The Development of Read Riddle Games to Improve Students' Reading Interest

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Abstract:
Reading is an important aspect of the Senior High School curriculum, especially in areas where languages were integrated. The curriculum focuses on teaching grammatical awareness, structure, and reading comprehension to help students progress from basic knowledge to higher levels of language use. This study aims to discover the students' outcomes by developing learning media using Google Site called "Read Riddle Games" for students in seniour high schoool. This study used ADDIE (Analysis, Design, Development, Implementation and Evaluation) as the methodology to design and develop a learning media product. The learning media were validated by material expert, media expert and trial with the students. The researcher used questionnaires as the instruments in this study. The analysis of trial with the students using questionnaire with Gain Classification revealed a significant improvement in students' interest in reading after the enforce of the developed learning media with an average of 71% increase in students' interest in reading. The development of the "Read Riddle Games" learning media has demonstrated high feasibility both in terms of material aspects and media aspects. This finding show that the learning media developed can be used to enhance students' interest in reading, thus contributing to a more effective educational experience.
Keywords: Development, Read Riddle Games, Reading Interest.

1. INTRODUCTION

English is widely used in international communication, business, and education. It allows accessible to pursue options for both personal and professional development, including studying abroad, working for global corporations, and having access to a larger variety of knowledge and resources. Additionally, learning English improves cognitive function and cross-cultural awareness (Febtiningsih, 2019, p.2).

In educational sector, teachers recommended to use technology, one of which is to facilitate their productivity (Pahmi et al., 2018, p. 2-3). Teachers should model technology use, pedagogical beliefs, and instructional strategies to prepare prospective teachers should be encouraged to integrate technology as a tool and goal in their future practice. Additionally, educators need to encourage students' technological literacy to prepare them to work and learn in the 21st century and helps develop the skills needed for collaboration, communication, problem-solving, and lifelong learning (Uerz et al., 2018, pp. 3, 7, 10).

Reading is an important aspect of the Senior High School curriculum, especially in areas where languages were integrated. The curriculum focus was on teaching grammatical

awareness, structure and reading comprehension to help students progress from basic knowledge to higher levels of usage. Reading allows students to improve their oral and written communication skills using the correct grammatical structures of the English language. Students were also able to discuss and analyze texts to generate new meanings and respond to literary texts by assessing literary originality (Manuel, 2022, pp. 3, 5, 11).

Reading also provides access to information, knowledge, facilities, lifelong learning, and opportunities. It is also key to learning in all aspects of life and can improve thinking, problem-solving, and other skills (Hameed, 2022, pp. 2–6). Additionally, reading can be done for various purposes, such as obtaining information, instructions, or entertainment. Overall, reading can have a positive impact on personal and professional development, academic achievement, and social and cultural awareness.

Nowadays, the students were low-motivated, have little prior knowledge, and poor vocabulary, which negatively impacts their reading comprehension. It can be seen from the decreasing of students' learning achievement, hindering their problem-solving abilities, and inhibiting their future studies and careers (Nanda & Azmy, 2020, pp. 3–5).

In fact, Indonesia is among the nations with the lowest levels of reading interest worldwide. The outcomes of various polls show this predicament. The Organization for Economic Co-operation and Development (OECD, 2019) carried out a research and review in 2018. According to 2019 International Student Assessment Program (PISA) statistics, Indonesian individuals have an extremely low literacy rate and reading interest. Statistics from the Indonesian National Reading Interest Survey showed that Indonesia is among the bottom six nations, or rated 72nd out of 77 (McComas, 2019).

The cause of low interest in reading in Indonesia can be due to several factors such as environment, education, social background, and facilities which can influence reading habit (Lesmana, 2019, p.2-3). There are also other factors contributing to students' low interest in reading. Firstly, the students seldom use English in their environment. Secondly, teaching materials are monotonous. Thirdly, the students do not have the opportunity to further develop their communication skills. Fourthly, the teacher have few learning media. This is expected to be the main explanation for why students' enthusiasm to learn has decreased. (Arifah et al., 2020, p.2-3). Whereas nowadays, Indonesian students tend to be more interested in reading on electronic devices, which is more appealing them who are more inclined towards technology (Fatich & Mahendra, 2020, p.2-3).

