Developing Quizizz-Based Learning Media in Teaching Reading

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Abstract

The lack of learning media that can promote learning during the learning process, which results in a decrease in student learning outcomes, is what inspired this research. The objectives of this study are to (1) identify the process of developing the product, (2) find out the feasibility of the product and (3) to find out students’ responses toward the product. The research method used in this research was the Research and Development (R & D) method, with the ADDIE development model. This model consists of the following steps: analysis, design, development, implementation, and evaluation. The respondents of this study were first semester students in English department who are taking the subject of reading for general purposes and two experts who assess the validity of the product content and the validity of media. The data collection methods in this study were observation, interview and questionnaires. The results showed that the process of developing the product has completed with the ADDIE model, which consisted of five stages namely Analysis, Design, Development, Implementation, and Evaluation. Second, the product was feasible. It was supported by the validators’ result value, which felt into the “Very Good” categories. Third, the product that has been tested in the class received positive responses from the students. Therefore, it can be concluded that the use of quizizz based learning media is recommended to be applied in reading class. This media is beneficial in improving students’ interest in reading.

Keywords: learning media; quizizz; reading.

Introduction

Reading as the part of literacy is forced to prepare the students in facing digital literacy which emerges to build an innovative reading habit. Reading also enables students to acquire the information, knowledge, and skill that they need in life. The quality of reading skill has a strong impact on English language ability. The more students have skill in reading, the more they will be opened with a new world,
increase the vocabulary, language development, and familiar with a variety of writing style. It means that the success or failure of the students in reading skill resonates throughout the rest of their life in the future.

However, due to the difficulty most Indonesian students have learning English as a second language, reading and understanding English content can be challenging. It truly caused by the low rate of reading habit and the existence of technology that changes their lifestyle. As stated by PradnyaDewi & Kristiani (2021) that reading is regarded as a difficult activity since it is dependent on the student's degree of thinking and language abilities, making it one of the most important skills to learn and to teach reading skills to students is also a challenging task as educators need to diversify the use of teaching approach to avoid boredom. Therefore, to cope with this problem, teachers need to integrate the technology in teaching reading.

Technology is something interesting for students at this time, especially for the Generation Z students who were born around the year of 1995-2012 (Stillman & Stillman, 2018). They are prepared to have a ten-skill including mastering English language before facing revolution 4.0. It is supported by Priyanti, et al. (2019) Who argue that since the young generation seems cannot live without utilizing technology, therefore, it is important to integrate technology into the learning process. It means that the teachers are required to be able to design appropriate learning by involving technology in the learning process (Phillips & Trainor, 2014).

Nowadays, with the advancement of technology, the progress of Indonesian language education is growing rapidly. In addition, with the advancement of technology, teachers need to create or seek new English teaching innovations in the classroom, such as using media-based online media applications. In other words, teaching media was tool that helps the teacher to create an effective and efficient learning process. As stated by Adnyani et al. (2020) that using technology as a learning medium for students can boost their feelings, willingness, and attention while studying. Thus, educators need to be able to utilize technology to support the teaching and learning process in the classroom and outside the classroom (Adisel & Prananosa, 2020).

According to Deterding, et al. (2011), gamification provides a fun and innovative way to build an interest in reading and guide the students to comprehend reading a text. The main objectives of gamification, according to
Dichev & Dicheva (2017), are to improve certain skills, introduce objectives that give learning a purpose, engage students, optimize learning, support behavior change, and socialize. Numerous researchers have looked into the impact of gamification in an educational context, and they have found that it has positive effects such as an increase in engagement, user retention, knowledge, and cooperation (Hakulinen & Auvinen 2014; Tvarozek & Brza, 2014).

Quizizz is a game-based educational application that may be used to test your knowledge (Pusparani, 2020). Quizizz platform was founded by Antik Gupta and Deepak Joy Cheenath in 2015. According to Arttirmak & Samet (2018), quizizz is a web-based learning that significantly affects the learning process among foreign language learners. It means that by creating an enjoyable learning condition, it is expected that the previous problems can be solved and the teaching learning process can run effectively. Thus, it can be concluded that technology-based learning such as quizizz can create an enjoyable learning condition by helping the students to activate their background knowledge before reading and evaluating their comprehension after reading.

