The Impact of Using Audio-Visual Media to Improve Letter Recognition Ability in Kindergarten

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Abstract


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Abstract

Learning currently still uses traditional methods, namely with a whiteboard and markers to introduce letters to children. This study aims to analyze the effect of audio-visual media on the letter recognition skills of children aged 4 to 5 years in kindergarten. This research is included in the type of quantitative experimental research that uses Quasi Experimental Design with Non Equivalent Control Group Design. The population of this study consisted of 30 kindergarten children. Because the population size was less than 100, complete sampling was used to guarantee the sample. Research data collection was carried out using the structural observation method. Meanwhile, data analysis was carried out using descriptive statistical techniques. Analysis of post-test data shows that there is a significant influence of audio-visual media on children's ability to recognize letters. This can be seen from the significant increase in their average performance, which increased from 27.73 before the intervention to 54.93 after the intervention. The results of the hypothesis test further support this observation, because the significance value of 0.002 is lower than the threshold set at 0.05. Therefore, it can be concluded that there is a statistically significant average difference in students' letter recognition skills between the experimental group and the control group. The latest information in this research can have implications for the continued application of audio-visual media to improve the ability to recognize letters in kindergarten children.

1. INTRODUCTION

Children have several rights in their lives, such as the right to play, rest, interact, learn and get a proper education. Because learning and education is a right for every child in Indonesia, every parent has an obligation to provide this right. The government must also take part by making policies and providing adequate educational infrastructure. The intellectual development of children aged 0-4 years reaches 50%,
aged 0-8 years reaches 80%, and aged 0-18 years reaches 100% (Olivawiawan, 2021; Cahyani, 2019). In the age range 0-8 years, a child’s brain growth can reach 80%. Therefore, providing stimulation that stimulates the brain at this time can encourage the development and branching of neurons in the brain, which in turn increases the child’s intelligence (Prasetya et al., 2023; Khadijah et al., 2021). However, the experience a child gains will remain if used continuously and will diminish if not used. Therefore, education is very important for early childhood but still follows the characteristics of the students. Early childhood is characterized by high curiosity and learns through play or fun activities. Education given to early childhood must be fun, conducive, motivate children to love learning, develop good character in children, and avoid acts of violence. Problems will of course arise if learning for early childhood is carried out without face to face, but here a teacher must still prepare all learning activities within limitations so that it becomes meaningful learning for children.

Online learning for PAUD children is something new, so it is necessary to study children’s developmental achievements. In general, the level of achievement of children’s development has decreased except for the art aspect and the highest results in social emotional, prosocial behavior (Pertiwi et al., 2021; Wulandari & Purwanta, 2020). Aspects of development that need to be improved in children are religious and moral values, motor skills, social emotional, cognitive and language (Sari et al., 2023; We & Fauziah, 2020). One level of achievement of language development that is very important for young children is recognizing letters. The ability to recognize letters is the foundation for language development in early childhood, especially children aged 4-5 years as the lowest level in the kindergarten learning group. Children’s language development in recognizing letters has different forms at each time. The development of recognizing letters itself includes various aspects such as listening, writing and hearing which must be further developed and improved. Young children must learn to listen, remember, follow directions, and understand ideas. Audio visual media can develop language skills in children. Language mastery in recognizing letters using audio-visual media can contribute to teachers improving learning, so that they can achieve learning goals effectively (Novelia & Hazizah, 2020; Dewi, 2019; Ernani & Yusra, 2019).

The ability to recognize letters is the ability to do something by recognizing the signs or characteristics of letters from the written system which are members of the alphabet which symbolize the sounds of language (Aisyah, 2021; Bastian & Suharni, 2021). Learning letters is an essential component of literacy development (Purwanti, 2023; Salamah, 2022). Children can read some words and recognize printed letters in their environment before they know the alphabet. Children say a list of letters of the alphabet, and learning to read have no difficulty compared to children who don’t know letters. Recognizing letters is basic knowledge for children to be able to recognize writing and words around them. The ability to recognize letters is also a very important ability for children to have, because it is an initial ability that supports language and literacy development. Because the introduction of letters is something new for young children, teachers need media that supports the learning process so that the material presented is truly real.

