Research Paper

Developing Modern Flash Cards Using Canva with Quick Response Code to Enrich Students' Vocabulary and Improve Pronunciation

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ABSTRACT

This research aims to develop modern flash cards at seventh-grade students at MTs N 2 Boaang Mongondow that integrated with technology such as quick response to enrich student vocabulary and pronunciation, also for enhancing students' understanding towards English lessons. This topic is raised because the learning model that implemented nowadays is still focused on the conventional method or teacher-centered learning model where the teachers in front of the class become the center of knowledge. Meanwhile, the junior high school students are the generation who were born and living in technology era. This research is conducted to ascertain the students' needs in the English lessons, then develop modern flash cards using quick response code based on the seventh grade English lesson. The research flow refers to 4D model that consist of four stages; define, design, develop and disseminate. Data was collected through questionnaires, analyzing student needs and preferences. The result revealed students' average English proficiency level was very low both in terms of vocabulary and pronunciation. However, this developed modern flash cards product successfully addressed the students' needs and pronunciation. Leading to increased motivation, promote students enthusiastic and active participation in English language learning.

Keywords: Modern Flash Cards, Canva, QR-Code, Learning Media, 4D Model

INTRODUCTION

Learning media is one of the main components in the teaching and learning process in the classroom between the teacher and students. It helps the teachers to convey the lesson content that easy to understand by the students in order to achieve the goal of the learning process. Nowadays, the information and communication technology provide great impact to the development of learning media. The utilization of information and communication technology in learning media improves the quality of learning, it is because it provides information effectively, facilitating the students to understand lesson easily and improve students' creativity. Kemp and Dayton as cited in Harsono et al (2018) pointed out that the use of good instructional media, can enhance the quality of learning and the outcome of learning.

Basic competence 3.4 in seventh grade syllabus explained that students are able to identify text structures and language elements of spoken and written transactional interaction texts. Those involve the act of giving and asking for information related to the names of objects (animals, objects, and public buildings). It also correlates with close environment. Those materials are selected because it is the basic materials of English and it is crucial to be studied and understood by the students as the beginner of English language learning. It aims to make the students easier to learn English in higher level.

However, common difficulty that often found in the process of learning English of

seventh grade in junior high school is vocabulary mastery (Sucandra et al, 2022). Based on pre-observation and interview with students and English teacher on July 26th 2022, it found out that most of the students can not mention the names of objects in English such as animals, public buildings, and even objects in their classroom environment such as whiteboard, ruler, marker and etc. Besides, students are struggling in pronouncing the vocabulary, for instance how the objects in the classroom like chair, bag, calculator supposed to sound. Purba (2022) state there are various causes of students' learning difficulties in English lesson such as: (1) no interest in learning because students do not like English (2) interested in learning English but lack of basic knowledge (3) have motivation and ability but the environment is not supportive (4) high learning motivation but opportunity to learn English is too short.

Teacher as a facilitator in the teaching and learning process should think how to enrich students' vocabulary and pronunciation. For this reason, teacher can use any learning media for making the lesson interesting and easy for the students to understand, including learning media that integrated with technology that provided by Canva application. Beside it provides direct accessibility to information, it also supports the teaching and learning process by engaging students in interactive lessons. Nowadays, it can be seen that the use of gadget has affected people's daily live including students. In this case, we can take an advantage to develop learning media that integrated with technology in order to decrease the student's using gadget for something useless, as gadget is often regarded as a bad influence especially in English language learning such modern as flash cards that designed through Canva.

On the other hand, traditional flash card has its weakness since it cannot be able to pronounce the existing vocabulary. However, one of technology that can be used to help this deficiency is using QR-Code. QR-code stands for Quick Response Code where this code is two dimensional barcode that can provide various types of information directly by scanning it with phone's camera. Based on the problems above, the researcher planned to develop modern flash cards by cooperating with technological sophisticated such as Canva application. It will used 4D Model that stands for define, design, develop and disseminate found by Sivasailam Thiagarajan, Dorothy Semmel and Mevlyn Semmel. The result of this researcher will be a smartphone base product since the all the flash cards are integrated with QR-Code. However, the pronunciation of each vocabulary is downloadable. For this reason, the students do not need to worry about spending internet data when they want to practice all over again.

LITERATURE REVIEW
Learning Media
Generally, media always refers to etymologically sides. It comes from Latin which is medius. The word media always refers to the literal meaning of media which is an intermediary. Based on that assumption, then many experts define media according to their background and their own perspective. Azhar (2017) state media is all forms and channels that used to convey messages and information. In line with that, Lutuheru as cited in Yuniastuti et al (2021) also consider that media as all of forms of intermediaries used by humans to convey or spread ideas or opinions so that the ideas can reach the recipient (the target addressed by the source of the idea).

