

Development of Quartet Game Card Media Based on QR Code to Improve Students' Indonesian Understanding at Elementary School

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Abstract

This study was conducted to determine the effectiveness of QR Code-based quartet cards to improve students' understanding of active and passive sentences, and to emphasize the role of teachers in creating an interactive learning atmosphere. The purpose of this article is to examine the feasibility of quartet game media using QR codes to improve students' understanding of active and passive sentences, by considering the aspects of validity, practicality, and effectiveness of quartet media. This type of research adopts a development model or Research and Development (R&D) with the ADDIE approach consisting of five stages: Analysis, Design, Development, Implementation, and Evaluation. The subjects in this study involved one material expert, one media expert, one language expert, one teacher, and 28 students of class IV-A Private Elementary School (MIS) Hidayatussalam. In this study, two types of data were used, namely qualitative data and quantitative data, the data collection process was carried out with various instruments, such as media and material validation sheets filled in by expert validators, as well as questionnaires about student and teacher responses, and pretest and posttest instrument sheets. The results of the study showed that the validity of media experts gave a score of 98%, material experts gave a score of 86%, while language experts gave a score of 94%. Therefore, the average total validation score reached 94% with the criteria of "very feasible". The practicality obtained from the questionnaire filled out by teachers and students produced a figure of 99% with the category of "very practical". The effectiveness of the media was analyzed through a comparison of pretest and posttest values using the N-Gain test of 0.61% with a range > 0.7 and included in the "moderate" category. From the results of the study, it can be concluded that the quartet card media (KARPET) is feasible to be applied in the Indonesian language learning process on active and passive sentence material in class IV MIS Hidayatussalam.

Keywords: Indonesian, Learning Media, QR Code, Quartet Game Card

Abstrak

Penelitian ini dilakukan untuk mengetahui efektivitas media permainan kuartet berbasis QR Code untuk meningkatkan pemahaman siswa terhadap kalimat aktif dan pasif, serta untuk mengetahui peran guru dalam menciptakan suasana belajar yang interaktif. Tujuan dari artikel ini adalah untuk mengkaji kelayakan media permainan kuartet menggunakan QR Code untuk meningkatkan pemahaman siswa terhadap kalimat aktif dan pasif, dengan mempertimbangkan aspek validitas, kepraktisan, dan efektivitas media kuartet. Jenis penelitian ini mengadopsi model pengembangan atau Research and Development (R&D) dengan pendekatan ADDIE yang terdiri dari lima tahap: Analysis, Design, Development, Implementation, dan Evaluation. Subjek dalam penelitian ini melibatkan satu orang ahli materi, satu orang ahli media, satu orang ahli bahasa, satu orang guru,

dan 28 siswa kelas IV-A Madrasah Ibtidiyah (MI) Hidayatussalam. Dalam penelitian ini, digunakan dua jenis data, yaitu data kualitatif dan data kuantitatif, proses pengumpulan data dilakukan dengan berbagai instrumen, seperti lembar validasi media dan materi yang diisi oleh validator ahli, serta angket tentang respon siswa dan guru, dan lembar instrumen pretest dan posttest. Hasil penelitian menunjukkan bahwa kevalidan ahli media memberikan skor sebesar 98%, ahli materi memberikan skor sebesar 86%, sedangkan ahli bahasa memberikan skor sebesar 94%. Dengan demikian, rata-rata total skor validasi mencapai 94% dengan kriteria "sangat layak". Kepraktisan yang diperoleh dari angket yang diisi oleh guru dan siswa menghasilkan angka sebesar 99% dengan kategori "sangat praktis". Efektivitas media dianalisis melalui perbandingan nilai pretest dan posttest menggunakan uji N-Gain sebesar 0,61% dengan rentang $> 0,7$ dan termasuk dalam kategori "sedang". Dari hasil penelitian dapat disimpulkan bahwa media kartu kuartet (KARPET) layak untuk diterapkan dalam proses pembelajaran bahasa Indonesia pada materi kalimat aktif dan pasif di kelas IV MIS Hidayatussalam.