Audio visual media is a type of media that apart from containing sound elements also contains image elements that can be seen, for example video recordings, various sizes of film, slides, sound, and so on (Rusnayani et al., 2021; Romadonah, 2019). This media capability is considered more interesting, because it contains elements of both types of media, the first is visual and the second is audio. The use of audio-visual media in learning is very effective, because it really saves educators’ energy and creates enthusiasm for learning. Images or videos can be used as examples of learning theories explained by educators, so that the learning process will be very interesting. If learning does not use media such as audio visuals, then when educators explain subject descriptions it will be like telling a fairy tale to children. Children will only imagine the appearance or reality of the imaginary story. However, if you use audiovisual media, children can immediately see pictures or videos presenting fairy tales. Therefore, through storytelling activities based on audio-visual media, it is hoped that good morals can be introduced. If the fairy tales designed are combined with elements of local cultural wisdom, it will make learning more interesting and effective. Therefore, the introduction of letters in early childhood can be done using audio-visual media so that learning can be carried out optimally.

However, the reality found at Kindergarten Kartika VII-3 Singaraja is that learning still uses the old method, namely the introduction of letters through children’s worksheets. Learning in schools has never used audio-visual media and often uses whiteboards and markers to introduce letters to children. This causes children to only focus on completing tasks in children’s worksheets and only a few are able to recognize letters. Based on the results of initial observations, it was found that most children did not know all the letters of the alphabet. Only 6 out of 25 children were able to recognize letters well, 19 out of 25 children seemed to have difficulty and confusion in naming the letters. Some children also turn upside down when saying letters with similar pronunciations or shapes, including b, f and v, m and n, p and b, m and w. Children have difficulty when asked to name a word from a letter, and vice versa when asked to name the first letter of a word. Factors that influence children’s ability to recognize letters are not yet optimal because
the child’s abilities are not yet mature, so the results are not optimal. Teachers have a very important role in introducing letters to children. Teachers must pay attention to the dominant factors that can influence letter recognition, such as the use of learning media that supports or is specifically designed to introduce letters to children aged 4-5 years. The learning media used in this research is audio-visual media such as YouTube videos.

Media is a word that comes from Latin and has a plural form or is often called medium (Ihsani & Febriyanti, 2021; Aka, 2017). Meanwhile, the word media literally means intermediary. In this case, the intermediary in question is an intermediary between the source of information or message (a source) and the recipient of the message or information (a receiver) (Daud et al., 2023; Djarar et al., 2023). Therefore, we often see media in everyday life, such as newspapers, online articles, films, television. Learning media provides benefits in classroom learning, including increasing student attention, student motivation, increasing learning effectiveness and adapting to student development levels. Media is any form that can be used to convey messages from the sender to the recipient of the message, with the aim of influencing students’ feelings, thoughts and attention (Ambarita, 2022; Baharun, 2016). Media can create dynamic and interactive learning experiences in the educational process. Media can be used in various fields, ranging from education, politics, and many more. The general function of the media is as a means of information for the public. Every society definitely needs information, because information can broaden people’s insight. The function of the media as a means of information makes it easier for people to obtain existing information. Audio visual media is a tool to help someone receive a message, so that they can gain useful knowledge and experience to achieve the goals they want to achieve.

Audio visual tools are audible tools, that is, they can be heard and visible tools, that is, they can be seen. Audio visual tools function to make communication more effective (Hidayat et al., 2022; Shalikhah, 2016). Learning media can help teachers make the teaching and learning process more effective and efficient. To stimulate enthusiasm for learning, teachers must understand the factors that influence the ongoing learning process, one of which is the use of learning media when teaching. Learning media is very important so that students are motivated to learn. Whatever model is used, it always emphasizes student activity in every learning process with innovative and creative characteristics. In this research, the media chosen is a video recording that presents an overview of the introduction of Hijaiyah letters while fostering interactive learning experiences in the educational process. Media can be used in various fields, ranging from education, politics, and many more. The general function of the media is as a means of information for the public. Every society definitely needs information, because information can broaden people’s insight. The function of the media as a means of information makes it easier for people to obtain existing information. Audio visual media is a tool to help someone receive a message, so that they can gain useful knowledge and experience to achieve the goals they want to achieve.

