

The Implementation of Education Games Media Applications with Local Culture-Based to Improve the Basic Reading Ability of Students in TK Islam Al-Azhar 34 Makassar

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Abstract— This study aims to improve the basic reading skills of educational media game applications with students based on local culture at the Al-Azhar 34 Islamic Kindergarten Makassar. Reading skills are very important for children in preparation to move on to the next level. This research must be done because the level of reading in Indonesia is still low. This was proven in 2017, the Indonesian people, especially children, regarding their reading interest, were still in the very low category. This is based on data from the United Nations Educational, Scientific, and Cultural Organization (UNESCO) which states that the percentage of children's reading interest in Indonesia still reaches around 0.01 percent. Digital games, as with games in many other forms, provide a setting, rules and constraints within which players can interact, either with each other or an aspect of the game environment in order to achieve some form of goal [1]. The results showed that through educational media the application of local culture-based media can improve the ability to read the beginning of the child which is shown from the evaluation in the second cycle which experienced a very good. This type of research is Classroom Action Research (CAR) with a two-cycle work procedure, namely cycle I and cycle II, which consists of four stages namely planning, implementing, observing, and reflecting. In the evaluation in the second cycle was declared successful or met the assessment criteria that must be achieved.

Keywords— *education game application media; beginning reading ability*

I. INTRODUCTION

Early childhood education is a guidance assistance aimed at children from an early age carried out through educational stimulus assistance to help physical and spiritual growth and development so that children have readiness in educational education, which is set on the formal, non-formal, and informal [2]. Early childhood is at the right sensitive period to develop all aspects of development in children including cognitive, language, physical-motor, social-emotional, religious and moral values. One of the aspects that must be developed from an early age is language. Language skills are very important for

children, because they are used by children to convey desires, thoughts, hopes, requests, etc. for their personal interests [3] Language is a communication medium because it provides skills to children to be able to communicate and express themselves so that children can become part of their social groups.

Early childhood language development as a whole includes the ability to hear, speak, write and read [4]. One part of language development is reading. As reading to children plays an important role in language development, primary caregivers are often encouraged to read to their children from a very young age [5]. Children's language and literacy competence does not begin when children enter school—Children's literacy learning starts well before formal schooling, and studies have shown that children are sensitive to speech even prenatally [6].

Whereas Dhieni [7] states that reading is also a meaningful interpretation of verbal symbols that are written or printed. Reading as part of language skills that should receive special attention to be developed in accordance with the needs and characteristics of children, carried out in pleasant circumstances and conditions, and there is no element of coercion of children to be able to read because there is no guarantee that someone who can first read will be more success in the future than those who are late. Now it is becoming increasingly hotly discussed by parents who have early childhood because they worry that their children will not be able to attend lessons at school later if from the beginning they have not been equipped with reading ability.

Parents' worries get stronger when their children cannot read before entering primary school. Concerns that make parents eventually force their children to learn, especially reading. The improvement of pre-reading skills that has been done repeatedly in every school is certainly not free from various obstacles in the process. In this case, the teacher still does not understand how to teach reading that is appropriate, interesting, and not boring for children. This can be seen from the number of children who do not pay attention to the teacher,

marked by playing, running, talking, and some children even disturb their friends so that many children do not focus on learning. This incident is often experienced by several schools but sometimes teachers still do not care about and underestimate it, so that at the beginning reading improvement is less effective and less than optimal.

The process of teaching and learning in schools is not just the delivery of material made from a teacher to students, but in practice it requires a clear design and concept so that the material can be well received by children. In accordance with the 2013 curriculum in the teaching and learning process, children are required to be active learning. In this case the teacher acts as a controller, mediator, facilitator, evaluator, and supervisor. Therefore, a teacher must be able to be a creative person and innovation in the learning process so that children are more motivated in learning that will make the classroom atmosphere more active and enjoyable. One of the efforts that teachers can make in improving early childhood reading skills in children is by implementing learning while playing. The reading learning media used still seem serious and are not in accordance with PAUD principles, namely learning while playing.

