

Implementation of Let's Read and Wordwall Application in Improving Elementary School Students' Reading Literacy

Malika Desrirori^{1*}, Novitri Rahayu¹, Yurike Rosiana¹

¹Department of Elementary School Teacher Education, Islamic University of Riau, Pekanbaru, Indonesia

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ABSTRACT

This study aims to develop and implement the *Let's Read* and *Wordwall* applications as an innovation to improve the reading skills of elementary school students. The research method used is Research and Development (R&D) with the ADDIE development model (Analysis, Design, Development, Implementation, Evaluation). During the analysis phase, students' literacy needs are identified by involving teachers and students as research subjects. Then, on the design and development stage, the *Let's Read* application is used to present various interactive stories, while *Wordwall* is used to create interesting quizzes and literacy games. The implementation stage includes face-to-face and online testing to assess the effectiveness of the application, while the evaluation is carried out by analyzing the results of the questionnaire distributed to students. The results of the study showed that the use of *Let's Read* and *Wordwall* significantly increased students' interest and reading ability. This study also provides recommendations for the application of applications in interactive learning in elementary schools.

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Corresponding Author:

Malika Desrirori

Department of Elementary School Teacher Education, Islamic University of Riau, Pekanbaru, Indonesia

Email: malikadesrirori@gmail.com

INTRODUCTION

The development of increasingly sophisticated technology has become an important means to achieve more effective and efficient educational goals. Behind that, teachers are required to have skills in mastering technology and learning media. Students' ability to manage their own learning is the key to learning in the 21st century, especially in an online learning environment in the midst of a pandemic situation (Mallipa & Murianty, 2022).

The role of learning media in the teaching and learning process is very important to be implemented by educators today (Arsyad, 2010). The definition of media in learning activities is more interpreted as a photographic or electronic tool in capturing, processing, and re-arranging visual/verbal information. Educational media is interpreted as an educator's tool in establishing communication with students (Danim, 2008). Learning media is anything in the form of software and hardware that can be applied in providing material from learning sources to students both independently and in groups with the aim of increasing students' attention and interest in learning so that learning activities become more effective (Jalinus & Ambiyar, 2016).

Language teaching, especially reading, has so far focused on how students can complete their tasks, which are expected to produce good results. This phenomenon has an impact on those who do not understand what students read properly because from the beginning, they read only to complete the tasks given, not trying to like and understand what books they like to read. Without instilling the habit of reading from an early age, they can face difficulties in liking this reading habit again and it is certain that it will have a bad impact on their future. Perhaps extensive reading is a very good way to help students read (for two recent reviews, see Day and Bamford, 1998; Horst, 2005). Students need to read extensively as much as possible, get pleasure, and some information is the goal rather than learning certain features and is usually self-selected (see Day and Bamford, 1998: 7-8).

There is a study on freshmen at Taiwan University about two groups where one group is accustomed to extensive reading than the other group that is accustomed to skill-based reading. However, the group that uses extensive reading has better results in reading comprehension and reading protocols than the other group (Sims, 1996). Similarly, Hitosugi and Day (2004) proved in 10 weeks of extensive reading research with their participants have increased, with a regular reading class that has no extra extensive treatment, and one extensive reading class. Then after the reading test results were distributed. The study found that the extensive reading class outperformed the other regular reading class. And further research in Japan found that the extensive reading class had good performance on a 100-item cloze test than the group that was taught traditionally (Mason and Krashen, 1997). Learners who engage in an extensive reading approach can improve various aspects of their learning, such as reading comprehension and reading speed, and this has been proven in many studies (the sample is Beglar and Hunt, 2014). Then Pigada and Schmit (2006) on vocabulary and spelling. Learners can also have positive effects such as attitudes and motivation with the extensive reading approach intended from this study (judge, 2011).