This study aims to analyze the influence of audio-visual media on the letter recognition skills of children aged 4 to 5 years in kindergarten. In learning activities, students are often faced with complex and abstract things that are difficult to understand. Through this media, it is hoped that it can provide another dimension to learning and effectively reach learning with different learning styles. It is also hoped that through this media the concepts obtained by students will stick in their memories, so that student learning outcomes will also improve. The latest information in this research can have implications for the continued application of audio-visual media to improve the ability to recognize letters in kindergarten children.

2. METHOD

This research uses a quantitative approach with a pre-experimental research design. This research involved 30 children in the Kartika VII-3 Singaraja kindergarten group. Since the population size was less than 100, a complete sampling method was chosen to ensure proper representation of the sample. Data was collected through a structured observation method on children aged 4-5 years at Kindergarten Kartika VII-3 Singaraja. Observations were made on children’s letter recognition abilities, with indicators such as listing types of animals with similar first letters, naming all the alphabets from A to Z, following examples of learning letters, and experience in alphabet memory. The instrument used in this research was aimed at determining children’s letter recognition abilities. The instrument includes the variable recognizing hijaiyah letters. By using this instrument, researchers can collect the data needed to test hypotheses. Apart from that, researchers also gained a better understanding of the influence of audio-visual media on the ability to recognize letters in children aged 4-5 years at Kindergarten Kartika VII-3 Singaraja. The grid of the observation instrument for the ability to recognize hijaiyah letters used in this research can be presented in Table 1.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Indicator</th>
<th>Observed Aspects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Know letter</td>
<td>Ability to identify hijaiyah letters</td>
<td>Students are able to name the hijaiyah letters</td>
</tr>
</tbody>
</table>
Variable | Indicator | Observed Aspects
--- | --- | ---
hijaiyah | 2. Skill in pronouncing hijaiyah letters properly and correctly according to the makhraj | 1. Students are able to pronounce the sounds of the hijaiyah letters in sequence 2. Students are able to pronounce the sounds of the hijaiyah letters randomly.

Source: Iqromah (2018) with modifications

The data that has been collected is then analyzed using descriptive statistical techniques. Descriptive statistical analysis aims to organize and analyze data, as well as inferential tests such as normality tests, homogeneity tests, and t-tests to test hypotheses. The normality test is carried out to ensure that the data follows a normal distribution. In this study, the normality test was carried out using the Lilliefors test. Next, a homogeneity test was carried out to assess the uniformity of the data between the experimental and control groups. The homogeneity test in this study used the F Test formula. Meanwhile, hypothesis testing or t-test was carried out to compare the averages between the experimental group and the control group. The choice of t-test depends on the homogeneity of the data. If homogeneity is verified, then a t-test is used with degrees of freedom according to a certain formula. However, if homogeneity is not verified, then a t-test corresponding to separate variances is used.

3. RESULT AND DISCUSSION

Result

The results of this research were data collected through the observation method. Observation sheets are prepared and used to observe children’s ability to recognize letters during learning activities. Children in the experimental group were observed using prepared instruments. To get an overview of the characteristics of the data and observation results, there were two groups, namely the experimental group with 15 children and the control group with the same number of children. This research uses audio visual media in the experimental group. Before the research began, a pre-test or initial test was carried out to assess children’s ability to recognize letters using audio-visual media at Kindergarten Kartika VII-3 Singaraja for the 2022/2023 academic year. The observation results of the ability to recognize letters using audio-visual media can be presented in Table 2.

