



Web-based Educational Game Application to Improve the Ability to Identifying the Main Idea in Indonesian Language Learning

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ARTICLE INFO

Article history:

Received February 12, 2024

Accepted May 10, 2024

Available online May 25, 2024

Kata Kunci:

Media Permainan Edukasi,
Identifikasi Gagasan Pokok,
Pembelajaran Bahasa Indonesia

Keywords:

Educational Game Media,
Identifying Main Ideas, Indonesian
Language Learning



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ABSTRAK

Terbatasnya penyediaan media pembelajaran yang inovatif, menarik, dan berbasis teknologi dapat berdampak pada kurang optimalnya jalannya kegiatan belajar mengajar di sekolah, khususnya pada mata pelajaran bahasa Indonesia. Tujuan penelitian ini adalah membuat aplikasi media game edukasi berbasis web untuk meningkatkan kemampuan mengidentifikasi gagasan pokok mata pelajaran bahasa Indonesia pada materi pembelajaran kewirausahaan siswa kelas V SD. Penelitian ini menggunakan jenis penelitian Research and Development dengan model penelitian dan pengembangan ADDIE. Teknik yang diterapkan dalam pengumpulan data adalah teknik tes melalui pretest dan posttest, serta teknik nontes melalui kegiatan observasi, wawancara, data berupa dokumen, dan angket atau angket. Instrumen angket dalam pengumpulan data berupa skala penilaian yang telah lulus uji coba dari ahli media, ahli materi, praktisi, dan siswa. Sampel penelitian ini adalah 24 siswa kelas lima sekolah dasar. Teknik analisis deskriptif kuantitatif dan analisis deskriptif kualitatif merupakan dua teknik yang digunakan dalam penelitian ini. Proses analisis data pada penelitian ini menggunakan aplikasi SPSS 29 yang meliputi beberapa proses uji antara lain uji normalitas, uji homogenitas, uji t, dan uji N-Gain. Hasil penelitian diperoleh bahwa media pembelajaran game edukasi berbasis web yang dikembangkan sangat layak dan efektif diterapkan pada proses pembelajaran bahasa Indonesia untuk meningkatkan pemahaman dan hasil belajar siswa kelas V SD.

ABSTRACT

The limited provision of innovative, interesting, and technology-based learning media can affect the running of teaching and learning activities in schools to be less than optimal, especially in Indonesian subjects. The purpose of this research is to create a web-based educational game media application to improve the ability to identify the main idea in Indonesian language subjects on learning entrepreneurship material for grade V elementary school students. This study uses a type of Research and Development research with the ADDIE research and development model. Techniques applied in data collection are test techniques through pretests and posttests, as well as non-test techniques through observation activities, interviews, data in the form of documents, and questionnaires or questionnaires. The questionnaire instrument in data collection is in the form of a rating scale that has passed testing from media experts, material experts, practitioners, and students. The sample for this research was 24 fifth-grade elementary school students. Quantitative descriptive analysis techniques and qualitative descriptive analysis are the two techniques used in this study. The data analysis process in this study uses the SPSS 29 application which includes several test processes including the normality test, homogeneity test, t-test, and N-Gain test. The results of the study obtained that the web-based educational game learning media developed is very feasible and effective to be applied to the Indonesian language learning process to improve the understanding and learning outcomes of fifth-grade elementary school.

1. INTRODUCTION

Education is defined as a conscious and systematic effort to create a learning environment and learning process in which students' activeness can develop religious and spiritual strength, self-control, personality, intelligence, and human traits. The purpose of education is to encourage students to become more self-aware and better understand the outside world full of countless secrets (Canter, 2019; Tuwijati et al., 2021). The implementation of education in Indonesia requires a language of instruction that is used in each lesson. Law Number 20 of 2003 Chapter VII Article 33 Paragraph 1 states that Indonesian as the State Language is the language of instruction in the implementation of national education. In the social, intellectual, and emotional development of students, Indonesian is crucial (Gustiawati et al., 2020; Septiyani & Mukhlisina, 2023). About language, especially Indonesian, which has a motto that "books are windows to the world" with the intention and purpose that people can have a passion for reading. There are four

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aspects of language skills, including aspects of listening, writing, speaking, and reading. The four aspects are closely related to each other so they cannot be separated. Through reading activities, the insight and knowledge possessed will expand. In addition, by increasing reading activities, there will also be more information and knowledge obtained (Adnyana et al., 2023; Avi Andini Pradita, 2022). Among language skills, reading has an important position and role in life, especially in the world of education. New knowledge and insights will be obtained by someone who likes reading activities where it can increase intelligence so that it is better able to answer challenges and questions in this life (Araka et al., 2021; Scorpina, 2022). Through self-awareness of the importance of reading needs, useful information will certainly be found, as long as it is not based on coercion. This also applies to students, when reading activities are carried out using full self-awareness, students will more easily obtain all the knowledge they need. It is different if when reading activities are carried out based on a compulsion, it will make the knowledge gained not optimal.