The use of media in the learning process becomes inseparable. Learning media take an important role in helping and facilitating educators to deliver a material to students. Arsyad [8] argues that a teaching and learning activity cannot be separated from a learning medium for the achievement of a learning goal. While Rudi & Cepi [9] revealed that learning media can provide stimuli and enthusiasm for learning to students so that they can learn independently. Nevertheless, what makes an educational media important in the process of teaching and learning activities is the accuracy of the media. One of the innovations made is by combining the learning media and developing technology.

Elkind [10] states several other reasons why technology should not be introduced to young children. He is concerned about the tendency of some educators to measure children's intelligence through their ability to manipulate the mouse and keyboard. Following her article, Elkind wrote a small note stating that a few months after writing this article, she was able to view the National Association for Youth Education (NAEYC) position statement on technology and children and found that her concerns were being addressed. and that there is no intention for computers to be the only tools children use for learning. However, several other studies have tested the effectiveness of several digital media products for children's learning and have found, for example, increased knowledge and skills of children to think, plan, observe, solve problems, read, language, mathematics, construct and test hypotheses, creativity and collaborative learning [11].

In this context, one of the ways that can encourage students to learn actively and creatively through several challenges is given one of them education games. Although patience declining in front of failure [12], Addiction and dependency [13], reduction of social relationships and poor academic performance [14], other studies show that these games could have a positive impact on the players and improve self-imagination and learning [15], problem solving thinking [16],

growth of spatial reasoning and specific cognitive abilities [17] in children. Children are growing and living in innovative technology world like us, therefore, we could not avoid them involving with these tools in everyday activities, education and variety of games [18]. Through educational games learning atmosphere also becomes more fun and as the principle of early childhood is playing while learning. Thus, the application of educational games as an appropriate learning media to be applied in the learning process.

Researchers examine the ability to read the beginning of children by using instructional media that are educative and interesting for children. Therefore, researchers made an application related to Education Games for early childhood as an alternative learning media that is easy to learn and understand by children with the concept of edutainment.

The Education Games learning model used by teachers in learning to develop children's early reading skills at school is still general, without any local cultural elements in South Sulawesi. Education Games in schools in general are not optimal, especially Education Games which are self-developed. Games so far have not met the requirements of learning media in early childhood, for example in terms of shape, size, and color, this will certainly affect the interests and motivation of children to learn. Education culture-based applications (software) that have been developed to improve children's early reading skills meet media requirements for learning in children aged 5-6 years.

The world of children can't be separated from the world of playing. Therefore, researchers make Education Games applications that are packaged as attractive as possible to make it easier for children to recognize vowels, recognize consonant letters, spell letters, mention letters, distinguish words that have the same initial letter, distinguish words that have the same initial syllables, arrange letters become syllables, composing syllables into a word, so that children are enthusiastic and not bored in learning it. In addition, children who like to play can be channeled through the Education Games application while learning.

The problem formulation relating to this research is "How to improve children's basic reading ability through the implementation of education games media application with local culture-based of students in TK Islam Al-Azhar 34 Makassar?"

In connection with the formulation of the problem above, the purpose of this study is to improve children's basic reading ability through the implementation of education games media application with local culture-based of students in TK Islam Al-Azhar 34 Makassar.

The indicators of the basic reading ability based on various theories and the level of child development achievement in the Minister of the National Education Regulation (Permendiknas) of the Republic of Indonesia Number 137 of 2014 concerning National Early Childhood Education Standards (PAUD), can be formulated as follows (1) Knowing the symbols vowel and consonant symbols, (2) Able to distinguish words that have the same initial letter, (3) Able to distinguish words that have the

same initial syllable, and (4) Able to arrange syllables into a word.

II. METHODS

The approach used in this research is a qualitative approach and a quantitative approach. This type of research used by researchers is a type of classroom action research. This research was carried out at TK Islam Al-Azhar 34 Makassar, precisely in group B4 and the subject of the study was group B4, totaling sixteen people consisting of eight boys, eight girls, and one teacher. This research was carried out in group B4 with consideration that it would soon move to the next level.

