaryatiningsih, 2017). Moreover, according to research findings in Kuswandari (2013), the use of the e-module can increase students' independence in the learning process. To support this statement, based on another research carried out by Fonda and Sumargiyani (2018) which examined the feasibility of using interactive e-modules, it proven that students have high enthusiasm in using e-module as independent learning materials rather than learning with textbooks accompanied by teachers.

The last aspect is that the e-module has an influence on students' learning outcomes. In addition to enhancing students' motivation and independence in the learning process, the e-module is also influential on students' learning outcomes and level of achievements. Suwindra (2012) stated that the use of an interactive technology-based media can improve students' understanding of the subject matter and showed a significant improvement in students' learning outcomes. Moreover, Suzana & Aspriyani (2020) stated that the students' learning evaluation has improved after using an e-module as the learning material in the learning process.

V CONCLUSION

The research and development process of this research was using 4D Model adapted from Thiagarajan, which consisted of Define, Design, Develop, and Disseminate. However, this research is only limited to the 3D stage (Define, Design, and Develop). The validity test was involved two validators as material validators and media validators. Both material validation result and media validation result showed 98% which indicates the product is "Very Valid" in product's content material and design. The practicality test was carried out by 35 students of 8.1 of SMPN 2 Tanjungpinang and showed 85% of product's practicality, which indicates the product is "Very Practical". Based on this data, it can be concluded that the product designed in this research was valid, practical, and eligible to be used in the learning process.

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