



**Jurnal Pendidikan Usia Dini**  
<http://journal.unj.ac.id/unj/index.php/jpud>  
Volume 16. Number 2. November 2022  
e-ISSN (Online Media): 2503-0566  
P-ISSN (Print Media): 1693-1602

## Motions and Songs to Improve Basic Literacy through Animation Videos

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DOI: <https://doi.org/10.21009/JPUD.162.03>

Accepted: September 4<sup>th</sup> 2022. Published: November 30<sup>th</sup>, 2022

**ABSTRACT:** The government incurs huge costs because of low literacy rates, which are associated with higher crime rates, poor health, and higher welfare costs, therefore the stimulation of basic literacy from an early age is important. This study aims to examine the effectiveness of animated motion learning media and songs that are interesting, innovative, and effective for improving basic literacy aspects of early childhood. This mixed-method design with the research and development stages of the ADDIE model was tested for the effectiveness of the media through a paired sample test. The research was divided into three stages, starting from needs analysis, product development, and product evaluation, involving 11 respondents in the effectiveness test. The data collection technique was carried out using a basic literacy instrument grid questionnaire, for child development, while for the feasibility of the media or products being developed it was also through a questionnaire from experts. Data were analysed qualitatively and quantitatively. The results of the study show that there is a significant increase in basic literacy values through learning media. The findings of the integration of quantitative and qualitative data form the basis for preparing the final product to revise and complement the deficiencies of movement and song-learning media.

**Keywords:** basic literacy, animation media, motion, and song, early childhood

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## 1 INTRODUCTION

The initial concept of literacy then develops into discourse, and increasingly develops into the knowledge literacy (Abidin, 2015). In detail, the focus of the problems in Aidin's Islamic Kindergarten, researchers found problems with the learning process used that was not by the context of the child's environment, this caused very minimal basic literacy, which had to be done to create interesting and fun learning media for children. One of the ways that researchers assume to increase children's basic literacy in reading, writing, listening, and logical thinking related to what they see or hear is through interesting learning activities to help the learning activities run smoothly.

Based on the facts that occurred in Aidin Islamic Kindergarten, researchers are encouraged to develop a motion and song learning media that can improve basic literacy in children in Aidin Islamic Kindergarten. The researcher hopes that the existence of movement and song-learning media can be an alternative solution to the problems of the learning process in these schools which still use activities that are less innovative and creative so that learning does not vary and is less fun for children. The learning activities provided are on the basic needs and literacy of children and adapted to the context of the environment around the school.

Several relevant studies related to the topics to be examined by researchers include research conducted by Inten et al., (2016). This research is related to the development of early literacy for children through singing techniques. Unlike the research conducted by Heydon et al., (2018) the importance of singing as a literacy practice for making multimodal meanings and establishing relationships which are of course reciprocal. Other relevant research states that the multisensory model can overcome parents' problems in their efforts to stimulate preschool children's literacy at home (Ruhaena, 2015). Furthermore, a research study conducted by Fajriyah (2018) developed emergent literacy in early childhood, by providing a stimulus for developing children's literacy by reading stories. Next refers to research by Bers (2018) which developed an introduction to coding programming to improve children's early literacy development. In line with that, further research is related to applying critical racial literacy to early childhood spaces to recognize humanity by respecting each other's differences (Nash et al., 2018). This literacy becomes a realm of creating harmonious social interactions.

Then, referring to other research, namely motion and song are the realm of simulation models for the development of kinesthetic intelligence where children can explore their movements, with various simple movements created by children and educators (Respati et al., 2018) same research conducted by Yetti and Muanivah (2017) there is an increase in kinesthetic intelligence when given stimulation of movement activities and traditional songs. Motion can stimulate children's development, as educators, especially in early childhood, there is a need for innovations in the learning process by developing creative and interesting learning media for children to stimulate their development.

Based on the theory and results of previous research this study aims to research the development of motion and song-learning animation media to improve basic literacy in children, the reason for choosing motion and songs is because it is something that attracts children's attention and creates a more pleasant atmosphere and is by the needs of early childhood development. The media is made based on the design of audio-visual media in the form of moving images, such as animation videos.

## 2 THEORETICAL STUDY

### 2.1 *Early Childhood Basic Literacy*

Literacy in early childhood education is also known as pre-literacy or emergent literacy. Basic literacy as a basis for developing literacy skills in early childhood. Basic literacy is oriented towards four indicators, namely listening, speaking, writing, and reading skills. This is confirmed by Tomblin et al., (2018) literacy is oriented toward children's reading ability, which is adapted to the child's needs.

