

## Using Puzzle Maker Crosswords for Islamic Education Evaluation

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### **Abstract**

*The main problem faced in learning at SMK DDI Parepare is the low motivation and involvement of students in the evaluation process of Islamic Religious Education (PAI). To overcome this, this study aims to evaluate the effectiveness of using crossword puzzle media based on the Puzzle Maker application as an evaluation tool for PAI learning in class XI. This media is expected to increase student participation and learning outcomes through more interesting interactions. This study uses a qualitative descriptive method with a field study approach. Data were collected through in-depth interviews, observations, and documentation. Data analysis was carried out in three stages, namely data reduction, data presentation, and drawing conclusions. Data validity testing used triangulation. The subjects of the study consisted of PAI teachers and class XI students at SMK DDI Parepare. The results of the study showed that the use of crossword puzzle media based on the Puzzle Maker application can increase student participation in the PAI learning evaluation process. Students are more enthusiastic and motivated to participate in the evaluation because of the challenging game elements. In addition, the use of this technology makes it easier for teachers to prepare evaluation questions effectively. However, technical constraints such as the availability of LCD projector devices are still a challenge. Overall, this media provides a positive response from both teachers and students in implementing learning evaluations.*

**Keywords:** *Crossword Puzzle Media, Puzzle Maker, Learning Evaluation*

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### **1. Introduction**

The world of education is very dependent on the role of teachers in directing the learning process (Mudatsir et al., 2024). Without teachers, the transfer of knowledge to students will not be effective and focused. At SMK DDI Parepare, teachers act as facilitators who interact directly with students to develop their abilities. In this context, teachers must be able to create an adequate learning environment for student development. Therefore, the

existence of teachers is the core of a successful education system. Monotonous learning causes a decrease in student learning motivation (Rofi'udin et al., 20s23; January, 2022). Learning that is only in the form of lectures or questions taken from LKS without innovation can reduce student interest. Activities that are repeated continuously with the same format make students feel bored and unchallenged. As a result, student participation in class is low and the learning process is not optimal. Therefore, variations in learning methods and media are needed (Yusuf, 2022).

One of the major problems in education today is the minimal use of creative methods by teachers. Many teachers are still fixated on traditional methods that do not actively involve students. As a result, students are less enthusiastic in following lessons, especially in subjects such as Islamic Religious Education (PAI). This raises the need for innovation that can increase direct student interaction and involvement. Thus, the use of more dynamic media can be a solution in creating a more interesting learning atmosphere (Rahman, 2020). The literature states that learning media plays a key role in increasing learning effectiveness (Kurniawan, 2018). Learning media can help in conveying educational messages more clearly and interestingly for students. The use of media, especially technology-based media, can also facilitate a more interactive and interesting learning process (Yanti, 2022). Based on various studies, interesting learning media can increase student involvement and learning effectiveness (Zainuddin, 2021). This shows that innovative learning media such as crossword puzzles have great potential in the world of education (Suharno, 2017).

Puzzle Maker is a technology-based media that can be used for learning evaluation purposes. Puzzle Maker is an application that makes it easier for teachers to create crossword puzzles as an evaluation tool. This application allows teachers to create questions that can involve students more actively in the evaluation process. Based on previous research, the use of crossword puzzles has been shown to improve students' memory and participation (Wahyudi, 2018). Therefore, Puzzle Maker is an innovative alternative learning media. Puzzle Maker has been applied in various studies to evaluate learning in various disciplines. For example, research conducted by (Zahra, 2023) shows that the implementation of crossword puzzle-based learning strategies in Islamic Religious Education subjects can improve student learning outcomes. This study is in line with the theory of cooperative learning which encourages student participation in the learning process (Anas, 2019). This finding supports the use of game-based media such as Puzzle Maker in improving the

effectiveness of learning evaluation. Therefore, Puzzle Maker is relevant to be applied in the context of PAI learning at SMK DDI Parepare.

