Animated Video-based E-Flashcard Learning Media for Early Childhood Pre-Reading Abilities

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ABSTRACT

The implementation of flashcards is still focused on image recognition and has yet to go too deep into letter recognition. This research aims to analyse the effect of animated video-based e-flashcards on the pre-reading abilities of young children. This type of research is quantitative with a quasi-experimental method and a non-equivalent control group design. The population of this study was early childhood children from group B class. The research sample consisted of two groups, namely group B1 as the control class and group B3 as the experimental class, totalling 38 children. Data collection methods use observation and documentation. Data analysis techniques use inferential statistics. The research results show the influence of the use of animated video-based e-flashcard learning media on the pre-reading abilities of early childhood. E-flashcard learning media can improve the pre-reading abilities of young children. Animated video-based e-flashcard learning media is equipped with additional features such as animation and sounds that can attract children's attention so that children can focus on the information presented.

1. INTRODUCTION

Early childhood is one of the individuals who has interesting developments when compared to adults. Early childhood is an individual who has unique characteristics and development according to his age stage (Ariyanti, 2016; Holis, 2017). At an early age, children will also enter the golden age or what is better known as the golden age (Muradi et al., 2021; Puspitasari et al., 2021; Wong & Russak, 2020). During this period, children aged 0 – 6 years will feel a stimulus in all aspects of their development. The stimulus that exists within the child will also be a determinant in developing aspects of his abilities at the next stage of development (Ismaya et al., 2022; Prasetiawan, 2019). In connection with the explanation above, based on the results of research on the growth and development of early childhood, golden age children only occur once in the human life phase. This means that when children are at an early age, their development and growth should not be missed in vain (Holis, 2017; Ismaya et al., 2022). Coaching and mentoring from adults

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can have a significant influence on a child's growth and development (Goryacheva & Sinelnikova, 2014; Kostyrka-Allchorne et al., 2017; Ni et al., 2021; Özkan Yıldız & Yılmaz, 2021). To help children's development, parents or adults around them must prepare various strategies, stimulation, methods or media that suit the children's needs carefully. The needs needed to develop aspects of the child also need to be adjusted to each stage of the child's age and condition (N. Anggraini, 2021; Lubis, 2018; Wang et al., 2023).

One aspect of a child's development that needs adult assistance and attention is the child's language skills. Language ability is a central indicator of all aspects of child development (Nuraeni et al., 2019; Risnawati & Nuraeni, 2019; Sa’ida, 2018). As long as children are in their golden age, their ability to absorb and understand as part of language skills, is in a rapid process (Nofita Anggraini, 2021; Fitriani et al., 2019; Risnawati & Nuraeni, 2019). So that there are obstacles or delays in the development of children's language skills, which will affect the involvement of children's abilities in listening, speaking, writing and reading (V. Anggraini et al., 2019; Christiani, 2013). Apart from conveying the importance of this ability to children, language is an inseparable part of human life. Language is a communication tool used by each individual to exchange stories, information or messages. With language skills, humans as social creatures can interact and communicate with each other. So it can be said that language is a significant ability to be developed in early childhood (Mailani et al., 2022; Sundari & Mulyawati, 2017).

Reading can be said to be a bridge to developing one's language skills well (Apriana et al., 2020; Fauziah & Hidayat, 2022; Fithri & Setiawan, 2017). On the other hand, reading is also an activity that children need to master in order to understand language in the form of information or learning in class. When children have a high level of literacy or reading ability, the child can be identified as someone who has a high level of language (Suraganga, 2017; Wandasari, 2017). Nothing bad happens to children who learn to read at an early age. With the ability to read, they can find information and knowledge that can have an influence on improving their learning outcomes at the academic level. Apart from that, children's ability to read can also build good communication and relationships with the people around them. In other words, the ability to read in children can help children develop other aspects of basic abilities such as cognitive and social-emotional abilities. (Rozalia, 2017; Wandasari, 2017).

