

Learning Strategies for Improving Number Recognition Ability through Digital Stories

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Abstract

Introduction to numbers in adank Early childhood varies, especially when it comes to recognizing numbers, one of which is by using digital stories. Seeing increasingly sophisticated technological developments in learning, children are also introduced to technology. This research aims to determine learning strategies for improving number recognition skills through digital stories. The subjects of this research were teachers, school principals, and children aged 4-5 years. The object of this research is number recognition. The data collection technique is through observation, namely collecting initial data related to the ability to recognize numbers, interviews are used to collect data related to learning strategies to improve the ability to recognize numbers through digital stories and documentation is used as supporting data in the ability to recognize numbers in early childhood. The data analysis technique used is data reduction, namely analyzing the data, grouping the data according to the data obtained, and then presenting the data, namely the data that has been reduced related to the ability to recognize numbers displayed according to the grouping. After presenting the data, then conclusions are drawn on the results of the research. The results of this research show that recognizing numbers using digital stories can improve concentration abilities and can also improve children's number recognition.

Keywords: digital story, learning strategy, number identification

Introduction

A learning strategy is a plan of action (a set of activities) that involves the use of learning methods and the use of various sources of power. This means that the preparation of a new strategy and the creation of a work plan have not yet been completed. Next, develop a strategy to achieve your specific goals. This means that the direction of all strategic decisions is to achieve goals. Therefore, preparation for the learning stages, use of different media, and learning resources all aim to achieve the goal. Therefore, before establishing a strategy, it is necessary to develop clear goals whose success can be measured, because goals are the spirit of strategy implementation (Hidayati, 2021). At the PAUD level, the activities focus more on children's activities. Learning strategies in early childhood should be made interesting, fun, and full of play, and fun and not remove children from the world of childhood (Parapat, 2020). The choice of methods and strategies must be by the characteristics of preschool children so that learning is more effective, moreover, the choice of learning support methods must also be considered so that children are interested in learning with an independent personality (Kurniawati, 2019).

The ability to recognize numbers in Early Childhood Education (PAUD) is one of the learning objectives. Children begin to recognize numbers by using symbols. An indicator of number recognition ability is that the child can name number symbols or the child can show number symbols. Through *storytelling* activities, children can get to know each other well. The importance of number concepts begins at an early age, as this period is a golden age and a period of great developmental sensitivity. Developments include the concepts of shape, color, and size as well as the concept of number (Salihan, 2019). The ability to recognize numbers and think clearly and systematically requires stimulation and development. Prepare children to participate in the next level of learning.

Minister of Education and Culture Regulation Number 146 of 2014 states that Early Childhood Education (PAUD) is a training effort for children from birth to 6 years of age, including providing educational stimulation. Education aims to encourage physical and spiritual growth and development so that children are ready to enter the world of continuous education. PAUD services for children aged 4 to 6 years can be in the form of Kindergarten (TK), Laudatur Asfar (RA), (Bustanul Asfar) BA, and other similar PAUD units (SPS). Her PAUD services in PAUD format are divided into two age groups. Group A is aimed at children aged 4-5 years and Group B is aimed at children aged 5-6 years. According to the 2013 Curriculum Characteristics, early childhood education is designed to promote all aspects of a child's development,

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including religious, moral, and physical values (motor, cognitive, linguistic, social, emotional, and artistic) aspects. It should be by applying learning in the form of direct learning experiences in the context of playing or learning through play. In line with this, Nest (in Maryatun, 2016) believes that early childhood education is a comprehensive process that encourages the growth and development of children aged 0-8 years covering physical and non-physical aspects by providing mental, intellectual, emotional, moral, and social development.