Based on observation by researcher, especially at students of senior high school, some problems were found. Firstly, the teacher have lack of media in teaching reading. As the result, the students' reading interest becomes low. Secondly, students have little chance to develop their reading skills. Thirdly, the teaching and learning process in class was very monotonous and uninteresting for students. Students who were uninterested in the lesson easily give up if the

material is difficult to understand. From these problems, of course it will impact on their low reading scores.

Therefore, to boost students' interest in learning, particularly in reading English literature, researchers sought to develop learning media. To improve students' interest in studying, particularly in proverbs and riddle-related information, the researcher developed learning media named "Read Riddle Games" utilizing Google Site.

Google Sites was created in March 2008. It is a platform that enables people to quickly and effortlessly develop their websites. To enhance learning, Google Sites is simple to use since it makes the most of tools like Google Docs, Sheets, Forms, Calendars, and Awesome Tables. Because creating and maintaining a website is complex, users often get stuck in creating or maintaining their website. Google is addressing this need with the introduction of Google Sites. There is no need with difficult high-level programming languages. The benefits of this website include its ease of use, 100MB of free online storage, and integration with other Google products like YouTube, Google Forms, and Wikipedia. Google servers safely host the webpage. It also has tools like timezones, calculators, translations, weather predictions, and open data. With the Google search engine, the latter is similarly simple to discover (Bangun et al., 2022, p. 2).

Researchers decided to develop a media called "Read Riddle Games" because students' interest in learning materials was decrease. This happens because the learning media used by teachers is still based on traditional learning media such as practice sheets and books. In addition, learners were expected to learn independently. Therefore, the researcher developed a learning media that helps students overcome their problems.

The researcher used this website-based learning media, to assist students in their learning process and overcome the problem of decreasing interest in reading. The media was designed to be simple, integrated, balanced, and visually appealing. The media was evaluated by media experts and tested on a group of students, and the results showed that it was highly feasible and effective in improving students' motivation and problem-solving skills. Therefore, the researcher used this media to enhance the quality of online learning and to provide students with a more engaging and effective learning experience.

Previous researcher have done research to improve students' learning motivation and understanding. First, Nuzullailila & Novianto (2022, pp. 3–4) determined the appropriate action strategy. The strategy included two main components: a) determining an attractive and comprehensive learning media, which was Google Site, and b) planning various learning strategies that would be implemented in each cycle. The researcher used Google Site as a learning media to provide students with a summary of the material and tasks that needed to be completed. The study resulted in improved social science learning outcomes through Google Sites media.

Overall, the researcher's strategy was to use a systematic approach to identify and address the problems faced by students in social science subject and improve their learning outcomes by using Google Site as a learning media and planning various learning strategies.

The second previous study by Amellya et al. (2021, pp. 2–3) demonstrated the development and evaluation of website-based mathematics learning media using Google Site through a metacognitive approach. The results show that learning media are highly suitable and effective in improving students' metacognitive skills. This study highlights the importance of using innovative learning tools to improve students' interest and cognitive performance.

There are differences between previous research and research done by researcher. For example, previous research has focused on training students and understanding learning media using Google Sites-powered learning media. Meanwhile, researcher focused on its development and interest. The previous research has focused on media development using different learning materials. The purpose of the study was to determine the outcomes of the Read Riddle Games by Google Sites.

2. METHODS

This research was used research and development methods, and is abbreviated as R&D. It is a research and development methodology with a scientific framework for researching, designing or processing or manufacturing a product, and validating a developed product (Nugroho & Hendrastomo, 2021, pp. 2–3). This study was conducted in May 2023 at Senior High School in Pekanbaru. This study uses the Analysis, Design, Development, Implementation and Evaluation (ADDIE) methodology to design and develop a learning media product. The ADDIE development method is systematically and theoretically developed to facilitate the media development learning process.

