BUSY BOOK MEDIA DEVELOPMENT TO STIMULATE LITERACY AND NUMERACY DEVELOPMENT ASPECTS EARLY CHILDHOOD

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ABSTRACT

This study aims to develop busy book media to stimulate aspects of literacy and numeracy development in early childhood. The research method used is Research and Development (R&D) with the ADDIE model consisting of analysis, design, development, implementation, and evaluation. This research and development were carried out through 3 stages of trials, namely material expert trials, media expert trials, and trials of media use in children. The subjects of the research and development were 25 children in group A, aged 4-5 years at TK ABA Karangasem 03 Jetak Paciran. Data collection techniques and instruments used included material expert questionnaires, media expert questionnaires, children's response questionnaires, interview and observation sheets, and documentation. The data analysis technique in this study used qualitative and quantitative data analysis. The results of this research and development showed that the value obtained by the busy book media from the material expert trial was 82% in the "Feasible, no need for revision" qualification. The next stage of the media expert trial was 95% in the qualification of "Very Eligible, no need for revision", and the last trial of media use in children was 92.3% in the qualification of "Very Eligible, no need for revision". Based on the results of the research and development that have been carried out, busy book media is helpful in stimulating aspects of literacy and numeracy development in children. "Eligible" used.

Keywords: Busy Book, Literacy Development, Numeracy Development, Early Childhood

INTRODUCTION

Early Childhood Education (ECE) is a developmental effort aimed at children from birth to age 6, through the provision of educational stimulation, so that physical and spiritual development occurs optimally. Learning in PAUD units is no longer only focused on reading, writing, and arithmetic skills, but also serves as a means to introduce pre-reading, pre-writing, and pre-math activities through fun activities. (Ministry of Education and Culture, 2020). Early childhood education institutions play a role in stimulating literacy and numeracy through various appropriate strategies. Children who are accustomed to writing and reading tend to grow into creative individuals and can think logically. (Yulia et al., 2021).

Literacy and Numeracy are a person's ability to use reasoning or understand a statement through activities, and the ability to apply the concept of number symbols or arithmetic operations (Khakima et al., 2021). Literacy and Numeracy are also helpful in training children's sharp thinking in finding solutions to every problem, where the ability to solve problems must be taught from an early age, because every individual will definitely face various challenges in their life.(Wahyuti et al., 2023), For this reason, children need to be guided and directed by

parents and teachers through enjoyable activities in an educational environment so that their talents, interests, and potential can grow and develop optimally (Hidayat & Nurlatifah, 2023).

Learning media plays a crucial role in the learning process. The media serves as a means of conveying information from teachers to students, making the material easier to understand (Saleh & Syahruddin, 2023). Likewise, with the development of Early Childhood Literacy and Numeracy, the use of appropriate learning media is very important, so that the learning process takes place in an interactive and fun way, and children readily accept the material. Therefore, teachers need to choose and use interesting media according to the child's stage of development. (Wulandari et al., 2023).

Busy book, as a learning medium that can attract children's attention because it is a unique, colorful book and contains various engaging activities, such as arranging numbers and letters. The creative presentation makes the learning process more contextual and relevant to children's daily lives. (Nggai et al., 2024). Busy books encourage children to learn collaboratively through interactions with teachers and peers. This medium is also effective in helping children with low literacy and numeracy skills. (Amri et al., 2023). Busy Book is an interactive media designed to support learning through exploration and an enjoyable hands-on experience. (Rahmatiah et al., 2024).

The results of initial interviews with class teachers revealed that, in ABA Karangasem 03 Paciran Kindergarten, the Busy Book media has been used in learning, but its use is still inconsistent; the available Busy Book is less varied in terms of content, consisting of only five pages, including the front and back covers. In addition, teachers do not understand how to use the media optimally, so children are left to learn alone without guidance. This condition causes children to feel bored easily. Therefore, it is necessary to develop Busy Book by adding content that is appropriate to learning needs, adding pages with fun and varied games, and using attractive color combinations.

Based on initial observations, most children still have difficulty recognizing letter symbols, distinguishing letter sounds, and matching words with pictures. A similar situation occurs in the numeracy aspect, where children are not yet able to count while pointing to objects, and match the number of objects with numbers 1-10. The level of literacy and numeracy development that has been achieved is only around 36% of the total 25 children. Referring to the Child Development Achievement Level Standards (STPPA), children aged 4-5 years are ideally able to recognize letter symbols and sounds, recognize the concept of numbers by counting while pointing to objects. This includes the ability to identify the concept of numbers

through concrete objects (1-10), point to the order of objects according to the numbers 1-10, and sequence the numbers 1-10 (Cahyaningrum et al., 2022).