Currently, the implementation of the independent curriculum gives students the freedom to learn with the hope that students can have a critical mind. There are several subjects that students can learn, one of which is Indonesian, where this subject can develop knowledge as well as an understanding of interconnected material to foster a sense of unity in Indonesian (Seso et al., 2022; Supriyoko et al., 2022). Identifying the main idea is one of the basic competencies in the Indonesian language subject. In subjects especially regarding main idea material, there are often obstacles when learning activities take place, namely students who find it difficult to understand and determine the main idea of the paragraph in the reading they read (Awatik, 2020; Novelni, 2023). To obtain the information mentioned, content understanding must be mastered by students when they read a discourse, to be able to understand the entire content of the paragraphs read, students must find the main idea of each paragraph first so that the information obtained is clearer and more optimal (Clarke, 2020; Lo et al., 2013). Therefore, teachers who are also educators in schools must consider the benefits of learning media because it can provide opportunities for teachers to innovate and be creative in designing and developing learning media to produce high-quality learning. Learning media is very important for the process or activities carried out by teachers (Khasanah et al., 2022; Septiani & Santi, 2022).

Learning media is a component that will not be able to be separated because it also acts as a complement when teaching and learning activities to achieve the goals of education and learning in schools. Students will be helped to understand the material through the implementation of learning tools, namely learning media. Teachers use this media to determine the quality and learning outcomes of students at school. Therefore, teachers can provide significant learning situations to their students and enable interaction between teachers and students. Regarding literacy, Indonesia is positioned at the bottom two according to UNESCO, children's reading activities must be improved and adapted to play activities (Intan Wahyuni et al., 2023; Nafi'ah, 2020). Playing or called games is an educational learning approach. Games can be used as a learning tool by applying the idea of learning accompanied by play. In the world of education, it is now also required to be part of improving the quality of education through the utilization of technological developments and information in the country of Indonesia, especially (Candrayani & Sujana, 2023; Diharjo, 2020).

However, researchers encountered problems in the fifth grade of Kenteng 02 State Elementary School, Semarang Regency. By the results of interviews with teachers and fifth-grade students, several conclusions can be drawn related to the problems that occur in the implementation of Indonesian language learning. According to the fifth-grade teacher, students are still not fluent in identifying and confused to determine the main idea because many students still have difficulty understanding what they read. Another thing is that the use of media is only focused on student books where the design looks monotonous to learning students. Teachers also only use traditional methods such as lectures, the models used are not to the wishes of students, and do not have other learning media references as a welcome to the delivery of material to identify the main idea in a paragraph on the text read. The implementation of learning in schools is still different from what is expected or has not become maximum learning. Where in the process, learning is only focused on listening activities, doing assignments, and only focusing on books that make students passive (Mo et al., 2022; Sidiq & Prasetyo, 2020).

Learning outcomes contribute to the problems in the study. From the list of evaluation results related to the material of identifying main ideas in paragraphs in descriptive text, there are still students whose scores are less than the Minimum Completeness Criteria (KKM) set by the school. Based on the data obtained, the quality of Indonesian language learning needs to be improved to get better results for all students in class V. In addition, the application of teaching materials, models, and models of learning is also needed. In addition, the application of appropriate and innovative teaching materials, models, and learning media is needed so that students' reading skills can identify and find the main idea in a paragraph (Abidin et al., 2020; Suharsiwi et al., 2022). Then, from the observations made, there has not been any interesting

and innovative learning media and has not been based on the application of technology which can involve students directly when learning is taking place. Learning media in its use is not a substitute for teachers when teaching but rather as a complement and auxiliary tool to convey the material being taught (Juhaeni et al., 2023; Kurniaman & Noviana, 2017). Based on interviews with fifth-grade teachers, the media used only utilize objects around the classroom. In addition, the use of the media is only done spontaneously without any prior preparation before learning takes place. Based on the above, it requires improvement in the use of Indonesian language learning media, especially in the material of identifying main ideas in paragraphs in description texts. The media used must be by the needs of students and by the material to be achieved and it would be even better if it is based on technology by current modern developments so that later it can be more sustainable with the correct state of technological life.