This classroom action research consisted of two cycles. Each cycle consists of two meetings. The research procedure of this research is based on Kurt Lewin's model [19] which explains that there are four things that must be done in the action research process, namely: (1) Planning, (2) Action, (3) Observation, and (4) Reflection.

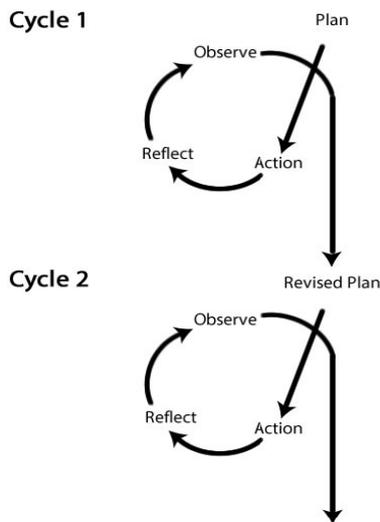


Fig. 1. Research procedure

The design or planning that is arranged will not be meaningful if it is not implemented in real activities or actions. The process of implementing this class action research uses two cycles, namely cycle I and cycle II. Each cycle consists of planning, implementation, observation and reflection. The cycle activities are described as follows:

1) Planning Phase

The planning stage is prepared as a guide in the learning process. This planning stage includes the following, a) Prepare Daily Learning Implementation Plan and prepare time for the implementation of activities; b) Preparing Education Culture application media based on local culture that will be used in accordance with the learning theme; c) Prepare instruments for observing learning activities of teachers and students

2) Implementation Stage

At the stage of the implementation of the action carried out based on planning that has been prepared. The steps for implementing the action consist of initial activities, core activities, and closing activities which are described as follows:

a. *Initial activity*, 1) The teacher prepares and arranges the class; 2) The teacher opens the activity with greetings and asks the child to pray before starting the activity; 3) The teacher conveys information about learning using the Education Games application media in the form of game rules and procedures for playing them; 4) The teacher directs and asks the child to play the Education Games application media; 5) The teacher gives appreciation to children who have used the Education Games application media.

b. *Core activities*, the teacher gives some activities to the child in accordance with the RPPH that has been prepared.

c. *Closing Activity*, 1) The teacher asks the child to tidy up the learning media that has been used; 2) The teacher reviews the children's activities during the learning process activities using the Education Games application media takes place and makes observations in the activity; 3) The teacher asks the child to pray after doing the activity, pray before going home and say hello.

3) Observation Stage

The observation phase is carried out with the aim of gathering various information about the learning process carried out by the teacher in accordance with the implementation that has been prepared. Observations in this research were carried out by observing and assessing all activities carried out by children during the learning process in the classroom using research instruments that had been made.

4) Reflection Stage

In the reflection stage, this research was carried out by analyzing the weaknesses and deficiencies that occurred in cycle I for improvement, so that the activities carried out in cycle II had an increase.

B. Data Collection Techniques and Procedures

Data analysis. Data collection techniques and procedures in this classroom action research consist of tests, observations, and documentation.

1) Tests, researchers used a test in the form of giving questions through a computer in the form of macromedia flash containing educational games that were done individually. Educational game questions include the introduction of vowels and consonants, distinguishing words that have the same initial letter, distinguishing words that have the same initial syllable, and arranging syllables into a word. The test is also carried out after the use of the Education Culture application media based on local culture that is during the evaluation of learning. The test used is in the form of a reading test using a measuring instrument for the child's initial reading ability based on the indicators to be achieved.

2) Observation is used to monitor the activities of teachers and students, especially on children's reading skills by using the application of cultural education based on local culture. The data collected through observation in this study were carried

out in two cycles. Where one cycle consists of two meetings to see and assess the activities of the teacher in teaching and the child's early reading skills. The child's initial reading ability assessed in the observation stage, namely the child's ability to recognize vowels and consonants, distinguish words that have the same initial letter, distinguish words that have the same initial syllables, and arrange syllables into a word.

