

# Development of A Montessori Book to Improve the Early Reading Skills for Elementary School Students

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## ABSTRACT

This study aims to (1) produce Montessori reading books and (2) reveal the effectiveness of Montessori reading books in learning to improve the reading skills of first-grade elementary school students. This research is research and development (RnD). The research subjects were students and teachers of grade 1 elementary school. Data was obtained through interviews and observation. The products developed are validated by experts, and initial reading skills are carried out to obtain the effectiveness of the book. Product effectiveness is tested through quasi-experiments. Data analysis techniques used an independent sample t-test with a significant level of 0.05. The results of this study are in the form of Montessori reading books. (1) The results of the expert validation assessment show that the books developed are appropriate according to material experts in the "very good" category, media experts in the "good" category, and linguists in the "very good" category. Teacher and student responses to Montessori books in learning are categorized as "very good". (2). The results of the effectiveness test indicated that the book was effective in improving beginning reading skills. Based on the results of operational field trials, the value of  $p < 0.05$  means that there is a significant difference in students who carry out the learning process using Montessori books.

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## 1. INTRODUCTION

Communication is one of the meanings of language. Humans require a great deal of communication. Humans require communication in their daily lives. A person communicates ideas, opinions, emotions, facts, thoughts, and even sentiments through communication (Cui 2021). One must be able to acquire Indonesian language skills to communicate effectively. Listening, speaking, reading, and writing are all aspects of language skills. The development of linguistic skills has been going on since the beginning of

time. The significance of developing linguistic skills in students increases in elementary school. Language abilities are crucial since they include components of logic and linguistics. A person's good linguistic abilities demonstrate the ability to think (Teo 2019).

Some students believe that learning a language is simple. In fact, Indonesian language students who study their mother tongue find that many students whose grades do not meet their teaching and learning activities. The inability of students to read has a significant impact on this. The low literacy rate in this country is a major problem. South Kalimantan Province obtained a percentage of 37.00 in the 2019 Provincial Alibaca Index from the Ministry of Education and Culture, indicating that it is at a low level (Listanto and Firmansyah, 2022). North Kalimantan, a new province, has a proportion of 42.86, which is significantly lower. Based on these data, it can be concluded that many people are still not literate in developed areas.

Elementary school is a place to provide education and guidance to students in honing reading skills (Wexler et al., 2022). The basic academic foundation of students is reading skills. In grade 1 students, the basic material given is the introduction of letter shapes and how to pronounce them. Reading is a complex cognitive process in which the reader translates printed symbols or messages into sounds. Reading is a complex cognitive process in which readers translate printed symbols or messages into sounds (Snell and Grainger 2019). Early reading skills will significantly influence advanced reading skills. Early reading skills require special attention from the teacher because it is very important to understand various other learning materials.

Meanwhile, Tarigan stated that reading aloud is included in the preliminary reading, where there are activities or activities carried out simultaneously in written form to capture and understand an author's information, thoughts, and feelings (Sb, Sb, and Hartati 2019). Therefore, in learning to read, the basic components of reading must include recording, decoding, and meaning. Reading skills are directed at understanding the meaning of the words or sentences they read (Tárraga-Mínguez, Gómez-Marí, and Sanz-Cervera 2020). Reading activities in the early stages introduce a series of letters with the sounds of language. Meanwhile, understanding meaning (meaning) is more emphasized in high-grade students in elementary school.

Based on the need analysis results, it was found that the reading ability of 1st-grade students was not fluent; many students spelt letters too long to pronounce one word. The teacher revealed that the problem occurred due to the pandemic factor, so the teacher could not directly improve students' reading skills. The teacher also said that no accompanying book made it easier for parents to accompany reading activities while studying at home or school from home. The main handbook contains complex and extensive material not to identify where students have difficulty reading.

Montessori is an educational method specifically for children. As the name implies Montessori, this method was first developed by a doctor and educator from Italy named Dr. Maria Montessori in 1900 (Lockman, Fears, and Jung 2018). The feature of the Montessori method is that it frees children to choose what they want to learn in accordance with the purpose of the Montessori method itself, namely so that children are able to reach their potential in life. The choice of lessons they can choose of course, has been designed based on the appropriate age range. In addition, Montessori can be applied at school or at home (Macià-Gual and Domingo-Peñafiel 2021).

Montessori books are considered a solution to problems teachers and students face while studying during the COVID-19 pandemic (Guzman and Jaillier-Castrillon 2021). Mallett & Schroeder revealed that the Montessori method focuses on an early constructivist approach to children's education by encouraging the development of academic and social skills (Demangeon et al., 2023). This is in line with the development of Montessori books to improve early reading skills. In this method, students perform various activities using tools or materials to support children's learning activities. Through the activities carried out, students can improve reading skills according to the principles of Montessori theory itself.