The purpose of this study was to analyze the evaluation process of Islamic Religious Education learning using crossword puzzle media based on the Puzzle Maker application in class XI of SMK DDI Parepare. By using this media, it is expected to increase student participation in the evaluation process. In addition, this study also aims to determine the supporting and inhibiting factors in the implementation of the evaluation. Through this study, it is expected to obtain a deeper understanding of the effectiveness of this media in the context of Islamic Religious Education learning. This study also aims to provide practical recommendations for teachers in the use of innovative learning media. Media such as crossword puzzles not only function as evaluation tools, but also as a means to increase student learning motivation. Thus, this study will provide new insights for Islamic Religious Education teachers at SMK DDI Parepare on how they can optimize technology in teaching and learning activities. Hopefully, this innovation can be implemented sustainably.

In addition, this study also aims to assess students' responses to the use of crossword puzzle media as an evaluation tool. Student participation in learning is very important to achieve optimal learning outcomes (Suparman, 2020). By involving students in more interactive and enjoyable evaluations, it is hoped that their motivation and interest in learning will increase (Wijaya, 2021). This study will measure how effective the media is in stimulating student engagement. Argumentatively, this study offers a new and innovative approach in evaluating Islamic Religious Education learning through game-based media. This innovation has the potential to create a more dynamic and enjoyable learning environment for students (Fauzi, 2018). The novelty of this study lies in the use of Puzzle Maker technology as an evaluation medium in Islamic Religious Education subjects, which is rarely used in vocational school environments. Thus, this study will provide an important contribution to the development of technology-based evaluation methods in the field of Islamic Religious Education.

## **2. METHODS**

This study uses a field research type, which involves collecting data directly from the research location to understand the phenomena that occur. The aim is to explore data on the use of crossword puzzle media based on the Puzzle Maker application in the evaluation of Islamic Religious Education (PAI) learning at SMK DDI Parepare. This research design uses

a qualitative approach that focuses on describing phenomena holistically. The descriptive qualitative approach was chosen because it is appropriate for revealing events factually and accurately. According to Creswell (2013), descriptive research is very suitable for describing complex social phenomena such as student participation in technology-based evaluations.

Data were collected through three main methods: observation, interviews, and documentation studies. Observations were conducted for five days in class XI of SMK DDI Parepare to observe the evaluation process of Islamic Religious Education learning using crossword puzzle media. In addition, interviews were used to dig deeper into information from Islamic Religious Education teachers and students regarding their experiences during the evaluation process. Documentation includes the collection of official data such as student evaluation results. This method was chosen to ensure the accuracy of data from various supporting sources.

The analysis process begins with the editing stage, namely checking the data to ensure accuracy and completeness. Then, the data that has been obtained is grouped based on main themes, such as student participation, the effectiveness of crossword puzzle media, and challenges faced by teachers. The data is verified to ensure its validity through triangulation, namely by comparing the results of observations, interviews, and documentation. This process is important to maintain data consistency. After the data is classified and verified, the researcher reduces the data to simplify and select data that is relevant to the research objectives. Furthermore, the reduced data is presented in descriptive form, which describes the learning evaluation process systematically. Conclusions are drawn based on the findings generated from the data, considering its validity through triangulation. This analysis process allows researchers to identify key factors that influence the effectiveness of crossword puzzle media-based evaluation at SMK DDI Parepare.

### **3. RESULT AND DISCUSSION**

#### **Learning Evaluation Process with Crossword Puzzle Media**

Evaluation is an important element in learning that influences students' final results. In the teaching and learning process, evaluation not only measures knowledge, but also assesses other aspects such as student participation and attendance. Along with the development of technology, application-based evaluations have begun to be implemented. Before the use of crossword puzzle media, PAI evaluations at SMK DDI Parepare were

carried out manually using written tests. However, this method requires more time and effort from teachers, especially in terms of compiling and correcting questions. Therefore, there is a need for a more efficient evaluation method. Puzzle Maker was chosen because of its ease in creating interactive and interesting evaluation questions. Based on an interview with Mrs. Nurul Hikmah, S.Pd., this media makes it easier for teachers to compile evaluation questions quickly and reduces manual workload. In addition, this media also encourages students to be more active in the evaluation process because it is more dynamic than traditional evaluation methods (Ramli, 2023). The use of this application is a step for teachers to adapt to technological developments in the world of education.