Kata Kunci: Bahasa Indonesia, Media Pembelajaran, Code QR, Kartu Permainan Kuartet

INTRODUCTION

Language is a means of communication used by humans, both verbally and in written form (Fadila et al., 2023). Speaking is an activity carried out to gain understanding. In learning Indonesian, there are important elements that must be considered. These elements are known as language skills, which include the ability to speak, read, write, and listen. (Anas, 2021). Language has a primary function in intellectual, social and emotional development among students (Nurmalasari, 2023). Language is very important in human life. With language, communication and relationships between humans are easier. This is because language is a medium for conveying messages or information from one individual to another or more individuals (Fauzy et al., 2024). Therefore, it is important for everyone as a social being to use appropriate and effective language in communicating (Wandini et al., 2021). Therefore, communication skills in Indonesian, both oral and written, must be acquired and strengthened in the learning process. Thus, the importance of Indonesian needs to be given special attention, especially for those who are learning this language (Kusumawati, 2022). Indonesian is a subject that must be taught in elementary schools or madrasah ibtidaiyah to strengthen students' language skills. This is important because language functions as a means of thinking and communicating, which aims to improve students' intelligence, emotional, and social abilities (Wahyuni et al., 2023). The role of Indonesian as a binding force in society is stated in the third statement of the Youth Pledge in 1928 which states, "We, the sons and daughters of Indonesia, uphold the language of unity, namely Indonesian". The role of language as the official language of the state is regulated in the 1945 Constitution, which contains articles regarding the determination of the official language of the state, namely Indonesian. (Devianty, 2021).

In elementary schools, this learning is emphasized so that students can interact appropriately and well in both oral and written forms (Saputri & Yamin, 2022). In Indonesian language learning activities at school, it often does not run smoothly. The low interest of students in learning this language is caused by the lack of taste or motivation from students to master Indonesian. For them, Indonesian is just a subject that must be followed and is not at all interesting to learn. Meanwhile, problems in the way Indonesian is taught in schools arise due to the incompatibility between the methods applied by the teacher and the situation in the classroom or school. (Darma Putra, 2023). Teaching Indonesian at the elementary school level shows that some implementations still use conventional learning methods, namely the lecture method (Utaminingsih et al., 2023). To solve this, teachers can utilize the right learning media for students, be more creative so that students remain enthusiastic and remain focused when the teacher delivers the material. In addition, the media that has been created must also provide a fun learning experience while playing by adjusting the content being studied (Puspita Sari, 2024). Meanwhile, in Indonesian lessons on active and passive sentences, students currently have difficulty understanding subjects, predicates, and objects → find it difficult to distinguish between active and passive sentences. the goal is to measure memory, not the ability to form active and passive sentences. They have difficulty changing verbs that begin with me- (active) to di-

(passive). Example of an error: "The letter was written by Siti" (the correct one is "The letter was written by Siti").

Based on the results of observations and interviews Teachers and students at MIS Hidayatussalam showed that students could not distinguish between active and passive sentences. When students were asked to change sentences from active to passive in everyday life, they faced difficulties and were less active in learning, had difficulty learning example sentences repeatedly, and the lecture method used by teachers during learning made students feel bored. Learning media has an important role in teaching active and passive sentences because it can change abstract concepts into more real ones, increase student involvement, and strengthen understanding of sentence structure in a fun and meaningful way. Therefore, efforts to improve students' abilities can use QR Code- based quartet game media To improve students' learning understanding of active and passive sentences, which is an interesting and interactive approach to easily improve students' understanding of active and passive sentences.

Media is a means of conveying messages and well-designed learning information (Nasution et al., 2024) which will be very useful for students in understanding the material (Yusnaldi, 2020) . The use of media as a tool for learning has existed since humans began their learning processes and activities. Media containing information and knowledge are presented to make the teaching and learning experience more meaningful. In the learning process, humans always use various types of media. In this context, the function of media is as a supporting tool in learning activities. The development of media used in teaching and learning is usually in line with the progress of the times, so that currently there are many creative media that can be used by teachers to improve the quality of the learning process (Rambe et al., 2022) . Learning media is very influential in the world of education, so that teachers can be more effective in explaining the material and students do not quickly feel monotonous or lose interest in learning. When choosing learning media, an educator needs to know the various types of media available. Learning tools are one of the elements that influence the teaching and learning process (Ritonga & Aufa, 2023) . By utilizing learning media, teaching and learning activities become easier and more interesting for students. (Ningrum & Zaini, 2023) . It can be concluded that the use of appropriate media can improve the quality of learning, make the learning process more interesting, and help teachers explain the material more effectively. Therefore, determining and using the right learning media is a primary obligation for teachers in creating a more meaningful and enjoyable learning experience for students.