Next according to Bedard et al., (2020) in their research Evaluation of the Move 2 Learn to program a community-based movement and pre-literacy intervention for young children that teaches literacy skills through a circle of dialogue reading story books. These skills can be seen from the knowledge and understanding of concepts related to print, vocabulary, and phonological awareness which are the basis for learning to read. Literacy continues to evolve and develop following the times that are constantly looking for novelties as seen from the results of research related to literacy in the world of education. early childhood. Media literacy is urgently needed at this time in the world of education by creating various forms of media that are creative, varied, and friendly in stimulating the development of literacy skills in children that are adapted to the needs of the child's age (Rasi et al., 2019).

Stimulating this basic literacy by creating an environment and culture, namely the habit of reading, with children reading books, and reading books stimulate children's brains to be active. Develop early childhood basic literacy, through stimulating habituation that is tailored to children's needs. Literacy will develop if it provides stimulation through creative and fun activities for children, one of which is motion and song learning media.

### 2.2 *Early Childhood Movement, Song, and Music*

#### 2.2.1 *Early Childhood Movement*

In early childhood education, movement activities when dancing, drawing, painting, and sticking and other activities that train muscles are related to gross and fine motor development and physical growth of children (Mayesky, 2002). According to (Graber & Woods, 2013) movement is divided into three parts including (1) locomotor movements, namely body movements that change places, for example: walking, jumping, running, rolling over, crawling, and cycling. (2) non-locomotor movements, namely body

movements in a still body position, for example, lifting, swinging, hugging, pushing, rotating, stretching, bending, and bending. (3) manipulative movements of the small muscles of the feet and hands, for example, throwing, catching, kicking, and bouncing. According to (Jamaris, 2017), children's motor skills are divided into three dimensions, namely posture, the ability to coordinate visual perception, and motor perception appropriately so that they can position their bodies with objects around them. Laterality is the ability to move gross and fine muscles in the intended direction. The combination of posture and laterality is combining gross muscle movements with smooth muscles such as a child playing the letter relay where the child will perform gross muscle movements, namely running, and the next child will perform smooth muscle movements, namely sticking letters to a flannel board. Meanwhile, according to Torrance stated that early childhood during the development period is in the period of sensorimotor and movement the best way to express thoughts and feelings (Karaca, 2017). Doing a movement is more fun when accompanied by music. This statement is reinforced by research by Safitri and Agustinus (2017) which mentions through the rhythm of the music that the child's motor will develop. Because of that motion cannot be separated from the music. So, the movement will be more fun and interesting to do in certain ways such as gymnastics and dancing, using music.

### *2.2.2 Early Childhood Songs*

According to Froebel songs should be given to children frequently in every play activity (Edwards, 2013). Furthermore, the benefits of using singing songs in learning are (1) as a means of relaxation by neutralizing heart rate and brain waves, (2) to foster interest and strengthen the attractiveness of learning, (3) to create a more humane and enjoyable learning process, (4) as a bridge in remembering learning material, (5) to build retention and touch children's emotions and aesthetic sense, (6) as a process of internalizing the values contained in learning material, (7) to encourage children's learning motivation (Fadillah et al., 2014). So, a song/singing is a pitched and rhythmic chant that contains the vocabulary or lyrics of the song when it is sung.

### *2.2.3 Music for Early Childhood*

Music can make people feel happy, excited, and comfortable. According to the Music Educators National Conference (MENC) music is a natural and important part of growth and development in children (Fox & Schirmacher, 2015). This can be seen from the research conducted by Pogue, (2018) it is proven that research proves music and movement help improve aspects of cognitive development in early childhood. Music can also improve math and literacy, as well as other areas such as social-emotional and behavioral. This is confirmed by (Widhianawati, 2011) that activities carried out through motion and songs are expected to please children while at the same time touching language development, sensitivity to musical rhythms, motor development, self-confidence, and the courage to take risks.

The musical experience comes from appreciating a song through listening, singing, playing music, moving to the rhythm, and reading music so that children get a comprehensive picture of the expression of the song. According to Aristotle, music can reconcile a troubled heart and can be used as a recreational therapy and fosters a spirit of patriotism. So that music can be interpreted as a tone in the form of various melodic tones according to the rhythm that is created and desired.