**Figure 2. Implementation of Learning Evaluation with Crossword Puzzle Media (Research Documentation, January 10, 2024)**

The observation results showed that students were more enthusiastic and active in working on crossword puzzle-based evaluation questions compared to the usual written test method. In addition, students also showed increased participation because they felt challenged to solve the puzzles given by the teacher. This is supported by the statement of students who were happy with the use of the media because it provided a different and more enjoyable evaluation atmosphere. In interviews with grade XI students, most stated that they enjoyed the evaluation process with crossword puzzle media more than the usual written evaluation. For example, Ade Resky Amelia and Abdullah expressed their pleasure in working on crossword puzzle-based questions. Although there were students like Aidil who felt ordinary, he still said that this method was more practical than the manual method. Thus, this media is not only fun, but also practical for teachers and students.

SMK DDI Parepare is equipped with an LCD projector that facilitates the use of the Puzzle Maker application. In addition, most teachers also have laptops that make it easier to compile crossword puzzle-based evaluation questions. The existing technical challenges can be minimized with thorough preparation before the evaluation begins. This shows that technological readiness in schools is an important factor in supporting the successful use of this media.

**Table 1: Evaluation Results Using Crossword Puzzle Media**

Student Code	Respondents	Response Description	Response Encoding
S01	Ade Resky Amelia	Very happy and enthusiastic to follow the evaluation with crossword puzzle.	Positive, Enthusiastic
S02	Abdullah	Prefer this evaluation over the usual written test.	Positive, More Fun
S03	Aidil	It's simple, but more practical than the manual method.	Neutral, Practical
S04	Muh. Ghaza	Enjoyed and impressed with this evaluation.	Positive, Impressed

*Data Source: Interview Results of SMK DDI Parepare Students in 2024*

Based on interview data, students who are usually passive become more active when given game-based questions such as crossword puzzles. This evidence shows that interactive learning media can stimulate students' interest to be more involved in the learning process. This is in accordance with the theory of learning motivation which states that innovation in learning methods can significantly increase student participation. In an interview, Mrs. Nurul Hikmah, S.Pd. stated that the evaluation process with crossword puzzles is much faster and more efficient compared to manual methods. Observation data shows that with this media, the time needed to prepare and correct questions can be significantly reduced. Thus, technological innovation in evaluation not only benefits students but also teachers (Putra & Wanda, 2023).

The majority of students stated that the evaluation with crossword puzzles was more fun and challenging than regular written tests. However, some students such as Aidil gave neutral responses, indicating that this method is not suitable for all students. These data suggest that although crossword puzzle media is generally effective, personal adaptations may be needed to meet different learning needs. Schools that are already equipped with devices such as LCD projectors and laptops make it easier to implement application-based

evaluations such as Puzzle Maker. In reviewing the data, it is clear that the readiness of technological infrastructure is very important in supporting the success of this method. Without adequate technological support, the implementation of application-based media will be difficult to implement properly.

Interview and observation data confirmed that this media was able to increase student participation and interest in the evaluation process. Although there were some technical challenges, the benefits gained from using this media were greater. Thus, this innovation can be recommended as an effective evaluation method for Islamic Religious Education (PAI) learning at SMK DDI Parepare. This study shows that the use of crossword puzzle media in the evaluation of Islamic Religious Education (PAI) learning at SMK DDI Parepare has a positive impact on student engagement. Compared to manual methods, evaluation using this media makes students more enthusiastic, active, and motivated. The use of the Puzzle Maker application allows students to participate more interactively, where they not only work on questions but also participate in fun and challenging activities. These findings indicate that technology can be an important tool in improving the quality of learning evaluation.