Ministry of Education and Culture Regulation Number 137 of 2014 concerning content standards clearly states that the scope of cognitive development includes learning and problem solving, logical thinking, and symbolic thinking. Child Development Level Standards (STPPA) Cognitive Development of Children Aged 4-5 Years As part of the process of developing symbolic thinking, children must be able to count many objects from 1 to 10, recognize the concept of numbers, recognize numbers symbols, and recognize letter symbols. The ability to recognize the concept of number symbols is an important ability that young children need to have because in everyday life children will always use the concept of number symbols, such as when counting objects. This is in Burns' opinion (in Syafitri, 2018) that the mathematical groups that can be recognized by 3-year-old children are numbers, models and functions, measurement, geometry, and mathematical solutions. The fundamental principle of PAUD is to provide educational stimulation to children to maximize their potential and enable them to have the ability to participate in the following activities (Katoningsih, 2021).

Mathematics learning activities for children are carried out in an integrated manner through learning themes that are close to everyday life using a variety of existing media. The purpose of using media in early childhood is to develop an understanding of numbers and counting. The media most familiar to children today is digital media, which is very easily recognized by children. Even young children can operate digital media skillfully. Not many children operate digital media properly and correctly (Salihan, 2019). Because there is no supervision from older people. One of the simple mathematical concepts is recognizing numbers. By knowing numbers, children will be able to recognize and read numbers and mathematical symbols

The benefits of knowing numbers are learned regularly so that children get used to counting while playing (Kurniati and Nufus, 2018). In addition, the introduction of number concepts aims to develop children's understanding of numbers and calculations with certain objects, thereby creating a solid foundation for children to develop mathematical abilities at the next stage. Therefore, teaching children to recognize the concept of numbers or basic mathematics is best done with certain objects. According to (Chandra, 2019), the use of concrete media can help children understand numbers more easily because all senses such as sight, touch, taste, and hearing can be used directly. Indeed, children can learn in the active phase, especially through concrete and symbolic objects in the form of pictures and symbolic objects in words or symbols (Wahyuni & Sukmawati, 2020). One of the special objects and tools used to introduce the concept of numbers to young children, especially through stories about numbers. Learning to recognize numbers is categorized as memorizing (Sanjaya, 2012).

Research on number recognition in early childhood has been carried out by many previous researchers, such as Baiq Salihan in group A of Kindergarten PGRI Raja City, Sikur District in 2019. The number of students who completed was still 35%, meaning This means it is still below the minimum standard which should be 85%. This has not achieved the expected results. Research conducted (Qur'ani, 2015) to see the ability to recognize numbers 1-10 through Bowang media games in Taman Indria Kindergarten, Kediri City District was proven by carrying out three stages with the final result (86.7%) achieving completeness. So it can be concluded that the Bowang media game can be applied to improve children's ability to recognize numbers 1-10. Suggestion, for the same purpose, namely efforts to improve the ability to recognize numbers 1-10, this Bowang media can be used as an action option to introduce numbers 1-10 to students. The research conducted (Ningrum, 2019) Method of Playing Picture Number Cards to Improve the Ability to Recognize Numbers 1-10 in Group A at PAUD An- Nahdliyah Kenongo Tulangan Sidoarjo carried out 3 cycles with results of 83.08% which met the specified indicators.

Storytelling is an activity carried out by someone to provide information or messages to someone, both orally and in writing (Yuniarti, 2014). "*storytelling*" which existed before printed sources, has been replaced by digital *storytelling* along with the rapid development of technology. Digital storytelling has influenced information-gathering skills, problem-solving solving, and attitudes toward teacher and student collaboration. Educators also use digital stories as a motivational tool to attract attention and guide their students (Cetin, 2021). A good understanding of the type and character of listeners is also very necessary. That way, what is conveyed in the story is conveyed to the listener (Puspitasari, 2019).

Based on the results of observations made by researchers in Group A BA Aisyiyah Karangduren, Sawit District, Boyolali Regency, in the 2023/2024 semester 1 academic year, it was seen that out of 22 students, only 6 were able to count objects and were able to pair them with numbers that matched the picture. These 6 children were only able to count the number of objects but were not able to pair them with the appropriate numbers. There are even children who still pronounce numbers incorrectly in order. This is because the activity of recognizing numbers is still monotonous. For example, bolding the numbers or simply connecting the appropriate numbers or pictures, makes children feel bored with their activities and results in children not being interested in learning so that children do not understand what is being conveyed by the teacher. Based on the problem above, the author wants to look at the theoretical basis for learning to introduce numbers through digital *stories* in early childhood.

