

Development of E-Assessment Instruments for Monitoring Early Childhood Memorization of the Qur'an through Istima' Teaching Materials

Tika Wijyanthi R, Rivo Panji Yudha
Panca Sakti University Bekasi

ABSTRACT

This study aims to develop an e-assessment instrument for monitoring the ability to memorize the Qur'an in early childhood through Istima's teaching materials. Using the 4-D development model (Define, Design, Develop, Dissemination), this research was conducted at Al Hisan Kindergarten, Bekasi, with research subjects aged 5-6 years. The results showed that the Istima' method is effective for children who have not mastered the hijaiyah letters; no significant differences were found in its application in different classes, and there are differences in Arabic pronunciation and speed of memorizing surahs. The results of the validation of this e-assessment product (Silentdra Assessment) are valid and reliable. The results of this validity consist of a trial of 3 validators, namely media expert validators of e-assessment products (Silentdra Assessment), who get good qualification validity test results. As well as the results of the validity of the assessment expert on this e-assessment (Silentdra Assessment) product get good qualification results. Also the results of the Qur'an validator of the e-assessment product (Silentdra Assessment), which get good qualification validity results. The results of this reliability show the average agreement between raters of 0.125, while for the person rater the consistency is 0.932, which means it has high stability.

Keywords: E-Assessment, Qur'an Memorization, Istima' Method

Corresponding author

Name: Tika Wijyanthi R

Email: [tikawijyanthir18@gmail.com@gmail.com](mailto:tikawijyanthir18@gmail.com)

INTRODUCTION

Assessment is an assessment process carried out by teachers to measure the level of students' abilities before or after participating in learning. It is an effective way to measure students' abilities (Lumba et al., 2021). Assessment of AUD learning can be carried out by utilizing the method of recording all activities and attitudes of children seen during the learning process. The assessment is carried out starting from the child arriving at school, marching, participating in the learning process, washing hands before eating, eating lunch with friends, playing freely, until finally the time to go home. Assessment in early childhood is done naturally without coercion, which arises based on the real conditions when children

do activities and the results obtained from activities (Mundia & Heru, 2020)

In early childhood, children's brains are developing rapidly and are very vulnerable to environmental influences. Therefore, learning at this time is very important to form good mindsets and habits (Pahlefi, 2022). One of the things that is highly recommended in Islam is memorizing the Qur'an. Memorizing the Qur'an not only helps children understand religious teachings but also helps in the development of cognitive, motor, and emotional abilities.

To facilitate assessment, an accurate instrument is needed to measure the stages of children's motor development. Based on these problems, the solution offered is to develop an assessment instrument for gross motor and physical development in early childhood. To find out the obstacles in children, the teacher must conduct an assessment (Dewi et al., 2021) Education is an adult's effort to relate to or interact with children to guide them towards physical and mental maturity. Education can also be interpreted as a process of conveying values by adults (teachers or parents) to children so that they can think and act maturely. Education is basically an effort to develop all the potential of students to prepare themselves to face various challenges in life (Akhmad Riadi et al., 2019). Good and quality education is a measure of the quality of human resources. Improving the quality of human resources in the field of education can be done by facilitating student learning activities (Asrial et al., 2020). Early childhood is a child who grows and develops with unique characteristics. One of these unique characteristics is a great sense of curiosity and enthusiasm for the surrounding environment. Children at an early age always ask a lot of questions, pay attention, and talk about something they hear and see. When children see something that catches their attention, they spontaneously ask questions. Curiosity and enthusiasm for something are expressed through words (Farida et al., 2022).

This study aims to develop an e-assessment instrument for memorizing the Qur'an in early childhood. With the appropriate e-assessment instrument, it is hoped that it can help teachers and parents in measuring the ability to memorize the Qur'an in early childhood. In addition, this research is also expected to provide information that can be used as evaluation material in improving the quality of learning to memorize the Qur'an in early childhood (Akhmad Riadi et al., 2019).

Although the importance of memorizing the Quran in early childhood has been recognized, there is no specific assessment instrument to measure the ability to memorize the Quran at that age. Existing assessment instruments are mostly aimed at older children or adults. Therefore, it is necessary to develop assessment instruments that are in accordance with the characteristics of early childhood in order to measure their ability to memorize the Quran more accurately. In measuring the ability to memorize the Qur'an in early childhood, there are often difficulties (Instrumen et al., 2019). This is due to the absence of assessment instruments that are in accordance with the characteristics of early childhood. Assessment instruments used in early childhood should be easy to understand, interesting, and in accordance with the child's developmental stage (Paramita et al., 2019).

