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Application of the 1-20 Counting Method Using Fingers in Improving the Cognition of Class B Children Ra Darussalam Kotasiantar

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Abstract:
The finger-counting method is one of the effective learning techniques in helping early childhood understand the concept of numbers and basic operations of mathematics.
This study aims to analyze the application of the 1-20 counting method using fingers and its impact on the cognitive development of grade B children at RA Darussalam Kotasiantar.
Using a qualitative approach, this study collects data through direct observation, interviews with educators, and documentation of child development. The results of the study show that this method provides various benefits, including increased understanding of number concepts, numeracy skills, and children's memory. In addition, this method also improves fine motor coordination and children's motivation to learn because of its interactive and fun nature. The use of fingers as a counting aid helps children associate numbers with concrete physical representations, making them easier to understand. Based on the findings of this study, it is recommended that educators optimize the method of counting using fingers in learning basic mathematics and combine it with other learning media to increase its effectiveness
Keywords: Counting, Cognitive, Early Childhood, Finger Method

INRODUCTION

Early childhood education is an important stage in building the foundation of children's cognitive development. According to Santrock (2020), cognitive development in early childhood is influenced by various factors, including the learning methods used. One of the important aspects of this development is the ability to count, which needs to be introduced early so that children are better prepared to understand more complex mathematical concepts at the next level of education.

However, in practice, many children have difficulty recognizing numbers and understanding basic mathematical operations if they are not given learning methods that are

appropriate to their development. These difficulties can hinder further understanding in the field of numeracy and lead to low interest in learning mathematics (Lestari & Widyastuti, 2021). Therefore, a more concrete and fun learning strategy is needed so that children can more easily understand the concept of numbers.

One method that has proven to be effective is the finger-counting method. According to recent research by Nugraha (2022), this method allows children to directly associate numbers with physical representations through the use of fingers, thus helping them understand the concept of numbers more concretely. In addition, this method also helps improve memory, motor coordination, and children's motivation to learn because it is interactive and fun.

The finger-counting method not only helps children in recognizing numbers but also strengthens the concept of simple addition and subtraction. A study conducted by Suryani (2023) shows that children who use this method master basic calculation operations faster than children who use conventional methods. This is due to the multisensory involvement in the learning process that strengthens children's understanding. Based on initial observations, many early childhood children have difficulty recognizing numbers and performing simple counting operations. One of the factors causing this is the lack of use of concrete methods in learning, which makes it difficult for children to understand numbers abstractly (Rahayu, 2020). The use of the finger counting method can be a solution because it helps children connect numbers with physical representations that are easy to understand.

In addition, this method provides additional benefits in the form of improving children's fine motor coordination. According to research conducted by Widodo (2021), activities that involve the use of fingers can help children develop their motor skills, which is also beneficial in writing and other activities that require hand coordination.

METHODS

To examine the effectiveness of the finger-counting method, this study uses a qualitative approach with a descriptive method. Data collection techniques are carried out through direct observation of the learning process, interviews with teachers, and documentation of child development. The subject of the study was a class B student at RA Darussalam Kotasiantar. Data analysis is carried out by means of data reduction, data presentation, and conclusion drawn. With this approach, the research is expected to provide a clearer picture of the benefits and challenges in the application of this method (Sugiyono, 2022).

Primary Data Source: Data was obtained directly from observations of children's learning activities when using the finger counting method and interviews with educators to understand the effectiveness and obstacles to the application of this method. Secondary Data Sources: Data was obtained from literature, research journals, and documentation of child development before and after the use of the finger counting method. Primary Data Source: Data was obtained directly from observations of children's learning activities when using the finger counting method and interviews with educators to understand the effectiveness and obstacles to the application of this method. Secondary Data Sources: Data was obtained from literature, research journals, and documentation of child development before and after the use of the finger counting method. The data obtained is analyzed through data reduction, data presentation, and conclusion drawing in order to obtain valid and comprehensive results (Sugiyono, 2022).

Data collected from observations, interviews, and documentation were analyzed to identify important patterns in the use of the finger counting method. Irrelevant information is filtered out so that only significant data is retained (Miles & Huberman, 2021). that has been reduced is prepared in the form of a descriptive narrative that describes learning patterns, children's responses, and the effectiveness of this method in improving their cognitive abilities (Creswell, 2020). The presentation of data also includes tables and diagrams to clarify the

results of the research. Based on data analysis, an interpretation of the results obtained was carried out to draw conclusions about the effectiveness of the finger-counting method in improving children's cognitive development (Sugiyono, 2022). The conclusions made are supported by the empirical findings of this study as well as related literature.