Research Methods

This type of research is descriptive and qualitative. The study was conducted at his BA Aisyiyah Karangduren Sawit in Boyolali. One week from October 10th to October 17th, 2023. The data used in this study typically uses primary data and secondary data. Primary data is data that is directly obtained. To obtain the data needed by researchers using qualitative data, researchers used several observation, interview, and documentation techniques during the data collection procedure. In this observation, researchers conducted and obtained data by interviewing teachers and students. Documentation activities are carried out to obtain images of the children being studied.

After data collection, the researchers processed and analyzed the data obtained in the field. Qualitative data analysis activities are conducted interactively and continuously until complete data are available. The activities in data analysis are: Data analysis techniques for further research include data reduction, presentation, and concluding. Data reduction begins with data wrangling activities that focus on aggregation, abstraction, and transformation of raw data through data recording in the field. Writers often conclude when they go into the field. From the beginning of data collection, qualitative writers begin to determine the meaning of something, paying attention to general patterns (notational theory), explanations, stereotype tendencies, propositions, and cause-and-effect flow. This conclusion was approached freely, openly, and sceptically, but the conclusion has been drawn. At first, it was not clear, but then it became more detailed and deeply rooted (Agusta, 2003).

Result and Discussion

The research was conducted at BA Aisyiyah Karangduren Sawit Boyolali which is located in Ngemplaksuren Rt 09 Rw 04 Karangduren, Sawit, Boyolali Central Java. This observation activity was carried out on October 1-October 5. The author made observations and collected data to find what he wanted. This is BA Aisyiyah 's effort at Karangduren to maximize learning about number recognition in early childhood. To understand the initial situation, the author made observations and coordinated with other schools. The current situation shows that the ability to read hijaiyah of early childhood in PAUD BA Aisyiyah Karangduren is relatively low. The aim is to optimize the abilities of young children to recognize numbers at BA Aisyiyah Karangduren.

A problem was identified during the observation period as well as when presenting the numbers to students. Initially, children were introduced to using notebooks and blackboards. Children seem indifferent and do not want to pay attention and are not enthusiastic about participating in learning activities. Also, the results of interviews with teachers show the percentage of students who understand numbers using less than-optimal writing methods. Due to these constraints, the introduction of numbers using digital *stories* was carried out. So that children can recognize and memorize basic numbers.

Introduction to numbers using the digital *story method* at BA Aisyiyah Karangduren Sawit Boyolali will be implemented this academic year, namely the 2023/2024 academic year. The introduction of numbers through the digital *story method* is carried out twice a week. According to the results of the interview, the class teacher stated that "the digital *story method* for introducing numbers is carried out on Tuesdays and Thursdays because there is other learning material that must be conveyed to children." Apart from recognizing numbers, children are also taught to recognize letters. Children are taught to bold the numbers in their notebooks as a support for the digital *story method*.

Digital *storytelling* is a combination of various multimedia features such as graphics, text, voice recordings, sounds, songs, music, and video with *storytelling* to present certain elements or points in a certain period and packaged in an attractive digital format (Corrine, 2011). Teachers feel the benefits of the digital *story method* because children are more enthusiastic about paying attention to what is being said. Children are more focused and children catch and digest more quickly. Because digital media is media that is close to children nowadays. So that children are more interested in this kind of learning. And also stories are something that children like, which makes children more enthusiastic.



