

# Analysis of Beginning Reading and Writing Media Needs Based on Interactive Multimedia

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**Abstract.** The issue of early reading and writing in Indonesia has attracted the attention of many researchers in the country. However, until now, there has been no research that addresses the root of this problem. Teachers and parents certainly always hope that their children can develop their literacy skills optimally so that they can succeed in the learning process at school. However, there is no media that effectively supports the efforts of teachers and parents. Therefore, this research aims to analyze the needs of teachers and parents in terms of early reading and writing activities for children, both at school and at home, through the development of interactive multimedia. The methods used in this research were questionnaires and interviews conducted with 28 elementary school teachers and 15 parents of students. The results of the research show the importance of first introducing alphabet recognition activities (A-Z). In addition, attention should be paid to the use of paper (thickness and color). The variation of letter types and sizes used in media production should also be considered, including incorporating many pictures and animations, providing easily understandable, clear, and organized content, utilizing technology and interactive multimedia. With these findings, it is hoped that there will be the development of interactive multimedia that includes these activities to be used in early literacy activities for elementary school-aged children.

**Keywords:** needs analysis; beginning reading and writing; interactive multimedia

## INTRODUCTION

Elementary school is the first formal educational institution. Upon entering elementary school, children will be trained and taught various ways to transform their behavior patterns from unable to capable, or from unaware to knowledgeable about something. This transformation occurs in terms of cognitive, affective, and psychomotor aspects. Various subjects will be taught, including one example, the subject of Bahasa Indonesia (Antari et al., 2015).

The learning of Indonesian language in elementary school is the most important, especially in the lower grades (grades I and II). This is because through language, students can acquire knowledge, technology, art, and information conveyed by educators. This process begins from the early stages of learning in school. Considering this, teachers as implementers and managers of learning in schools are required to design, implement, and evaluate four language skills aspects covered in Indonesian language learning, namely reading, writing, listening, and speaking (Lateke, 2017).

Reading and writing skills are two interrelated and inseparable aspects of language proficiency. When teachers teach writing, students automatically engage in reading and writing. The same applies to other aspects of

language proficiency, such as listening and speaking. These four aspects are closely related and form a cohesive whole.

Readiness in learning materials has a significant impact on the learning process. This serves as an important foundation for taking steps to a higher level. It is expected that students can master all aspects of the taught learning, including Indonesian language learning.

However, in language proficiency learning, each aspect has the opportunity to be emphasized separately. If the focus of learning is on reading and writing skills, then those skills will be emphasized, while listening and speaking skills will be secondary.

The process of early reading and writing learning, which enables children to read and write, is a crucial process. However, this process is not an easy task as it involves providing children with a skill they have not yet mastered (Antari et al., 2015). The problem of low early reading and writing skills demands the discovery of appropriate and effective teaching media.

The use of early reading and writing learning media significantly determines the success of children in mastering other language skills. According to Ghoni (2020), the limited availability of adequate media and the difficulty of using the available media pose challenges for teachers in delivering materials, which affects students' interest in paying attention to the

materials presented by the teacher.

Based on a survey conducted among elementary school teachers in the Cirebon and Kuningan regions, researchers identified issues in early reading and writing learning. The majority of students face difficulties in combining syllables into words. In schools, the available learning media are limited to arranged pictures and alphabets. However, teachers do not utilize these media; they prioritize classical teaching using markers and whiteboards. The teaching approach employed by these teachers makes students less active and results in monotonous learning. As a result, students lose enthusiasm in participating in the learning process, and the learning becomes one-directional. Further preliminary research was conducted in a second-grade elementary school classroom in the Kuningan district. Students in that class are still not proficient in writing dictated words from the teacher, and the only alphabet poster hung on the classroom wall serves as a decoration rather than a learning medium. The existing media does not appear to be effective because it is not utilized. Teachers teach using the surrounding school environment as a medium, with the assistance of whiteboards and markers. Such a teaching approach only focuses on the teacher (teacher-centered) without developing the individual abilities of each student, resulting in monotonous learning.

This research aims to find a solution to the lack of variety in learning media for early reading and writing materials. The researchers will attempt to integrate the theory of early reading and writing with digital applications that can

assist students, teachers, and parents in providing enrichment for early literacy skills, both at school and at home. In order to formulate a suitable concept for the digital application, this research focuses on the analysis of needs distributed through teachers and parents who will utilize the digital application.