Many relevant studies were concerned about the implementation of quizizz in the classroom. The first was conducted by Priyanti et al. (2021). The research’s aim was to investigate the effect of Quizizz towards the eleventh-grade students’ English study. The result showed that Quizizz affected students reading comprehension. Then, the research by Ju & Adam (2018) about evaluating quizizz in Arabic class. The results show that the use of quizizz affects the students to be more interesting and more focus on learning English. Moreover, Cook & Babon (2017) conducted a study about the use of weekly online quizzes based on prescribed preparatory material as a tool to incentivize preparatory reading. The result of the study shows that the role of a high students’ engagement with the quizzes affects the performance of prescribed reading.

Unfortunately, numerous studies only investigate the use of quizizz as an evaluation tool. Thus, this study focuses on learning media that not only functions as an evaluation tool but can also convey learning material. This is because good learning media is a media that have evaluation tools and material descriptions (Hamadi et al., 2021; Kim, 2019). It is supported by Medvedovska, et al., (2016) that quizizz have features to support learning process, such as assignment, quiz, polling, export to excel spreadsheet, presentation, print, report the quiz result to the students’
parents, and live quiz. In presenting the materials, the teacher can create some slide completed with text, picture, video, and link from other sources. Quizizz also provides the back sound music that facilitates the students to be enjoyed while having the quiz given by the teachers. Therefore, this study focuses on developing learning media by using quizizz for teaching reading for general communication of first semester students of English major in IKIP Siliwangi. This paper also aims at investigating the quality of the developed learning media and investigating the students’ responses toward the use of the developed learning media.

**Research Methodology**

The type of research used in this research is research and development (R&D), which produces products in the form of learning media. Sugiyono (2010) states that research and development methods create a particular product and test its effectiveness. Meanwhile, Maydiantoro (2021) stated research and development (R&D) is a research model that aims to develop a product that needs research and then develop it to produce a product that has been tested. This research was conducted in IKIP Siliwangi. The respondents of this study were first semester students in English department who are taking the subject of reading for general purposes and two experts who assess the validity of the product content and the validity of media.

The research design is adapted from ADDIE research and development model developed by Dick and Carey (1996). ADDIE development model consists of five stages: Analysis, Design, Development, Implementation, and Evaluation (McGriff, 2000) (Dalimunthe et al., 2021). Firstly, the analysis stage is conducted to to gather information in the field and find what the student wants. In this stage, a need analysis for product development was carried out by using interviews. The data from the needs analysis and initial information were used as a reference in the development of the learning media. Second, design stage focused on determining the course grid. The third stage is the development stage. In this stage, the product that has been designed is made into a real product (the first draft product) which is then tested to determine the validity of the product developed. In this stage, the learning media was developed by using is quizizz. Then, the learning media was validated by two experts. The next stage is the implementation stage. The last stage in this model
is the evaluation stage, which is carried out by giving questionnaire to find out the students’ responses toward the developed product.

The five stages of the ADDIE model are interrelated and structured systematically. The first to the fifth stage in its application must be systematic and cannot be ordered randomly (Budiarti, 2017).

![Figure 1. Model ADDIE illustration](Dinatha and Kua, 2019) (Dalimunthe et al., 2021)

Questionnaire used to measure feasibility of product and to investigate students' responses toward the product. The questionnaire made for each respondent must score the item on a scale of 1 to 4 (1 = strongly disagree; 2 = disagree; 3 = agree; 4 = strongly agree). Then, the data from questionnaires were analysed quantitatively. Percentage was used to examine data by using the following formula:

\[ P = \frac{F}{N} \times 100\% \]

Note:
- \( P \) = Percentage
- \( F \) = Frequency of instrument
- \( N \) = Number of cases

The Likert scale used this calculation with a range of 1-4. Then, the data were converted to descriptive analysis in terms of its goodness as proposed by Suharto (2006: 52 - 53).

<table>
<thead>
<tr>
<th>Interval</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>( 3.24 \leq X \leq 4 )</td>
<td>Very Good</td>
</tr>
<tr>
<td>( 2.5 \leq X \leq 3.24 )</td>
<td>Good</td>
</tr>
<tr>
<td>( 1.75 \leq X \leq 2.24 )</td>
<td>Fair</td>
</tr>
<tr>
<td>( 1 \leq X \leq 1.74 )</td>
<td>Poor</td>
</tr>
</tbody>
</table>
Findings and Discussion

Findings

The steps of developing quizizz learning based media in teaching reading follow some procedures adapted from ADDIE model consisted of five phases such as analysis, design, development, implement and evaluation.

