Implementation of BEBI-Ku Learning Media for Children with Motoric Impairments at Cileunyi Special School

Meylani Novitasari¹*, Nazwa Laila Putri ², Nafidatul Ilmi³, Natasya Silvia Putri ⁴, Ranti Nur Fatihah⁵, Alya Jilan Rizqita⁶, Ika Setyaningrum⁷

Universitas Pendidikan Indonesia, Indonesia
Correspondence: meylaninovitasari@upi.edu

ABSTRACT

The aim of this research is to implement ICT literacy-based learning media based on the results of identification and assessment on one subject and to see the effectiveness of the learning media created. Single subject research (SSR) is the method used in this research. The research results obtained were that there was an increase in the subject's Indonesian language skills after being given the implementation of learning media twice. However, the percentage increase is still not optimal, so for better results it is still necessary to develop the learning media that has been created. It is hoped that this research can be a reference for teachers at school or parents at home so that they can create more interactive learning media so that they are effective and efficient in developing their Indonesian language subject skills.

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1. INTRODUCTION

Education is an important need and must be fulfilled by every individual. Education itself is a means to help people be able to live in everyday life in society (Agus Mustofa in Sapriyah, 2019). One of the subjects given to students at each level is the Indonesian language subject. Indonesian language lessons at school essentially teach children to be able to communicate using Indonesian. Indonesian language learning in elementary schools is directed at improving students' ability to communicate in Indonesian both orally and in writing (Suparlan, 2020).

Based on the Independent Curriculum, the Indonesian language skills that need to be taught to students include 4 elements, namely: listening, reading and viewing; speaking and presenting; also wrote. These four elements are mutually sustainable and are needed by every student to fulfill their communication skills. With language, people can: become social and cultured beings, form good individuals, and understand and participate in the process of community development, for the present and the future (Ali Muhammad, 2020).

Students with motor impairments are students who have impairments in their muscles, bones, nervous system and joints which can be caused by damage to the brain and other parts of the body. These motor obstacles can cause problems with communication, mobility, coordination, as well as obstacles to the development of individual integrity (Mirnawati, 2019). Due to several disturbances in their motor skills, students with motor skills can have difficulty learning things, including Indonesian language subjects. This is in line with the results of Browns and Grissmer's research, fine motor skills in kindergarten are predictive of subsequent academic performance in literacy (Brown, 2010 in Hakim et al., 2022) and performance in mathematics (Grissmer et al., 2010 in Hakim et al., 2022).

Problems in taking Indonesian language subjects need to be solved, considering that Indonesian is one of the important skills that every student needs to have. Therefore, modifying learning so that students with motor impairments can receive learning regardless of the motor impairments they have is one of the things that teachers need to prepare carefully. Learning media is one of the things that teachers can prepare to accommodate students' learning needs. Learning media in general are "tools to help the teaching and learning process. "Everything that can be used to stimulate students' thoughts, feelings, attention and abilities or skills so that they can encourage the process." (Arief in Linggasari, 2022).

Currently, many previous studies also discuss creating learning media for children with special needs who also have difficulties in Indonesian language subjects. Including research on the Pengembangan Media Power Point Sebagai Media Pembelajaran Bahasa Indonesia di Sekolah Dasar (Herlina et al., 2022), Penggunaan media pembelajaran berbasis audio visual untuk meningkatkan hasil belajar bahasa indonesia di sekolah dasar (Susilo, 2020), Pengembangan media Pembelajaran interaktif pada Pembelajaran bahasa indonesia kelas III sekolah dasar (Afifah et al., 2022), Pengaruh media power point dengan slide video terhadap hasil belajar bahasa indonesia siswa kelas III sekolah dasar (Muhamin, 2023). However, until now, there has been no research regarding highly interactive learning media in Power Point such as applications to develop Indonesian language subject skills in children with even motor skills. The aim of this research is to develop a learning media based on Information and Communication Technologies (ICT).
Learning media itself continues to develop all the time, starting from conventional learning media to IT-based learning media. **ICT Literacy-based Learning Media** is an option that teachers can consider in meeting the learning needs of students who have difficulty in Indonesian language subjects. This research focuses on the formulation and implementation of student learning using ICT literacy-based learning media.