2.1 Research Procedures

2.1.1 Analysis

Firstly, the analysis begins by conducting the field and literature research. Regarding the curriculum analysis gained from the curriculum implemented in 2013, a direct interview with the teacher in charge of the subject was done. Topic analysis is needed in creating teaching materials according to goals. On-site research is conducted directly through visits to educational sites and debriefing with English teachers.

2.1.2 Design

Secondly, is the design phase. The activities carried out in the design stage are compiling the components to be used in media such as determining reference sources in compiling Proverbs and Riddle material, namely: *Modul Pembelajaran SMA Bahasa dan Sastra Inggris Kelas X* (Rosalina, 2020) which includes core competencies, basic competencies, learning

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objectives, table of contents, introduction, subchapter concepts, material description, evaluation, and key evaluation answers.

The next stage is compiling components that will be applied to the media, such as: Proverbs and Riddle materials in image form, designs for website appearance including website headers, google forms as student practice sheets. Because of this website is more focused on 'games', researchers also provide interactive games. The following is an overview of the Read Riddle Games website.

Figure 1. Overview Media

Before applying the "Read Riddle Games" media to students, the researcher conducted a material and media validation test to material experts and media experts. This validation aims to determine whether it is feasible to teach reading in a way that will boost students' interest in reading and their alignment with objectives, content, intelligence, and connection points. Additionally, suggestions from material experts and media experts as a review before being tested.

2.1.3 Development

The third phase is development. At this point, the material from the modules is developed into the website, namely by providing interactive games. The conception and integration of collection support materials were pre-designed during the design phase.

2.1.4 Implementation

The fourth is implementation phase. Researcher tested the media directly and asked students to fill out questionnaires and Pre-Test. After giving questionnaires and pre-test, the next step is to provide media to students. The next step after using the media is based on the student's responses to the learning media. Test results form the basis is for the evaluation phase. The link to access the media can be found in the following link: https://sites.google.com/student.umri.ac.id/readriddlegamesforgradex/

Researcher tested the use of learning media on students in class X MIPA 4 SMA Negeri 2 Pekanbaru. In the questionnaire, there are 15 statements in the form of multiple choices. Each of the statements contains 4 options namely; (1) not good, (2) good enough, (3) good, and (4)

very good. Each of each choice has a score of 1, 2, 3, and 4. This scoring aims to determine the feasibility of the learning media being developed.

According to Palelupu & Cholik cited in Wafa & Fahmi (2020, p.4) the overall score obtained from the respondents (media professional, material professional, and students) was used to calculate the criterion for media quality who completed the questionnaires and use the following formula:

Table 1. Formula for Calculating The Average Score (Palelupu and Cholik)

$$K = \frac{F}{N \times I \times R}$$

Where:
K : eligibility percentage
F : total number of respondents' answers
N : highest score in the questionnaire
I : number of questions in the questionnaire
R : number of respondents

The ideal rating category can be seen in the table below:

Table 2. Ideal Assessment Criteria for the Feasibility of Learning Media (Palelupu and Cholik)

Eligibility Percentage Intervals	Category
$0\% < K \leq 20\%$	Very Unqualified
$20\% < K \leq 40\%$	Unqualified
$40\% < K \leq 60\%$	Qualified enough
$60\% < K \leq 80\%$	Qualified
$80\% < K \leq 100\%$	Very Qualified

If the feasibility of the learning media meets the necessary standards and the percentage is greater than 60%, the learning media are considered qualified for usage.

In terms of how the students' interest in reading was determined by the questionnaires, regardless of whether the students belonged to interested or uninterested. The researcher was conducted before and after treatment by using The Motivation for Reading Questionnaire was developed by A Wigfield and JT Guthire cited in Rinawati (2019, p.4). The aspects are as follows:

Table 3. List of Questionnaire Aspects on Reading Interest

Aspects	Total Questions	Question numbers
Reading Efficacy	5	2, 4, 6, 7, 10
Reading Curiosity	6	3, 5, 9, 11, 12, 14
Reading Involve-ment	4	1, 8, 13, 15

The instruments were given to the students' as a pre- and post-test.

3. FINDINGS AND DISCUSSION

This section presents learning media created by the researcher used the Read Riddle Games, supporting exercises performed by students, and instructions. This application was used to support the educational experience and the effects of this exploration afterwards.