#### *2.2.4 Relationship of Motion and Song with Music*

According to Dodge et al., (2002), the experience of music and movement can help develop both sides of the brain, which has been found in several studies and contribute to children's social/ emotional, physical, cognitive, and language development. The experience of music and movement serves two purposes. The first objective, music meets the physical, social, emotional, cognitive, creative, and language needs of children. The second goal is to help enrich the early childhood education curriculum (Fox & Schirmacher, 2015). The relationship between motion and song with music according to The Music Educators National Conference (MENC) national standards for music education for children involves programs of singing, moving, listening, making, playing musical instruments, and responding to visual and verbal representations of sound. (Edwards, 2013; Fox & Schirmacher, 2015).

#### *2.3 Movement and Song Learning Media*

According to Gagne, learning media are various types of components in the student's environment that can motivate students to learn (Priansa, 2017). Meanwhile, according to Omeng and Priscah (2016) that learning media is a means of transmitting or sending messages. This means that learning media becomes a facility that makes it easier for children to understand the knowledge being learned.

Along with the development of science and technology, the use of media, be it visual, audio, audiovisual, projected still media, or projected motion media, can be done together or simultaneously through a tool called multimedia. According to Priansa (2017), the use of computers is not only projected motion media but can mix all types of interactive media. Projected motion media: film, television, video (VCD, DVD, VTR), computers, and the like. Learning by utilizing multimedia makes it easier for students to learn and develop their potential more optimally.

### 3 METHOD

Research and development researchers use the ADDIE model design (Analysis, Design, Development or Production, Implementation or Delivery, Evaluation) which is a model developed to design learning systems including models, learning strategies, learning methods, media, and teaching materials (Sugiyono, 2013 ). Research development is the process of researching consumer needs and then developing products to fulfill those needs. The purpose of R & D efforts in education is not to formulate or test theory but to develop effective products for use in schools (Mills & LR Gay, 2016).

Research and development are research methods used to produce certain products and test the validity and effectiveness of these products (Handini, 2017).

This research and development were carried out to develop and produce a product, one of which is motion animation learning media and songs which aim to provide basic literacy stimulation according to the needs of early childhood. Research and development are carried out by collaborating qualitative and quantitative research methods which are packaged with certain stages in the context of feasibility testing and testing the effectiveness of a product that is developed/innovated as well as new/original products related to the education sector. Qualitative data analysis was obtained from the results of interviews, observations, and documentation. Quantitative data is in the form of questionnaire assessments from the evaluation of experts regarding the results of the products being developed.

### 3.1 *Validation and Media Effectiveness Test*

#### 3.1.1 *Validation Test*

The procedures and results of the model trial were carried out in stages through expert tests, small-group tests, large-group tests, and effectiveness tests. Testing the validity of experts on learning media is carried out to determine the quality and effectiveness of the products developed. Product design assessment is carried out by experts in the field of Early Childhood Education, music and song experts, early childhood movement experts, and media experts to obtain the practicality, validity, and effectiveness of motion and song learning animation media. Then trials were carried out, each trial was evaluated for improvement of the media developed to revise the final product.

### 3.2 *Media Effectiveness Test*

#### 3.2.1 *Instruments*

Based on the conceptual and operational definitions, the instrument for measuring basic literacy in this study was developed in an observation sheet by compiling the following instrument grids (see table 1).

Table 1. The lattice of Basic Literacy Instruments in Children Aged 5-6 Years

<b>Aspect</b>	<b>Indicator</b>	<b>Statement Points</b>		
Read	a. Recognize picture symbols	1. Be able to name the pictures you see		
	b. Reading moves and songs	2. Able to imitate movements and songs		
	c. Read simple sentences	3. Able to read simple sentences from songs		
Write	a. Write simple sentences	4. Able to write vocabulary and simple sentences on songs		
Listen	a. Understand language	5. Able to understand multiple commands simultaneously		
		6. Able to repeat more complex sentences		
		7. Able to follow the rules while playing		
		8. Able to answer more complex questions		
		9. Able to communicate fluently		
		10. Able to demonstrate understanding of the concept of motion and song		
		b. Express language	11. Able to convey his opinion about movement and song	
				12. Able to express the movements and songs performed
		Logical Thinking	a. Express what you want and feel	13. Able to create movement

Aspect	Indicator	Statement Points
	Amount	

3.2.2 Data Collection

This study used several data collection techniques, namely interviews conducted during the needs analysis and product revision process to obtain input and suggestions in developing the designed media. Observations were made starting from the activity of collecting data and testing the use of media. The basic literacy instrument test is used for testing the use of media. Field notes are carried out to record important things that happen and are needed as additional information in improving the media. The documentation is in the form of photographs or video recordings during the media trial activities.