Quartet game is a type of educational card game, consisting of a number of themed cards with pictures. Each card has a unique design, with a title or name printed at the top center of the card, and two lines of information below it. At the bottom, subtopics are written on the left and right sides, which represent the category or content of the information contained in the card (Lestari & Arsyad, 2020) . This quartet card media is suitable for the way children learn in elementary school, namely learning by playing. In addition to having fun, there are educational components that students can learn with learning elements obtained in a pleasant atmosphere. Thus, it is hoped that the use of quartet cards can support student success (Samsiyah et al., 2021) . According to Hasanah, there are several advantages to using card media compared to electronic media: 1) easier to use. 2) encourages students to be more active and creative in learning. 3) Information is delivered in a clear and more real way. 4) helps develop motor skills. 5) In terms of visuals, this element is slightly easier to understand. However, the weakness of physical media is that images can only be understood through the senses and small images can reduce the effectiveness of learning (Utami & Nirwana, 2021) . It can be concluded that quartet games are an interesting and useful learning tool for children in elementary school. This media really helps students to learn in a more active way, stimulates imagination, and understands lessons in a fun way. Although there are some shortcomings, quartet cards are still a practical and useful learning tool. KARPET media (Quartet Game Cards) is a type of picture card that carries a game method. In addition, this media also utilizes technology. This is adjusted to the characteristics of students who generally like games and can be introduced to technology in their learning process to meet the demands of the times, so that they can create a more enjoyable learning environment (Syahroni, 2020) . It can be concluded that Media (Quartet Game Cards) combines games with technology

to create an interactive and enjoyable learning experience. The use of QR Codes allows students to better understand the material, especially regarding active and passive sentences. This media has proven effective in improving the quality of learning and student learning outcomes.

QR Code- based quartet (carpet) game media can improve students' learning comprehension, including: (Sulistyono & Choirunnisa, (2024) , researching the development of quartet (carpet) game card media to improve science learning outcomes for grade IV on plant structure material. This study shows that teachers play a significant role in creating a dynamic learning environment. With interactive learning, this can have a positive impact on student learning achievement. (Ningsih & Gunansyah, 2023) , development of QR code quartet card learning media in social studies learning on national events during the colonial period for grade V elementary schools. This study aims to determine the level of feasibility of QR code quartet card media in social studies learning. (Safitri & Prayogo, 2023) , researching barcode quartet card media on science material at UPT 39 Gresik State Elementary School. This study aims to develop barcode quartet card media with a mind mapping learning model and find out feasibility of quartet card media. (Siregar et al., 2024) , researched the development of learning media using quartet cards based on local wisdom in improving students' thinking skills at SDN 060824 Sutrisno. This study aims to determine how effective learning media in the form of quartet cards based on local wisdom are in improving students' critical thinking skills at the elementary school level. (Aini & Sunarso, 2024) , development of quartet card media assisted by qr-codes for Pancasila education subjects to improve learning outcomes for class V students of SDN Pakintelan 01 Semarang. This study aims to design, test the validity, and evaluate the effectiveness of Quartet Card media assisted by QR-Code in Pancasila Education lessons with an emphasis on the topic of Indonesian Cultural Diversity in Class V SDN Pakintelan 01.

Previous studies that developed quartet card media generally aimed to introduce and strengthen the basic concepts of quartet media. In several studies, quartet media was used to help students understand the material and how the subject performs the action directly. While I developed quartet card media in active and passive sentences, the main difference lies in the learning objectives, card structure, material focus, and how to apply it in the game. Quartet cards for active sentences emphasize more on the introduction and formation of active sentences, while quartet cards for passive sentences focus more on the transformation of active sentences into passive sentences and understanding the structure of passive sentences. Both aim to improve students' understanding of the differences between active and passive sentences, but with an approach that is tailored to the characteristics of each type of sentence. The purpose of this writing is to find out the quartet game media based on QR Code to improve students' learning understanding of active and passive sentences.