1. Analysis Stage

Before designing the media, need analysis was conducted to gather the information about students' necessities, students' lack and students' wants. The researchers conducted need analysis through observation and questionnaire.

Based on the data from observation, it was found that the teaching and learning process in reading class only depend on the use of textbook. Furthermore, the data from questionnaires revealed that most of the students agreed that the use of textbook which was used in reading class is not interesting and it could not help much in improving their reading ability. It can be seen from the students' level ability in reading is still intermediate.

Moreover, related to the students' lack most of the students agreed that they had difficulty in reading because of their lack of strategies in reading. In addition, the data from questionnaire also showed the students difficulties in reading namely finding the topic, finding main idea, identifying specific information, guessing meaning, inferencing, and summarizing.

2. Design stage

In this stage, the researchers focused on designing course grid. The course grid consists of some elements such as Learning objectives and unit/learning material. It corresponds with the previous study done by Moradmand et al. (2014) that the design phase should contain objectives, learning activities, pedagogical strategies, and materials. Learning objectives and learning material of the developed learning media are stated in Table 2.

<table>
<thead>
<tr>
<th>No</th>
<th>Learning Objectives</th>
<th>Learning material</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The students can preview and predict the article</td>
<td>Previewing and Predicting</td>
</tr>
<tr>
<td>2</td>
<td>The students can find out specific information</td>
<td>Scanning</td>
</tr>
<tr>
<td>3</td>
<td>The students can identify the main idea of the text</td>
<td>Skimming</td>
</tr>
</tbody>
</table>
The students can guess the meaning from the context

5. The students can determine topic of a paragraph

6. The students can differentiate topic, topic sentence and main idea

7. The students can recognize listing pattern

8. The students can recognize sequence pattern

9. The students can recognize comparison and contrast pattern

10. The students can recognize cause and effect pattern

11. The students can draw inferences

12. The students can make a good summary of a sentence

13. The students can make a good summary of a paragraph

14. The students can make a good summary of a short passage

3. Development stage

After designing the course grid, the next stage is development. In this stage, the media was developed based on three components namely opening section, content section and closing section. Opening section consist of cover. While, content section covers two parts namely learning materials and evaluation quizzes. The last, closing section consist of material conclusion. All of them were then developed into quizizz application. The development of quizizz is illustrated as follows:

Figure 2. display of opening section (Cover)
In content section, learning material and learning objectives were designed based on course grid in design stage. Therefore, there are 9 units as the material developed using quizizz as can be seen in Figure 3.

![Figure 3. display of materials](image)

In content section, the assessment was given after the presentation of material. There were 14 online reading quizzes to assess students’ comprehension on the teaching material. Assessment enables students to consider what they have learned, clarify any misunderstandings, and evaluate their progress. In other words, assessment revises how and what students wish to study, as well as how much time they devote to different tasks and learning resources. There is no denying that how students engage with the assessment process affects their future learning and the development of their learning strategy.

![Figure 4. display of quiz](image)

After doing the quiz, the students’ list and scores also could be seen after they practice the quizzes. It can be seen from figure 5.
After the media has been developed, the feasibility of the product was assessed by two experts, namely material experts and media experts. Validation of material experts was carried out to determine the suitability of the material needed by students. While, validation of media experts was carried out to assess the validity of media. The result of material validation can be seen in table 3.

<table>
<thead>
<tr>
<th>No</th>
<th>Aspect</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Quality material</td>
<td>3.2</td>
</tr>
<tr>
<td>2</td>
<td>Quality of language</td>
<td>3.5</td>
</tr>
<tr>
<td>3</td>
<td>Quality of evaluation task</td>
<td>3.5</td>
</tr>
<tr>
<td>4</td>
<td>Suitability of content</td>
<td>3.2</td>
</tr>
<tr>
<td></td>
<td><strong>Mean (x)</strong></td>
<td><strong>3.35</strong></td>
</tr>
</tbody>
</table>

The table above shows that the product value by the first validator is 3.35. This value is categorized in the "very good" category. In addition, the result of media validation can be seen in table 4.