Table 2. The Value of Observation Results for the Ability to Recognize Letters Using Audio Visual Media

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Class B-1 (Control)</th>
<th>Class B (Experimental)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average</td>
<td>27.733</td>
<td>54.933</td>
</tr>
<tr>
<td>Median</td>
<td>28</td>
<td>55</td>
</tr>
<tr>
<td>Mode</td>
<td>24</td>
<td>56</td>
</tr>
<tr>
<td>Minimum</td>
<td>20</td>
<td>48</td>
</tr>
<tr>
<td>Maximum</td>
<td>35</td>
<td>62</td>
</tr>
</tbody>
</table>

Based on this table, it is known that class B (Experimental) has a higher score in each category. This means that the use of audio-visual media has a better influence on the ability of children aged 4-5 years to recognize letters: The data analysis used in this research is a different test using the Independent Sample T-test. The normality test is used to determine whether the data obtained from research results is normally distributed or not. The results of the normality test in this study using the Shapiro-Wilk test can be presented in Table 3.

Table 3. The Normality Test Results

<table>
<thead>
<tr>
<th>Variable</th>
<th>Group</th>
<th>Kolmogorov-Smirnov</th>
<th>Shapiro-Wilk</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Statistics</td>
<td>df</td>
</tr>
<tr>
<td>Results</td>
<td>Class B-1 (Control)</td>
<td>0.127</td>
<td>15</td>
</tr>
<tr>
<td>Observation</td>
<td>Class B (Experimental)</td>
<td>0.099</td>
<td>15</td>
</tr>
</tbody>
</table>

Based on the Shapiro-Wilk test, it is known that the significance or probability value for Class B-1 (Control) is 0.637 and Class B (Experiment) is 0.846. This value is greater than 0.05, which means the significance value is greater than α, so it is stated that all data is normally distributed. Then the homogeneity test is used to find out whether the sample comes from a homogeneous population or not. The homogeneity test was carried out using Anova and assisted by the IBM SPSS Statistics 25 program. Data is said to be...
homogeneous if the calculated F value is smaller than F table and the significance level value is 5% (0.05). The results of the homogeneity test in this research can be presented in Table 4.

Table 4. The Homogeneity Test Results

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Levene Statistics</th>
<th>df1</th>
<th>df2</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Observation Based on Mean</td>
<td>0.201</td>
<td>1</td>
<td>28</td>
<td>0.658</td>
</tr>
<tr>
<td>Observation Based on Median</td>
<td>0.145</td>
<td>1</td>
<td>28</td>
<td>0.706</td>
</tr>
<tr>
<td>Observation Based on Median and with adjusted df</td>
<td>0.145</td>
<td>1</td>
<td>27.969</td>
<td>0.706</td>
</tr>
<tr>
<td>Observation Based on trimmed mean</td>
<td>0.194</td>
<td>1</td>
<td>28</td>
<td>0.663</td>
</tr>
</tbody>
</table>

Based on Table 4, it is known that the sig. Based on Mean is 0.658 > 0.05, so it can be concluded that the data variance for Class B-1 (Control) is 0.637 and Class B (Experimental) is the same or homogeneous. Next, the T-test (t-test) is used to test the comparative hypothesis if both data are interval/ratio type, normally distributed, and classified as parametric. The results of the independent t test in this research can be presented in Table 5.

Table 5. The Independent T Test

<table>
<thead>
<tr>
<th>Parameters</th>
<th>F</th>
<th>Sig.</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
<th>Mean Difference</th>
<th>Std. Error</th>
<th>95% Confidence Interval of the Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equal variances assumed</td>
<td>0.201</td>
<td>0.658</td>
<td>-16.933</td>
<td>28</td>
<td>0.000</td>
<td>-27.20000</td>
<td>1.60634</td>
<td>-30.49043 -23.90957</td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Observation Results</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Based on the "Independent Samples Test" output table in the "Equal Variances Assumed" section, it is known that the Sig. equal to 0.002 < 0.05. So as is the basis for decision making in the independent sample t test, it can be concluded that H0 is rejected and H1 is accepted. Thus, it can be concluded that there is a significant average difference in students' ability to recognize letters between the group of students taught using audio-visual media (Class B (Experimental)) and the group of students taught not using audio-visual media (Class B-1 (Control)) for Group B children at Kartika VII-3 Singaraja Kindergarten for the 2022/2023 academic year.