Teaching and developing reading skills, young children must be given an introduction first. Introduction to reading skills in early childhood can start from pre-reading activities. Pre-reading introduction is the main stage in introducing language to children (Asmonah, 2019; Wabyuni et al., 2023). Pre-reading skills include how children can recognize and pronounce letters or numbers correctly. Apart from that, pre-reading skills are also known as the initial foundation for children before entering the advanced reading stages in higher grades. (Hidayati & Astuti, 2020; Putri, 2019). As one of the basic skills for early childhood, not all adults have the courage to teach pre-reading to children. Children need varied and interesting strategies, activities and media to be able to learn or recognize letters (Swari & Ambarawa, 2022; Winarti & Suryana, 2020). Regarding this, similar research states that the preparation of learning concepts in early childhood, especially those related to literacy activities, must be adjusted to the objectives of aspects of reading development in children by focusing on children's needs. Providing inappropriate activities or media for children will be an obstacle for them in developing pre-reading skills. Therefore, parents, educators and other adults must collaborate with each other in designing reading learning for early childhood which is able to optimally stimulate children's learning, abilities and interest in learning. (Pertiwi, 2016; Rachmawaty, 2017).

Increasing pre-reading abilities in children has made the use of learning media a highlight that must be paid attention to by teaching staff. Considering that children have a tendency to choose playing rather than studying, educators must implement learning media that can stimulate children's desire to learn (Ali, 2022; Hardanti et al., 2022). One of these learning media is flashcards. This media is included in the type of visual learning media that can make children remember the letters or pictures on the flashcards. (Nawafilaty, 2019; Rahman & Haryanto, 2014). The form of flashcard learning media is in the form of picture cards. With a size suitable for teachers or children to hold, namely around 25 x 30 cm, flashcards are categorized as an efficient learning medium. Due to their efficiency as a learning medium, flashcards are often used in a learning model with a play concept. So, flashcards are also part of a form of educational game for young children in developing various learning activities (Nawafilaty, 2019; Rupdinah; & Sudjana, 2022).

Based on the existence of flashcards as an educational visual learning media for young children, various educational institutions have used this media for learning activities. One of the early childhood education institutions that has used flashcards in learning activities is the Pembina Melaya State Kindergarten. Pembina Melaya State Kindergarten is the only public kindergarten in Melaya District, Jembrana Regency. Based on the results of initial observations carried out in kindergarten, flashcards have been introduced to children to introduce the environment or other living creatures around them, for example, introducing pictures of animals. Then, based on the use of flashcard media in the Pembina Melaya...
State Kindergarten, children have also shown interest in learning. However, the implementation of flashcards is still focused on image recognition and has not gone too deep into letter recognition. Thus, children do not yet have optimal development regarding the introduction of aspects of pre-reading abilities.

Similar research states that learning using flashcard media makes it easier to learn to read at first so it is hoped that it can improve the quality of learning (Nawafilaty, 2019; Rupdinah; & Sudjana, 2022). The results of initial observations at the Pembina Melaya State Kindergarten also did not find any development of flashcard learning media in a more diverse direction, such as the use of e-flashcards or better known as digital flashcards. According to the type, e-flashcard learning media is used via cellphones, computers, iPads and tablet PCs. This use is also a comparison with the use of flashcards in the form of ordinary picture cards which are used or played directly by teachers (Maronta et al., 2023; Widiyanti, D. & Darmiyanti, 2021). Then, in using digital-based learning media on flashcards, there are several other types of e-flashcards that can be used for children’s learning, one of these types is an animated video. The use of e-flashcard diversity in learning has also been shown to minimize the decline in children’s level of interest in learning regarding the use of print or image media. (Maronta et al., 2023; Suartini et al., 2016).

Based on the background explanation above, this research will examine in more depth whether or not there is an influence of one type of e-flashcard, namely, animated video-based as a learning medium on the pre-reading abilities of early childhood in the Pembina Melaya State Kindergarten. The selection of animated video-based e-flashcards in this research was also based on the benefits that can be used in the future by teachers at the Pembina Melaya State Kindergarten in seeking to develop pre-reading skills along with the learning media that will be used. Apart from that, based on the condition of the Pembina Melaya State Kindergarten which has not yet developed pre-reading learning media in a digital direction, this research also wants to find out whether there is an effect of using animated video-based e-flashcards on children.