Traditional Flash cards
Flash card is included in visual media and it is very common media that is used in learning language spesifically in memorizing vocabularies. According to Susanto (2011) flash cards are picture cards that are equipped with words. The pictures on flash cards are grouped such as animals series, fruits,

clothes, colors, shapes, numbers and so on. This cards is played by showing it to the child and reading it quickly. The purpose of this method is to train the right brain of the students to memorize pictures and words, as a result the vocabulary can increase.

Azhar (2017) states flash card is a small card containing picture, text, or symbol that remind or lead the students to something that related to the picture. Usually, it has a size of 8 x 12 cm, or the size is depending on the class that is faced. For those reasons, flash cards are considered as a helpful learning media that can be used by the teachers to inform a new words to the students as well as can be the one of the effective learning media for the students to remember the new words that the teacher has introduced. As Pfaff et al (2013) state that flash cards are a simple piece of cards which is probably the most used visual aids in the process of language teaching in class. Moreover, Sitompul (2013) states that flash cards is known as a helpful strategy due to the benefits in process of learning language.

Modern Flash Cards

The development of information and communication technology (ICT) brings many good changes in the environment of education. Including, the development of learning media that is used in the teaching and learning process. Milawati (2021) state that learning media is all things that teacher utilizes as a medium to convey information to students so they will be motivated to follow the whole learning process. There are several learning media that utilize technological advances, one of them is digital-based learning media such as modern flash cards. Modern flash cards are a new thing in the field of education. Modern flash cards are a development of a traditional flash cards by integrating them with Quick

Response Code or commonly abbreviated as QR-Code. The use of modern flash cards is able to make the students not only learn about vocabulary but also learn or listen the pronunciation of the vocabulary on the flash cards at the same time.

Nowadays, the learning media that is used in the teaching and learning process are increasingly varied in order to make the material easier to understand, including in English language learning. For this reason, it is hoped that modern flash cards will be a useful strategy for students to overcome their difficulty, not only in pronouncing English vocabulary but also promote students' enthusiastic and desire in learning English.

QR-Code

QR-Code stands for *Quick Response Code*, it is a form of 2D bar codes. It was developed by Denso Wave, a Japanese automatic data capture equipment company in 1994. Qr Code is readable by a mobile phone that equipped with camera, it can store addresses, URL, phone numbers, texts, and many things that can be used in magazines, advertiments, and other media or in other words, as a fast link to access online or offline content. As a result, we can visit websites that linked by the URL quickly, or sending the message directly or even saving numbers into the address book easily. So it makes the users access a lot of information easier.

The Using of QR-Code in Education

As we move towards a highly developed information society, wireless internet technology combined with smart phone and tablet are the key for smart learning. The development of smart technology has also brought many changes in the environment of English education. Also, English materials, contens, teaching and learning model using

smart technology have been continually developed.

The study of QR-Code in education can be placed in the context of mobile learning and the most important aspects in the study of mobile learning are location independence and time independence (So, 2008). "Location independence" is referring to learning is not limited to a fixed location, in other words the locations are including indoor and outdoor settings. While "time independence" is learning not only in classroom learning time but also in informal learning environment at a suitable time. A phrase that commonly used in mobile learning for this is "anyplace and anytime". In conclusion, there are some reasons to use QR-Codes and the main reason is allowing the students to be more independent while learning.

QR-Code Potentials for EFL Learning

Baik (2012) state QR-Code is regarded as an ambient media gate to the internet, it offers several instructional capabilities which make it a tool that useful for classroom use. Since they can be used to access online content quickly e.g. websites, videos, audio and even documents (Jeon, 2015). So basically, QR-Code is not only useful for the teachers to develop creative learning experience for the students but it also help the students to explore a method in learning new things spesifically in English such as new words as well as the pronunciation all by themselves. QR-Code also has another advantages which it can increase students' motivation, engagement, independence and arouse students' interest (Baruffi, 2015). For this reason, it can be conclude that it can be the useful strategy for the students to reduce difficulty and increase their desire in learning English. A study entitled "QR Codes as a Potential Tool in Teaching and Learning Pronunciation: A Critical Review"

conducted by Mei and Hua (2013) have reported that QR-Code brought many benefits to teachers and students during teaching and learning process in the classroom, not only QR-Code promotes the motivation of the students but also provoke students' learning interest, thus leading to the positive learning attitudes of the students.

Vocabulary

Vocabulary is defined as the linguistic elements that connect four languages aptitudes of speaking, listening, writing and reading. There are some experts that have given a variety of vocabulary meaning. The first is Johnson as cited in Amiruddin (2022) Vocabulary is crucial aspect of language proficiency because it determines how people speak, listen, write and read. There are various kinds of vocabulary according to Hiebert and Kamil (2005) which are oral vocabulary, print vocabulary, productive vocabulary and receptive vocabulary.