Literacy needs to be owned by individuals to support solving problems in everyday life, one of which is literacy. Literacy can be defined as a means of communication and expression, through various; practiced in a particular context for a particular purpose and using a particular language and involving a continuum of learning measured at different levels of proficiency to develop their knowledge and potential, and participate fully in their community and wider society. Literacy is the ability to identify, understand, interpret, create, communicate and calculate, using print and written materials associated with various contexts (UNESCO, "Defining Literacy". Germany: UIS, 2018).

Reading literacy is a basic skill that is very important to be mastered by students, especially at the Elementary School (SD) level. This ability is not only the foundation for academic success, but also determines the critical, creative, and analytical thinking skills needed in everyday life.

However, various studies show that the level of reading literacy of students in Indonesia is still relatively low. Reading ability is one of the factors causing low interest in reading that comes from within students. The results of research conducted by the Program of International Student Assessment (PISA) Team of the Research and Development Agency of the Ministry of Education and Culture showed that the reading skills of children in Indonesia are very concerning, around 37.6% can only read without understanding the meaning and 24.8% can only associate the text read with one piece of knowledge information (CP Sari, 2018).

The 2018 Programme for International Student Assessment (PISA) report shows that Indonesia is ranked 74th out of 79 countries in terms of reading ability. This shows the need for a more innovative and effective learning approach in supporting the improvement of student literacy. By reading, we can learn various points of view, and gain various knowledge, which is very useful for our future (Aziz, 2023).

Improving reading literacy skills is one of the main challenges in education in Indonesia, especially at the Elementary School level. According to data from the Ministry of Education and Culture, low student literacy is a serious concern because it impacts critical, analytical, and creative thinking skills. In the context of modern learning, technology is one solution to support improving student literacy, one of which is through the use of interactive digital applications.

In today's digital era, the use of information and communication technology has become one of the solutions in creating more interesting and interactive learning. One of them is literacy learning using Android-based *Let's Read* to answer the challenges of the growing industrial era (Samsiyah, N. et al. 2020). The *Let's Read* and *Wordwall* applications are two platforms that offer a fun and interactive learning experience. Applications such as *Let's Read* and *Wordwall* offer various features that can help students develop their reading literacy skills. *Let's Read* is a digital library application that provides children's stories in local and international languages, designed to increase interest in reading through interesting and easily accessible stories. Meanwhile, *Wordwall* is an application that provides various types of interactive games that can be used to improve students' vocabulary mastery, text comprehension, and reading skills. Both of these applications allow students to learn in a more flexible, creative way, and according to their learning style.

The use of this application is relevant to the demands of the curriculum that emphasizes the development of student literacy through an activity-based and technology-based approach. Research conducted by Rohani (2024) shows that the use of technology-based interactive media such as *Wordwall* can increase student learning motivation and learning outcomes in understanding reading texts. In addition, a study by Saputra et al. (2022) also revealed that the use of *Let's Read* can create a fun reading experience, thereby significantly improving students' reading literacy skills.

This study adopts the Research and Development (R&D) method with the ADDIE development model to implement *Let's Read* and *Wordwall* as reading literacy learning aids in elementary schools. The ADDIE stages include needs analysis, design, development, implementation, and evaluation which aim to ensure the effectiveness and sustainability of the application's use in learning.

Previous studies have shown that technology integration in education, including through applications such as *Wordwall* and *Let's Read*, can improve students' learning motivation and learning outcomes. For example, Prasetyo et al. (2022) reported that the use of technology-based

interactive media can increase students' participation and literacy achievement. In addition, a study by Rohani (2024) found that digital media such as *Wordwall* are effective in helping students understand reading texts through interactive educational games. With this background, this study aims to explore the effectiveness of *Let's Read* and *Wordwall* in improving elementary school students' reading literacy and provide practical guidance for teachers in integrating this technology into daily learning.