Learning using the Montessori method requires special skills from the teacher in managing the classroom, tools, and materials that will be used in the learning process in the classroom. The Montessori method aims to develop aspects of student development according to their characteristics and age

(Behnamnia et al., 2020). The Montessori method provides students with an accessible and enjoyable learning experience but does not rule out its essential role in mastering early reading skills.

Using Montessori book media in learning can facilitate and streamline learning activities (Sun, Kumar, and Manickam 2021). The learning process becomes more exciting and meaningful. The developed Montessori book can be a solution to improving early reading skills. The book's material is designed attractively with various exercises in the form of games to support student interest in learning and knowledge. The purpose of this study was to produce Montessori reading books and reveal the effectiveness of Montessori reading books in learning to improve the reading ability of first-grade elementary school students.

## 2. METHODS

In this study, the method used is Research and Development (RnD). The purpose of the development research method is to develop a product as a solution to a problem that is tested for its feasibility and effectiveness in research so that it can be widely used by the community. The subjects of this study were students of grade 1 A at SDN Pasar Lama 1 Banjarmasin. Research and development is carried out using qualitative and quantitative approaches. The qualitative approach describes data from teacher responses, student responses, criticisms and suggestions from the results of expert validation. Products developed are evaluated through trials. Each trial activity is evaluated both in the evaluation of the results and the evaluation of the process. Based on the findings of the trial results, improvements or revisions were made.

This study uses the Borg and Gall method, which consists of 10 steps. (1) research and information collecting, (2) planning, (3) developing a preliminary form of product, (4) preliminary field testing, (5) main product revision, (6) main field testing, (7) operational product revision, (8) operational field testing, (9) final product revision, and (10) dissemination and implementation". Data collection instruments used interviews, observations, questionnaires, and performance tests. Questionnaires were given to material experts, media experts, linguists, teachers and students. Data analysis techniques used are qualitative and quantitative. Qualitative data were obtained from interviews, observations, and questionnaires from experts and practitioners. After using the book, experts carried out product validation, including material experts, media experts, linguists, and teacher and student responses. Quantitative research data were analyzed using the t-test to compare the data obtained in this study's control and experimental classes.

## 3. FINDINGS AND DISCUSSION

### 3.1 Expert Validation Results

The generated product is an educational book designed for first-grade elementary school kids, using the Montessori teaching approach. The developed product is thereafter subjected to examination by an expert, who offers an assessment in the form of critique and suggestions for enhancing the final product. The book underwent two stages of testing during the feasibility test phase, specifically the empirical feasibility test stage and the theoretical feasibility test stage. The theoretical feasibility test encompasses the participation of specialists in several domains, such as material experts, media experts, and linguists, who conduct expert evaluations. The empirical feasibility test encompasses the participation of students as users, encompassing both small-scale and large-scale tests. The evaluation of the Montessori book learning media revision at each step of product testing was conducted by considering the feedback provided by the respondents.

The results of the validation by material experts obtained a score of 146 or 85% in the "Very Good" category. Therefore, the product developed can be said to be feasible to continue in trials in learning. Material experts advise adjusting the sentences for grade 1 students so that they are not too long and include pictures to make it easier for students to understand the material presented. Based on media experts, the product evaluation results obtained a score of 120 or 80.5% in the "Good" category.

The input and suggestions given are that the font size should not be too small and use striking colors to attract students' interest. The last evaluation of linguists obtained a score of 60 or 85.5% in the "Very Good" category. The advice and input from linguists is the use of letters adapted to the latest PUEBLI.



Figure 1. Cover and content

Based on the results of the teacher's response, it obtained a score of 65 or a value of "B" with the category "Good" and the results of student responses obtained a score of 120 or a value of "A" with the category "Very Good". The use of Montessori books is one of the interesting media and makes it easier for students to learn to read. The suggestions and input from teachers and students are almost the same, namely the exercises in the book need to be added again to deepen students' reading abilities.