METHOD

This type of research uses a research and development (R&D) model (Okpatrioka Okpatrioka, 2023). The development model used in this study is the ADDIE approach introduced by Dick and Carey. The learning design process with the ADDIE approach begins with Analysis, followed by Design, then Development, after that Implementation, and finally Evaluation (Rawe, 2021) . According to Molenda, the ADDIE model is considered a general learning model and is very suitable for development research. When applied in development, this process is considered to take place sequentially, but remains interactive (Rohaeni, 2020) . This approach was chosen because it has clear, logical, and easy-to-understand steps.

The subjects in this study involved one material expert, one media expert, one linguist, one teacher, and 28 students from class IV-A MIS Hidayatussalam. This study was conducted at MIS Hidayatussalam on Jl. Puskesmas No. 103, Bandar Khalipah, Percut Sei Tuan District, Deli Serdang Regency, North Sumatra. In this study, there were two types of data used, namely qualitative data and quantitative data. The data collection process was carried out with various instruments, such as media and material validation sheets and one linguist filled out by expert validators, as well as

questionnaires on student and teacher responses, and observation sheets for pretest and posttest results . The measuring instrument used in this study applied the Likert scale , and the results were analyzed using a formula to calculate the percentage of validity. The calculation was carried out as exemplified in the following section.

$$validasi (V) = \frac{Total\ skor\ validasi}{Total\ skor\ maksimum} \times 100\%$$

Table 1. Percentage of Results Expert Validation

No.	Score	Category
1.	20% - 35%	Invalid
2.	36% - 52%	Less Valid
3.	53% - 68%	Quite Valid
4.	69% - 84%	Valid
5.	85% - 100%	Very Valid

Source : (Rustandi, 2021)

Questionnaire data analysis was conducted to evaluate how practical the quartet card media developed by the researcher was. Information collection was conducted by utilizing the Likert scale , based on the following calculations.

$$Presetase (P) = \frac{F}{N} \times 100\%$$

Information:

F: Total score obtained

N : Total maximum score

Table 2. Student and Teacher Response Questionnaire Presentation

No	Score	Student and Teacher Response Criteria
1.	81% - 100%	Strongly agree
2.	61% - 80%	Agree
3.	41% -60%	Disagree Less
4.	21% - 40%	Don't agree
5.	0% - 20%	Strongly Disagree

Source: Sugiono, Educational Research Methods (Auliya & N, 2020) .

The following is a table that describes the criteria for the effectiveness of teaching media based on the analysis of pretest and posttest results calculated with N-Gain. A learning media is considered successful if it reaches a minimum N-Gain value (*g*) of 0.3 with 0.7 being the standard determined as follows.

$$N\ Gain = \frac{(Rata - rata\ Skor\ Posttes) - (Rata - rata\ Skor\ Pretest)}{Skor\ Maksimum - (Rata - rata\ Skor\ Pretest)} \times 100\%$$

Table 3. Criteria for Effectiveness of Learning Media

N-Gain Value (g)	Category
$g > 0.7$	Tall
$0.3 \leq g \leq 0.7$	Currently
$< g < 0.3$	Low
$g = 0$	Fail

Source : (Putra et al., 2023)

RESULT AND DISCUSSION

Analysis

In the early stages of development, analysis was conducted to find the main problems and basic needs that triggered the development of the media. Some of the analyses conducted were as follows: (1) Performance Analysis, (2) Student Analysis, (3) Analysis of Facts, Concepts, Principles and Procedures for Learning Materials, and (4) Analysis of Learning Objectives (Rachma et al., 2023).

The results of the analysis show that students experience difficulties in understanding one of the topics of Indonesian language learning, especially those related to active and passive sentences. This topic requires students to be able to distinguish between active and passive sentences in everyday situations. Unfortunately, the methods used in current learning still rely on lectures without the support of interactive learning media, thus creating boredom and reducing the effectiveness of student understanding.

The lack of media that helps visualization and interaction also worsens student engagement in the learning process. Based on this, the researcher formulated a solution in the form of developing learning media based on quartet cards integrated with QR Code technology. This media is designed to be easily used, both in and out of class, and can adapt to changing times through the use of digital technology. After formulating a solution based on needs analysis, an initial evaluation was carried out by the supervising lecturer on the concept and prototype of the proposed media. The results of this evaluation indicate that this QR Code Quartet Card media is worthy of continuing to the next stage of development.