With the discovery of several learning problems as described, the researcher wants to develop a webbased educational game application to improve the ability to identify the main idea of students on the material of Learning to be Entrepreneurial in Indonesian Language subjects in Class V SDN Kenteng 02 which later in its application is accompanied by using the Problem-Based Learning learning model. Where the basis of this research is none other than to create an innovation of an educational game that is expected to be able to increase students' literacy interest and learning motivation, especially in terms of reading comprehension so that it is easier for them to find the main idea and important information from the reading they read.

One of the studies relevant to this problem is a research produced by previous study aims to develop educational game media based on local wisdom that improves the initial reading skills of grade I elementary school students (Khasanah et al., 2023). This local wisdom-based educational game media was developed using the ADDIE method. The results show that the educational game media based on local wisdom is valid for use by students in elementary schools where student activities and responses are very effective when field trials are carried out. Overall, the educational game based on local wisdom is considered suitable for use in improving early reading skills with the t-test result of $0.034 < 0.05$. The results of the N-Gain test showed the existence of an increase in the beginning reading of grade I students in elementary schools whose percentage amounted to 75.10% in the effective category. The conclusion obtained from this research is that educational game media based on local wisdom is feasible for improving students' beginning reading skills.

Based on the problems studied, namely learning that is still less than optimal due to inadequate and varied learning media which causes students to lack motivation to learn. This research was conducted to develop learning media that is relatively new in this school. Teachers are required to have skills that can support their professionalism in their duties. Not only in the media but the development of a PBL (Problem Based Learning) based learning model is also one of the applications of a model that is considered by 21st century learning (Fitri et al., 2020; Haug & Mork, 2021; Yuniyanto et al., 2020). In addition, the PBL model that researchers use is also deemed suitable to be applied to the material of identifying the main idea of a paragraph in a description text, because the PBL model has advantages, including making students learn and process not only memorize, then student activity increases, solve problems through collaboration with groups, and are constructed by students through teacher guidance (Ariyani & Kristin, 2021; Heong et al., 2020). The novelty of this study is to improve the comprehension skills of fifth-grade students of SD Negeri Kenteng 02, especially in the material of identifying the main idea in a paragraph. The purpose of this research is to develop educational game learning media based on web applications, test the feasibility of the media made, and test the effectiveness of the media that has been developed.

2. METHOD

Researchers conducted this research with the development research method (Research and Development) and referred to the ADDIE development research model (Analyze, Design, Development, Implementation, Evaluation) (Marzal, 2020). The ADDIE learning media design model is simple, focuses on development, and can be carried out in stages or systematically to realize comprehensive learning media. The steps found in the ADDIE research and development model are: (1) Analysis Stage; (2) Design Stage; (3) Development Stage; (4) Implementation Stage; (5) Evaluation Stage. The research was conducted at SDN Kenteng 02 Semarang Regency. The subjects in the research carried out included: 1) 24 fifth-grade students of SDN Kenteng 02, 2) fifth-grade teachers of SDN Kenteng 02, 3) expert team, and 4) researchers. The data collection techniques that researchers use are two combined techniques including test techniques and non-test techniques. The test technique is in the form of pretests and posttests presented in the form of multiple-choice questions, then non-test techniques through observation, interviews, distributing questionnaires or questionnaires, and research documentation. The questionnaires used in this study amounted to four kinds, namely, media expert validation questionnaires, material expert validation, student responses, and teacher

responses. To facilitate researchers in the preparation, the questionnaire is made into a grid first where this grid is used to test the feasibility of web-based educational game media applications from research subjects, namely media experts, material experts, students, and teachers. The questionnaire grids are described in Tables 1, Table 2, Table 3, and Table 4.