From previous research, there is no system that has implemented a monitoring system for children's memorization of the Qur'an in kindergarten, which is reported daily, monthly, and semesterly at the same time. Reporting on previous systems has almost the

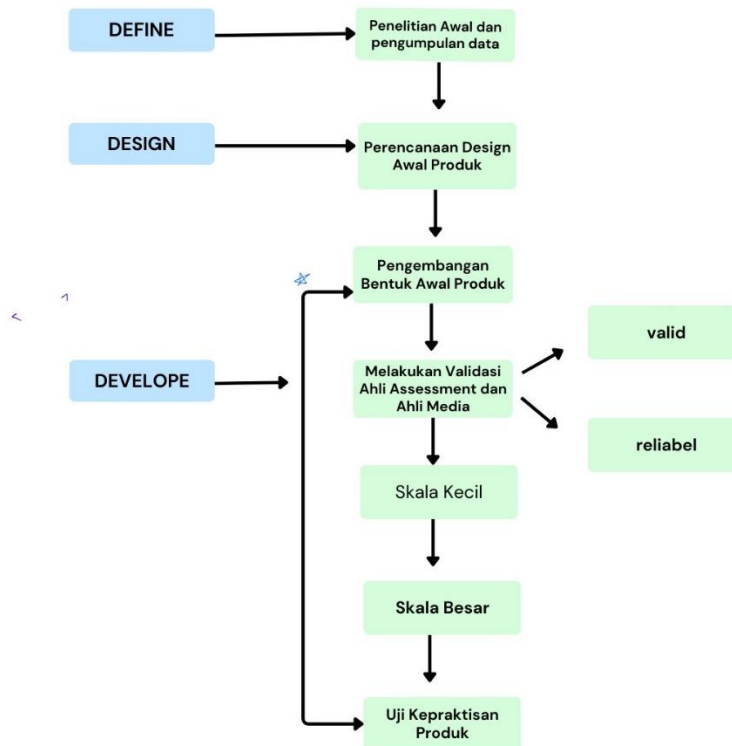
same mechanism in all systems, namely providing records of child development in the form of children's memorization records, and there are several systems that only provide grades from child development (Mundia & Heru, 2020). From the results of previous research, a media is needed that provides a complete report on the development of children's memorization of the Qur'an, which is reported daily, monthly, and every semester, and religious assessment. In addition to the reporting system, there is also a system that helps parents find out the child's schedule while in kindergarten. With the system to be built, parents can be helped by a monitoring system in monitoring children's memorization of the Qur'an, which is expected to help parents and teachers to work hand in hand to give more attention to children related to the development of children's memorization of the Qur'an, which is considered still lacking during teaching and learning activities at school. Based on the discussion and formulation of the problem and the relevance of previous research that has been carried out, the author developed an E-Assessment Monitoring Instrument for children's memorization of the Qur'an through istima' teaching materials.

METHOD

This research uses the type of research and development (Research and Development). The educational research and development model (Research and Development) carried out adopts the 4-D (Four-D) development model. According to Hughes Hughes, (2018) in (Panji Yudha, 2014) the research and development method (Research and Development) is a research method used to produce certain products and test the effectiveness of these products. The Four-D research and development model was developed by Sivasailam Thiagarajan, Dorothy S. Semmel, and Melvyn I. Semmel (1974) with research stages namely, define, design, develop, and dissemination (Thiagarajan, 1974).

The 4D development model can be adapted into 4P, namely defining, designing, developing, and disseminating. The outline of the four stages is as follows (Trianto, 2007). The activities carried out at each stage of research and development can be explained in Figure 1.

Figure 1. Modified Instrument Development Research Design Based on 4D Model



RESULT AND DISCUSSION

This research and development produces a product in the form of E-Assessment Monitoring Memorization of Al Qur'an Early Childhood through Teaching Materials istima' (Silentdra Assessment) developed with the 4-D model (define, design, develop, and disseminate). The steps contained in the 4-D model are:

1. Define Stage

Needs analysis is the initial stage of the 4D model used in this study, so that researchers can find out the initial understanding of Al Hisan Kindergarten teachers and needs regarding assessment and the basis for product development. In this study, researchers identified the needs of teachers with a need identification questionnaire consisting of 7 statement points filled in by 3 teachers by choosing answers that were in accordance with the conditions experienced and related to the need to use the product.