## METHODS

This research is part of research and development that adopts the concept of research and development (Borg & Gall, 1983) and begins with preliminary research. In the context of this research, a needs analysis is conducted to develop a product in the form of interactive multimedia-based early reading and writing media. The population for this research consists of 28 kindergarten teachers and 15 parents of students, who were selected randomly. To collect data, instruments such as questionnaires and interviews were used. The collected data was then analyzed descriptively to draw conclusions.

## RESULTS AND DISCUSSION

Based on the results of the questionnaire and interviews, it is concluded that the digital media should provide literacy activities that can be accessed both at school and at home. The digital application should provide literacy activities that can be played individually or collectively, allowing for communication within the application. In summary, the needs for digital-based literacy media are summarized in Table 1.

**Table 1.** Formulation of Needs for Interactive Multimedia MMP Guide

Needs	Description
Including activities for alphabet recognition as a priority (A-Z)	Introducing various letters to children can enhance their ability to recognize easily identifiable letters and improve their letter selection skills.
Considering the use of paper (thick and colored). Considering variations in the type and size of fonts.	The use of bright, thick, and colored paper materials will make children more interested in learning early reading and writing activities. Readability is the most important factor when determining the type of font for creating interactive learning media for children as it will facilitate them in recognizing the differences between letters and other characters.
Including many pictures and animations.	The use of attractive images accompanied by diverse animations further increases the interest of early grade students in learning and facilitates their early reading and writing skills.
Including materials that are easy to understand, clear, and organized.	Materials that are easy to understand, clear, and organized will prevent students from getting bored and help them retain the lessons they have learned, both at school and at home.
Leveraging technology and interactive multimedia.	The use of renewable technology aided by interactive multimedia will further enhance students' enthusiasm for learning as it aligns with the current era.

### **Including Alphabet Recognition Activities**

Understanding letters is important for young children, as they are exposed to various alphabets, such as Latin and Arabic letters, from their environment. Familiarizing children with different letters develops their ability to recognize and differentiate various letter types (Pangastuti & Hanum, 2017). Repetition is needed for children to learn to recognize letters and pronounce them correctly. According to the regulations set by the Ministry of National Education of the Republic of Indonesia in Regulation No. 58 of 2009 concerning Early Childhood Education Standards, the ability to recognize letters is one aspect of children's language development. This includes the ability to recognize letter symbols and know the initial letter of an object.

Based on the opinions of several experts, it can be concluded that letter recognition is a developmental stage where children can recognize and understand letter symbols. The level of success in letter recognition can be measured when children can attribute meaning to letters and pronounce the initial letter of a word. Letter learning is an important part of the Kindergarten curriculum, which is implemented through meaningful and relevant repetition activities related to reading and writing, so that children can recognize letters and understand that letters form words. Implementing letter recognition strategies from an early age has significant benefits for children's language development, as it helps prepare them to have fluent and effortless reading skills. Additionally, children who have a good understanding of letter recognition tend to have superior reading abilities. Therefore, it can be concluded that through early childhood letter recognition learning, children will gain meaningful benefits in preparing their reading and writing skills.

### **Considering The Use Of Paper Types**

Paper is the most common medium used for writing, printing, and drawing, while pictures or photos are representations of the original form in a two-dimensional format. These images can be understood and enjoyed by everyone and are used to visualize concepts that are being conveyed to students. This is emphasized by (Suyatmiati, 2014), stating that the use of colored paper media will help students focus their attention on what needs to be done first. Students will be interested and enthusiastic about completing their tasks. The

learning process becomes more active and enjoyable.

### **Considering The Variation Of Font Types And Sizes**

Providing letter-color variations is a reading learning program aimed at helping students improve their reading skills. The letter-color variations involve teaching reading through the phonics method and utilizing colored cards with letters written on them as visual aids. The recommended font type to be used is Arial in uppercase or capital letters. This font type is chosen because it is a bold and clear typeface that minimizes the curvature of the letters. The grouping of letters into four different colors is done to differentiate similar and frequently confused letters, such as A and V, M and W, or B, D, R, and P.

### **Including A Variety Of Pictures And Animations**

Visualization is a teaching technique that allows concepts to be perceived visually through the sense of sight (Harsalinda & Wijayati, 2018). Arsyad (2014: 102) explains that visualization of the material can be presented in the form of photos/images/illustrations, graphs, sketches, charts, or diagrams. Visual education is a simulation method that is created and presented through computer media to provide a specific display (Andoro, 2015).