3.2.3 Media Effectiveness Test Data Analysis

Analysis in the research and development of Motion Learning Animation Media and Songs uses two types of data. The first is qualitative data obtained from observations and field notes. The two quantitative data obtained from the calculation results of testing the data before and after the use of Motion Learning Animation Media and Songs in field trials were analyzed through the SPSS version 16.00 program. Product Model Design Animation Learning Motion and Song Media. The product model design for motion learning animation media and songs will determine the quality criteria for the product model including validity, practicality, and effectiveness, as shown in Figure 1.

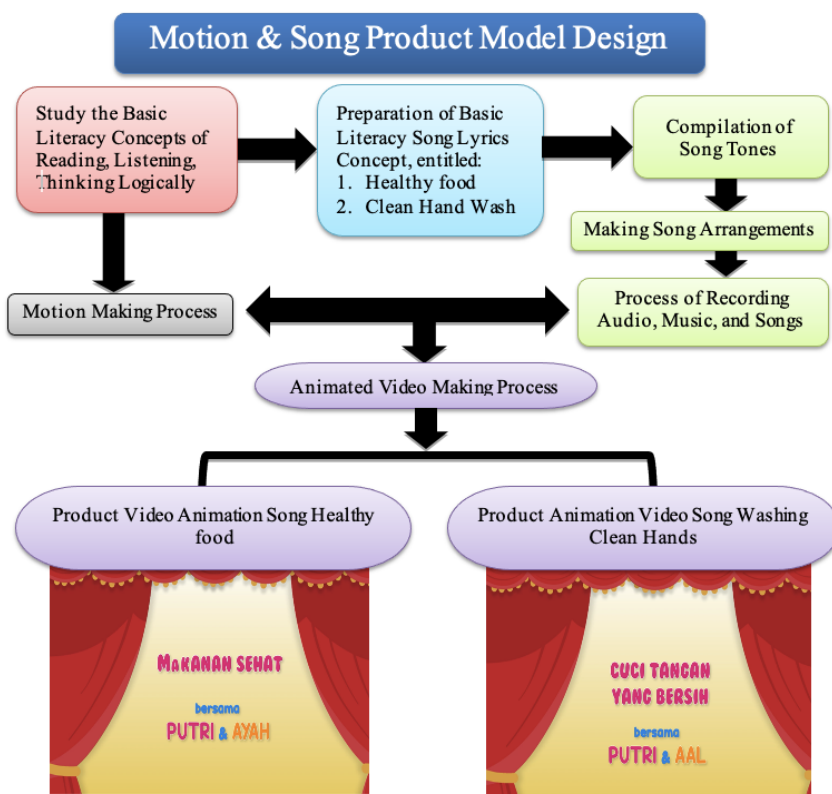


Figure 1. Product Model Design

### 3.2.1 Conceptual Design Model of Motion Learning Animation Media and Songs

This conceptual design was designed from the results of an analysis of media needs in early childhood basic literacy learning. Then a literature study looks for appropriate learning media to improve early childhood basic literacy. So, the researchers designed a product in the form of motion learning animation media and songs. The following is a conceptual design that can be seen in figure 2.