Design

The second stage, design is a crucial step before proceeding to media development. At this stage, the design of the product content and appearance is prepared and the planning of evaluation and validation instruments is carried out. Verifying the expected results or achievements (learning objectives) and determining the right method or strategy to achieve them (Hidayat & Nizar, 2021). The design begins by organizing learning materials about active and passive sentences which are grouped based on their characteristics. Each characteristic is explained in full and arranged according to the learning guide. The media designed is a quartet card equipped with a QR Code, with an attractive appearance created using the Canva application. Each card includes important elements such as: Title and sub-material, Visual illustrations that match the theme, Examples of active and passive sentences, along with a QR Code that can be scanned to display digital explanations more interactively. Because digital media in education refers to the use of digital devices and information technology to assist teaching and learning activities (Yusnaldi et al., 2024).

This media is produced using 210 gsm art paper with a size of 29.7 cm x 42 cm, added with glossy lamination to make it more durable and not easily damaged when used by elementary school students. In addition to designing the product, this stage also includes the preparation of supporting instruments, including: Validation sheets from material experts, media experts and language experts, Pre-test and post-test questions as a measure of media effectiveness, Questionnaire sheets for students, and Observation sheets for research purposes. Before making the instrument, the researcher prepared a grid as a guideline in compiling questions and evaluation items to ensure the validity and reliability of the product being developed.

Development

The third step in the ADDIE model is development, which emphasizes the physical creation of media and the product validation process. In this development phase, the activities carried out are to realize the product that has been designed. After the product is finished, a validity test will be carried out to ensure the validity of the product by experts so that the product can be used (Pradnyani NMDS & Paramita. MVA, 2024). The development process begins with selecting the ideal application for designing media, namely Canva. This application was chosen because it offers a variety of design features that support

the creation of visual and informative media. The resulting product consists of 34 quartet cards, which are divided into two cards per group based on the existing learning theme.

The steps in this development phase include: (1). Designing the media design: The researcher arranges the visual appearance of the quartet card, including image elements, material text, and placement of QR Codes on each card to allow students to access the material explanation digitally. (2). Validating the media by experts: The initial product design is then reviewed by material experts and media experts to ensure that the content and appearance of the media are in accordance with the learning criteria and can be understood by students. (3). Revisions based on input: After obtaining suggestions and criticisms from experts, the researcher makes improvements to the card design to make it more optimal, both in terms of content, visuals, and media function. By going through this development stage, the QR Code Quartet Card media is expected to be an effective and enjoyable media for students in understanding active and passive sentence material.



Figure 1. QR Code Based Quartet Card Design

In the process of making this quartet card media, a guidebook is also included that explains how to play. This guidebook aims to help students understand the game and ensure that their learning objectives can be achieved properly. The guide is printed on colored HVS paper, equipped with illustrations and explanations of the material, and accompanied by a barcode to access additional information digitally. To extend the service life, the guidebook is laminated to make it more durable when used. At the validity testing stage, this quartet card media received the following scores:

Table 1. Validator Assessment Recapitulation

No.	Name	Media Expert	Subject Matter Expert	Linguist	Criteria
1.	Prof. Dr. Idzni Azhima M.Pd	98%	-	-	Very Worth It
2.	Prof. Dr. Tri Indah Kusumawati M.Hum.	-	86%	-	Very Worth It
3.	Budiman, S.Pd.I., M.Pd	-	-	94%	Very Worth It
	Amount	98%	86%	94%	Very Worth It
	Average value	94%			Very Worth It

The data obtained are the results of assessments by media and material experts. The assessment shows that media experts gave a score of 98%, material experts gave a score of 86%, while language experts gave a score of 94%. Therefore, the average total validation score reached 94%, which is included in the very valid category and indicates that the media is worthy of being tested in the field. This shows that the QR Code- based quartet card media with material on active and passive sentences is considered worthy of being used as a learning tool. This media will be developed further in accordance with input and suggestions from validator lecturers, which will be

used as a guideline in the media product revision process to improve its quality before being applied more widely.