The implications of the results of this study are very relevant to the world of education, especially in integrating technology into learning evaluation. By using crossword puzzle media, teachers can save time and energy in preparing and correcting questions, while creating more interesting evaluations for students (Sari & Wijay, 2019). This shows that this method can improve the quality of learning and evaluation in schools, especially in subjects such as Islamic Religious Education which tend to require active student involvement. The implication is that schools and teachers need to continue to utilize technology to create better and more effective learning experiences. This study has several limitations that need to be considered. First, this study was only conducted in one school, so the results may not be generalizable to all schools with different backgrounds. Second, the crossword puzzle media was only tested on Islamic Religious Education subjects, so it is not yet known whether its effectiveness is the same in other subjects. In addition, there are technical limitations related to the readiness of infrastructure in other schools, such as the availability of LCD projectors and access to computers, which could be obstacles in the widespread application of this method.

For future research, it is suggested that the scope of the study be expanded to more schools with various backgrounds to test the validity and reliability of these findings. In

addition, future research can focus on the implementation of crossword puzzle media in other subjects such as mathematics or science to see whether this media is effective in different learning contexts. Further research can also explore the long-term impact of the use of technology in evaluation on students' learning outcomes and their motivation, so as to provide deeper insights into the integration of technology in education.

### **Supporting and Inhibiting Factors in the PAI Learning Evaluation Process Using Crossword Puzzle Media**

This study shows that the use of crossword puzzle media in the evaluation of Islamic Religious Education (PAI) learning at SMK DDI Parepare has supporting and inhibiting factors. The main supporting factor is adequate technological facilities such as LCD projectors and laptops owned by teachers. In addition, teacher readiness in utilizing technology also plays an important role in the success of this evaluation. However, several technical obstacles such as device damage or lack of preparation before the evaluation are still obstacles that need to be overcome.

**Table 1: Supporting and Inhibiting Factors in the Evaluation Process Using Crossword Puzzle Media**

No.	Factor	Description	Encoding
1	Facilities, Constraints	Support facilities such as LCD and laptop are very helpful, but sometimes the LCD is damaged.	G1
2	Preparation, Technology	Thorough preparation is needed before the evaluation, especially in terms of technological devices.	G2
3	Participation, Time Constraints	Students are more active with this media, but sometimes time runs out due to equipment preparation.	G3

*Data Source: Interview Results of PAI Teachers at SMK DDI Parepare in 2024*

Analysis of the data shows that although technological facilities are the main supporting factors in implementing crossword puzzle-based evaluations, technical preparation factors and time constraints also need to be considered. Teachers must ensure that devices such as projectors and laptops are ready to use before the evaluation begins. This is in accordance with interviews which indicate that lack of preparation can reduce the effectiveness of the evaluation and reduce the time for the actual implementation of the evaluation. Support from technological facilities in schools, such as the availability of LCD projectors and laptops, makes it easier for teachers to implement crossword puzzle-based

evaluations. As expressed by Mrs. Nurul Hikmah, S.Pd., teachers can utilize personal laptops and school facilities to support the evaluation process. However, damage to some devices such as LCD projectors caused delays in preparation. Therefore, routine maintenance and procurement of new devices need to be prioritized to ensure smooth evaluations in the future.

Teacher readiness in using technology is also an important factor that influences the success of the evaluation. Teachers must be able to operate technological devices well and make preparations in advance. Based on interviews, teachers who are skilled in technology can conduct evaluations more efficiently, while teachers who are less familiar face difficulties in implementing crossword puzzle-based evaluations. Therefore, technology training for teachers is very important to improve the quality of evaluations. Another important finding is the importance of preparation before the evaluation begins. Technical preparations, such as setting up projectors and laptops, must be done well before the class starts so that the evaluation runs smoothly. Interview data shows that inadequate preparation can cause delays in the implementation of the evaluation. Therefore, teachers need to be more careful in preparing devices and ensuring that all tools are functioning properly.