METHOD

This study uses a research and development (R&D) research design. R&D research is a research model that aims to develop a product (Sugiyono, 2019) including in efforts to improve reading literacy of elementary school students. In this study, researchers developed products in the form of *Let's Read* and *Wordwall* for grade 4 and grade 6 elementary school students. The R&D research used in this study is the ADDIE model (Branch, 2009), which consists of the stages of analysis, design, development, implementation, and evaluation. (Figure 1).

The test subjects in this study were grade 4 students who were tested directly offline and grade 6 students who were tested online.

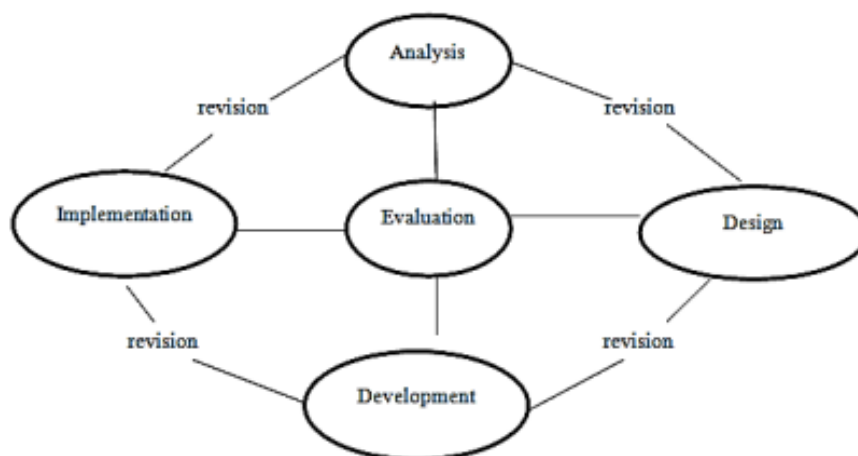


Figure 1. ADDIE Development Flowchart (Branch, 2009)

According to Figure 1, the development procedure using the ADDIE development model can be described as follows:

1. Analysis Stage

This initial research phase is in the form of an analysis of the literacy needs of elementary school students. The analysis stage is the initial stage carried out in development research. The purpose of the analysis is to determine the material and to get an overview of the learning media needed by students. The analysis that we do at this stage is an analysis of students, so that the media developed is in accordance with learning needs and can be used as a medium to foster students' literacy interests. Furthermore, an analysis of the curriculum in schools is also carried out, this aims to ensure that the products developed are in accordance with the curriculum used in schools.

2. Design and Development Phase

At this stage, the researcher began to design and develop media, namely *Let's Read* and *Wordwall*. The design and development stage is a stage carried out after analyzing students and analyzing student needs. When the product has been produced, the researcher will validate the product to ensure that the product produced is suitable for use. Among the things that are done are: conducting evaluations with 2 children during and offline.

3. Implementation and Evaluation Stage

At this stage, a small-scale product trial was conducted on students and a product trial on teachers. At this stage, the trial conducted was useful for seeing the practicality of the product that had been developed and declared valid and feasible. The results of the media practicality test were seen from the responses of teachers and students to the ease of use, attractiveness, and benefits of the product developed.

The data collection instruments in this study consisted of a validation questionnaire and a practicality questionnaire. The validation questionnaire aims to measure the level of validity of the *Let's Read* and *Wordwall* that were developed. The aspects assessed are related to the material, language used, images, implementation activities, the appearance of *Let's Read* and *Wordwall*. Meanwhile, practicality includes aspects of attractiveness, ease of use, and benefits of *Let's Read* and *Wordwall*. To find out whether the media is valid or not, calculations are carried out on each of the responses obtained from the questionnaires that have been distributed. The formula used in calculating the average score of the validation and practicality questionnaires is:

$$\bar{x}_{skor} = \frac{\text{skor perolehan}}{\text{jumlah skor pernyataan}} \times 100\% \quad (1)$$

The validation criteria given to students and the test result intervals are converted in Table 1.

