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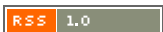
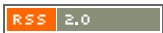
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The Application of Local Wisdom based Early Reading: Elementary School Teachers' Responses in East Java

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ABSTRACT

Early reading becomes the key of learning success in the elementary school. It requires an adaptive, innovative, and comprehensive learning media to be implemented for students. The aim of this study is to investigate the elementary school teachers' responses at East Java, Indonesia on the local-wisdom-based application which is utilized as the learning media. This study is qualitative research in form of exploratory case study. The samples are the elementary school teachers in Bojonegoro Regency, Tuban Regency, Lamongan Regency, Jombang Regency, and Mojokerto Regency. The data is collected using open questionnaire. Furthermore, it is tabulated and calculated using descriptive statistics. The data is analyzed using content analysis. The results show 100% of teachers state that the learning media of early reading needs to be developed, 62% of them choose local wisdom as learning content, 74% of them choose application as the media because it is able to be installed in the smartphones, 66% of them state that the element of 5Cs has to be added, and 62% of them choose quizzes/practices in form of matchmaking. The conclusion of this study is that the elementary school teachers in East Java, Indonesia state that the learning media of early reading needs to be developed in form of application which is easy to be installed in the smartphones. This local-wisdom-based application contains quizzes in form of matchmaking so it helps students in developing 5Cs from an early age.

Keywords: application, local wisdom, early reading, teachers' responses, elementary school.

I. INTRODUCTION

Elementary school is the basic educational stage which is important for children (Elihami, 2022) who are the future successors of the nation (Parameswara, 2021). This stage is oriented towards instilling knowledge, attitude, and basic skills (Fitri et al., 2021) which is carried out in a conducive and fun way to create children's personalities or identities (Parameswara, 2021) in line with the curriculum element in the learning. In other words, elementary school is a basic stage to prepare the national generations who are intellectual based on the implemented curriculum.

Curriculum is an important part in educational field (Indarta et al., 2022) which includes the process of learning design, assessment (Qolbi, & Hamami, 2021) and determines the qualified graduates (Pujiono, 2014). The Indonesian curriculum design is being developed and changed. At this time, curriculum which is implemented in Indonesia is the curriculum 2013. In the elementary school, this curriculum has implications on psychomotor, cognitive, and affective aspects in which the assessment process starts from reviewing syllabus, creating grids, implementing, analyzing, and creating final result report (Mustika et al., 2021) in line with the students' characteristics and the learning environment (Mawardi, 2014). Therefore, it can be stated that curriculum is the important element of education which is being developed based on time changes and students' characteristics.

The students' characteristics in the elementary school are created and changed in line with their growth. Biyatno (2021) says that students have distinctive characteristics in terms of mental, physical, moral, and social. Based on moral and social perspectives, they have understood the rules applied in society (Marsari et al., 2021). According to Hayati et al. (2021), students' characteristics in the elementary schools have an influence on the teaching and learning process. The elementary school learning has various models in its implementation. However, in the curriculum 2013, it is stated that it implements integrative thematic learning model (Pohan & Dafirt, 2021) which combines various competences and various topics of subjects. One of the subjects in the elementary school is Indonesian language that requires students to be skilled in reading (Dafit & Ramadan, 2020). According to Lestari et al. (2021), the stages of learning to read for elementary school students are started by the first grade students who learn the early reading.

In achieving the goal of learning early reading, it needs an interesting media and method, so the pressure on learning process can be reduced (Rahmat & Haryanto, 2014). Andzayi & Ikwen (2014) explain that the methods of early reading which often used are 1) basics of spoken language, 2) letter recognition skills, 3) language sound awareness, 4) comprehension skill training. Other methods that can be implemented in learning early reading are repetition of sounds, silent reading, spelling (Hulme et al., 2002) that can be carried out by using complete vocabulary as learning material (Masterson et al., 2010). Based on those opinions, it is known that there are many methods to provide the learning of early reading starting from introducing letters, words, language sounds, and method used.

Glenberg et al. (2011) say that learning materials in form of toy pictures have benefits for students' understanding in which it will facilitate early reading skill. The printed learning materials such as letter books, word books, and sentence books are able to help teacher in delivering materials (Scanlon et al., 2008). In the next stage, teachers are able to provide reading schemes from story books to create abundant vocabulary memories (Stuart et al., 2003). Other teaching materials which can be implemented in the early reading learning are the use of poetry, plays, songs, and the development of fable stories to make it more practical for educators (Gustiawati et al., 2020). The various forms of application which can be implemented in the learning process become evidence that it is able to provide advantages in the process of early reading. One of the advantages can be viewed in the initial learning in which the students achieve simple texts that are easy to be understood and explained (Koornneef et al., 2019). The use of early reading application also provides benefit such as students' eyeball movement will be more adept at understanding the order of texts (Koornneef & Kraal, 2022). Furthermore, the textbook can be scanned so it can be listened directly (Svensson et al., 2021). Textbook which is combined with the application will be better and interesting for students, so the reading process will be preferred (Delacruz, 2014).