Discussion

This research was carried out for two weeks before and after treatment, namely by conducting a pre-test and post-test. This research involves observation and collecting research data using prepared instruments. The research results were obtained after two groups, namely the experimental group which used audio-visual media and the control group which used media which had been implemented at school. It can be seen that there are differences in the average ability to recognize letters. The average results of children's letter recognition abilities in the experimental group were higher than the average results found in the control group. Based on post-test data, the use of audio-visual media has a significant influence on children's ability to recognize letters. This can be seen from the change in their average ability, which has increased significantly. The results of hypothesis testing also strengthen these findings, so it can be concluded that there is a significant average difference in students' letter recognition abilities between the group of students who were taught using audio-visual media (Class B (Experimental)) and the group of students who were taught not with audio-visual media (Class B-1 (Control)) for Group B children at Kartika VII-3 Singaraja Kindergarten for the 2022/2023 Academic Year.

The results of this research are in line with previous research which found that there was a significant average difference in students' ability to recognize letters between the group of students who were taught using audio-visual media and the group of students who were taught not with audio-visual media (Khadijah et al., 2021; Chandra, 2016). Children are more enthusiastic and enthusiastic in participating in the learning process because audio-visual media allows them to play an active role in learning and attracts their attention. Other research also states that audio-visual media has an influence on children's ability to read hijaiyah letters (Buulolo et al., 2023; Sintia et al., 2021).
Previous research states that the use of technology, especially audio-visual media, has great potential in supporting the learning process (Setiawan et al., 2023; Muttaqien, 2017). The use of technology in education can increase interactivity and attract students' interest in learning. Audio visual media has a big influence on the ability to recognize hijaiyah letters in children aged 4-5 years. This is in line with previous research which states that visual video media is proven to be a learning medium that can influence the ability to recognize hijaiyah letters in children aged 4-5 years (Kandarishah & Jannah, 2024; Desiani & Istiqomah, 2023). A significant increase occurred after treatment or treatment was carried out in learning in terms of the results of the post-test scores for the experimental or control classes. The main function of learning media is as a tool in the teaching process which plays a role in creating the learning atmosphere and conditions regulated by the teacher. The use of learning media in the early stages of teaching greatly contributes to increasing the effectiveness of the learning process and delivery of material at that time. The use of audio-visual media in this research has proven to be suitable for use in learning. This is in line with previous research which revealed that the audio visual media developed was declared suitable for use in learning (Sari, 2021; Sembiring & Antara, 2021; Sumiati & Tirtayani, 2021). Apart from inspiring students' interest and motivation, learning media also helps students to better understand the material, presents information in an interesting and trustworthy way, makes it easier to interpret information, and compresses data. This study aims to analyze the influence of audio-visual media on the letter recognition skills of children aged 4 to 5 years in kindergarten. This research has implications for increasing the attractiveness and media in learning, thereby providing a more interesting learning experience for students. Through audio visual media, students can improve learning outcomes because the learning material can be more embedded in their memories. The latest information in this research can have implications for the continued application of audio visual media to improve the ability to recognize letters in kindergarten children. The limitations of this research lie in the limited scope of research subjects. Future research can consider a wider range of subjects to obtain optimal results.

4. CONCLUSION

Based on the research carried out, it is known that there is an influence of audio-visual media on increasing the ability to recognize letters in group B children of Kartika VII-3 Singaraja Kindergarten. This can be seen from the significant average difference in students' ability to recognize letters between the group of students who were taught using audio-visual media (Class B (Experiment)) and the group of students who were taught not using with audio-visual media (Class B-1 (Control)) in children. Group B Kindergarten Kartika VII-3 Singaraja Academic Year 2022/2023. The latest information from this research can have an impact on the continued use of audio-visual media to improve kindergarten children's ability to recognize letters.

5. REFERENCES