Table 1. Validation Criteria (Sugiyono, 2019)

Average Score (%)	Validity Category
81 – 100	Very Valid
61 – 80	Valid
41 – 60	Quite Valid
< 40	Invalid

For the practicality test category of the media given to students, it is converted in Table 2.

Table 2. Average interval of media practicality test.

Percentage Score (%)	Practicality Category
<40	Not Practical
41 - 60	Quite Practical
61 - 80	Practical
81- 100	Very Practical

RESULTS

a. Analysis Results (Analyze)

The Analyze stage is the initial stage carried out in development research. The purpose of the analysis is to determine the material and to get an overview of the literacy activity media needed by students.

The first thing to do is to conduct initial observations. The study was conducted on students around the house with an average age of 10-12 years. Where from the results of the observation it was found that students said that at school they still rarely use digital media in literacy activities. The literacy activities used are monotonous and boring. Therefore, researchers developed literacy media that are appropriate and suitable for use. The stages of analysis carried out are analysis of student needs and character. Needs analysis is useful for matching the material/story that will be selected in the *Let's Read* application media. The media used must also be related to the goals to be achieved in literacy activities. Next is the analysis of student character, where students in grades 4 and 6 of elementary school have an age range of 10-12 years.

According to Piaget (1976) at the age of 6-12 years, children are in the concrete operational stage of development. And children tend to prefer learning that is fun and not too rigid or monotonous, therefore with the development of the *Lets Read Application* and *wordwall*, it is hoped that students will enjoy literacy activities more.

b. Design and Development Results

1. Design and Development Media

Let's Read has a green and white base color with several stories that have a variety of colors. In Figure 2, you can see many stories that can be read by students.



Figure 2. Examples of Story Books

And then the researcher chooses the story that will be implemented to the students according to the students' needs (Figure 3).

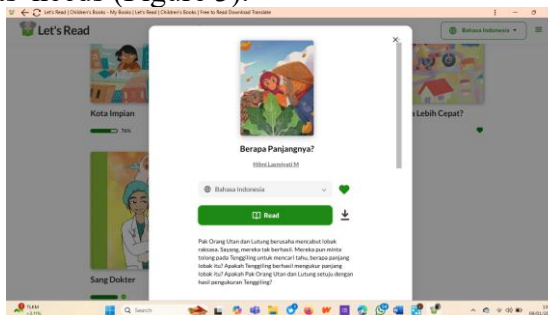


Figure 3. Text on the Book

Next, the story is designed in a game or game with the *Wordwall* application which has various features and colors to evaluate students after reading the story in the Let's Read application. In Figure 4, one of the features in *Wordwall* can be seen in the form of a quiz that the researcher chose to evaluate students.

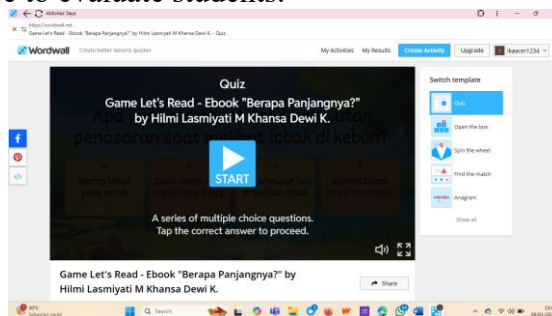


Figure 4. Wordwall Quiz

In the next activity in Figure 5, students work on a quiz that the researcher has previously created on the *Wordwall* application. .



Figure 5. Quiz in Wordwall

In the *Wordwall* quiz activity, there is a display, if it is wrong as in figure 6 and if it is correct as in figure 7.



Figure 6. Incorrect Answer



Figure 7. Correct Answer

At the end of the activity session, as shown in Figure 8, the scores of the students who have done the work will appear, showing who has the highest score.