3) Data documentation of this research are image files, learning activities, student worksheets, teacher and student observation sheets.

Data analysis technique used in this research is descriptive analysis technique which includes data reduction, data presentation, and conclusion / verification.

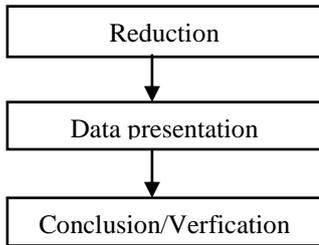


Fig. 2. Data analysis

To determine the completeness of learning outcomes for beginning reading (individually) through the Education Games application media can be calculated using the following equation:

$$P = \frac{F}{N} \times 100$$

Information:

- P = % Complete learning outcomes classically
- F = raw score obtained by the child
- N = The ideal maximum score of the test in question

2. Indicators of Success

a. Process Indicator

Process indicators are obtained from observations during the learning process. Learning implementation data is obtained from students' activities using observation sheets in the form of a checklist (√). Each child is said to have completed learning (individual completeness) if the proportion of correct answers of children is ≥70%, and a class is said to have completed learning (classical completeness) if in the class there are ≥80% of children who have completed learning [20]. The data obtained on the implementation of teacher actions during the learning process using observation sheets in the form of a checklist (√) and can be calculated through the formula as follows:

$$P = \frac{A1}{A2} \times 100$$

Information:

- P = % total score of the learning process
- A1 = Score of the steps achieved by the teacher
- A2 = Maximum score of performance

b. Results Indicator

Indicator results are obtained if the child has done the test and get a score in accordance with the indicators to be

achieved. An indicator of success in this study is the increased ability to read the beginning of children of the B4 group in TK Islam Al-Azhar 34 Makassar. Indicators of the ability to read the beginning is meant in the form of children's ability to recognize vowel and consonant symbols, distinguish words that have the same initial letter, distinguish words that have the same initial syllables, and arrange syllables into a word. The achievement of the level of development in accordance with the specified indicators. This research is said to be successful if children who have an increased reading ability in the beginning using the media application based on local culture Education Games by ≥80% or with a very well-developed category. The category develops very well for each indicator that is if the child gets a score of 4. The category develops very well for a recapitulation of all indicators of a child's initial reading ability if he gets a score of 16.

III. RESULTS AND DISCUSSION

The results of this study through classroom action research on the education games media applications with local culture-based to improve the basic reading ability of students in TK Islam Al-Azhar 34 Makassar which focuses on 16 research subjects through observation and documentation, analyzed in descriptive form. The results of this study were conducted during two cycles, namely cycle I and cycle II. Cycle I was conducted during two meetings and Cycle II was also carried out during two meetings. Each cycle consists of four stages, namely planning, implementing, observing, and reflecting. The results of the reflection from the first cycle are used as material for consideration to make improvements in the second cycle.

A. Classroom Action Research Stages

Classroom action research stage consists of two cycles. Each cycle consists of two meetings. In each meeting, the researcher categorized the reading ability assessment in children starting from very well developed, developing as expected, starting to develop, and undeveloped. Each category is coded, that is very well developed (BSB) with a score of 4, developing as expected (BSH) with a score of 3, starting to develop (MB) with a score of 2, and undeveloped (BB) with a score of 1. The research results are presented in the table as follows:

TABLE I. CYCLE I MEETING I

Component Code	Number of children based on assessment criteria				Total
	BSB(4)	BSH(3)	MB(2)	BB(1)	
1	-	-	12	4	28
2	-	-	14	2	30
3	-	-	12	4	28
4	-	4	10	2	34
5	-	5	11	-	37
6	-	-	13	3	29
7	-	2	11	3	31
8	-	6	9	1	37
9	-	-	14	2	30
Number of Scores Achieved					284