Implementation

The implementation stage is the process of introducing a well-designed application or product to users (Riyadi & Chuluq, 2021). The implementation stage was carried out after the quartet card media had been approved by the expert validation team in the fields of media, materials and language. This experiment aims to determine the extent to which the media can be accepted and used effectively in the learning context. During the trial process, students were asked to fill out a questionnaire to evaluate the appeal of the quartet card media. In addition, observations were also made on student behavior and participation when using the media, as well as the implementation of pretests and posttests to assess their increase in understanding of active and passive sentence material. This trial took place in class IV MIS Hidayatusslam, with a total of 28 students who all participated in the implementation of the media. This experiment also aims to determine the reactions of teachers and students to the QR Code- based quartet card media. The results of the evaluation from teachers and students regarding the use of the media can be seen in the table below:

Table 2. Results of Teacher and Student Response Questionnaire Assessment

No.	Evaluation	Question items	Presentation	Criteria
1.	1 Grade IV Teacher	10	100%	Very Practical
2.	28 Students	10	99%	Very Practical
	<i>Average value</i>	20	99.5%	Very Practical

Based on the data analysis conducted, it was found that the response score from teachers reached 100% in the strongly agree category, while the average score from students reached 99%, which was also in the strongly agree category. Thus, the average total response from teachers and students showed a figure of 99.5%, which indicates a very good level of acceptance of the media that has been developed. This finding shows that the quartet card media using QR Code is considered very interesting and effective, especially in teaching Indonesian on active and passive sentence materials. The high level of agreement from teachers and students reflects that this media has the ability to increase learning interest, student participation, and understanding of the topics taught.

This media is also considered practical and easy to use, because its small size can be stored in a pocket, making it flexible to use inside or outside the classroom environment. The effectiveness of implementing QR Code- based quartet card learning media for active and passive sentences will then be analyzed through a comparison of pretest and posttest values, using N-Gain analysis. A recapitulation of the results of the pretest and posttest will be presented in the following section.

Table 3. Recapitulation Results of Pretest-Posttest Values

No.	Research Subject	Pretest Score	Posttest Value
1.	28 Grade IV Students	70.17	87, 14
2.	Average <i>N-Gain</i> (g)		0.61
	Average <i>N-Gain</i> (g) Percentage		61.46%

The calculation results show that there is an increase in learning outcomes after the trial of using quartet card media, with an N-Gain value of 0.61 which is included in the "moderate" category. If converted into a percentage, the value is equivalent to 61.46% and is in the *fairly effective category*. Thus, the quartet card media has proven to be quite effective and has succeeded in supporting the learning process at MIS Hidayatussalam. In addition, data from the results of teacher and student surveys can also be used as a basis for assessing the feasibility and effectiveness of quartet card media in learning, especially in active and passive sentence materials.

Evaluation

In the final stage, namely Evaluation, the researcher makes final improvements to the product results that have been designed according to input and opinions from experts and small groups involved in the

response questionnaire (Anafi et al., 2021) . Evaluation an assessment was conducted on the level of acceptance and success of the quartet card media using QR Code . The purpose of this evaluation was to assess the extent to which the media that had been created could meet the learning objectives and to obtain the necessary feedback for improvement after the revision process. The results of the experiment conducted in class IV MIS Hidayatussalam showed that this media was well received by students and teachers. The data were obtained from questionnaires filled out by students and teachers, which generally gave an assessment that the QR Code- based quartet card media was very supportive in learning Indonesian, especially regarding active and passive sentences. This media is considered interesting, easy to use, and able to improve students' understanding and participation in the learning process at MIS Hidayatussalam school. These findings indicate that this media has a good impact on the learning process, especially on active and passive sentence material. A good assessment of the development of QR Code- based quartet cards with active and passive sentence material can be seen from how interested students are in the product. Based on suggestions from media experts, it was stated that the learning video produced from the QR Code- based quartet card was made by the researcher himself to avoid plagiarism. There are several points that were revised in the table below:



Figure 2. Results Before and After Revision of Quartet Card Media

Based on the image above, there appears to be a change in the design style of the quartet card, especially in the type and size of the writing. The font used now is the Alice font with a larger size than the previous version, to improve readability for students. Furthermore, according to input from the media validator, the contents of the QR Code which previously contained learning materials are now recommended to use self-made videos. The goal is to prevent the risk of plagiarism and ensure that the content presented is original and relevant to learning objectives.