Based on the benefits and advantages of early reading application in supporting students' reading activities, there are many research that are carried out to test the effectiveness of early reading application. One of early reading applications GraphoLearn is computer game with a feature of language training that supports teachers' directions for early reading (Mehringer, et al., 2020). Chirst, et al. (2019) argue that the use of early reading application with a book display can improve students' text understanding in the first year of elementary school. Jamshidifarsani, et al. (2019) explain that the designed application for early reading can be utilized to teach relative context of each vocabulary. Moreover, the ease of educators in monitoring reading understanding has been assigned to students (Hashim & Vongkulluksn, 2018). Based on previous research, the early reading application has many advantages and benefits. It becomes researchers' reason to develop an early reading application. However, this application focuses on the substances of Indonesian local wisdom. In fact, Indonesia has various local wisdoms. So, it is very appropriate when local wisdom becomes the substance in early reading application. Local wisdom has received attention from various fields including educational field by using the role of schools to explore the potential of it (Sofyan et al., 2019). Its existence can support the respect for culture, so it can bring up positive values in everyday life (Kusumasari & Alam, 2012). Local wisdom also acts as potential environment with traditional knowledge, local culture, and natural resources that can be utilized in teaching and learning process (Ardan, 2016). Based on those opinions, local wisdom can said to have many advantages in educational field, so it can be implemented in the teaching and learning process to create effective learning.

The implementation of local wisdom in Indonesian language learning can improve students' understanding and personalities (Angraini & Kursniarti, 2017). Uge, et al. (2019) conclude that the element of local wisdom in the social study learning can foster an attitude based on culture. The last study carried out by Saripudin et al. (2022) shows that local wisdom is able to support history learning, so the students can explore the values of it.

Based on those researchs, there is no researcher who includes the element of local wisdom in early reading application. Therefore, this study includes it in developing the early reading application. It will decorate each level of application. The levels are a) introducing alphabets, b) reading consonant and vocal letters, c) reading syllables, d) reading words, e) reading sentences, and f) reading narrative texts.

The concept of designing local wisdom in this application is carried out by observing several areas in Indonesia and documenting it in pictures. Figure 1 is one of pictures taken as local wisdom of Bojonegoro Regency, Indonesia.



Figure 1. *Kayangan Api* (The Local wisdom of Bojonegoro Regency, East Java, Indonesia) Source: Researchers' document

Based on figure 1, the researchers change it into an animated/cartoon picture by using application to make the elementary school students to be more interested to read using early reading application. Figure 2 will be used as content of the application.



Figure 2. *Kayangan Api* (animated picture in early reading application) Source: Researchers' Document

Based on figure 2, the researchers conduct interview with one of teachers in private school Bojonegoro, East Java, Indonesia. This activity is carried out to gain initial informations whether the picture can be used as the content of application. Based on the interview results, this study is carried out to investigate elementary school teachers' responses at East Java related to the needs of local wisdom based application in early reading.

II. METHODOLOGY

This study is qualitative research in form of exploratory case study. Exploratory research aims to explain a topic using observations and develop the conceptual framework of understanding, responses, and beliefs, so it creates linkages across all research steps. In this study, researchers observe and summarize the responses of elementary school teachers at East Java, Indonesia related to the needs of local wisdom based application in early reading. The participants are teachers of elementary schools in the East Java, especially in the Bojonegoro Regency, Tuban Regency, Lamongan Regency, Jombang Regency, and Mojokerto Regency who fill up the open questionnaire provided. The questionnaire is spreaded by utilizing the Google form. The data collected is tabulated and processed using descriptive statistics. The teachers in five regencies are provided open questionnaire. It is compiled based on the grids of teacher's need analysis which can be viewed in table 1.

Table 1. The instruments of need analysis for teachers (developed from BSNP 2017)

No.	Aspect	Indicators	Total number	Question number
1.	The need of teaching materials	Availability of learning media in early reading	1	1
		The need of learning media in form of local wisdom based application	2	2, 3
2.	The need of learning materials	Suitability with the learning criteria	1	4
		Material accuracy	1	5
		Accommodating life skill	1	6
3.	The need of presenting teaching materials	Presentation technique	1	7
		Material presentation support	1	8
4.	The need of linguistics components	In line with students' development	1	9
5.	Evaluation	Quiz availability	1	10

No.	Aspect	Indicators	Total number	Question number
	needs			
6.	The need of product specification	The size of application	1	11
7.	The need of production components	Ease of production	1	12