<table>
<thead>
<tr>
<th>No</th>
<th>Aspect</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>General Quality</td>
<td>3.2</td>
</tr>
<tr>
<td>2</td>
<td>Quality of language</td>
<td>3.5</td>
</tr>
<tr>
<td>3</td>
<td>Media Presentation</td>
<td>3.5</td>
</tr>
<tr>
<td></td>
<td><strong>Mean (x)</strong></td>
<td><strong>3.4</strong></td>
</tr>
</tbody>
</table>

The table above shows that the product value by the media expert is 3.4. This value is categorized in the "very good" category. Therefore, it can be concluded that the development of learning media by using Quizizz in teaching reading for general communication has feasibility with the categories "very good".
4. Implementation stage

After being validated by experts, the developed media were then implemented to first semester students of English major in IKIP Siliwangi. At this stage, quizizz link was shared to the students who were taking reading for general communication subject. Thus, all participants are required to join the link. Through quizizz, the students can read and understand material by themselves and work on questions for practice everywhere and anytime. It indicates that the use of developed product can raise students’ academic achievement.

5. Evaluation Stage

An evaluation of quizizz learning based media usage for Reading for general communication course was conducted to obtain information regarding the use of the developed learning media. The questionnaires were distributed to 28 participants who had completed the representation of the material. The questionnaire consists of language aspect assessment and content materials assessment. The list of questions in language aspect and content materials assessments was adapted from Furwana & Syam (2021). The result if students responses are displayed in Table 5.

<table>
<thead>
<tr>
<th>No</th>
<th>Question</th>
<th>Percentage</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I enjoyed learning Reading through Quizizz</td>
<td>10.71</td>
<td>89.28</td>
</tr>
<tr>
<td>2</td>
<td>The use of quizizz can improve my reading skill</td>
<td>35.71</td>
<td>64.28</td>
</tr>
<tr>
<td>3</td>
<td>I became more motivated in reading using quizizz</td>
<td>7.14</td>
<td>89.28</td>
</tr>
<tr>
<td>4</td>
<td>Learning reading by using quizizz is more interesting than by using textbook</td>
<td>50</td>
<td>46.42</td>
</tr>
<tr>
<td>5</td>
<td>The use of quizizz are helpful to understand the lesson</td>
<td>39.28</td>
<td>60.71</td>
</tr>
</tbody>
</table>

Table 5. The result of students’ responses

Discussion

1. Analysis Stage

This stage revealed the information about students’ necessities, students’ lack and students’ wants. Related to the students’ necessities, the result of questionnaire and interview revealed that all respondents stated that the use of media in learning
process is the most influential factor to improve students’ reading comprehension and most of students agreed that quizizz as the most interesting media. It is supported by the data from interview that in presenting the materials, the teacher can use quiz to create some slide completed with text, picture, video, and link from other sources. Quizizz also provides the back sound music that facilitates the students to be enjoyed while having the quiz given by the teachers. As pointed out by Medvedovska, et.al., (2016) that quizizz have features to support learning process, such as assignment, quiz, polling, export to excel spreadsheet, presentation, print, report the quiz result to the students’ parents, and live quiz.

In addition, related to students’ lack, the data revealed that students had difficulties in reading namely finding the topic, finding main idea, identifying specific information, guessing meaning, inferencing, and summarizing. It indicates that readers should be familiar with some items in comprehending reading, namely: main idea (topic), expressions/idioms/phrases in context, inference (implied detailed), detail (scanning for a specifically stated detail), excluding facts not written (unstated details), supporting idea(s), and identifying meaning synonym, or opposite, (Brown, 2003). Thus, it can be concluded that in developing the media, the teaching materials should cover types of reading strategies such as finding main idea, identifying specific information, guessing the meaning, inferencing, and summarizing. Thus, these findings can be used as the basis for designing media.

2. Design Stage

The result of students’ needs analysis provided the framework in designing learning objectives and teaching material. It enabled the researchers to determine what the course should focus on, what material to include in terms of language or skills, and what learning approach to employ. It is in line with the statement of Seel & Glasgow (1998) that design stage is a process which leads to the goals and is driven by a search for the answers to the following questions: “What instructional strategy will achieve the objectives?”, “What are the objectives?”, “How will we know if the objectives are met?”. Then, this blueprint used as the basis for developing quizizz Based Learning Media.