2. METHOD

This research design carries a quantitative approach with a quasi-experimental method or quasi-experimental research using a nonequivalent control group design. Experimental research is a method used to identify and measure the effect of a particular treatment on controlled conditions (Megawati, 2016; Wahyuillahi et al., 2021). In a nonequivalent control group design, the experimental group and control group are not chosen randomly, so it contains some similarities to the pretest-posttest control group design. (Warmi & Imami, 2018; Yasin & Nihayah, 2022). This research aims to evaluate the effect of animated video-based e-flashcard learning media on the pre-reading abilities of young children. The research location chosen was the Pembina Melaya State Kindergarten, with the research population consisting of group B children in the kindergarten. The research sample consisted of two classes with a total of 38 children. To achieve the research objectives, researchers used two data collection methods, namely the observation method and the documentation method. The observation method is used to observe and record children’s behavior in dealing with animated video-based e-flashcard learning media. The documentation method is used to collect data from relevant documents, such as records of children’s progress in participating in learning programs. Next, the collected data will be analyzed using hypothesis testing techniques. This analysis will be carried out using SPPS version 24 statistical software. If the data tested does not follow a normal distribution, then the final analysis will use a non-parametric test, namely the Wilcoxon Signed Ranks Test test. Through this research, it is hoped that empirical evidence can be found regarding the influence of animated video-based e-flashcard learning media on the pre-reading abilities of young children.

3. RESULT AND DISCUSSION

Result

The data in this study was obtained by giving tests to subjects at the Pembina Melaya State Kindergarten. The research subjects used in this research were 38 Pembina Melaya State Kindergarten students. This number was taken from two groups, namely group B1 and group B3. This study divided subjects into two groups, namely the control group and the treatment group, both groups had the same number. All of this data is used as research data. Respondents were grouped by gender. Detailed descriptions of respondents can be seen in Table 1. A description of the pre-reading abilities of early childhood children at the Pembina Melaya State Kindergarten can be found using descriptive analysis of each group. An overview of pre-reading abilities in the control group can be seen in Table 2. An overview of the pre-reading abilities of early childhood children at the Pembina Melaya State Kindergarten before and after the intervention in the treatment group can be seen in Table 3.
Assumption testing or prerequisite testing is carried out to determine the type of test that will be used in hypothesis testing. The prerequisite tests consist of a normality test and a homogeneity test. If the data is not normally distributed then hypothesis testing continues using non-parametric statistical tests. The normality test aims to see the distribution of the data collected. Normality test uses the Kolmogorov-Smirnov test. Normality test results can be seen in Table 4. The normality results of the post-test data in the treatment class are automatically removed by the system because they have a constant value. The data was then processed statistically non-parametrically using the Wilcoxon Signed Rank Test. The results of the normality test showed that the data was not normally distributed so that the homogeneity test was not carried out and continued with the hypothesis test using the Wilcoxon Signed Rank Test. Based on the results of the prerequisite test it was known that the data was not normally distributed so data analysis was carried out using a non-parametric statistical test, namely the Wilcoxon Signed Rank Test. The Wilcoxon test can be seen in Table 5. Based on Table 5, it is known that the significance value is less than 0.05 (0.008 < 0.05) so it can be concluded that there is a significant difference in pre-reading ability between the control class and the treatment class. This shows that H0 is rejected and Ha is accepted, namely that there is a significant influence of learning using animated video-based e-flashcard media on the pre-reading abilities of early childhood in the Pembina Melaya State Kindergarten.

| Table 1. Characteristics of Respondents by Gender |
| No. | Gender | Number of people | Percentage (%) |
| 1.  | Man    | 17              | 44.74          |
| 2.  | Woman  | 21              | 55.26          |
| Total |   | 38              | 100            |

| Table 2. Overview of Control Class Pre-Reading Ability |
| No. | Category               | Pre-Test | Post-Test |
|     | Number of People | Percentage (%) | Number of People | Percentage (%) |
| 1.  | Undeveloped          | 7        | 36.8     | 0          | 0          |
| 2.  | Starting to Develop  | 12       | 63.2     | 0          | 0          |
| 3.  | Developing According to Expectations | 0 | 0 | 7 | 36.8 |
| 4.  | Developing Very Well | 12       | 63.2     | 19         | 100        |
| Total |                    | 19       | 100      | 19         | 100        |

| Table 3. Description of the Pre-Reading Ability of the Experimental Class |
| No. | Category               | Pre-Test | Post-Test |
|     | Number of People | Percentage (%) | Number of People | Percentage (%) |
| 1.  | Undeveloped          | 7        | 36.8     | 0          | 0          |
| 2.  | Starting to Develop  | 12       | 63.2     | 0          | 0          |
| 3.  | Developing According to Expectations | 0 | 0 | 0 | 0 |
| 4.  | Developing Very Well | 19       | 100      | 19         | 100        |
| Total |                    | 19       | 100      | 19         | 100        |