Time constraints are also an issue that needs to be considered in evaluation using crossword puzzle media. Because the preparation of tools often takes time, evaluations often start late. This has the potential to reduce the time allocated for the evaluation activity itself. In interviews, several teachers expressed that difficulties in managing time were an obstacle in the evaluation process. This suggests that better time management is needed to optimize the implementation of evaluations (Djuanda & Rosdiana, 2024). The findings also showed that crossword puzzle media increased students' participation in the evaluation. Students were more involved in the evaluation activities and showed higher enthusiasm compared to traditional evaluation methods. This media motivated students to think quickly and solve problems in a more interactive format. The interview results indicated that students enjoyed the challenges provided by the crossword puzzle media, thus increasing their involvement in learning. In addition to time constraints, technical constraints such as projector damage and power outages were obstacles in the implementation of the evaluation. Teachers must always be ready with other alternatives when these constraints arise. According to the interviews, several teachers revealed that they had to find other alternatives when the main device was not working, such as using a whiteboard or manual evaluation methods. This shows the importance of having a backup plan in every evaluation implementation.

Based on the results of this study, schools need to improve and enhance technological facilities and provide training to teachers regarding the use of media in evaluation. Procurement of new devices and routine maintenance of existing devices will help minimize technical constraints. In addition, improving technological competence for teachers through training can support the smoothness of crossword puzzle media-based evaluations and increase student participation in learning. This study shows that the use of crossword puzzle media in the evaluation of Islamic Religious Education learning at SMK DDI Parepare can increase the effectiveness of evaluation compared to conventional methods. Teachers and students both feel helped by this media, especially because of its ability to design interactive evaluation questions. These findings indicate that technology can be used to facilitate a more interesting evaluation process, while minimizing the workload of teachers in preparing and correcting questions. Therefore, innovations like this can provide a more efficient and enjoyable alternative for students in learning evaluation.

The results of this study have important implications for the world of education, especially in utilizing technology for learning evaluation. Crossword puzzle media not only increases student participation, but also provides an opportunity for teachers to adopt more interactive technology. In the long term, the implementation of technology like this can help teachers overcome the challenges that arise in monotonous and time-consuming learning evaluations. Another implication is that schools must support the use of technology by providing adequate infrastructure, such as projectors and internet access, to facilitate the use of innovative media in learning. However, this study has several limitations that need to be considered. First, this study was only conducted in one school, so the results may not fully reflect the effectiveness of crossword puzzle media in other schools with different characteristics. Second, this study only focuses on the evaluation of Islamic Religious Education learning, so its application to other subjects has not been tested. Another limitation is in terms of technical limitations, such as dependence on adequate technological devices, which may be a challenge for schools that do not have such facilities. Therefore, the results of this study need to be tested further in different contexts.

Future research can expand the scope of the study by involving more schools with different backgrounds to test the generalizability of these findings. In addition, further studies can explore the use of crossword puzzle media in other subjects, such as mathematics or science, to see its effectiveness in various learning contexts. Future research can also examine more deeply the impact of technology use in evaluation on various aspects of

learning, including motivation, creativity, and long-term learning outcomes. Thus, future research can provide broader insights into the application of technology in education.

#### 4. CONCLUSION

This study found that the use of crossword puzzle media in the evaluation of Islamic Religious Education (PAI) learning at SMK DDI Parepare significantly increased student participation and motivation. Evaluations that were previously carried out manually are now more interactive and fun with this media, which encourages students to think quickly and be more involved in learning. Teachers also feel that the use of crossword puzzles creates a more dynamic and effective learning environment. This suggests that this media can be a useful tool for improving the quality of evaluation in schools. The main strength of this study lies in its comprehensive approach, as it involves the perspectives of students and teachers. In-depth interviews with both parties provide rich insights into the impact of this media on the evaluation and learning process. This study is able to provide a comprehensive picture of the effectiveness of crossword puzzle media in creating more innovative, interactive, and fun evaluations. Thus, this study has succeeded in showing that this media can support innovation in learning evaluation, not only from the student's perspective but also from the teacher's perspective.

However, this study has several limitations. First, this study was only conducted in one school, so the results may not be generalized to other schools. Second, this study focused on the immediate responses of students and teachers without evaluating the long-term impact of using this media on students' understanding of the material. Another limitation is related to the availability of technological facilities that may not always be adequate in every school, which could affect the widespread implementation of this media. Nevertheless, the results of this study show the great potential of crossword puzzle media as an innovative evaluation tool that is worthy of further development.

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