Feasibility of Learning Media Based on Material Aspects

The validation questionnaire by material experts was filled out by English Education Department lecturer, Universitas Muhammadiyah Riau. The following is the result of the feasibility calculation by the material expert:

Table 4. Material Expert Feasibility Questionnaire Calculation Results Based on Material Assessment Aspects

Assess-ment Aspect	Total Score	Eligibility Percentage	Category
Learning Design	30/30	100%	Very eligible
Content	38/40	95%	Very eligible
Language and Commu-nication	26/30	87%	Very eligible

The table 4 demonstrated that the results of the assessment of the material expert is based on aspects of material assessment namely learning design, material content, language and communication obtained an average percentage of 94%. The findings of this assessment indicate that the learning media developed is included in the very feasible category.

Feasibility of Learning Media Based on Media Aspects

    The assessment of the media expert questionnaire instrument was filled out by Informatics Education lecturer in Universities in Riau. The following is the result of the eligibility calculation by media expert:

Table 5. Media Expert Feasibility Questionnaire Calculation Results Based on Media Assessment Aspects

Assess-ment Aspect	Total Score	Eligibility Percentage	Category
Usability	30/35	85%	Very eligible
Functionality	27/30	90%	Very eligible
visual communication	30/40	75%	Eligible

    The table 5 demonstrated that the results of the assessment of the media expert is based on aspects of media assessment usability, functionality, and visual communication obtained an average percentage of 83%. The findings of this assessment indicate that the learning media developed is included in the very feasible category.

Trial with The Students

    The researcher did trial using Gain Classification to examine whether students' interest in reading improved after using the developed learning media. Test result was analyzed using Gain Classification as follows:

Table 6. Gain Classification

Score	Category
0,71 – 1,00	High
0,31 – 0,70	Medium
0,00 – 0,30	Low

    The decision to determine the Gain Classification was to see if the researcher-developed learning media in a questionnaire form would increase students' interest in reading. The results of questionnaire responses about reading interest are as follows:

Table 7. Results of questionnaire responses students' reading interest

Aspects	Interest Percentage	Category
Reading Efficacy	0,72 (72%)	High
Reading Curiosity	0,72 (72%)	High
Reading Involvement	0,70 (70%)	Medium

The table 7 reveals the percentage of the aspects, namely reading efficacy, reading curiosity and reading involvement, has an average score 71% which means that the students' reading interest has improved with high category. Based on the finding, the development of the "Read Riddle Games" learning media has demonstrated high feasibility both in terms of material aspects and media aspects. The average percentage increased to 71%, further affirming the positive impact. Similar research has also been conducted by Octaviarnis (2020) using riddles game to enhance students' vocabulary mastery with the result 29 out of 32 students improved their vocabulary mastery after implementing riddles game. The percentage of students who gained up to 80 score was 93.54%. A study was also conducted by Data (2022) which proves that using Google Sites as a learning platform to deliver English instruction specifically designed for academic and professional purposes in a distance learning setting was effective in raising student engagement, self-directed learning, convenience, time management, on-time assignment submission, and overall learning achievements. A study was also conducted by (Rizki et al., 2022, p. 224) In student trials, the learning materials created for seventh-graders using Smart Apps Creator (SAC) received a score of 4,96 in the "very good" category, indicating that they are appropriate for supporting teaching and learning activities.

4. CONCLUSION

In conclusion, the development of the "Read Riddle Games" learning media has demonstrated high feasibility both in terms of material aspects and media aspects. The assessment conducted by material experts indicated that the learning design, content, and language and communication aspects of the media received very eligible ratings. Similarly, the evaluation by media experts determined that the usability, functionality, and visual communication aspects were also considered very eligible. Furthermore, the analysis of student trials scores using Gain Classification revealed a significant improvement in students' interest in reading after the implementation of the developed learning media. The average percentage increased to 71%, further affirming the positive impact of the "Read Riddle Games" media on

student reading interest. This finding found the effectiveness and potential of the learning media in enhancing students' engagement and interest in reading, thus contributing to a more effective educational experience.

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