Research on the Busy Book media has been conducted previously by (Amri et al., 2023) Who developed this media to improve early childhood literacy skills? The results of their research showed that the Busy Book media was deemed suitable, with a feasibility rating of 87.3%. Further research (Rahmatiah et al., 2024) Examined the effectiveness of Busy Book in improving basic numeracy skills in early childhood, and successfully recorded a significant increase of 57 children in just one month. Unlike the two studies, this study has novelty in terms of the scope of the targeted developmental aspects. Not only is this study focused on improving literacy or numeracy alone, but it also develops and examines the use of Busy Book media to stimulate both aspects at once, namely literacy and numeracy in early childhood in one integrated medium.

These facts indicate a problem that needs to be addressed immediately. The solution requires appropriate learning media to stimulate children's literacy and numeracy development. One such medium is the Busy Book. Selecting the right media can stimulate and increase children's enthusiasm for learning. (Anggita Isma Juliandini, Taopik Rahman, 2022). This study aims to determine how the process of developing busy book media in stimulating the development aspects of literacy and numeracy of children aged 4-5 years in TK Aisyiyah Karangasem 03 Paciran, thus teachers will be more helped, because the content in it can be designed as attractive as possible, so it is expected that the literacy and numeracy aspects of children will develop significantly and learning will be more effective.

LITERATURE REVIEW

1. Early Childhood Literacy Development

Children aged 0 to 6 years are in the age range 0 to 6 years, namely the early period of life, which is very important because it is the foundation for the physical, cognitive, social, emotional, and moral development of children. (Yusuf et al., 2023). Early childhood literacy development encompasses the ability to read, write, express feelings verbally and nonverbally, and think critically and logically. These skills develop gradually, continuously, and dynamically according to the child's age and developmental stage. Literacy plays a crucial role in helping children adapt to increasingly complex environments. (Yulia et al., 2021).

The stages of literacy development are divided into several stages, namely: a)Stage 1 (Pre-Linguistic)namely starting when the child is born until the age of 1 year, b) Stage 2 (Linguistic) namely between the ages of 1-2 years, c) Stage 3 (Grammar Development) at the

age of 3-5 years, d) Stage 4 (Grammar approaching Adulthood) at the age of 6-8 years (Azzahroh et al., 2021).

2. Early Childhood Numeracy Development

Early Childhood numeracy skills are the ability to apply number concepts and counting skills in everyday life situations, which can gradually develop towards an understanding of addition and subtraction. (Sudarti, 2022)Understanding numeracy can train systematic thinking, which can help children solve problems more easily. Considering that children aged 4-5 are not yet capable of abstract arithmetic, appropriate media and methods are needed to ensure numeracy learning is enjoyable and effective, allowing children to grasp the concept of numbers gradually. (Hayati et al., 2022).

3. Busy Book Media

A busy book is a media in the form of a book, which is generally made of flannel, and contains various fun activities. The use of attractive colors helps increase children's focus when learning, so that multiple aspects of development can be stimulated optimally. (Fitriyah et al., 2022). *Busy book comes* from the word "busy," which means busy, and the word "book," which means book, so it can be interpreted that a busy book can be construed as an activity book designed to keep children busy through various activities that aim to stimulate and train all aspects of child development. (Damayanti I., 2023).

According to Damayanti I (2023) The benefits of busy book media are to improve children's motor skills, mental and social-emotional abilities, stimulate children's curiosity in a fun way, increase children's creativity, and prevent children from feeling bored. In line with the opinion (Sakri Alfaregi & Wirman, 2022). That the benefits of busy books include: a) Stimulate aspects of children's emotional development in a more positive direction, such as learning to work together in groups, b) Stimulate children to think logically and critically, c) Children's motor skills can develop through activities in busy book media, such as matching patterns, sticking, d) Can arouse enthusiasm for learning.

Busy book media is included in visual media. The advantages of busy book learning media, according to (Damayanti I., 2023) Is: a) Classroom learning is more efficient and enjoyable, b) This media is durable because it is made of thick material so it is resistant to dirt, does not wrinkle or tear easily, c) Bright colors and a series of engaging activities in busy book media can actively involve students and stimulate their imagination, so that learning becomes more enjoyable, d) Busy book media can be used in various ways with other media.

METHODOLOGY

This research uses the R&D (Research and Development) method to develop or improve existing products and test their effectiveness. (Torang Siregar, 2023), using the ADDIE model, which consists of 5 stages, namely analysis, product design/planning, product development, implementation or application, and evaluation stage (Waruwu, 2024). This research and development was conducted through three trial stages, namely material expert trials, media expert trials, and field trials (use of media on children).