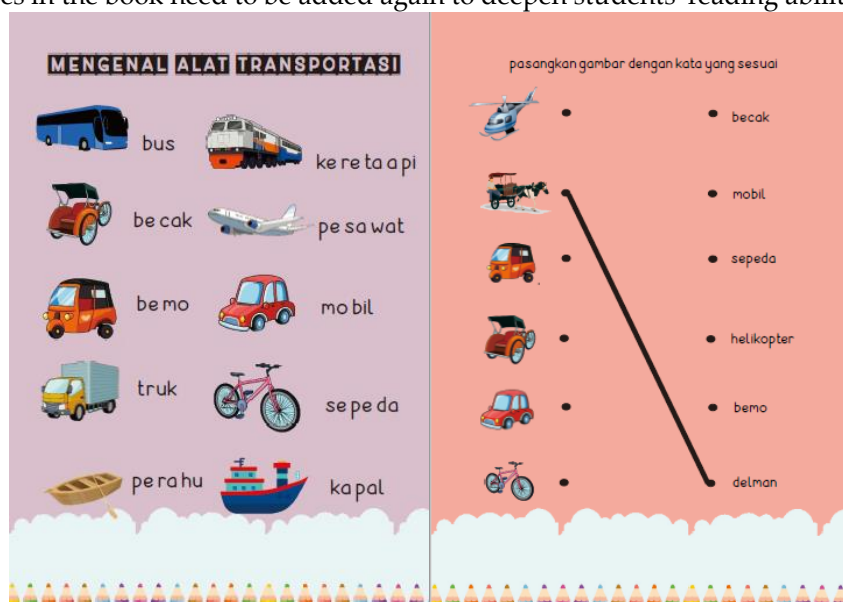


Figure 2. Content and Evaluation

### 3.2 Limited Trial Results

The products that experts have validated were then made improvements based on suggestions and input. After the product had been revised, it was then tested in small groups in class. The results of the initial product trial in the form of a Montessori book were carried out in small groups to improve reading skills. The small group trial involved 5 students. Based on the results of limited trials in small



Montessori method in learning to read the beginning is carried out with various activities. These different activities are systematically arranged and arranged in a learning book.

The leading cause of children experiencing failure in reading is that children can only sound letters without knowing the meaning contained in them (Jamshidifarsani et al. 2019). The pandemic condition has worsened the reading situation of students, where students sometimes study at home without any assistance from their parents, lack of reading practice, and lack of understanding of proper reading techniques by parents and teachers. The achievement of students' basic academic abilities, which include reading, writing, and arithmetic (*calistung*), cannot be separated from the stimulation given to all their senses and motor abilities. In the Montessori method, students are not taught to read by spelling, such as "b-u bu" "k-u ku" "book." However, students are invited to play by listening to songs, connecting letters, connecting words, interpreting objects, playing letter maze, etc. This activity is presented in a book with attractive packaging (Degli Innocenti et al. 2019).

The book developed in this study directs students to understand the meaning of the objects presented. This can be seen in the response based on the results of a limited trial in small student groups, 100% of students can learn to use Montessori book products well. Then in the control class, the pretest results showed that the average students' reading ability was 9.51. Meanwhile, in reading skills that were posted, the average obtained by students was 13.07. The average result of the students' reading skill performance pretest obtained in the experimental class was 11.34. Meanwhile, in reading skill posts, the average students obtained was 14.20. This means that students are happy, and it is easier to understand the structure of the words presented. The same thing can be seen from the results of the teacher's response. Learning by using Montessori books makes it easier for students to read. The provided Montessori books can be used for independent study during school from home during this pandemic.

Based on the results of operational trials, Montessori books were deemed appropriate and effective for use in the learning process. This is evidenced by the calculated t value in the comparison which is -3.111 which is smaller than t table which is -2.052 ( $-3.111 < -2.052$ ) and the significance of P is  $0.000 < 0.05$  then  $H_0$  is rejected, meaning that there is a difference in the average reading ability in control class and experimental class. The developed Montessori book can be one of the right solutions to improve the reading skills of early grade 1 elementary school students.

#### 4. CONCLUSION

Based on the description of the results and discussion in the study, it can be concluded as follows: 1) The developed Montessori book is said to be feasible based on the results of the material expert validation obtaining a score of 146 in the "Very Good" category, media expert validation got a score of 120 in the "Good" category, and validation of linguists obtained a score of 60 in the "Good" category. 2) The developed Montessori book was declared suitable for learning based on teacher and student responses. The teacher's response scored 65 in the "Very Good" category, and the student response scored 120 in the "Very Good" category. 3) Montessori books for the 1st-grade students at SDN Pasar Lama 1 Banjarmasin were declared effective in learning. The effectiveness was obtained from the initial reading skills test results for the experimental class and control class students. The students' initial reading skills scored less than the specified significance level,  $p > 0.05$ . The experimental class's reading skills got a score of 0.003.