Table 1. Material Expert Instrument Lattice Table

No	Indicator	Sub Indicators	Item
1	Aspects of Learning Objectives	Compliance with learning outcomes	1
		Appropriateness to learning objectives	2
		Appropriateness to the topic being taught	3
2	Content Quality Aspects	Explaining the material taught	4
		Material content makes it easy to learn	5
		Complete material content	6
		Content encourages literacy	7
		Questions are relevant to the learning objectives	8
		Vocabulary is easy to understand	9
		Language by student characteristics	10
3	Feedback Aspect	Helping teachers with difficulties	11
		Reducing learning difficulties	12
		Generates learning motivation	13
		Attracts students' attention	14

Table 2. Media Expert Instrument Lattice Table

No	Indicator	Sub Indicators	Item
1	Display Design	Attractive shape	1
		Attractive display	2
		Clear display of images and fonts	3
		Attractive color selection	4
2	Media Quality	Proportional placement of in-game items	5
		Media can be used in the long term	6
		Practical and accessible media	7
		Media with instructions for use	8
		Media with readings and questions	9
3	Suitability to Level Development	Language is clear and easy to understand	10
		Appropriateness to the developmental level	11
		Meet the concept of learning through play	12
		Make students learn actively	13

Table 3. Students Response Instrument Lattice Table

No	Indicator	Sub Indicators	Item
1	Learning	Learning Implementation	1,2
2	Learning Media	Media display	3
3	Material Suitability	Compliance with learning objectives	4
4	Media Benefits	The role of snakes and ladders media in learning	5,6,7,8,9,10

Table 4. Teacher Response Instrument Lattice Table

No	Indicator	Sub Indicators	Item
1	Learning Media	Attractive media display	1
		Media display increases learning motivation	2
		Easy-to-operate media	3
2	Material Suitability	Compliance with learning objectives	4
		The material is organized systematically	5
		Presentation of questions to improve critical	6
3	Media Benefits	The role of snakes and ladders media in learning	7,8,9,10,11

Then about data analysis techniques, researchers do when all data collection processes have been completed. In collecting data to test the feasibility of this educational game product, researchers used an instrument in the form of a questionnaire. Meanwhile, to analyze the effectiveness of educational game media using various tests, namely the normality test, N-Gain test, and T-Test test which comes from the results of pretest and posttest.

3. RESULT AND DISCUSSION

Result

The development of learning media in the form of educational games based on web applications in this study has been designed to the needs and problems of learning Indonesian in grade V, especially in terms of identifying main ideas. This development research will later present the results consisting of (1) the results of the design of web application-based educational game development, (2) the feasibility of web application-based educational game media developed, and (3) the effectiveness of web application-based educational game media on the understanding of grade V students in identifying main ideas at SD Negeri Kenteng 02. The following is a description of the stages of developing web application-based educational game media adapted to the ADDIE model (Analyze, Design, Development, Implementation, Evaluation):

The analysis stage has the aim of analyzing the needs of students as the basis for developing educational game media based on web applications that will be created. In this stage, researchers first conducted interviews with class teachers which were then followed by distributing questionnaires of teacher and student needs during the learning process of Indonesian language subjects. In the results of interviews with class teachers, researchers found more than one problem that occurred during Indonesian language learning, especially related to the low literacy of students in material that requires reading comprehension the learning outcomes are still low and the learning media is less varied. This can occur because there is still a lack of provision of learning media during the teaching and learning process, especially in Indonesian language subjects. Teachers are more focused on relying on printed media in the form of textbooks or other reading books. Furthermore, researchers distributed teacher needs questionnaires and student needs questionnaires which contained questions about the development of learning media that they needed in the teaching and learning process. Based on the data from the needs questionnaire distributed, it can be concluded that students and teachers both need learning media that can provide new experiences in learning so that it is more able to attract students to take part in learning more optimally and feel more fun because, through educational game media, it becomes a combination of learning while playing. Therefore, this educational game media will be deemed suitable to be developed for students where students are more enthusiastic in carrying out reading comprehension activities to improve the ability to identify main ideas by Indonesian language subjects Learning Entrepreneurship material.

The design stage begins with collecting all the material that will be inputted into the game to be developed, then followed by collecting questions that will later become a quiz in the educational game developed. After all is considered complete, namely from the items or materials needed in the educational game later, the researcher proceeds to the stage of designing the displays that will appear in the educational game according to the items that have been collected previously. In this case, it includes the selection of interesting animations, the selection of backgrounds that are suitable for children's age, and the selection of music that is also adjusted and suitable for accompaniment in the educational game developed. In addition, researchers also design learning tools consisting of teaching modules and LKPD which will be used as a reference in teaching and learning activities.