Visual media refers to anything that is represented in a visual form (can be seen). Visual media is a representation of objects in a relative size (different from the actual size). In the field of education, there is a term called instructional media. Instructional media provides general clarity, information, and a description of the content to students in the learning process. Instructional media plays an important role in teaching as a tool to create a more effective learning environment (Afridzal et al., 2018).

### **Including Content That Is Easy To Understand, Clear, And Organized**

Textbooks are compilations of learning materials organized in a systematic manner to present the overall competencies that learners will acquire during the learning process. Textbooks assist teachers in delivering instructional content, thereby helping achieve the learning objectives. Furthermore, the learning resources available within teaching materials or textbooks used in schools have not been optimally utilized, such as

the potential found in the surrounding environment.

### Utilizing Technology And Interactive Multimedia

Interactive multimedia is a combination of various formats such as text, audio, video, and even animations that interact with each other and are packaged in a digital file to convey information or messages to users (Manurung, 2021). The use of interactive multimedia transforms teachers from being the primary source of learning to enabling students to learn anytime and anywhere. This is supported by (Kus Eddy Sartono et al., 2022), stating that interactive multimedia offers several advantages and can be used as one of the online learning media in schools. Firstly, the use of interactive multimedia makes learning more innovative and interactive. The interactivity in multimedia supports learning and enhances understanding of the presented content.

### CONCLUSION

This research indicates that teachers and parents require interactive multimedia that can facilitate early reading and writing activities. The results show that early reading and writing media should include activities that introduce the alphabet (A-Z). Additionally, attention should be given to the use of paper (thick and colored). The variation in the type and size of fonts used in the creation of the media should also be considered. Furthermore, the media should incorporate numerous images and animations. Moreover, the content of the material should be easily understandable, clear, and well-organized. Finally, the creation of the media should leverage technology and interactive multimedia to align with the current advancements.

### REFERENCES

- Afridzal, A., Bina, S., & Getsempena, B. (2018). Perbedaan Hasil Belajar Menggunakan Media Gambar Dan Video Animasi Pada Materi Karangan Deskripsi Di Kelas Iii Sd Negeri 28 Banda Aceh. *Jurnal Tunas Bangsa*, 5(2), 231.
- Andoro, I. F. B. (2015). Proses Visualisasi Sistem Operasi Berbasis Multimedia dengan Metode Kognitif Piaget di SMK Ibu Kartini Semarang. *Jurnal IC-Tech*. 10(2), 52-59. Retrieved from <https://jurnal.stmikwp.ac.id/files/disk1/2/ictch-ignfbayuan-58-1-7bayu.pdf>
- Antari, N. T., Suwatra, I. I. W., & Antari, N. N. M. (2015). Pengaruh model pembelajaran jolly phonics terhadap kemampuan membaca dan menulis permulaan pada mata pelajaran Bahasa Indonesia siswa kelas I SD. *E-Journal PGSD Universitas Pendidikan Ganesha*, 3(1), 1–10.
- Ghoni, A. (2020). Analisis Kebutuhan Pengembangan Media Gambar Pada Pembelajaran Ipa Melalui Adobe Flash. *Ejournal.Kopertais4.or.Id*, 5(36), 15–25. <http://ejournal.kopertais4.or.id/tapalkuda/index.php/alyasini/article/view/3681>
- Kus Eddy Sartono, E., Ambarsari, R., & Herwin, H. (2022). Interactive multimedia based on Indonesian cultural diversity in Civics learning in elementary schools. *Cypriot Journal of Educational Sciences*, 17(4), 1192–1203. <https://doi.org/10.18844/cjes.v17i4.7136>
- Lateke, S. M. (2017). Peningkatan Keterampilan Membaca dan Menulis Permulaan Siswa Kelas I SDN Langger melalui Metode SAS Jurnal Kreatif Tadulako Online Vol . 1 No . 3 ISSN 2354-614X. *Jurnal Kreatif Tadulako Online Vol . 1*, 1(3), 61–74.
- Pangastuti, R., & Hanum, S. F. (2017). Pengenalan Abjad pada Anak Usia Dini Melalui Media Kartu Huruf. *Al-Hikmah : Indonesian Journal of Early Childhood Islamic Education*, 1(1), 51–66. <https://doi.org/10.35896/ijecie.v1i1.4>
- Permendiknas. 2010. Standart Pendidikan Anak Usia Dini. Jakarta: Depdiknas.
- Suyatmiati. (2014). Upaya Meningkatkan Prestasi Belajar Matematika Dengan Menggunakan Media Pembelajaran Kertas Berwarna. 4(2), 43–58.