This Montessori book is very precise and effective for use in the learning process, as evidenced by the validation and tests that have been carried out. This book makes it easy for students to understand letters so they can pronounce them correctly. Besides that, the layout in this Montessori book is very colorful and adapted to the characteristics of grade I students. This Montessori book is also equipped with many reading exercises designed with fun exercises to motivate students to learn. In the end, the Montessori book is highly recommended for teachers and students to use this book in the process of improving creative thinking skills. Researchers suggest continuing this research by considering digital literacy and numeracy literacy variables.

## REFERENCES

- Behnamnia, Najmeh, Amirrudin Kamsin, Maizatul Akmar Binti Ismail, and A. Hayati. 2020. "The Effective Components of Creativity in Digital Game-Based Learning among Young Children: A Case Study." *Children and Youth Services Review* 116:105227.
- Cui, Yanglu. 2021. "The Role of Emotional Intelligence in Workplace Transparency and Open Communication." *Aggression and Violent Behavior* 101602.
- Degli Innocenti, Edoardo, Michele Geronazzo, Diego Vescovi, Rolf Nordahl, Stefania Serafin, Luca Andrea Ludovico, and Federico Avanzini. 2019. "Mobile Virtual Reality for Musical Genre Learning in Primary Education." *Computers & Education* 139:102–17.
- DEMANGEON, Alison, Stéphanie CLAUDEL-VALENTIN, Alexandre AUBRY, and Youssef TAZOUTI. 2023. "A Meta-Analysis of the Effects of Montessori Education on Five Fields of Development and Learning in Preschool and School-Age Children." *Contemporary Educational Psychology* 102182.
- Guzman, Catalina Urrea, and Erika Jaillier-Castrillon. 2021. "Educational Innovation as One of the Drivers of Human Evolution." *Cypriot Journal of Educational Sciences* 16(5):2651–75.
- Jamshidifarsani, Hossein, Samir Garbaya, Theodore Lim, Pierre Blazevic, and James M. Ritchie. 2019. "Technology-Based Reading Intervention Programs for Elementary Grades: An Analytical Review." *Computers & Education* 128:427–51.
- Listanto, Virgiawan, and Nurhuda Firmansyah. 2022. "The Trend of Library Development in Indonesia and the Effects on Literacy Skills in Schools." *Jurnal Kependidikan: Jurnal Hasil Penelitian Dan Kajian Kepustakaan Di Bidang Pendidikan, Pengajaran Dan Pembelajaran* 8(3):508–20.
- Lockman, Jeffrey J., Nicholas E. Fears, and Wendy P. Jung. 2018. "The Development of Object Fitting: The Dynamics of Spatial Coordination." *Advances in Child Development and Behavior* 55:31–72.
- Macià-Gual, Aida, and Laura Domingo-Peñafiel. 2021. "Demands in Early Childhood Education: Montessori Pedagogy, Prepared Environment, and Teacher Training." *International Journal of Research in Education and Science* 7(1):144–62.
- Miseliunaite, Brigita, Irina Kliziene, and Gintautas Cibulskas. 2022. "Can Holistic Education Solve the World's Problems: A Systematic Literature Review." *Sustainability* 14(15):9737.
- Sb, Nugraheti Nugraheti Sismulyasih, Nugraheti Sismulyasih Sb, and Hartati Hartati. 2019. "Improvement of Read Aloud Skills for Elementary Students Through Literacy Corner." Pp. 357–60 in *5th International Conference on Education and Technology (ICET 2019)*. Atlantis Press.
- Snell, Joshua, and Jonathan Grainger. 2019. "Readers Are Parallel Processors." *Trends in Cognitive Sciences* 23(7):537–46.
- Sun, Na, Priyan Malarvizhi Kumar, and Adhiyaman Manickam. 2021. "Educational Philosophies and Theoretical Perspective for Self-Cultivation in Early Childhood Education." *Aggression and Violent Behavior* 101718.
- Tárraga-Mínguez, Raúl, Irene Gómez-Marí, and Pilar Sanz-Cervera. 2020. "Interventions for Improving Reading Comprehension in Children with ASD: A Systematic Review." *Behavioral Sciences* 11(1):3.
- Teo, Peter. 2019. "Teaching for the 21st Century: A Case for Dialogic Pedagogy." *Learning, Culture and Social Interaction* 21:170–78.
- Wexler, Jade, Devin M. Kearns, Christopher J. Lemons, Alexandra Shelton, Marney S. Pollack, Laura M. Stapleton, Erin Clancy, Erin Hogan, and Cheryl Lyon. 2022. "Improving Literacy Instruction in Co-Taught Middle School Classrooms to Support Reading Comprehension." *Contemporary Educational Psychology* 68:102040.