After the game design developed is ready, the next design stage is the implementation of the game design that has been made and all items that will be included in the educational game are applied through the react application with the following results as show in [Figure 1](#).

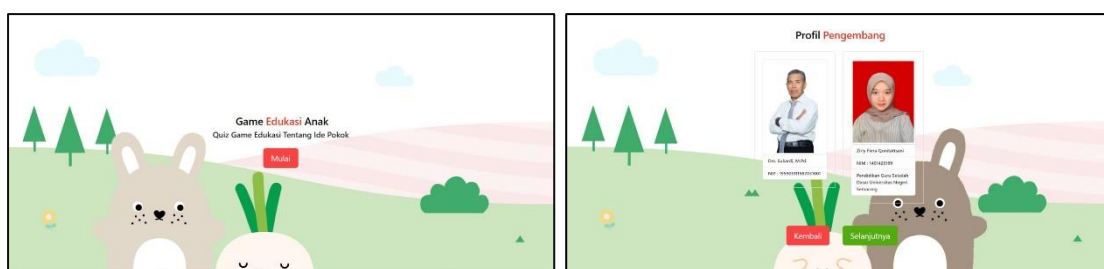


Figure 1. Main Menu of Web-Based Educational Game Application for Identifying Main Idea

Based on [Figure 1](#), it can be seen that the development of educational games starts with making the main menu first which consists of the initial appearance of the game starting, followed by the profile of the game developer, learning objectives, and outcomes, and educational game quiz instructions. After the entire main menu was implemented, the researcher began adding core material that explained identifying the main idea as a reminder for students before carrying out the educational game quiz which was on the next slide. After the core material was completed by the students, then the students were asked to work on a quiz related to identifying the main idea where the work of each question provided only had one chance to answer so that later each question that had been chosen the answer, they immediately received a right or wrong notification and an additional score for each successful answer correctly.

In development stage, researchers have created a learning media that still needs to be recognized for its validity and improvement by experts in the field of media and experts in materials, especially in Indonesian language subject matter. [Table 5](#) contains the results of the media validity test by media experts and material experts.

Table 5. Results of Media Validation of Web-Based Educational Game Application for Identifying Main Idea

No	Test Subject	Percentage	Category
1.	Media Expert	90%	Very Feasible
2.	Material Expert	91 %	Very Feasible

Based on [Table 5](#), the results of the validity test for the feasibility of media made from the design/appearance of the media, the content/material contained in the media, as well as the language or vocabulary used in web-based educational game media applications to identify main ideas get a percentage of 90% from media experts. Meanwhile, the percentage of assessment results from material experts is 91%, whereas from the two percentage results, the web-based educational game learning media application to identify this main idea is categorized as very feasible. Through this stage, researchers also managed to get the results of the media assessment developed after going through several necessary revisions and input from validators to become learning media in the form of educational games that are good, correct, and efficient to be applied in the teaching and learning process.

After the learning media developed has been declared feasible by experts, the researchers proceed to the next stage, namely the implementation or application of the media through trials to fifth-grade students at Kenteng 02 State Elementary School. In this case, the effectiveness of the media will be measured based on the responses of students and class teachers through questionnaires distributed by researchers after the media trial is carried out. The response questionnaire that was tested consisted of 4 student responses from the small-scale trial group, 20 student responses from the large-scale trial group, and the class teacher's response to the media that had been tested. The results of calculating the effectiveness of the media can be seen in [Table 6](#).

Table 6. Results of Student and Teacher Responses to Web-Based Educational Game Media Application

No	Test Subject	Percentage	Category
1.	Small Scale Group Trial	93.75%	Very Feasible
2.	Large-Scale Group Trial	90%	Very Feasible
3.	Classroom Teacher Test	100 %	Very Feasible

Based on [Table 6](#), the results of the trial use of educational game media based on web applications to identify main ideas show the percentage of the acquisition of response results from questionnaires distributed previously to small-scale student groups with a percentage of 93.75%, then from large-scale group trials got a percentage of 90%, and the last is the acquisition of responses from the test of media use by class teachers with a percentage of 100%. So, it can be concluded that the teaching and learning process using web application-based educational game learning media to identify main ideas is more effective and makes it easier for students to improve their understanding of the material of identifying main ideas.