The teacher's perception of the required assessment media obtained an average percentage of 63%, which is in the interested qualification. From the results obtained, it indicates that Al Hisan Kindergarten teachers are interested in using online-based assessment media in the process of monitoring assessment of children's memorization of the Qur'an, so that media is needed that suits their needs and can facilitate teachers in conducting monitoring assessments of children's memorization of the Qur'an.


From the results of the user needs analysis, three users were obtained who were used in the e-assessment of monitoring the memorization of the Qur'an of Early Childhood Kindergarten Al Hisan. These users include admins, teachers, and parents. These user needs will have their respective roles in a predetermined system.

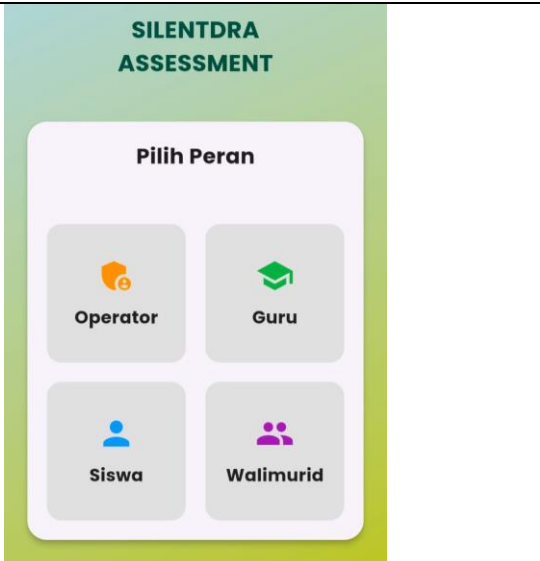
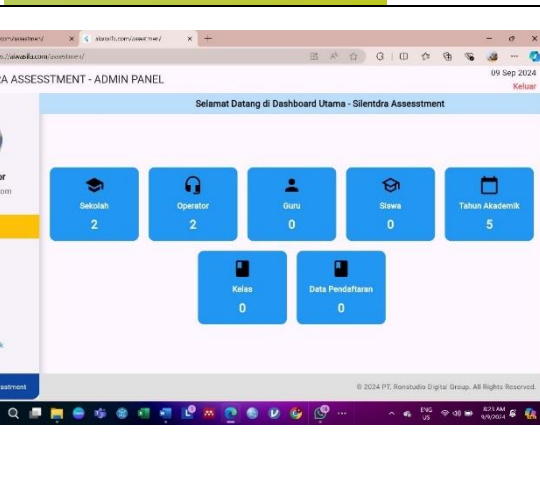
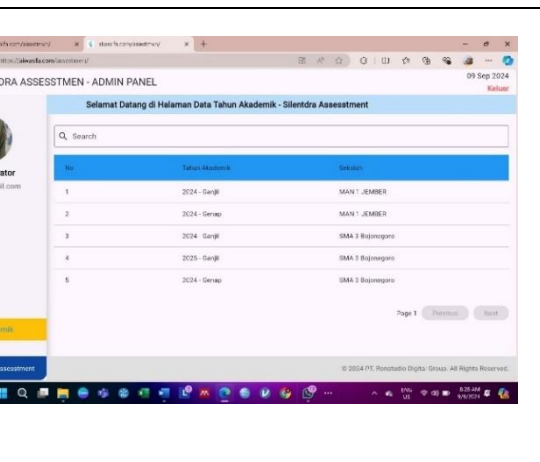
2. Design Stage

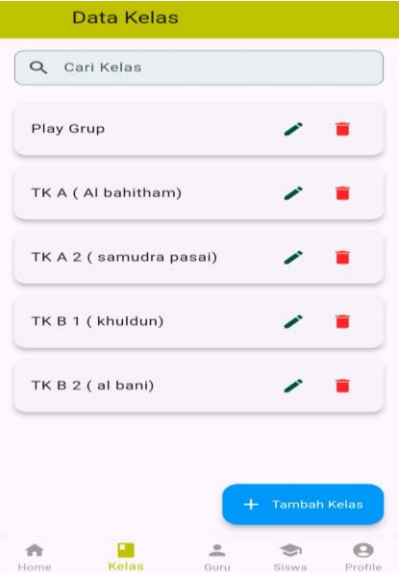

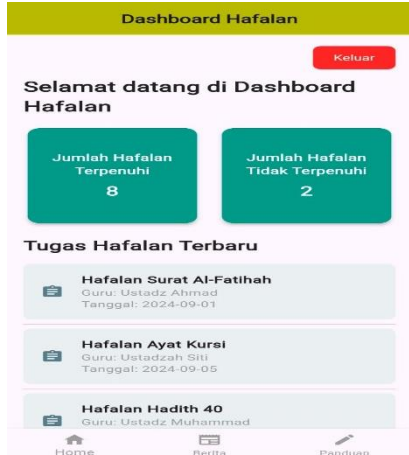
The design stage in this 4D model is to design the product development of e-assessment monitoring of early childhood memorization of the Qur'an that will be developed. In this second stage, it is focused on three activity steps. First, researchers select several applications that can be used in the product development process. In making this system, we will use the PHP and HTML programming languages.