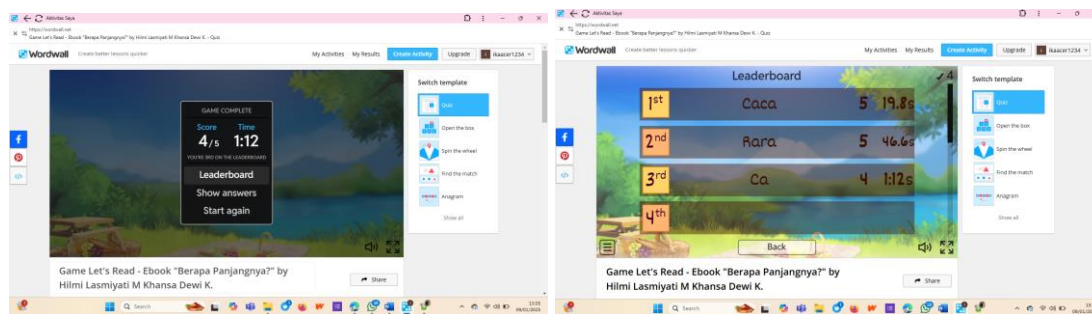


Figure 8. Students' Scores

2. Validation by Peer's

After the product is developed, it then enters the validation trial stage of the learning media carried out by 25 students regarding the aspects of material, language and media. Validation testing is carried out by filling in the validation instrument sheet using a google form with an assessment scale (4 very good, 3 good, 2 sufficient, 1 less) along with the developed media product given to the validator.

Table 3. Content Validation

No	Assessment criteria	Score
1.	Are the stories provided interesting to students?	4
2.	Does the material help students understand the reading better?	4
3.	Does the material provide examples that are clear and easy for students to understand?	4
Score Acquisition		12
Total statement score		12
Feasibility presentation		100%

Based on the table above, the percentage of suitability of the material with the learning objectives is 100% with a very appropriate qualification, thus the material is in accordance with the learning objectives contained in the *Let's Read* and *Wordwall*-based learning media that have been developed.

Table 4. Language Validation

No	Assessment criteria	Score
1.	Is the language used in the <i>let's read</i> and <i>wordwall</i> applications easy for elementary school students to understand?	4
2.	Are the grammar and spelling used correct and up to standard?	4
3.	Is the language used able to build students' self-confidence in learning to read?	4
Score Acquisition		12
Total statement score		12
Feasibility presentation		100%

Based on the table above, the percentage of language suitability used in the learning media is 100% with a very suitable qualification, thus the language contained in the *Let's Read* and *wordwall*-based learning media is very suitable for use.

Table 5. Media Validation

No	Assessment criteria	Score
1.	Is the appearance of the <i>let's read application</i> and <i>wordwall</i> attractive and appropriate for students?	4
2.	Is the media easy for students to use without much assistance from teachers or parents?	3
3.	Do the available features support student interaction and engagement in learning?	4
4.	Can the media be accessed smoothly without technical problems such as errors or lag?	3
Score Acquisition		14
Total statement score		16
Feasibility presentation		87.5%

Based on the table above, the percentage of eligibility of learning media based on *Let's Read* and *wordwall* is 87.5% with very feasible qualifications, thus the media developed, namely learning media based on *Let's Read* and *Wordwall*, is very feasible to use.

From the results of the validation test by experts in table 3, the percentage obtained for the material content from all validators is 100%, which means it is in the "very valid" category. In table 4, the percentage obtained from all validators for language content is 100%, which means "very valid", and in table 5, the percentage obtained from all validators for media content is 87.5%, which means "very valid". Based on the calculation of the overall average, the validation percentage result is 95.8%, which means that the media developed is in the "very valid" category, so it can be concluded that the media can be used for testing on students.

c. Implementation and Evaluation Results

After the product is validated by students (peers), it is then implemented with students. At this stage, the implementation of *Let's Read* and *Wordwall* for students, both applications are implemented in 2 stages, namely students in grades 4 and 6 of elementary school. The first implementation stage, namely the *Let's Read* and *Wordwall* applications, was tested on a limited basis with 2 students online. The 2 students who were used as online samples in the study were grade 6 students. The selection of students was based on the category of students who got the highest and lowest scores. This activity was carried out to test and ask for student responses to the *Let's Read* and *Wordwall* media products that were developed. This limited trial was carried out by giving open questions directly to students. The following is a list of students who conducted a limited trial, which can be seen in Table 6.