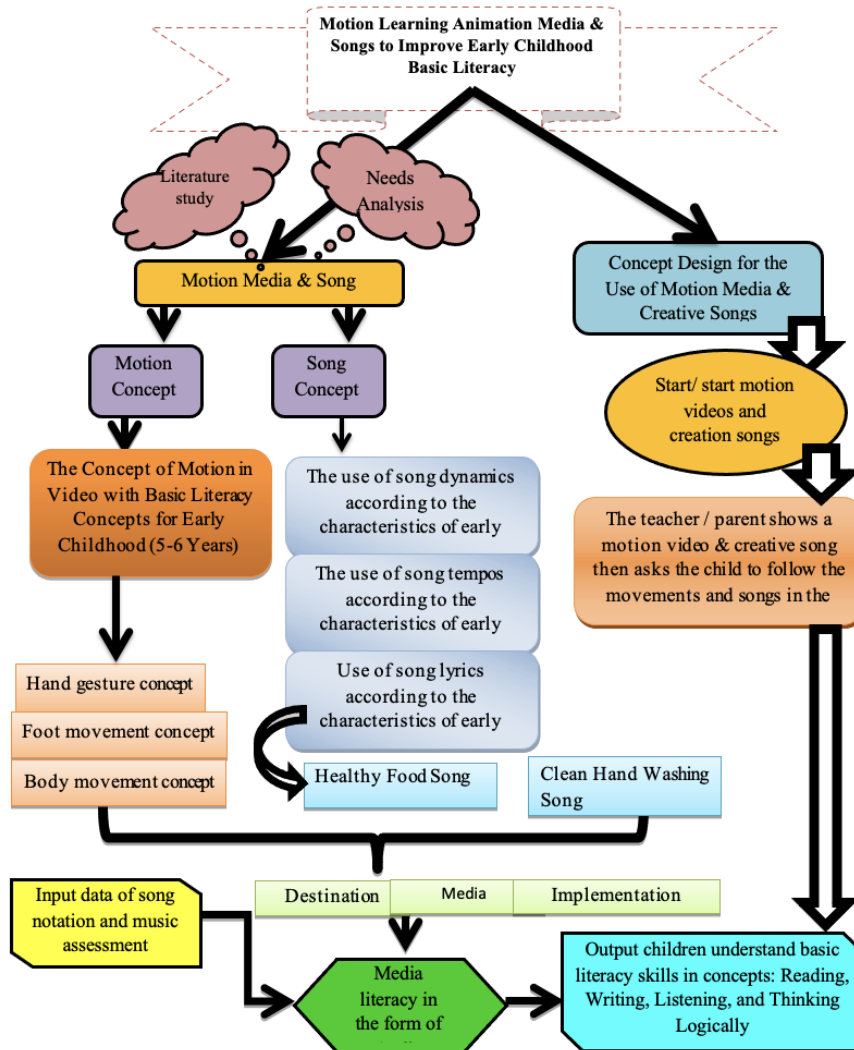


Figure 2. Conceptual Model

## 4 RESULT AND DISCUSSION

### 4.1 Result

#### 4.1.1 Preliminary Observation of Expert Validation Results

Experts in motion learning animation media and songs to improve basic literacy, all of whom work as lecturers, not only from the Faculty of Early Childhood Study Programs, Faculty of Languages, Faculty of Music Arts, Jakarta State University but also from the



University of Serang Banten and the University of Education Indonesia Bandung. This can be seen from the results of media eligibility from expert tests in table 2.

Table 2 Theoretical Feasibility Test Results (Expert Test)

No	Expert	Questionnaire Results	Percentage	Description of Media Eligibility
1	Early childhood	15/16 x 100%	93.75%	Very Worth it
2	Media	19/20 x 100%	95%	Very Worth it
3	motion	15/16 x 100%	93.75%	Very Worth it
4	Music and Songs	23/24 x 100%	95.83%	Very Worth it
5	Expert Judgment Instrument Grilles	44/52 x 100%	84.62%	Very Worth it

#### 4.1.2 Empirical Test Results

Furthermore, to complete the theoretical feasibility test, a feasibility test was carried out through empirical testing on motion learning animation media and songs. The empirical test involved several respondents from the City of Dumai, Riau. The empirical test is a feasibility test of motion learning animation media and songs to improve basic literacy in children aged 5-6 years. The following is the result of the percentage comparison of the small group due diligence and the large group due diligence.

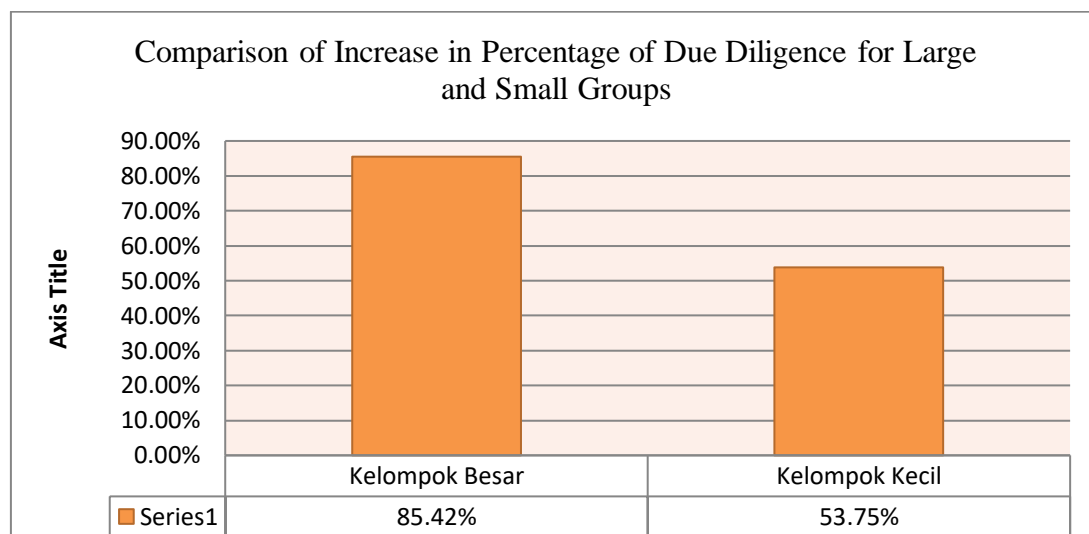


Figure 3. Comparison of the percentage of due diligence for small groups and large groups

The results of the analysis above show that motion and song-learning media are effectively used to improve basic literacy in children 5-6 years old, both in small-group and large-group testing. This can be seen in the feasibility test obtained in the small group 53.75%, and the large group test obtained 85.42%.