Assessment Score:

$$P = \frac{284}{576} \times 100 = 49,30\% \text{ (unfulfilled)}$$

TABLE II. CYCLE I MEETING II

Component Code	Number of children based on assessment criteria				Total
	BSB(4)	BSH(3)	MB(2)	BB(1)	
1	-	7	9	-	39
2	-	6	10	-	38
3	-	9	7	-	41
4	-	8	8	-	40
5	-	9	7	-	41
6	-	-	14	2	30
7	-	4	9	3	33
8	-	12	4	-	44
9	-	8	8	-	40
Number of Scores Achieved					346

Assessment Score:

$$P = \frac{346}{576} \times 100 = 60,06\% \text{ (unfulfilled)}$$

The results of the research observations of the teacher's actions during the learning process showed that the implementation of learning was not optimal. This shows that the teacher is less capable of organizing the class and preparing the media used in the form of educational games based on local culture media applications. In addition, the assessment items are still in the sub-optimal criteria so that it affects the child's early reading ability which is not optimal. Whereas in the first cycle the second meeting showed that there had been an increase, seen from a number of children who had begun to develop until reaching the criteria of developing as expected. Although there is an increase in children's development activities, the results obtained have not yet reached the specified assessment criteria. Therefore an improvement is made in the next cycle, namely in cycle II. Evaluation in the first cycle was carried out using a test instrument. The test instrument contains questions related to the indicator of beginning reading, namely recognizing vowel and consonant symbols, distinguishing words that have the same initial letter, distinguishing words that have the same initial syllable, and arranging syllables into a word. This evaluation phase is carried out every cycle at the second meeting.

TABLE III. CYCLE II MEETING I

Component Code	Number of children based on assessment criteria				Total
	BSB	BSH	MB	BB	
1	7	9	-	-	55
2	7	9	-	-	55
3	13	3	-	-	61
4	8	8	-	-	56
5	12	4	-	-	60
6	10	6	-	-	58
7	7	9	-	-	55
8	10	6	-	-	58
9	11	5	-	-	59
Number of Scores Achieved					517

Assessment Score:

$$P = \frac{517}{576} \times 100 = 89,75\% \text{ (fulfilled)}$$

TABLE IV. CYCLE II MEETING II

Component Code	Number of children based on assessment criteria				Total
	BSB	BSH	MB	BB	
1	13	3	-	-	61
2	14	2	-	-	62
3	16	-	-	-	64
4	11	5	-	-	59
5	16	-	-	-	64
6	12	4	-	-	60
7	8	8	-	-	56
8	16	-	-	-	64
9	16	-	-	-	64
Number of Scores Achieved					554

Assessment Score:

$$P = \frac{554}{576} \times 100 = 96,18\% \text{ (fulfilled)}$$

Based on the results of the translation of children's activities during the learning process in the second cycle of the first meeting and second cycle of the second meeting has increased and declared successful. This shows that every child is in developing as expected category according to expectations and some is already in the very well developed category. At each meeting always shows improvement, this is because children are able to understand the ways or techniques in using the media application of Education Culture based on local culture very well. It can not be separated from the direction and guidance of the teacher. From the results of the evaluation, we will know the extent of the child's development. Evaluation in the second cycle is the same as before also done using a test instrument. The test instrument contains questions related to the indicator of beginning reading, namely recognizing vowel and consonant symbols, distinguishing words that have the same initial letter, distinguishing words that have the same initial syllable, and arranging syllables into a word. This evaluation phase is carried out every cycle at the second meeting.

B. Evaluation

From the results of the evaluation in the second cycle experienced a very good improvement which is an improvement from the evaluation of the first cycle, it can be seen from the development of children which is increasing, although there are still some children who are in the category of starting to appear and develop as expected but almost all children are in the developing category very good. This means that the evaluation in the second cycle was declared successful or has met the assessment criteria that must be achieved.

C. Reflection

After seeing the results of observations or observations on the implementation carried out in cycle II seen from the planning, implementation, and observations have begun to be carried out properly. The implementation of the actions taken

by the teacher in implementing the Education Culture application media based on local culture in improving children's basic reading ability can already be carried out properly in accordance with the steps to be achieved.