Table 6. List of limited Trial Students

No	Student Initials	Learners
1.	GR	Student 1

2.	N	Student 2
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The initial stage carried out was the researcher showed, introduced and explained the *Let's Read* and *Wordwall* applications to students. Then the researcher explained how to use the *Let's Read* and *Wordwall* applications in literacy learning. After that, the researcher directed students to use the application and operate the application individually. After students have finished literacy activities with the *Let's Read application*, students will be directed to the *Wordwall* activity, then the researcher asked for students' responses by giving them several questions.

The results obtained from this limited test are that students 1 and 2 said that literacy activities using the *Let's Read* and *Wordwall* applications are very interesting. The use of images and colors in *Let's Read* gives the impression of not being boring when learning. For *Wordwall*, the game playing activity is very impressive for them and they are very enthusiastic. The reading books presented in the *Let's Read Application* can be easily understood by them. The language used is easy for them to understand. Students 1 and 2 said that they were interested and happy if teachers could use *Let's Read* and *Wordwall* in the classroom.

Based on the data collected from the results of the limited trial, it can be concluded that students like the use of the *Let's Read* and *Wordwall* applications in literacy activities because of the pictures, various colors and movements of the two applications. The material/story presented in the book can be easily understood. Then students are also able to use the *Let's Read* and *Wordwall* applications easily. Students also feel interested and happy if the teacher uses these two applications in class for literacy activities at the beginning before starting learning. This application can be said to have an attraction that can make students interested in literacy activities so that reading activities become more enjoyable, and can be a new media in activities to increase students' interest in reading in class.

Next, the implementation of the *Let's Read* and *Wordwall* Applications was carried out with 4 grade 4 elementary school students. In its implementation, literacy activities using the *Let's Read* and *Wordwall* Applications were delivered by researchers (students). After the implementation of literacy activities using the *Let's Read* and *Wordwall* Applications, an evaluation was carried out on 6 students to determine the practicality of using the two applications. The provision of this student response practicality questionnaire aims to find out whether the product developed is practical and can be used by students for future literacy activities. The results of the *Let's Read* and *Wordwall* Application practicality test by students can be seen in table 7.

Table 7. Results of the practicality test of student responses

No	Assessment Aspects	Average Percentage	Category
1.	Attractiveness	83.3%	Very Practical
2.	Ease of Use	75%	Practical
3.	Benefit	66.7%	Practical
Overall average		75%	Practical

Based on Table 7, it can be seen that the practicality test by students has three aspects of assessment, namely the aspects of Attraction, Ease of Use, and Benefits. Based on the table above,

it can be seen that for the Attraction aspect, the average percentage obtained is 83.3% with the category "Very Practical". For the Ease of Use aspect, the percentage obtained is 75% with the category "Practical", and for the Benefits aspect, the percentage obtained is 66.7% with the category "Practical". For the overall percentage, the average obtained is 75% with the category "Practical".

DISCUSSION

The *Let's Read* and *Wordwall* learning media are suitable for use because they have met the aspects of validity by and practicality of the media. Based on the results of the media validity test, a validation score of 95.8% was obtained with the category "very valid". This shows that the *Let's Read* and *Wordwall* media meet the criteria that are very good from an expert's perspective. In line with research conducted by Mamolo (2019) which states that a learning media can be continued to the practicality process if it has met the minimum good validity standards.