Based on the results of data processing, the researchers choose 5 teachers who provide very detailed reasons to be interviewed. It is conducted in unstructured and open manner, so the researchers obtain detailed, honest, and in-depth data. The research procedures are started by compiling research instruments, validating the research contents, creating instruments using Google forms, and sharing it to the research participants. In compiling research instruments, the researchers create test instruments based on the need analysis of teaching material in five regencies. It utilizes the instruments developed from BSNP 2017. Furthermore, the compiled instruments are validated by two validators who are lecturer and teacher. Both validators are given checklist sheets to assess the instruments. Moreover, the researchers repair it based on their suggestions. Furthermore, the researchers copy it to Google form and share it to the teachers in the first grade of elementary school at five regencies. The following step is analysing the data obtained. The data analysis implements content analysis. It describes an archive mode message, so the researchers working in this research are very careful to draw their conclusions (Hasanudin dan Fitriarningsih, 2020, p. 119). It is implemented in this study by adopting from the content analysis developed by Miles dan Huberman (2007), namely 1) data reduction, 2) data presentation, and 3) drawing conclusion/verification.

III. FINDING/RESULT

Elementary School Teacher Responses at East Java related to Local Wisdom based Application in Early Reading

To investigate teachers' responses, the researchers ask a question "In line with the technology and science development, what are your opinions about the existence of learning media in early reading for elementary school students? Should it be developed?". Based on the question, it can be explained that the percentage of teachers who answer 'yes' is 100% and 'no' is 0%. In other words, elementary school teachers in East Java are agree that learning media of early reading for elementary school students needs to be developed.

In the reason column, one of teachers provides reason that more reading media can increase students' intention to learn reading. When the researchers want to get deeper reason, the researchers conduct interview. The interview transcript with one of teachers in public school at Tuban Regency is as follows:

- R : "You said that more reading media can improve students' intention and interest to learn reading. I want to ask you. What are the relationships between learning media of early reading and students' intention?"
- S1 : "In my opinion, the relationship is because media is a tool to facilitate in reading. While the reading intention is potential and desire to read using existing media."
- R : "How is the existence of learning media for beginning reading that is growing?"
- S1 : "The existence of growing media can facilitate students to learn and be active in the learning process, so it is easier for students in understanding the learning concept to foster their interest in reading."
- P : "Can you give the example, please?"
- S1 : "For example, one of media taken is picture for the low level class. The pictures can show information, so the first year students can guess the meaning of it and they will be able to write it. Moreover, they are interested to read it. Furthermore, the pictures and its written are interesting to be read."
- P : "What strategies need to be developed regarding the availability of early reading media?"
- S1 : "Creating varied learning media so it can foster students' interest in reading."

The second question is "In your opinion, to improve 5Cs (critical thinking, creativity, communication skill, collaboration, and confidence/character) of elementary school students, what should the learning media be based on?". According to that question, the percentage of teachers who answer that the learning media should be based on local wisdom is 62%, the percentage of teachers who answer it should be based on the *Pancasila* values is 36%, the percentage of teachers who answer it should be based on both local wisdom and *Pancasila* values is 2%. It can be concluded that

most of elementary school teachers in East Java agree that the learning media of early reading for elementary school students has to be based on local wisdom.

One of them gives a reason that the learning media based on local wisdom is easier to help students in understanding it. The researchers carry out an interview with her. The transcript of it is as follows:

- R : "You say that learning media based on local wisdom can help students to be easier in understanding it. Can you tell me more about it, please!"
- S2 : "I will you an example. When the student who comes from out of Bali is introduced to the local wisdom of *Ogoh-ogoh* through the learning media, she will think critically about the nature of *Ogoh-ogoh* such as 'What is it?' and 'where does it come from?'. In this case, the role of local wisdom is to help students to understand the learning materials."

The third question is 'To accommodate learning in the era society 5.0, students can learn easier anywhere and anytime. Based on your opinion, what kinds of learning media that is needed by students?' Based on that question, it can be concluded that the percentage of teachers who answer that the learning media should be in form of application which is easy to be installed on smartphone is 74%, the percentage of teachers who answer that the learning media should be in form of application which is easy to be installed on the computer is 8%, the percentage of teachers who answer that the learning media should be in form of book is 8%, the percentage of teachers who answer that the learning media should be in form of e-book is 4%, the percentage of teachers who answer that the learning media should be in form of interactive learning video is 2%, the percentage of teachers who answer that the learning media should be in form of application which is easy to be installed on any device is 2%, the percentage of teachers who answer that the learning media should be in form of comics is 2%.