Further testing of the effectiveness of media in this large group aims to see the effectiveness of using animation learning media for motion and songs to increase literacy in children aged 5-6 years. Testing the effectiveness of media development products was carried out using a pre-experimental research design 'one group pretest-posttest design. Before being given the treatment the researcher gave a pretest to assess basic literacy in

children. After that, they were given treatment using motion learning animation media and songs, and then they were given a posttest to measure changes in the increase in basic literacy in children after being given treatment. The researcher tested the pretest and posttest values of basic literacy in children by using animation learning media for motion and songs, which can be seen in table 3.

Table 3 Results Calculation of Pretest Test and Post-Test Assessment Basic Literacy Using Motion Learning Animation Media and Song

Respondents	Evaluation				Enhancement (%)	Information
	Pretest		Posttest			
	Total score	Percentage	Total score	Percentage		
R1	42	87.50	44	91.67	4,17	There is an increase
R2	44	91.67	46	95.83	4,17	There is an increase
R3	41	85.42	44	91.67	6,25	There is an increase
R4	43	89.58	45	93.75	4,17	There is an increase
R5	44	91.67	45	93.75	2.08	There is an increase
R6	42	87.50	44	91.67	4,17	There is an increase
R7	43	89.58	44	91.67	2.08	There is an increase
R8	43	89.58	44	91.67	2.08	There is an increase
R9	38	79.17	43	89.58	10,42	There is an increase
R10	37	77.08	40	83.33	6,25	There is an increase
R11	38	79.17	42	87.50	8.33	There is an increase
<b>Average</b>	<b>41.36</b>	<b>86,17</b>	<b>43,73</b>	<b>91.10%</b>	<b>4.92%</b>	<b>There is an increase</b>

To see a comparison of the results of the pretest, posttest, and increase in the effectiveness test, can be seen in figure 3.