- Oral vocabulary is a set of words for which we know the meaning when we speak or read orally.
- Print vocabulary consists of those words for which the meaning is known when we write or read silently.
- Productive vocabulary is a set of words that an individual able to use in speaking and writing because those words are well-known, familiar, used frequently.
- Conversely, receptive vocabulary is a set of words for which an individual can assign meanings when listening or reading. These are words that often less well-known and less frequent in use.

Pronunciation

Pronunciation is referring to the way a word or language is pronounced. Hewings (2004) state pronunciation is individual sounds that

make up speech, to the way in which pitch – the rise and fall of the voice- is used to convey meaning. Cook as cited in Gilakjani (2016) defined pronunciation as the production of English sounds, where pronunciation is learned by repeating the sounds and correcting them when it produced inaccurately.

The Importance of Teaching Pronunciation

Why is it important to teach pronunciation? It is because it can be so frustrating for the students when they got repeated experiences where communication break downs due to the problems of their pronunciation. Hewings (2004) state that difficulties in pronunciation might mean that the students fail to get their message across, even the correct words are being used or the students might fail to understand what is said to the people. Potentially, what is more confusing is the possibility of what the students say can be understood to mean something they did not intend. (p.11) Further consideration to teach pronunciation is because students often feel that pronunciation is important for English language learning since they want their pronunciation can easily understandable to decrease communication break downs. On the other hand, Hewings (2004) state that sometimes teacher does not always reflect for that wish and pronunciation is treated as a low priority area of study.

Need Analysis

Need analysis is the systematic collection and analysis of all information necessary for defining and validating a defensible curriculum. Therefore, the need analysis theory that is used for this research is from James Dean Brown Theory in 2016 that divided into three steps for collecting the students' needs data.

The three steps are elaborated by Brown in conducting the need analysis. Firstly, getting ready to do need analysis. In this step, there are four aspects in defining the purpose of need analysis; discrepancy, democratic, analytic and diagnostic. The purpose of those aspects is about to investigate the needs of the students, characteristics, their lacks, wants, necessities, what they already know and what they are going to learn next. Secondly, doing the need analysis that consists of data gathering and analyze and interpret need analysis results. Data gathering is about strategies for collecting NA information such as NA interviews, meetings in NA, collect NA data on learners, collecting NA data with questionnaires. While analyze and interpret need analysis data result is about analyzing and interpret the data using qualitative, quantitative and mixed-methods. Thirdly, using the analysis results that only consists of reporting on NA project which discusses about how to organize the NA report, how to describe the NA process, different way to report; quantitative, qualitative and mixed-methods results, and last is the format of SLOs that the NA recommends.

MATERIALS & METHODS

The research study follows the research and development that commonly abbreviated as R and D as the research design and 4D Model to develop the modern flash cards product. Sugiyono (2010) stated that Research and Development was research method which is used to produce a certain product and examine the effectiveness of the product.

This study is conducted at MTs N 2 Bolaang Mongondow in North Sulawesi Province. The data collection involves using questionnaires that aims to gather information about students' needs, lacks, and wants regarding the modern flash cards

product by using the theory of Brown that consist of discrepancy, democratic, analytic and diagnostic view. The students' needs are analyzed by calculating and identifying the highest percentages, meanwhile the development of modern flash cards is analyzed through media expert judgement and students' response questionnaires.

RESULT

The research findings provided information on the development of modern flash cards for seventh-grade students in MTs N 2 Bolaang Mongondow. The guidelines in this research referred to 4D Model; Define, Design, Develop, and Disseminate. Define is the first stage that aims for planning, gathering, and analyzing students' needs and necessities by using the theory of Brown. The second stage is design that aims to design product by adjusting the students' characteristics and needs. Develop is the third stage where the product will be judged by expert media to gain credibility from product quality and also to see the students' response about the product that have been designed. Dissemination is the final stage which aims to promote the flash cards using quick response code to the seventh-grade students at MTs N 2 Bolaang Mongondow. The four stages of 4D model implementation process will be elaborate in the following sections.

Result of Defining Stage

The define stage is using the need analysis concept by James Dean Brown in 2016 that consists of: Getting ready to do Need Analysis, Doing the Need Analysis and Using the Need Analysis Results. This research is utilizing those phases for gathering the data of the student's needs, lacks, and necessities. Additionally, getting ready to do Need Analysis has four frameworks that will guide for creating the questions in questionnaire to gather the data.

Those frameworks are: discrepancy view, democratic view, analytic view, and diagnostic view.

In discrepancy view, it focuses on knowing the students' gaps, aims to find the differences between student's desire for future language performance in learning English. Democratic views are formulated to determine the needs of the students where it involves the learning goals that preferred by all the stakeholders while learning English. Analytic view has a purpose to determine the continuity of material topic studied by the students, whether the teacher taught each material following the sequence or not which mean if the material started from the easiest to the hardest. The last is diagnostic view has a purpose to find out the elements or skills that must be taught to the students in English language learning.