2. **METHODS**

2.1. Research design

The research was designed using the *Single Subject Research method*. In this study, the subjects were students who were identified as having motor barriers with learning difficulties in phase b Indonesian language subjects. For this reason, intervention is provided by implementing learning media based on the results of the assessment.

![Research Flow Diagram](image)

2.2 Research Techniques

The data collection technique was carried out by technical tests in the form of working on *worksheets* as well as non-technical tests in the form of observations of students and interviews with class teachers. A worksheet containing questions on the Indonesian language subject for special education phase B was given to the research subject with the initials D. Observations were carried out by the researcher on the subject while the subject was working on the worksheet given. Interviews were conducted with subject class teachers at SLBN Cileunyi to see the learning conditions and student learning progress during class.

2.3 Research Instruments

The assessment instrument was created based on the curriculum used by the subject school. In this research, the instrument was created based on the theory of reading and writing abilities as well as the independent curriculum in Indonesian language subjects for children with special needs in phase B. The following are the learning achievements in special education Indonesian language subjects in phase B which are used as the basis for the assessment instrument.
Table 1. Achievements of Phase B Special Education Indonesian Language Subjects

<table>
<thead>
<tr>
<th>Listening Elements</th>
<th>Reading and Viewing Elements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students' ability to receive, understand the information they hear, and prepare relevant responses to give appreciation to their speech partners. The processes that occur in listening include activities such as listening, identifying, understanding, interpreting language speech, interpreting it, and/or preparing responses to the speech partner. Listening is an important communication skill because listening ability determines the level of students' ability to understand the meaning (express and implied) of oral presentation, understand the main and supporting ideas in the information content and the context underlying the presentation. Components that can be developed in listening include sensitivity to language sounds, sign systems, vocabulary, language structure (grammar), meaning, and metacognition.</td>
<td>Students' ability to understand, interpret, interpret and reflect on texts according to their goals and interests to develop their knowledge, skills and potential. Viewing is a person's ability to understand, interpret, interpret and reflect on visual and/or audio-visual presentations according to their goals and interests to develop their knowledge, skills and potential. Components that can be developed in reading and viewing include sensitivity to phonemes, letters, sign systems, vocabulary, language structure (grammar), meaning, and metacognition.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Elements of Speaking and Presenting</th>
<th>Writing Elements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Presenting is the ability to present ideas or responses eloquently, accurately, responsibly, and/or convey feelings according to context in a communicative way through various media (visual, digital, audio and audiovisual). Components that can be developed in speaking and presenting include sensitivity to language sounds, sign systems, vocabulary, language structure (grammar), meaning, and metacognition.</td>
<td>Ability to convey ideas, responses and feelings in written form eloquently, accurately, responsibly, and/or convey feelings according to context. Components that can be developed in writing include applying the use of spelling, words, sentences and paragraphs, language structure (grammar), meaning and metacognition in various types of text.</td>
</tr>
</tbody>
</table>

3. RESULTS AND DISCUSSION
3.1. Student Demographic

Based on the assessments that have been carried out, several conditions of children were found related to their needs, abilities and difficulties as well as the potential that still exists in students. These four things need to be considered in formulating the learning media that will be given to children. In the reading aspect, children need training in visual and auditory perception as well as direct reading skills. In the writing aspect, students need visual and auditory perception training to be able to transfer sound to writing.

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In the aspect of speaking and presenting, students need language development. These needs are supported by the potential that students still have in the form of a good sensory system as well as the students’ joint attention abilities.