Based on the results of reflection, it was found that there were several deficiencies or weaknesses in cycle I, including the following:

- 1) At the planning stage, there are still deficiencies, including teachers who are less active in class management and media preparation used in the form of media applications for Education Games based on local culture.
- 2) Teachers only convey information about learning using the Education Games application media based on local culture without conveying the rules of the game in using local culture-based Education Games application media.
- 3) The teacher does not provide special guidance to children who are less able to mention the letters in the local culture-based Education Games application media.
- 4) Teachers do not motivate children to be more active and enthusiastic.
- 5) The teacher does not reprimand the child when he does not pay attention to the activities being taught so that the child does not focus on doing the activities.

The above shows that the use of local culture-based Education Games application media in improving children's early reading skills in cycle I has not been successful because there are still indicators of success that have not been fulfilled, for that it is necessary to make improvements in cycle II.

The results of the second cycle reflection as follows:

- 1) Learning to read the beginning by applying the Education Culture application media based on local culture has been implemented well in accordance with the target to be achieved.
- 2) The learning process using Education Culture application media based on local culture that is implemented by the teacher takes place well.
- 3) When the teacher's explanation took place, almost all children paid attention and were enthusiastic in using the Education Culture application media based on local culture so that the learning went as expected.

The learning outcomes in the second cycle show that researchers have achieved what is expected in applying the Education Culture application media based on local culture in improving children's early reading abilities.

The results of the first cycle of research on the application of Education Games application media based on local culture to improve children's early reading skills showed that there were only two child who were in the very well-developed category, while there are still many children who are in the category below average or in the category starting to develop even undeveloped. Although there have been changes and improvements, it cannot yet be declared successful because it does not meet the performance assessment criteria.

Whereas in cycle II experienced a very good improvement which is an improvement from the first cycle, it can be seen from the development of children which is increasing, although there are still some children who are in the starting to developed and develop as expected category but almost all children are in the very well developed category. This means that the evaluation in the second cycle was declared successful or has met the assessment criteria that must be achieved.

Improvements have been made to improve reading abilities, including that the teacher has understood the flow of the research by evaluating themselves using the researcher assessment sheet notes related to the actions that the teacher should take during the learning process. Meanwhile, the increase in reading ability in children increases, because children have better understanding of how to work on educational games. In addition, the evaluation carried out by the children was in the form of a worksheet in which there were various reading problems starting from recognizing letters, combining letters, combining syllables, and reading words. The evaluation sheet makes it easier for children to work on questions because there are interesting pictures and elements of local culture in them. Apart from educational games, elements of local culture are also included in children's evaluation sheets such as objects that are close to themselves and the child's environment. Therefore, in addition to being interested in doing assignments, children also understand the steps in playing educational games.

IV. CONCLUSION

Based on the results of the research and discussion that has been proposed, it can be concluded that the implementation of teacher actions during the learning process experienced an extraordinary increase and was declared successful. This shows that the teacher has been able to carry out actions as expected. So from the results obtained from the process of learning to begin reading in TK Islam Al-Azhar 34 Makassar can be increased, it is shown that the child is able to recognize the symbols of vowels and consonants, able to distinguish words that have the same initial letter, able to distinguish words which has the same initial syllable, and is able to arrange syllables into a word. So, it can be concluded that education games media applications with local culture-based to improve the basic reading ability of students in TK Islam Al-Azhar 34 Makassar.

In an effort to improve children's early reading skills, through this research it is recommended:

- 1) For Kindergarten teachers, in order to be able to implement the Education Culture application media based on local culture to improve children's early reading skills in kindergarten.
- 2) For the school, it should be able to complete the facilities and infrastructure in an effort to improve the ability to read the beginning of children in TK Al-Azhar 34 Islamic Kindergarten Makassar.
- 3) For parents, it is expected to provide support or motivation to children to be more active in learning especially in reading activities.

4) For further researchers, can conduct similar research but with different material and approaches.

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