Result of Designing Stage

The design stage in 4D model aims to develop the product. This stage involves two processes; designing modern flash cards and designing QR-Code.

1. Result of Designing Modern Flash Cards

There are three materials that presented in this flash cards. Those are animals, public buildings, and objects in the classroom. It is because those materials were appropriate for the seventh grade English lesson based on basic competence 3.4. Flash cards consists of many pictures. While designing the flash cards, the researcher designed it one by one through Canva application. In order to make the students' easier to identify and understand the material that presented, the researcher try to simplify it.

2. Result of Designing QR-Code

Each vocabulary in flash cards is equipped with Quick Response Code (QR-Code) that has a purpose to pronounce each vocabulary.

It works by scanning the code with phone's camera. Since the students are struggling in pronouncing the vocabulary, the researcher created this to help them and also want the students to use their smartphones for learning. This product also can help them to learn independently anywhere and anytime. Since these flash cards are equipped with QR-Code, it will need an internet connection to access it for the first time. But it has a "download" option, the students can download each sound. So, every time they want to learn again, they do not have to worry about running out of the phone's data.

Result of Developing Stage
Developing stage aims to enhance the quality of the product that has been designed through the assessment of media expert and the students. it involves two steps; obtain media expert's appraisal and conduct a trial of flash cards product development for the students.
1. Result of Media Expert Appraisal
There were at least 13 questions in the questionnaires that would be evaluated by the media expert that discussed about the product's graphics and visuals, typography, colors, and illustrations and did the product can motivate and promotes the students' enthusiastic in English language learning that has been designed using a Likert Scale. Moreover, for the assessment aspects that assessed letters, symbols, colors on the media and help the students to improve their pronunciation. Furthermore, the total score of the product giving by the media expert was very valid which means that the product is highly positive to be use in the teaching and learning process.
2. Result of Developmental Testing To Students
Developmental testing was the second phase in developing stage. It aims to know students' response towards the product by handing out a questionnaire that contained nine statements regarding the flash cards product. There were nine statements in the questionnaire and it will be presented in Likert scale. Based on the analysis data from students' response result towards the nine questions, the result was highly positive.

Result of Disseminating Stage
Dissemination is the last stage in 4D model. At this stage, the product was ready to disseminate after got the result of comments and suggestions from media expert and students' response towards the product. The researcher then distributed the product to English teacher and VII B students at MTS N 2 Bolaang Mongondow. The students learned the material that contained in the flash cards, then the teacher tested the students by asking them to do some exercises. The exercises aim to test the students about their understanding towards the material.
The average score of students score was indicating that using this flash cards product in English language learning can enhance students' understanding towards the material, help them to memorize easily and also improve their pronunciation.

DISCUSSION
Modern flash cards product that being developed in this research brought many advantages for the students in teaching and learning process specifically English language learning. The result of using flash cards as a learning media on students found out that it enhances students' vocabulary. That is because it focuses in presenting the material that the students choose to learn. It also helps them to understand and memorize the material easily since it wrapped in a simple and clearer way. Besides, the presence of QR-Code that aims to produce a sound of the vocabulary help to reduce

students' difficulties and improve their pronunciation.

Another result revealed that flash cards that equipped with QR-Code promotes students enthusiastic in English language learning. Since it presented in a fun and colorful way as the students' characteristic, this product makes the students learning English more enjoyable in class. Additionally, this product also motivates the students to actively discuss the material, for instance asking each other and guessing the vocabulary related to the picture on it.

Furthermore, the product can be utilized for self-learning anytime and anywhere. This can increase self-confidence as well as empower the students to be more responsible in learning independently without continuing to depend on the teacher. Also, it provides opportunities for students to hone their skills in English and the ability to be creative and active.

The process of developing this product was using 4D Model (Define, Design, Develop, Disseminate) by Thiagarajan, Semmel and Semmel. The development of this learning media uses the 4D model because it is systematically arranged so that the implementation is sequential, each stage that will be passed always refers to the next stage in order to get the effective learning media.

CONCLUSION
This study aims to develop flash cards using QR-Code for seventh grade students of MTS N 2 Bolaang Mongondow. Researcher arises that topic as the contribution to help the student problems in English language learning, especially in vocabulary as well as pronunciation. This study applies 4D model as the method to guide the process of collecting, analyzing, finding and discussing the data. Moreover, there are two research questions that become the main discussion of this research and it also aims for limiting and directing this research. The first question aims to determine the students' needs and the second aims to develop the flash cards using QR-Code product. This study highlights the importance of learning media to support the

students in teaching and learning process, particularly in English lesson.

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