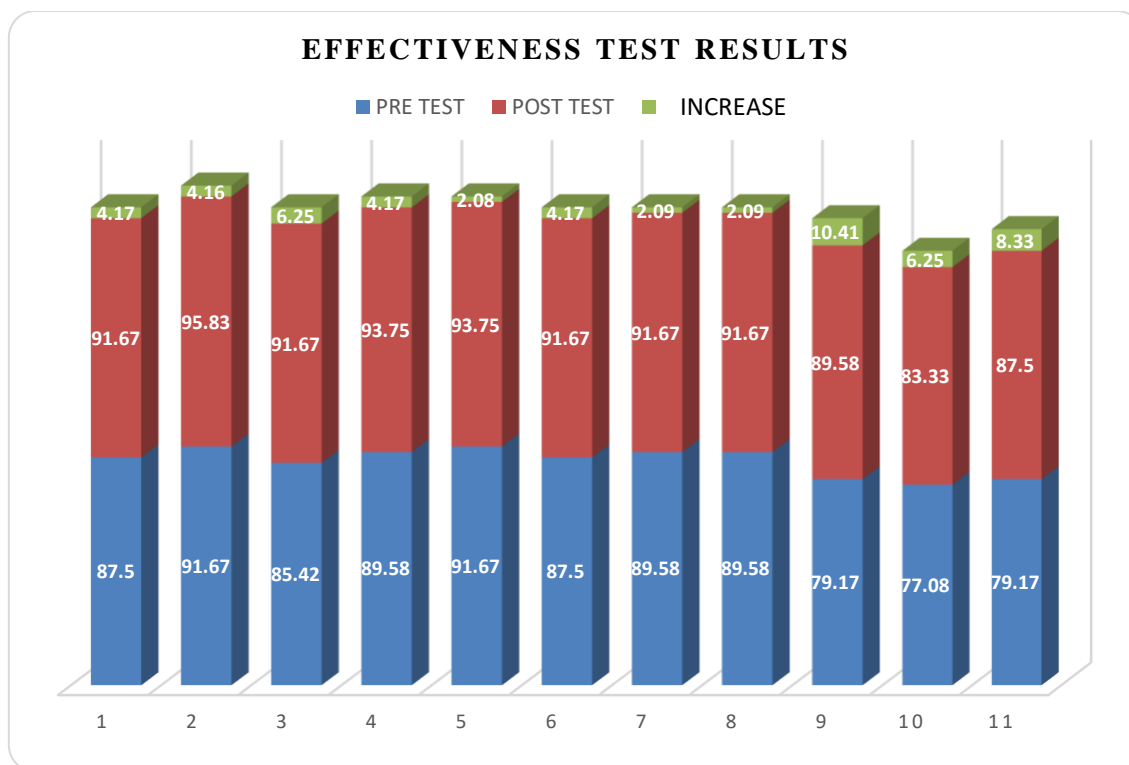


Figure 4. Graph of Percentage of Effectiveness Test

Based on testing the average pretest value shows an average value of 41.36 with a percentage of 86.17%. Meanwhile, the average post-test score was 43.73 indicating a value with a percentage of 91.10%. The results of the average pretest and posttest scores showed that there was a difference in the percentage increase of 4.92%. This shows that motion and song-learning animation media can improve basic literacy in children 5-6 years. Furthermore, to find out the effectiveness of motion learning animation media and songs to increase basic literacy in children 5-6 years, the researchers conducted statistical data analysis by testing t. Based on the calculated value of the paired sample t-test statistical analysis, it obtained a t-value of 6.094 with a significance value (2-tailed) of 0.000 so it can be said that the value of  $0.000 < 0$ .

Every unique child has different abilities, to stimulate these abilities the teacher needs innovations to create things that are interesting for children, one of which is movement, and this song can be used to stimulate basic literacy in group B children in Aidin Islamic Integrated Kindergarten, West Dumai District, City of Dumai which is the target of this research subject. It can be seen in research that movement and songs can improve basic literacy in children 5-6 years. Some that can be seen in basic literacy when using animated motion learning media products and songs in terms of; (1) reading where children can recognize symbols, read pictures, symbolic forms of motion and songs so that children read simple sentences in songs, and other sentences (2) write, where children can write simple sentences, (3) listening, where children can understand language and express language, (4) think logically, where children can express what they want and feel. The improvement in each aspect of basic literacy can be seen in figure 5 from the pretest and posttest results of the effectiveness trial.

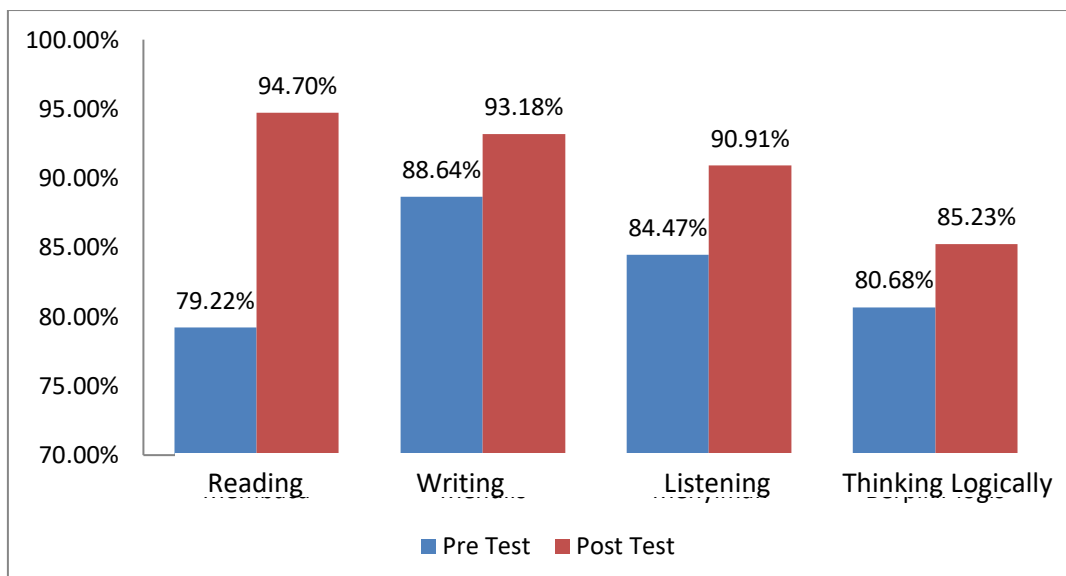


Figure 5. Graph of Percentage of Basic Literacy Aspects

## 4.2 Discussion

Research has found that learning through music and songs can create a friendly atmosphere when students begin to enter the learning process, music and songs can increase students' interest in learning, improve memory, ability to relax and concentrate/focus and improve language skills. According to Trost et al., (2017), the basal ganglia are also heavily engaged in the processing of pleasant emotions, therefore the advantages of music for children's motivation during the learning process (including learning outcomes) have a strong biological basis. Stimulating this basic literacy by creating an environment and culture, namely the habit of reading, with children reading books, and reading books stimulate children's brains to be active. Where the results of data analysis are the value of CVR is 1.00 and CVI is 1.00. This shows that the value scale is in the range of 0.80-1.00 which means that the content validation is very high.