Figure 1. Children Listen to Digital Stories

Table 1. Interview Results

| No | Question | Interviews | Interview result |
|----|---|------------|--|
| 1. | How is the child's ability to recognize numbers in BA Aisyiyah Karangduren? | Headmaster | The ability to recognize numbers in moderate children then increases their ability to use digital <i>stories</i> |
| | | Teacher a | Initially, it was less then it increased after using digital <i>stories</i> |
| 2. | Why are digital <i>stories</i> more effective for optimizing number recognition? | Headmaster | Digital <i>stories</i> are more effective because teaching using digital media that is interesting to children will be more focused |
| | | Teacher a | Effective in learning. Digital <i>stories</i> are used so that children are not monotonous in learning. And children's concentration improves when listening to digital <i>stories</i> |
| 3. | How do children respond when learning digital <i>stories</i> ? | Headmaster | Children are very happy with learning like this |
| | | Teacher a | Children are very enthusiastic about listening to digital <i>stories</i> |
| 4. | Are there any obstacles in recognizing numbers through digital <i>stories</i> ? | Headmaster | Obstacles exist if a child starts interacting with his friends. |
| | | Teacher a | There are no facilities for digital learning, namely LCD, so we are still using it for now laptops to display. |
| 5. | Are digital <i>stories</i> recommended as an introduction to numbers in the future? | Headmaster | Becomes one of the learning strategies that will be used in the future |
| | | Teacher a | Highly recommended again in the future ” |

Based on the table above regarding children's ability to recognize numbers, so far it has not been optimal. Also, the previously monotonous introduction makes the child uninterested in what is being conveyed. By using digital *stories*, children's ability to recognize numbers improves. Because the teacher only provides explanations without introducing number symbols, children find it difficult to understand what the teacher explains (Amaris, Rakimahwati, and Marlina (2018).

Not only methods, of learning must be appropriate to student characteristics (Khatimah, 2020). The teacher's efforts to introduce numbers using the digital *story method* are proven to support children when introducing the ability to recognize numbers well. Efforts can be made including concentration, understanding, and building good relationships. Digital method *stories* are carried out by focusing children by increasing concentration when listening to stories. Invite children to listen to digital *stories* and monitor children's progress in recognizing numbers. The use of digital *stories* is very effective for learning number recognition.

From the table above regarding children's responses when learning digital *stories*, it can be seen that children are very happy with learning about number recognition. Starting with children enthusiastic about digital *stories* will make it easier for children to digest the material. Learning that uses learning media will foster children's enthusiasm for learning. A positive impact on improving learning can be felt if the learning process uses interesting and enjoyable media or tools that create pleasure and a sense of learning and new experiences (Liyana & Astien, 2019).

Based on the table above, the obstacles to telling stories lie in the lack of facilities in schools. If there are facilities according to what is needed, delivery will be optimal. Media can convey information from the sender (teacher) to the receiver (student). Media is a tool to help students receive and process information to achieve learning goals (Daryanto2011). The next obstacle is the condition of children who want to socialize Sasi with friends while learning. Social relationships develop due to the encouragement of curiosity about everything that exists in the world around them, namely individual curiosity about how to have good and safe relationships with the world around them, both physical and social (Ali and Asrori, 2006).

Conclusion

Based on the results of the above research and discussion, it can be concluded that there is a need to improve number recognition skills, media that is attractive to children is needed so that children will be more interested and concentrated in learning. Learning media is a tool used to help make it easier to achieve goals. One of the learning media that can be used in the learning process is to improve the ability to recognize numbers by using digital *stories*. Digital *stories* not only contain stories but also about introducing numbers to children. Through digital *stories*, children are expected to be more enthusiastic about learning to recognize numbers without being boring or monotonous.

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- >>> J- SANAK: *Journal of Child Studies* (p-ISSN: 2686-5343 |e-ISSN: 2715-7989) Vol. (2)(01), (July-December) (2020), (Pages) (40-48) DOI: <https://doi.org/10.24127/j-sanak.v2i01.193> Copyright © 2020, Muhammadiyah University Metro|40 IMPROVING THE ABILITY TO RECOGNIZE NUMBERS 1-10 WITH IMAGE MEDIA Dina Khairiah IAIN Padangsidempuan edinna.airi04@gmail.com Efrida Mandasari Dalimunthe2 IAIN Padangsidempuan mandasariefrida88@gmail.com Ika Nur Aini Nasution3 IAIN Padangsidempuan ikanuraininasution@gmail.com
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