This research was conducted at ABA Karangasem 03 Kindergarten, Jetak Paciran. The subjects were 25 children in Group A, aged 4-5 years. Data collection techniques included interviews, questionnaires, observation, and documentation. The instruments used included questionnaires validated by material experts and media experts, interview sheets, observation sheets, and child response questionnaires. The data analysis techniques used in this study include qualitative and quantitative data analysis. Data validity was verified through triangulation. The triangulation methods used in this study were source triangulation and technique triangulation.

RESULTS AND DISCUSSION

Based on the research and development carried out, the following research results were obtained:

1. Analysis Stage

The initial stage in R&D research is the Analysis stage, which begins with a preliminary study. At this stage, researchers identified problems through observations and interviews at ABA Karangasem 03 Paciran Kindergarten in early October 2024. It was found that teachers used demonstration, lecture, and storytelling methods, as well as aids such as Lego, blocks, letter cards, and numbers. Busy Book media was also used, but with a straightforward appearance and content (consisting of only five pages, including the front and back covers), so it was not optimal in stimulating the literacy and numeracy development of group A children (4-5 years old).

Based on data obtained from the results of initial observations of children aged 4-5 years at ABA Karangasem 03 Paciran Lamongan Kindergarten, children still find it challenging to recognize letter symbols, distinguish letter sounds, and match words with pictures, as well as recognize the concept of numbers. Children still have difficulty in counting while pointing at objects, matching or connecting the number of objects with number symbols 1-10. Literacy and numeracy development has appeared in 36% of 25 children.

As a form of evaluation of findings in the field, the learning process requires support such as learning media. Learning media is one of the most critical aspects in the learning process to make it easier for children to understand something, an event, or understand the learning material delivered by the teacher, especially in early childhood, because children of their age need something concrete or tangible in front of them. This is in accordance with the opinion that states that learning media is one of the facilities/tools that are very necessary for educators to support educational success, which functions to create conditions for children to be able to absorb knowledge more effectively, accurately, and in depth (Shofia & Dadan, 2021).

2. Design/Planning Stage

This stage is the stage for designing the product to be developed, where the product design is still conceptual in nature, which underlies the development process in the next stage. (Waruwu, 2024). In designing the media development in this study, the first step was to determine the media design, including the name of the learning media. The media to be developed was the busy book learning media. One learning medium that can help stimulate the development of children's literacy and numeracy is the busy book media, as it is packaged with engaging and interactive games. (Risa Mufliharsi, 2019). So that it can raise enthusiasm and increase children's motivation to learn (Anggita Isma Juliandini, Taopik Rahman, 2022).

The next step is to determine the material to be used for making the media, namely, busy books in the form of books made from flannel. Busy books are books that are usually made of flannel, contain fun activities, and the choice of attractive colors makes children more focused on learning, so that aspects of child development can be well stimulated. (Fitriyah et al., 2022).

The next stage is determining the content of the material to be developed in this busy book media, namely, literacy and numeracy learning for children aged 4-5 years. Early Childhood Literacy Development is the ability to read, write, express feelings, desires verbally and non-verbally, think critically and logically, which is a continuous and dynamic process, according to the child's age development stage, which functions to make it easier for children to adapt to more complex environments. (Yulia et al., 2021). Understanding numeracy can train systematic thinking, which can help children solve problems more easily. Because children aged 4-5 years are not yet capable of abstract arithmetic, appropriate media and methods are needed to make numeracy learning enjoyable and effective, allowing children to grasp number concepts gradually. (Hayati et al., 2022). Finally, the developer designs the storyboard or busy book media design using the Canva app.

3. Development Stage

In the development stage, the concepts and plans created in the design stage are then translated into concrete, specific learning media products. At this stage, developers create busy book learning media that are ready to be implemented or applied in learning. Damayanti I (2023) The benefits of busy books include improving children's motor skills, mental and social-emotional abilities, stimulating curiosity in a fun way, increasing creativity, and preventing boredom. Furthermore, busy books can also help promote children's logical and critical thinking. (Trust, 2021).

This busy book learning medium was developed into two types: "Busy Book Literacy" and "Busy Book Numeracy." Both books were made from flannel using a sewing technique, based on a pre-designed storyboard using the Canva app. The production process took approximately one month.
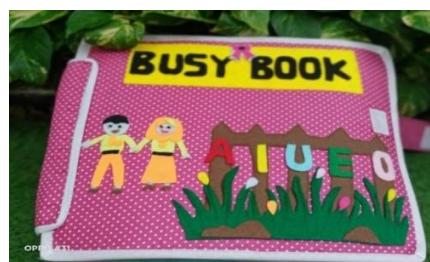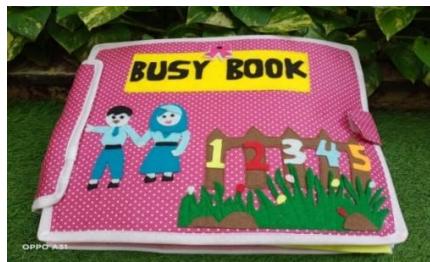
Figure 1. Busy Book Numeracy Figure 2. Busy Book Literacy