The result of the development of this teaching media is a quartet card game (KARPET) which focuses on active and passive sentence material, which is applied to fourth grade students at MIS Hidayatussalam elementary school. This media was developed by referring to existing media, but updated and redesigned with adjustments so that students can also be introduced to learning methods that utilize technology. The purpose of developing this media is to increase student participation in

the learning process, so that their abilities can develop well and have a positive impact on learning outcomes. Based on evaluations by material and media experts, analysis of pretest and post-test data, user questionnaire results, and observation assessments from researchers, it can be concluded that the Quartet Card equipped with a QR Code is very suitable and effective for use by fourth grade students in elementary schools, especially in teaching Indonesian about active and passive sentences. The success of using this media is reflected in the high interest and enthusiasm of students in the learning process. This is inseparable from the attractive design of the media in the form of physical cards combined with the use of QR Code technology so as to provide a more interactive and enjoyable learning experience. Therefore, this media can not only increase students' motivation and enthusiasm for learning, but also contribute well to improving their learning outcomes.

The learning media created by researchers can be considered valid if it has gone through the process of testing the validity of material and media experts carried out by competent lecturers in their fields. Based on the results of the validation sheet, the material that has been presented obtained a percentage result of 98%. This means that the media is "very valid" in the range of validity criteria of 81% -100% (Rustandi, 2021). The practicality of the media was also obtained from the questionnaire responses of class IV MIS Hidayatussalam teachers. Data from the questionnaire responses showed a percentage reaching 100%, which shows that the quartet card media is in the range of 81% -100% with a very practical category (Auliya & N, 2020). Furthermore, data on the effectiveness of the media was obtained through the analysis of students' pretest and posttest scores, which include the percentage of success in learning and the N-Gain test. The results of the analysis showed that students' pretest scores reached a percentage of 70.17%, and were included in the "good" category. Meanwhile, the posttest results analyzed using the same formula showed an increase of 87.14 %, which is in the "very good" category. To measure the extent of the increase in learning outcomes, an analysis was carried out using the N-Gain formula. From this calculation, the N-Gain value was obtained of 0.61 which is included in the "moderate" category (Putra et al., 2023). This study reveals that the application of quartet card media in the learning process can make learning activities more interesting and not boring. Students master the material faster because they learn while playing. In addition, this media can increase learning motivation and active involvement of students during learning activities. The use of technology through the application of QR Codes in this media also helps expand students' knowledge not only in academic aspects but also in understanding digital literacy.

Learning media can be considered appropriate if it has met three aspects of the criteria, namely validity, practicality, and effectiveness (Mahardika et al., 2022). A product is said to be valid if it is stated as such by media and material validators (Tuljannah & Khabibah, 2021). Practical if students can use the product easily. The practicality discussed here refers to ease in the field of education such as: learning media, modules, instruments, or other products (Kiki Fatmawati et al., 2023). Effective if students achieve satisfactory learning outcomes and provide positive responses. Learning tools can be used as tools that can present an effective and efficient learning process (Nuriyanti et al., 2022).

CONCLUSION

QR Code- based quartet card games are effective in improving students' understanding of active and passive sentence materials. This media is also able to encourage active student involvement in the learning process. This quartet card game has gone through a validation stage by experts. The results of the assessment by media experts show that this media is very feasible to use, with the category "very valid". Thus, the content of the material and the use of language in this media have been validated by media experts, material experts and language experts, and are declared "very feasible" to use. Overall, this media meets the criteria of being valid, practical, and effective for use in the learning process. The main innovation of this media lies in the integration of QR Code, which connects students with digital materials such as audio, video, and interactive tasks. Thus, this media

is very effective in helping to improve the understanding of elementary school students, especially in learning active and passive sentences.

This study has limitations because it was only conducted in one school, namely MIS Hidayatussalam. Therefore, the results obtained cannot be generalized widely to other schools that have different characteristics. In addition, the learning media developed in this study has only been applied to one learning material, so its use is still limited. However, there is a great opportunity to develop this media further, especially to make it accessible to students with special needs, such as the blind and deaf. In future development, adjustments to the visual, audio, and interactivity aspects need to be considered so that this media can be more inclusive and friendly to all groups.

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