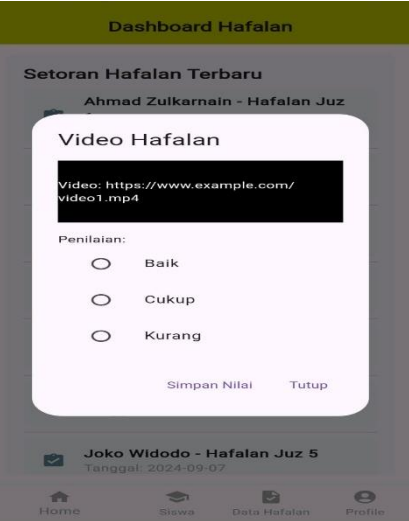
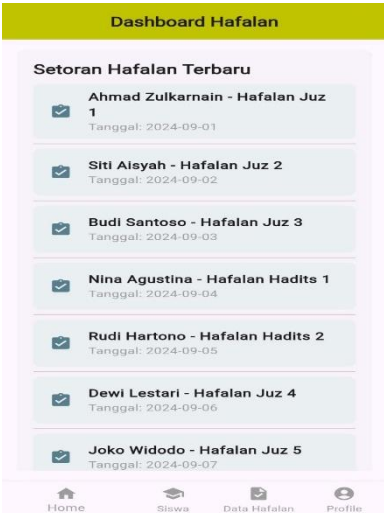
The next activity is making a prototype of e-assessment monitoring of memorization of the Qur'an in early childhood by including features 1) Student data regarding student personal data. 2) Teacher data regarding personal data and teacher accounts. 3) Parent data regarding personal data and parent accounts. 4) Class data regarding student class data and student homeroom teacher. 5) Schedule data regarding data on the time and hours of lessons in each class. 6). Report data regarding summary data and documentation of aspects of children's Qur'an memorization progress. The following is an initial description of the prototype of the product e-assessment monitoring of early childhood memorization of Al Qur'an.

Table 2. Design of Silendra Assesment

No.	Description	Visual
1	Front Page initial display	

No.	Description	Visual																		
2	Initial view of Login Page																			
3	Initial view of dashboard page after login																			
4	Initial View of academic year page	 <table border="1" data-bbox="812 1470 1266 1680"> <thead> <tr> <th>No.</th> <th>Tahun Akademik</th> <th>Sekolah</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>2024 - Ganjil</td> <td>MAN 1 JEMBER</td> </tr> <tr> <td>2</td> <td>2024 - Genap</td> <td>MAN 1 JEMBER</td> </tr> <tr> <td>3</td> <td>2024 - Ganjil</td> <td>SMA 3 Bujanggoro</td> </tr> <tr> <td>4</td> <td>2025 - Ganjil</td> <td>SMA 3 Bujanggoro</td> </tr> <tr> <td>5</td> <td>2024 - Genap</td> <td>SMA 3 Bujanggoro</td> </tr> </tbody> </table>	No.	Tahun Akademik	Sekolah	1	2024 - Ganjil	MAN 1 JEMBER	2	2024 - Genap	MAN 1 JEMBER	3	2024 - Ganjil	SMA 3 Bujanggoro	4	2025 - Ganjil	SMA 3 Bujanggoro	5	2024 - Genap	SMA 3 Bujanggoro
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No.	Description	Visual
5	Initial view of class data page	
6	Initial view of teacher data page	
7	Initial view of student data page	

No.	Description	Visual
		
8	Initial view of learning data page (discussion, material and assessment)	
		

3. Development Stage

The making of e-assessment products for monitoring the memorization of Al Qur'an in early childhood includes the process of making subject matter questions and then testing to determine the validity and practicality of the product. The developed product that has been completed will then go through the validation stage, which is validated by material/content experts, design experts, assessment experts, and practicality tests.