The next step was validation by material experts and media experts on the busy book learning media that had been created. Validation aimed to evaluate the content and suitability of the material to the characteristics of early childhood, as well as the objectives of literacy and numeracy development. The results of the material validation by the material experts showed that the media was declared "appropriate" with a score of 82%. There were no revision notes from the validators, only suggestions to add a user manual and storage box to ensure the media is neater and cleaner. Meanwhile, validation by the media experts showed results of "very appropriate", with a score of 95%.

4. Implementation Stage

The implementation stage is the direct trial stage of the Busy Book media for children, to obtain feedback on the effectiveness and feasibility of the product that has been developed (Waruwu, 2024). After being declared feasible, the developed Busy Book media was then tested. A field trial involving 25 children in group A as research subjects. Based on the observation results, the Busy Book literacy and numeracy media obtained a total score of 923 out of 1000, or 92.3%, with excellent quality, and was declared very feasible without the need for revision. The use of this media showed an increase in children's literacy and

numeracy skills, including recognition and differences in the sounds of letters A-Z, matching words with pictures, and understanding numbers 1-10 through concrete activities. Children also appeared enthusiastic and actively involved during the learning process.

Figure 3. Researchers with children during media trials

The use of busy books has shown that children are very enthusiastic about learning letters and number symbols. This is influenced by the media's attractive appearance, in terms of images, colors, and game content, which stimulates children's curiosity. One benefit of busy books is that they increase children's enthusiasm for learning through a fun and interactive approach. (Trust, 2021). This is also in line with the opinion that states that one of the advantages of busy book media is that there are bright colors and a series of engaging activities in busy book media that involve students and trigger their imagination, so that learning becomes more enjoyable. (Damayanti I., 2023).
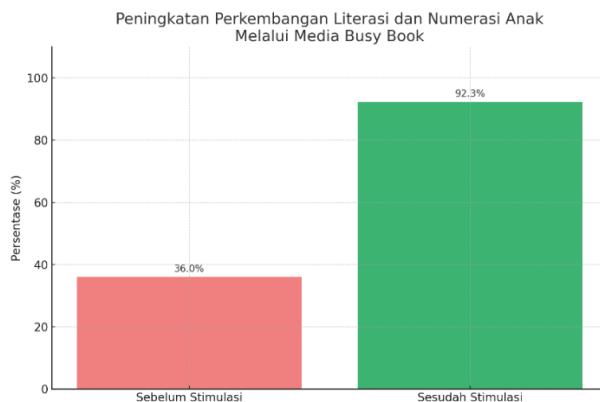

Figure 4. Graph of increasing children's literacy and numeracy

Based on the data in the graph above, it is known that the percentage of children's literacy and numeracy development before stimulation using the Busy Book media was 36%. After stimulation, there was a significant increase to 92.3%.

5. Evaluation Stage

Evaluation is conducted to assess the suitability of the developed media. Data from this stage is used as a basis for refining the product, especially if the media is deemed not entirely suited to the child's needs (Waruwu, 2024). Based on the media evaluation results,

only a few suggestions were received, namely the need for a user manual and a media storage box. The developers followed up by creating both.

CONCLUSION

Based on the results and discussion of the research, regarding the development of Busy Book Media to Stimulate the Development Aspects of Early Childhood Literacy and Numeracy, it can be concluded that, Busy Book Media was developed to stimulate the development aspects of early childhood literacy and numeracy using the ADDIE model, which includes the stages of analysis, design, development, implementation and evaluation. This media is made of flannel with an attractive design and content that is in accordance with the development indicators of children aged 4-5 years. The validation results showed the feasibility of the material by 82%, and the media by 95%, so that the Busy Book was declared feasible and ready to be tested on early childhood. The trial of Busy Book Media on children aged 4-5 years showed positive results, with children's responses reaching 92.3%. Children and teachers considered this media interesting, relevant, and according to the needs of children. Learning took place in a fun and effective way in stimulating the development aspects of children's literacy and numeracy, in accordance with the objectives of the research.

Based on the results of this study, the researchers offer several recommendations: Busy Book media needs to be further developed with a variety of content and games that are more engaging and appropriate for early childhood development. Busy Book media should be integrated into learning and tailored to children's characteristics and needs. Further research is recommended to test the effectiveness of Busy Book media on other aspects of child development.

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