One of the teachers gives a reason that the application which can be installed on smartphone is more interesting for children. The researchers conduct an interview with him. The fourth question is 'in your opinion, what kinds of ability which need to be added in the learning media of early reading to accommodate elementary school students' life skills?'. Based on that question, the percentage of teachers who answer that all components of 5Cs (critical thinking, creativity, communication skill, collaboration, and confidence/characters) need to be added to learning media is 66%, the percentage of teachers who answer that communication skill should be added to learning media of early reading is 18%, the percentage of teachers who answer that confidence should be added to learning media of early reading is 6%, the percentage of teachers who answer that critical thinking skill should be added to learning media of early reading is 4%, the percentage of teachers who answer that creativity skill should be added to learning media of early reading is 2%, the percentage of teachers who answer that collaboration skill should be added to learning media of early reading is 1%.

One of the teachers gives a reason that 5Cs consists of skills which are needed by students. In this era, when the students do not have 5Cs, they will be difficult to compete in the future. The fifth question is 'what are the forms of quizzes/exercises in the learning media of early reading?'. It can be explained that the percentage of teacher who answer that the quiz is in forms of matchmaking is 62%, the percentage of teacher who answer that the quiz is in forms of multiple choice is 28%, the percentage of teacher who answer that the quiz is in forms of true false is 4%, the percentage of teacher who answer that the quiz is in forms of constructing words is 2%, the percentage of teacher who answer that the quiz is in forms of combination between multiple choic, true false, and matchmaking is 4%.

IV. DISCUSSION

The elementary school teachers in East Java agree that learning media of early reading needs to be developed. The rapid development of science and technology has influenced the educational field including the learning of early reading which needs the development of effective learning media to assist it (Bua, 2022) and obtain the aims of it (Widodo, 2018). In its development, learning media has to have an appeal to make students learn easily because it contains videos, sounds, animations, and simulations (Muhson, 2010) while it is still based on the current curriculum.

In the curriculum, learning media plays very important role in early reading. To support it, the learning media of early reading contains various things, especially the local wisdom. Based on the survey results, the elementary school teachers in East Java agree that local wisdom is utilized as the content in learning media of early reading. Local-wisdom-based learning media is very needed to enrich students' knowledge and characters (Anggraini & Kusniarti, 2017) because it contains social values.

Its usefulness for Indonesian country is also supported by the learning media of early reading which accommodates it in the era of society 5.0 such as the use of application in the early reading learning. Based on the survey results, the

elementary school teachers in East Java agree that the application which is easy to be installed in smartphone to support the learning process of early reading in the era of society 5.0. Moreover, it can help society in accessing the data and information (Malau, 2021), for instance when someone registers, makes transactions (Bhavin et al., 2021). The application which can be easily installed on smartphones is considered to be needed in the era of society 5.0 to provide media that can connect and develop the learning media quickly (Salgues, 2018) because the consolidation between the application and learning can carry out the online and offline teaching-learning process using the features of audio, video, communication, collaboration, and independent materials, so the students are able to develop their own skills (Pujiasih, 2020).

The self-ability of elementary school students can be developed using 5Cs. Based on the survey results, the elementary school teachers in East Java agree that it can accommodate students' life skill. The 5Cs skill consists of critical thinking, creativity, collaboration, communication, and celebration which becomes the basic skills to create innovation (Sudira, as cited in Jalinus et al., 2021, p. 1247). This condition makes the components of 5Cs become the important thing to develop new innovations that are valuable and useful (Seechaliao, 2017). The life challenges in this century can be stimulated for elementary school students by providing matchmaking question in the learning media of early reading. In line with elementary schools teachers at East Java who prefer to provide questions in form of matchmaking to teach early reading. Matchmaking test is another arrangement of multiple choices with type of questions that can be used to assess students' knowledge (Reeder & Joos, 2020). Matchmaking test such as matching letters is easier to be applied for children (Kushner, 2017), so they are able to remember, interpret, and recognize the learning items.

V. CONCLUSION & RECOMMENDATIONS

The conclusion of this study is the teachers of private and public elementary schools in East Java-Indonesia especially in Bojonegoro Regency, Tuban Regency, Lamongan Regency, Jombang Regency, and Mojokerto Regency agree that learning media of early reading has to be developed in form of application which can be easily installed in the smartphones. This local-wisdom-based application contains quizzes/questions in form of matchmaking test, so it helps elementary school students to develop 5Cs skill from an early age. Further research has to be carried out to explore teachers' responses in Indonesia related to learning media of early reading to support elementary school students to have 5Cs skill through Indonesian local wisdom.

The implication in this study provides new finding that the material of early reading includes Indonesian local wisdom. It can force elementary school students' motivation and intention to learn early reading. Furthermore, the materials are realized in form of application which is able to be accessed whenever and wherever. It is also very effective in improving their reading skill. Therefore, in the future research, it will be reference to understand Indonesian local wisdom and easy ways to learn early reading. Finally, this finding can support the learning process in the society era 5.0. It can also improve elementary school students' digital literacy.

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