| Table 4. Normality Test Results |
| Kolmogorov-Smirnova | Shapiro-Wilk |
| Statistics | df | Sig. | Statistics | df | Sig. |
| Pretest Control B1  | 0.403 | 19 | 0.000 | 0.616 | 19 | 0.000 |
| Control Posttest B1 | 0.403 | 19 | 0.000 | 0.616 | 19 | 0.000 |
| Pretest Treatment B3 | 0.403 | 19 | 0.000 | 0.616 | 19 | 0.000 |

| Table 5. Wilcoxon Test Results |
| Control Post-test B1 – Treatment Post-test B3 |
| Z | Asymp. Sig. (2-tailed) |
| -2.646b | 0.008 |
Discussion

Pre-reading ability is the ability that children have before actually reading. Pre-reading skills are the beginning of learning to read which consists of recognizing letter symbols which will be used as a basis for initial reading (Kustiyowati, 2020; Wabyuni et al., 2023). At this stage, children's independence begins to emerge but they still need help from others to read words (Fridani, 2020; Siregar & Rahmah, 2016; Sulistyowati et al., 2020). Assistance and practice are very necessary to help students prepare to start reading. Parents and teachers can use learning media to introduce letter symbols so that students can be helped. Early childhood needs fun learning media because children will consider this as something interesting so their attention will be focused on the learning media used. (Hadini, 2017; Irhandayani, 2020; Ratna & Utami, 2018).

Animation Video-based E-Flashcard learning media provides a more interactive and interesting learning experience for children, so that they are more involved in the learning process. Animated videos provide clear visualization and support understanding of basic concepts in reading (Gae et al., 2021; Novelia & Hazizah, 2020). Previous research findings also reveal that this medium also provides opportunities for children to learn independently, allowing them to repeat material that is difficult or lagging behind. (Agustina et al., 2021; Andini & Supriadi, 2018; Sayekti, 2019). Animated Video-based E-Flashcard learning media can enable children to learn independently, giving them control over the speed and intensity of their learning. This helps children to feel more confident in dealing with letters and words, and develops independence in learning. The use of E-Flashcard learning media based on Animation Video not only facilitates more effective learning but also creates a positive experience in learning. This is an important step in preparing children to enter the world of reading with confidence and interest, which will ultimately bring long-term benefits in their literacy development. (Fridani, 2020; Irhandayani, 2019; Siregar & Rahmah, 2016). These results indicate that the use of E-Flashcard learning media based on animated videos can be an effective tool in improving the pre-reading abilities of young children. This research makes an important contribution to the development of learning methods that are more modern and relevant to technological developments, as well as providing valuable insights for educators and parents in supporting children’s literacy development at an early age.

The results of the research show that there is an influence of learning using animated video-based e-flashcards on students’ pre-reading abilities. The use of media in the form of flash cards can enable children to read early, develop memory, train concentration, and increase vocabulary, so that children can recognize letters more easily and are ready to start reading. (N. Puspitasari et al., 2022; Ulfa, 2020). E-flashcard media based on animated videos is equipped with aspects of digital animation and sounds which can make children more interested so they can understand the message they want to convey. (Evianti & Atika, 2021; Hidayat, 2022). The results of this research are in line with research conducted showing that there is an influence of the use of flash card media on the introduction of pre-reading in children aged 4-6 years at Kindergarten Nurya Bil Ilma Jember (Kustiyowati, 2020; Utomo et al., 2023). This research is also in line with research which shows that the use of flashcard media can improve early childhood reading abilities at the pre-fluent reading stage. (Maronta et al., 2023; N. Puspitasari et al., 2022).

4. CONCLUSION

There is an influence of learning using animated video-based e-flashcards on students’ pre-reading abilities. Using media in the form of flashcards can enable children to read early, develop memory, train concentration, and increase their vocabulary so that they can recognise letters more easily and are ready to start reading as input material for teachers to choose the right learning media to train children’s pre-reading skills. Learning media that attract children’s interest will make it easier for children to understand the information that will be conveyed.

5. REFERENCES


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