Develop early childhood basic literacy, through stimulating habituation that is tailored to children's needs. Literacy will develop if it provides stimulation through creative activities and is fun for children, one of which is motion animation video learning media, and songs. This study developed a product in the form of motion animation video learning media and songs. The media will be packaged in the form of motion videos and songs. With this motion and song learning model, children are happy, want to listen, and children understand the themes explained by the teacher. The movements and songs that are performed are related to themes that are often used as learning material in kindergarten. This is done because the movements and songs are usually only done in the early morning activities. Recent research by Rowe reveals the same thing that early exposure to music can improve language development and literacy, especially in terms of phonological awareness, vocabulary, taking turns, and other communication-related skills (Rowe et al., 2022). However, the movements and songs that are performed are very interesting because they will be performed when the teacher wants to explain the theme of learning. Because based on previous experience, if the teacher explains the theme conventionally, this makes the child bored so that the child does not understand the essence of the learning that is carried out every day.

When the effectiveness trials were carried out, the researchers found that the children looked enthusiastic and enthusiastic in following the movements and songs. Animation Media Product Learning motion and this song contain learning in schools related to healthy food, and clean hand washing which is poured in the form of song lyrics so that it is easy for children to understand, with this it can stimulate basic literacy in children. This can be seen in every aspect of basic literacy increasing in every child. Research studies conducted by Juniasih (2015) Story-based educational dance activities (TARITA) can increase children's movement creativity. At the same time, research by Yetti et al., (2019) movements and songs that contain story elements in them make it easy for children to remember the various vocabulary and contents of the song, making it easier for children to retell stories in songs that were previously sung. The existence of movement and singing also makes children able to speak more expressively because with stories in

motion and songs children are used to imitating the expressions of the characters in the songs being sung.

Literacy ability is the foundation of a student's ability to achieve continuous success without limits. The initial view of literacy is the ability to read and write, literacy is free from illiteracy. In line with that, basic literacy is oriented toward four indicators, namely the ability to listen, speak, write, and read. The need for basic literacy is stimulated, this can be seen from the situations and conditions in early childhood schools and the demands from parents for their children to be good at reading, therefore, the need for stimulation that adapts to the needs of each child. This is confirmed by Tomblin et al., (2020) literacy is oriented toward children's reading abilities, which are tailored to children's needs. Subsequent research studies explain that movements and songs are carried out with audiovisual assistance, children not only hear, but children can immediately see the movements and song lyrics in a video (Lastari et al., 2016). Mariati and Asmara (2017) research the development of innovative learning media of movement and thematic songs that can assist teachers in teaching art, especially motion and songs for early childhood that are more interesting and fun.

Further research related to aspects of social-emotional development through playing movements and songs, children who experience hypersensitivity can control themselves, adapt, interact positively, work together, and be able to respect others (Rakhmawati, 2016). Media literacy is needed today in the world of education by creating various forms of media that are creative, varied, and friendly in stimulating the development of literacy skills in children that are adapted to the needs of the child's age (Rasi, et.al, 2019; Schmidt, 2019). The research concluded that the development of motion and song-learning videos are very appropriate to be used to enter the stage of media effectiveness in learning to stimulate the locomotor abilities of children aged 5-6 years.

## 5 CONCLUSION

Based on this, according to the researcher's analysis of the research that there are several findings found using motion animation and song learning media to improve the literacy skills of children aged 5-6 years, namely (1) Children are excited, enthusiastic, happy during the learning process, (2) Children will be interested if the teacher or researcher implements the media enthusiastically and cheerfully, (3) this media is new media that teachers can use in learning activities, and (4) the media is very easy to use. Through this media, children feel happy because of music and movement to increase their ability to understand the tasks given so that children more easily recognizable symbols in shapes, and pictures, write by moving and singing songs, read simple sentences, write simple sentences, can understand language already express language and children can express wishes and feelings. This media is effective enough to be developed in children aged 5-6 years so that it can be developed in kindergarten schools.

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