The trial was conducted to obtain results in the form of an assessment of aspects of material/content, design and assessment, and ease of using the product so that it was known how the product development reached its validity and practicality weights. The scale used in the validity and practicality test is a rating scale with options 1–5.

The overall score of the media expert validator is 75, or after converting the percentage results, 79% is in good qualification and needs minor revision, and the results of validator 2 are 81, or after converting the percentage results, 85% is in good qualification and needs minor revision. The suggestions and comments given are: 1) the assessment menu has not been categorized according to the aspects of child development and growth; 2) there is no feedback menu for parent communication; 3) there is no child growth report; 4) the front wallpaper is not appropriate; 5) there is no daily report data, monthly report data, or semester report data on the development of children's memorization of the Qur'an; 6) there is no information menu about using the website; and 7) there is no image or video input menu in the assessment report.

In the assessment expert test, the overall score of validator 1 is 40 or after converting the percentage results; 80% are in good qualifications and need minor revisions, and the results of validator 2 are 38 or after converting the percentage results; 76% are in good qualifications and need minor revisions.

The Qur'an Expert validation of the e-assessment instrument for monitoring the memorization of the Qur'an in early childhood shows that this system is very effective in monitoring and evaluating children's memorization.

The level of agreement (reliability) between the four raters can be explained by calculating the reliability coefficient between raters using the intraclass correlation coefficient. The results of the calculation (using the help of the SPSS version 24 program) are presented in Table 8:

Table 3 Intraclass Correlation Coefficient Reliability Test

	Intraclass Correlation Coefficient						
	Intraclass Correlation a	95% Confidence Interval		F Test with True Value 0			
		Lower Bound	Upper Bound	Value	df1	df2	Sig
Single Measures	.125 ^b	-.118	.526	1.519	1	3	.190
Average Measures	.932 ^c	-.731	.816	1.519	1	3	.190

From table 3, it can be seen that the results of the ICC calculation using SPSS v.24 obtained The results of the analysis show an average inter-rater agreement of 0.125, while for the person rater the consistency is 0.932, which means it has high stability(Polgar S, 2019; Streiner & Norman, 2008).

The small-scale trial at the development stage was conducted on 15 students of group B of Al Hisan Kindergarten. Researchers will make observations and record children's reactions and answers during the Qur'an memorization deposit. The following is a recap of the results of the small-scale trial as in table 4.

Table 4. Categorization Results of e-Assessment monitoring of Early Childhood Qur'an Memorization

Children	Score	Category
Child 01	91	Very Practical
Child 02	82	Practical
Child 03	85	Practical
Child 04	87	Very Practical
Child 05	88	Very Practical
Child 06	90	Very practical
Child 07	89	Very Practical
Child 08	78	Practical
Child 09	95	Very Practical
Child 10	86	Very Practical

Child 11	81	Practical
Child 12	90	Very Practical
Child 13	93	Very Practical
Child 14	89	Very Practical
Child 15	90	Very Practical

The results of the categorization of e-assessment monitoring of early childhood Qur'an memorization through istima'a teaching materials show that the majority of participants, namely 73% or 11 children, are in the Very Practical category with scores between 85 and 95 out of a total score of 100. This indicates that the e-assessment monitoring of Qur'an memorization product is very practical to use.

Four participants, constituting 27% of the total, were in the Practical category with scores in 75 to 85. This indicates that the e-assessment of monitoring memorization of the Qur'an is Practical to use. No participants were in the less practical category with scores below 60, indicating that all participants had a minimally practical understanding of the Qur'an memorization monitoring e-assessment. The total number of participants tested was 15, which represents 100% of the measured sample. From these results, we can conclude that the Qur'an memorization monitoring e-assessment is overall very practical in use for all participants.

CONCLUSION

The results of the needs analysis show that teachers and parents of students need new assessment products for children's memorization of the Qur'an. The results of the identification of needs regarding new assessment media that answer yes are in the qualification are very much needed so that it becomes the basis for researchers in developing this e-assessment (SILENTDRA ASSESSMENT). The results of the validation of this e-assessment (SILENTDRA ASSESSMENT) product are valid and reliable. The results of this validity consist of a trial of 2 validators, namely media expert validators of e-assessment products (SILENTDRA ASSESSMENT), who get good qualification validity test results. As well as the results of the validity of the assessment expert, the validity of the media expert, and the validity of the Qur'an expert on this e-assessment product (SILENTDRA ASSESSMENT) getting good qualification results, practical, and easy to use. The results of this reliability show the average agreement between raters of 0.125, while for the person rater the consistency is 0.932, which means it has high stability.

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