At evaluation stage, researchers test the effectiveness of educational game media based on web applications to improve the understanding ability of grade V students in identifying main ideas, this test is carried out through pretest and posttest experiments that have been carried out previously. From the results of this pretest and posttest, the data will be tested again through several types of tests, namely, normality test, homogeneity test, t-test, and NGain test using the SPSS application. The first test is the normality test where which test is used so that the learning outcomes can be known whether the distribution is normal or not. The results of the normality test in the smallscale group, the pretest value has a sig value of 0.088 while the posttest value has a sig value of 0.953. The normality test in the large-scale

group produced a sig value of 1.00 on the pretest results, while the posttest produced a sig value of 0.083. Based on the data obtained, it can be concluded that the pretest and posttest values of the media trial are normally distributed and the statistics used are parametric.

The next test is the homogeneity test to get the results of whether the pretest and posttest scores have the same variance (homogeneous) or not. Table 7 presents the results of the homogeneity test for smallgroup and large-group trials.

Table 7. Homogeneity Test of Small Group and Large Group Trials

Statistics Parameters		Levene Statistic	df1	df2	sig
Results of Learning Indonesian	Based on Mean	0.084	1	22	0.775
	Based on Median	0.139	1	22	0.713
	Based on Median and with adjusted df	0.139	1	21.288	0.713
	Based on trimmed mean	0.078	1	22	0.783

It can be seen in Table 7 for the results of the homogeneity test of the learning media trials in small groups and large groups getting a sig value of 0.775. Because data can be said to be homogeneous if $p > 0.05$, it can be stated if the data from the learning media trials in small-scale groups and large-scale groups have data from homogeneous variances. The third test is the t-test, where this t-test is carried out after the normality test obtained normal data and the homogeneity test with homogeneous variance. In the t-test, parametric statistical techniques are used, with the calculation of the t-test in the form of a paired sample test because there are two paired samples. If the sig value. (2-tailed) < 0.05 then it is said that there is a significant difference in learning outcomes on the pretest and posttest. Conversely, if the sig. (2-tailed) > 0.05 then it is stated that there is no significant difference. From the results of the t-test on the learning media trial data through pretest and posttest, it was found that the sig. (2-tailed) of 0.032 in the small-scale group trial and the acquisition of a sig. (2-tailed) of 0.002 in the large-scale group trial.

From the two t-test results, it can be concluded that there are differences in student learning outcomes in Indonesian language subjects, especially in the material of identifying main ideas before and after the use of web-based educational game learning media applications to improve understanding of identifying main ideas of grade V students. Therefore, the media can be said to be effectively to be applied in the teaching and learning process because it can help students while gaining new experiences. The last test stage carried out by researchers is the N-Gain test so that it can be seen whether there is an average increase in student learning outcomes in pretest and post-test data. The results of the N-Gain test analysis of the small-scale group product trial obtained an average increase (gain) in pretest and posttest data of 0.5659 where the data was included in the medium criteria. Then in the results of the N-Gain test analysis of the large-scale group product trials, the average increase (gain) of pretest and posttest data was 0.5729 with moderate criteria. From the research data that has been stated, it can be concluded that the development of educational game learning media based on web applications to improve the ability to understand and identify the main idea of fifth-grade students of Kenteng 02 State Elementary School is declared feasible, and effective as a learning medium for Indonesian language subjects learning material entrepreneurship. students' willingness to participate in mathematics learning, directly or indirectly.

Discussion

Web-based educational game media applications developed by researchers using react application to improve the ability to understand and identify the main idea of fifth-grade students of SD Negeri Kenteng 02 in learning entrepreneurship material. This educational game media can be played or accessed online in the form of a web link or also via offline in the form of an application. Then, this educational game can be played via desktop / PC and Android. The utilization of this media is done by applying all the material related to identifying the main idea, such as an explanation of the material and examples of the results of finding the main idea either at the end, at the beginning, or in the middle of the paragraph with the aim that students have more of an overview in understanding the material presented so that it is not abstract. By loading material about identifying main ideas in the learning media developed, it is hoped that it can achieve goals that are no less important, namely increasing students' interest in literacy, especially in reading comprehension (Kumar & Nanda, 2019; Pratiwi, 2016). After going through various stages of development starting with looking for potential problems that exist in schools, collecting the necessary data, designing products, design validation, product improvement/revision, and product trials, to produce the final product.