**Table 2. Research Subject Assessment Results**

<table>
<thead>
<tr>
<th>Ability</th>
<th>Difficulty</th>
<th>Need</th>
<th>Potency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recognize alphabet and numbers</td>
<td>the and</td>
<td>Various combinations of letters</td>
<td>1. Children are able to obtain information through their sensory systems without interference</td>
</tr>
<tr>
<td>Reading combinations of kv and kvk syllables</td>
<td>Not yet able to read words directly</td>
<td>Practice reading without spelling</td>
<td>2. Children are able to be independent (controlling body movements, body coordination, body balance, taking care of themselves, and socializing)</td>
</tr>
<tr>
<td>Copying syllables and words</td>
<td>Not yet able to write dictation</td>
<td>Visual and auditory perception exercises</td>
<td></td>
</tr>
<tr>
<td>Talk about something briefly</td>
<td>Not yet able to speak with the correct language structure</td>
<td>Language development exercises</td>
<td></td>
</tr>
</tbody>
</table>

**3.2. Making Learning Media**

The implication of the subject assessment profile is that students can create learning media based on ICT literacy. Because students are able to be physically and socially independent. Visual and auditory perception exercises will be more interesting when using ICT media because students can be more interactive in learning something.

The learning media created based on the assessment in this research was named BEBI-Ku (Learn Indonesian with Ku). In line with its name and students’ learning needs, this learning media will include an introduction to the alphabet, combinations of syllables, how to read words directly, and practice putting words together. The features in the learning media are made interactive, like playing a game, so that students will not get bored. PowerPoint is designed like a game application on a cellphone, in portrait form so it is easier to use for monoplegic students. On each media slide, a sound will appear containing learning instructions, and when the button on the learning media is pressed, it will make a sound and direct you to the next page. The following is the BEBI-Ku learning media prototype that has been created.

Berk (in Dewi, 2020) states that PowerPoint can also be used as the best medium for conveying humor to students when learning in class, so that learning becomes more enjoyable. This was reaffirmed by Xingeng and Jianxiang (in Dewi, 2020) who stated that PowerPoint is a powerful teaching tool. In this BEBI-Ku learning media, interactive locations are found in the PowerPoint background design, sound on each slide, game buttons, reminder cards, as well as exercises with various animations.

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3.3. Implementation of Learning Media

The implementation of learning media was carried out twice, with a time span of two weeks from the first implementation to the second implementation. Based on the implementation of the BEBI-Ku learning media on the subject, it can be seen that there have been changes in Indonesian language skills. The percentage increase in the subject's ability to recognize the alphabet has not changed, because the subject has answered 100% correctly since the first implementation. The subject's ability to read syllables from the first implementation to the second implementation increased by 25%. In the second implementation, subjects found it easier to recognize consonant-vowel and consonant-vowel-consonant alphabet combinations, for example Ba and Tap. In terms of the ability to read combinations of vk, kkv, and vkk syllables, the subject has not yet developed much through the BEBI-Ku learning media with only progress of 9.095%. Meanwhile, the subject's ability to read words increased by 15.39%, where the subject still had difficulty reading some words and needed help to read them. The subject's ability to put words together increased by 33.34%, copying the subject's writing increased by 22.22%, while the subject's ability to write dictation increased by 22.22%.

**Table 3** Results of Learning Media Implementation

<table>
<thead>
<tr>
<th>NO</th>
<th>Ability</th>
<th>Day 1 Implementation</th>
<th>Day 2 Implementation</th>
<th>Percentage Increase in value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Correct</td>
<td>Wrong</td>
<td>Correct</td>
</tr>
<tr>
<td>1.</td>
<td>Get to know the alphabet</td>
<td>100%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>2.</td>
<td>Reading combinations of CV and CVC syllables</td>
<td>66.66%</td>
<td>33.34%</td>
<td>91.66%</td>
</tr>
</tbody>
</table>
### 4. CONCLUSION

Based on the research that has been carried out, it was concluded that in formulating an intervention to change the behavior or abilities of students, SSR can be a research method that can be chosen. Because with SSR, the changes that occur in students will be clearly visible before and after the test is carried out. The ICT Literacy-based learning media can be said to be quite effective in maintaining students’ enjoyment in learning. In creating and implementing learning media, identification, assessment and creating student profiles are stages that need to be fulfilled first. Based on the implementation results, it can be concluded that the BEBI-Ku learning media has brought improvements to the subject’s Indonesian language skills, however, for more effective and efficient practice and results, further development is necessary.

### 5. ACKNOWLEDGMENT

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### 6. AUTHORS’ NOTE

The authors declare that there is no conflict of interest regarding the publication of this article. Authors confirmed that the paper was free of plagiarism.
7. REFERENCES