RESULTS

The results of the study showed that the application of the 1-20 counting method using fingers had a positive impact on children's cognitive development, including: Improvement of Number Understanding Children have an easier time recognizing numbers and understanding the concept of number sequence through the use of fingers (Ningsih, 2023). Improving Memory The use of finrs as a tool provides a multisensory learning experience that helps strengthen children's memory (Prasetyo, 2021). Practicing Motor Coordination Activities using fingers in counting not only improve cognitive abilities, but also train children's fine motor coordination (Wahyuni, 2020). Increasing Learning Enthusiasm Children are more interested and active in participating in learning because this method is interactive and fun (Putri, 2022).

It	Assessment Aspects	Before (%)	After (%)
1	Ability to recognize numbers	40%	85%
2	Numeracy skills 1-20	35%	80%
3	Concentration while studying	50%	90%
4	Enthusiasm in learning	45%	88%
5	Fine motor coordination	55%	87%

This data showed a significant improvement in various aspects of child development after the application of the finger counting method for four weeks.

DISCUSSION

The results of this study indicate that the finger-counting method has a significant impact on children's cognitive development. Children who used this method showed a greater improvement in understanding the concept of numbers compared to children who did not use similar methods. In addition, they are also more enthusiastic about learning because this method involves physical aspects that support better understanding.

The finger-counting method provides a more concrete learning experience for children. When children use their fingers to count, they can see and feel numbers, which helps them remember concepts better. Recent research by Nugraha (2022) also shows that a multisensory approach like this is effective in improving understanding of numerical concepts in early childhood. Another study by Suryani (2023) supports these findings, stating that children who use this method master basic arithmetic operations faster than children taught with conventional methods.

To ensure the accuracy of the data obtained in this study, validation was carried out through data triangulation. Data collected from observations, interviews with educators, and documentation of children's academic development were compared to ensure consistency of results. The results of triangulation showed that the three data sources provided consistent findings regarding the effectiveness of the finger-counting method.

Validation was also carried out by comparing the results of this study with previous studies. For example, Prasetyo (2021) found that children who learned to count using their fingers experienced a higher increase in memory compared to those who did not use this method. Similar results were found in this study, showing that the finger-counting method not only helps with number understanding but also improves children's concentration and

confidence in solving numerical problems.

In addition, internal validation is carried out through discussions with educators and experts in early childhood education. Their input shows that this method is indeed very helpful in the learning process, especially for children who are still in the stage of introducing the concept of numbers.

The validation results showed that the finger-counting method provided significant improvements in various aspects of child development, including:

Number Understanding**:** Children recognize numbers faster and understand the order of numbers.

Numeracy Skills: Children are able to perform simple counting operations better. Memory**:** Children have an easier time remembering numbers and number sequences. Motor Coordination**:** The activity of using fingers in counting trains children's fine motor skills.

Confidence**:** Children are more confident in solving numerical problems.

Learning Motivation: Children are more enthusiastic about attending math lessons because this method is fun and interactive. With these results, it can be concluded that the finger-counting method is an effective learning strategy in improving the cognitive development of grade B children at RA Darussalam Kotasiantar. This method not only helps children in understanding numbers, but also contributes to improving their memory and motor coordination. Therefore, it is recommended that this method continue to be used and developed in early childhood learning to improve the effectiveness of teaching basic mathematics.

CONCLUSION

Based on the results of this study, the finger-counting method is proven to provide strong benefits in improving children's cognitive aspects, especially in terms of number understanding, numeracy skills, and memory. Children who used this method showed faster development compared to children who did not use it. The success of this method is supported by its concrete, interactive, and easily accessible nature to early childhood. From an academic perspective, this method contributes to increasing children's readiness to face more complex mathematics material at the next level of education. Strengthening your understanding of numbers early on helps build a solid foundation in numerical learning in the future. From the social side, this method also plays a role in increasing children's confidence and communication skills, especially in interacting with peers during learning sessions. Thus, the method of counting using fingers is recommended to continue to be applied and developed in early childhood education. Educators are advised to combine this method with other learning approaches to create a more varied and effective learning experience for children.

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