In the early stages where researchers analyzed needs based on curriculum analysis, learning media analysis, and user analysis. This was done by interviewing class teachers and distributing needs

questionnaires which resulted in a lack of procurement of learning media that was still not interesting and effective in increasing student motivation in learning. Previous research stated that teachers can rely on educational game media as one of the learning media in classroom learning activities (Sofiana & Asmawati, 2022). Through the application of educational game media, children will grow a sense of interest in themselves it triggers students' activeness and positive interaction to get their learning experience in constructing their understanding. After successfully designing the product, researchers tested the media on media experts and material experts by going through several revisions until the media was considered valid, effective, and feasible to be applied during the implementation of the teaching and learning process. The results of validation by media experts obtained 90%, while material experts obtained a percentage of 91%, from the two percentages obtained, the media is categorized as very feasible.

This is in line with research conducted which shows that learning media in the form of educational games is feasible to use as evidenced by the results of the feasibility test with a percentage of 92, 33% (Adnin et al., 2022). Furthermore, because the media has been validated by experts in their fields, researchers tested the product on students and fifth-grade teachers of SD Negeri Kenteng 02, where at this stage the researchers divided it into two groups, namely a small-scale group with 4 students and a large-scale group with 20 students. In this trial, the media received a very feasible assessment from the results of the student and teacher response questionnaires that had been given after the trial was carried out, where each percentage was obtained as much as 93.75% from the results of the small-scale group trial, 90% from the results of the large-scale group trial, and 100% from the results of the class teacher trial. In addition, based on the results of pretest and posttest data processing, web-based educational game learning media applications to improve understanding of identifying the main idea are said to be effective for use as Indonesian learning media for learning entrepreneurship material. This is in line with research conducted which shows that the android-based educational game developed him can improve the learning outcomes of Indonesian language subjects at SMA Negeri 01 Kurau even though it is included in the moderate category (Noor Aulia et al., 2024).

The implications resulting from this study are the existence of educational game media based on web applications to improve the ability to understand and identify the main idea of learning material for entrepreneurship in Indonesian language class V students get very good qualifications. Therefore, this learning media can be utilized as well as providing media that further innovates teachers to create learning media, so that students also feel the euphoria of learning that is more interesting and fun to have an impact on increasing thinking skills in learning. The use of technology-based learning media has positive implications for increasing student motivation to learn (Kristini, 2020; Wijaya et al., 2023). Moreover, the application of learning media is associated with today's technological advances, one of which is packaged in the form of educational games. According to previous study the validity of educational games is based on the relationship between the objectives and the products made (Arisandy et al., 2021).

The validity criteria consist of the suitability of the components that are the basis for making educational games and the relationship between the many features of an educational game in solving the problem under study. This is also reinforced by the results of research conducted which says that educational games can also increase cultural literacy for children in Indonesia, so it can be concluded that educational game media in Indonesian language learning in grade V is declared valid as well as practical to be applied as a creative learning media (Kurniawati Mahardika et al., 2023). On the other hand, from this research, it is also known that a medium is very influential on student learning outcomes. Therefore, educators should apply fun learning media (Rahmawati & Atmojo, 2021). The limitation of the research felt by the researcher is the lack of several devices to play the game developed so that initially the game is played on one device for one person to one device for several people or in groups in working on quizzes in the game. Suggestions for further research are to be able to conduct research by better-preparing everything, especially in this case, namely the number of devices so that it can run as previously planned.

4. CONCLUSION

The results of the validation of several subjects, namely media experts and material experts, obtained the results if the media developed is feasible to be applied in the learning process. The results of the teacher and student response questionnaires also produced positive responses and were declared very feasible to use in the teaching and learning process. Furthermore, based on the results of data processing of pretest and posttest values, it shows that if the media developed is effective to be applied, this is obtained from the results of the t-test test of the results of the pretest and posttest scores of fifth grade students of SD Negeri Kenteng 02, the average increase before and after using learning media for small-scale group tests the N-Gain test results are in the high category while in large-scale group tests the N-Gain test results are in the medium category. Based on the explanation of the research results, it can be concluded that the

development of educational game media based on web applications that researchers develop for fifth grade students of Kenteng 02 State Elementary School is declared feasible and effective as a learning media in improving the understanding ability and learning outcomes of fifth grade students, especially to identify the main idea in Indonesian language subjects learning material entrepreneurship.

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