3. Development stage
In this stage, the researchers carried out the activities such as creating learning media and building all content and components based on the design stage. The media was developed based on three components namely opening section, content section and closing section. At the end of the presentation, there were exercises for students as material for teachers’ evaluation. It is in line with Cox & Clark (1998) that giving continuous online formative assessment using quizzes will give positive effect to students since they know their own learning progress. Thus, it can be concluded that assessment plays a key role in improving and strengthening learner motivation (Burry, 2017) which influences the way students approach their learning (Barbosa, 2005).

After the media has been developed, the feasibility of the product was assessed by two experts, namely material experts and media experts. The data shows that the product value by two experts were categorized in the "very good" category. Therefore, it can be concluded that the development of learning media by using Quizizz in teaching reading for general communication has feasibility with the categories "very good". Therefore, it can be concluded that the media can be applied in the implementation stage. The data showed that the validity level of learning assessment via Quizizz application met very valid criteria and could be used without modification (Natalia et al., 2018).

4. Implementation Stage

The implementation of this learning media was carried out on a small scale or piloting. Furthermore, after the lecturer had given the learning material, students were given 14 online reading quizzes to assess students’ comprehension on the teaching material. The data revealed that students were enthusiastic about implementing the development of learning media that researchers have developed. This indicates that Quizizz can create an enjoyable learning condition. This is because Quizizz learning media are new and exciting learning media for them. It is in line with the statement of Ju & Adam (2018) that the use of Quizizz affects the students to be more interesting and more focus on learning English.

In addition, the data also showed that through Quizizz, the students can read and understand material by themselves and work on questions for practice everywhere and anytime. It indicates that the use of developed product can raise students’
academic achievement. It is in line with Toharudin et al. (2011: 27), which state that the purpose of preparing teaching materials, among others, can help develop or improve student learning outcomes.

5. Evaluation Stage

The purpose of this stage is to obtain information regarding the use of the developed learning media. The data was collected from questionnaires. It was revealed that the result of students’ responses toward the use of quizizz based learning media was 3.26. Based on the criteria, it indicates that the use of quizizz based learning media belongs to very good criteria. Thus, it can be concluded that in terms of its practicality, the students have positive responses toward the use of quizizz learning based media. It is supported by Harefa et al., (2020) that quizizz can give students the opportunity to compete, which encourages them to learn and enhances their grades.

Furthermore, the data also showed that mostly students (10.71% strongly agreed and 89.28%) expressed that they enjoyed learning reading through quizizz. In addition, the data also revealed that mostly students (64.28%) agreed that the content of reading material developed in quizizz help students to improve their reading skill. It is in line with the statement of Priyanti et al. (2019) that the use of quizizz can improve students’ ability in reading. Further, it can be seen in the statement of number 3 that the majority of students (89.28 %) agree that they became more motivated in reading using quizizz. This finding is supported by Dhamayanti (2020) that quizizz can assist students in learning motivation and academic achievement. Additionally, other statement showing the students’ positive perception toward the use of quizizz was number 4, most of students (50 % strongly agree and 46.42% agree) stated that “Learning reading by using quizizz is more interesting than by using text book”. The last, the data also showed that most of students (60.71%) agreed that the use of quizizz are helpful to understand the lesson.

Based on the description above, it can be concluded that students gave positive responses toward quizizz learning based media. It indicates that that using Quizizz in the classroom as a learning evaluation tool can increase student interactivity and engagement, which is supported by research (Akhtar et al., 2019).
Conclusion and Suggestion

Based on the results of research that has been carried out, thus it can be concluded that the resulting product was in the form of quizizz learning based media which contains reading material (text, images and videos) and assessment. This product was valid and feasible to be applied in Reading class. In addition, after being implemented in the Reading class, the product also had positive responses from students. This learning media is very useful because it can increase students' learning motivation in reading and can help students to improve their reading skill. This study was limited on reading skill only and conducted in the university. Thus, there is a need for further development considering the use of different methodologies or designs, such as the mix-method, classroom action research, or experimental design in productive language skills being studied such as writing and speaking. In addition, it is suggested to modify the media so that it can accommodate all student learning styles.

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References