The results of the implementation of *Let's Read* and *Wordwall* media with grade 4 and 6 elementary school students were obtained by researchers from the results of student practicality, which was 75%. This shows that the *Let's Read* and *Wordwall* media that were developed have met the level of practicality that is "practical". From the results of the research that has been carried out, it can also be seen the factors that cause students to like reading activities using *Let's Read* and *Wordwall* because of the appropriate visualization and play activities. So that students who previously felt bored to read become more enjoyable. The implementation of Distance Learning (PJJ) requires educators to be more creative in delivering learning through various digital media or applications (Y. Khairunisa 2021). The media can be developed or created independently by utilizing digital media that is already available for free or for a fee.

In addition, the results of this study are also relevant to research conducted by (Savira & Gunawan, 2022) The results of the study stated that the *wordwall* application can improve learning outcomes. Meanwhile, the influence of *wordwall* learning media on reading interest carried out by researchers has a very good influence on students' reading interest. Thus, it can be concluded that the use of *wordwall* game media has a role in influencing students' reading interest. The same is true for research conducted by researchers that there is an influence of the use of *wordwall* game-based media on literacy interest.

Use of the *let's read* application Also in line Based on the presentation and analysis of data, it can be concluded by research (Endang Sri Maruti, 2022) that the *Let's Read* application can be used to improve literacy resilience for children. Through this application, the desire and habit of reading possessed by children grows and increases again. So far, free time has only been used for playing. By using this application, children can play while learning to read. The texts available are not only in Indonesian, but also in regional and foreign languages. Therefore, children not only learn Indonesian, but can also learn regional and foreign languages.

The development research of *Let's Read* and *Wordwall* contains several advantages, namely (1) Diverse and Interesting Reading Content. Where *Let's Read* provides various stories that are appropriate to the reading level of elementary school students and is designed to increase reading interest. Diverse stories allow students to explore interesting topics, increase curiosity, and reading motivation, (2) Free Access. Where this application is available for free, so it can be accessed by

schools and students personally at no additional cost, supporting schools that have limited budgets. (3) Visual and Interactive Design. The story is equipped with interesting illustrations, making reading more enjoyable and helping students understand the context of the story, which indirectly strengthens understanding.

The results of this study are in accordance with previous research conducted by (Maghfiroh, 2018) which stated that the use of *wordwall* media can improve student learning outcomes. Furthermore, the results of the study (Isnaeni & Hildayah, 2020) stated that the use of learning media can make students more enthusiastic in learning and interact well. This is reinforced by the statement (Wahyuningtyas & Sulasmono, 2020) that learning media has a very important role in improving learning outcomes, because it can make the learning process fun and not monotonous so that it can attract students' attention in participating in learning. Furthermore, it is stated that learning media can motivate students so that they can improve their learning outcomes (Harsiwi & Arini, 2020).

CONCLUSION

So, *Let's Read* and *Wordwall*-based learning media have advantages where students can improve their reading literacy, in order to facilitate their understanding of the reading material being read. Through *Let's Read* and *Wordwall*, this study has succeeded in developing it to be utilized in literacy/reading activities in elementary schools. The media developed have met the criteria for validity and very good practicality so that it can be concluded that the *Let's Read* and *wordwall* applications developed are suitable for use in elementary schools. The use of digital technology such as *Wordwall* games can be maximized by teachers by utilizing various features to support the fulfillment of learning objectives, one of which is the formation of disciplined elementary school student character (A, DD Utami, et al. 2022).

The use of the *let's read* and *wordwall* applications is highly recommended in literacy activities 15 minutes before learning activities in elementary schools. Where its use can also be a new experience for students, so that literacy activities become more interesting, fun and not monotonous about reading with books that are identical to boring. In addition, the *let's read* and *wordwall* applications are expected to be implemented by subsequent researchers to determine their effectiveness not only in elementary schools but also in increasing literacy interest at the junior high, high school and college levels.

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