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The Influence of Big-Book Learning Media Based on Scientific Literacy on Students' Scientific Reading Ability: Text Scaffolding Skills and Reading Comprehension

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ABSTRACT Choosing the right learning media is needed to improve 21st-century knowledge and skills, such as scientific reading skills. Big-Book is a learning medium in the form of a book that is relatively large in size and contains picture illustrations and text. This research aims to determine the implementation and influence of scientific literacy-based big-book learning media on students' scientific reading abilities. The method used in this research is Quasi-Experimental. The subjects used in this research were class VII students, junior high school using 2 classes consisting of 30 students. Sampling was carried out using purposive sampling, namely taking samples with certain considerations. The data collection technique in this research is a test by conducting a pretest and posttest. Meanwhile, the data analysis technique used is the ANCOVA analysis test. The research results based on the ANCOVA test show a significance value of 0.00 <- 0.05, meaning that big-book learning media based on scientific literacy has a significant difference or influence on students' scientific reading abilities. So this research concludes that big-book media based on scientific literacy is very suitable to be used as a support for special learning regarding scientific reading skills.

Keywords: Big-Book, Reading ability, Scientific literacy, Learning media

1. INTRODUCTION

The development of science and technology that emerged in the 21st century can influence the dynamics of various science learning. The development of science and technology should be adapted to human competence so that they can make good use of science and technology by considering the impact on the next generation (Jo, 2011; Tursinawati & Widodo, 2019). The formation of character in addition to competence in the knowledge dimension to face global competition is a demand for global development which demands science learning that is oriented towards achieving 21st-century capabilities. In the development of technology, the concept of science has become a basis that is implemented for discovery activities in revealing clarity regarding natural phenomena. Apart from that, in cultivating students' interest and competence in studying science education and technology, science learning has its strategy (Masruroh & Arif, 2021; Tangen et al., 2011).

In the world of education today, students are required to play a more active role in every lesson (Hani'ah & Fadly, 2022). Students' interest and activeness during the learning process greatly influence their understanding of the material they receive in acquiring new knowledge (Anindita & Pertiwi, 2022). For this reason, based on constructivism theory, to obtain and form knowledge, efforts are needed from the students themselves. One of the students' efforts to acquire and form knowledge is to develop reading skills. Because in the 21st century skills are the main focus in education, especially science education (Nisrina et al., 2020).

As explained by Nazilah et al. (2019), reading a text or text will lead someone to dig deeper into information to gain new knowledge (Mcnamara & Floyd, 2011; Nazilah et al., 2019). Students who have a good interest in reading will find it easier to dig up information in a reading. Therefore, students' mastery of reading skills determines their effectiveness when observing the teaching and learning process in schools (Meneses et al., 2018; Ritonga & Rambe, 2022). Reading comprehension activities are the key to

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successful student learning. Because in reading comprehension, readers are required to be able to understand the content of the reading (Jamil et al., 2020). Reading comprehension skills will support someone in understanding scientific content and in reading scientific articles needed to support scientific literacy (Fang & Wei, 2010). Especially in the world of education today, students are required to think critically, the basis for critical thinking is the ability to read. Therefore, scientific reading skills are very necessary.

Scientific reading ability has several indicators. Indicators are research variables used to indicate a condition, so they can be used to measure change. According to Muliawanti et al. (2022), there are 3 indicators of scientific reading ability, namely, the ability to grasp the meaning of words/phrases, the ability to grasp implicit and explicit meaning, and the ability to make conclusions. Each indicator has relevance for use in research (Muliawanti et al., 2022).

Various previous studies discuss students' scientific reading abilities. Experimental method research carried out by using the CICR cooperative learning model on the ability to read and understand descriptive texts showed that there was a significant influence from moderate to good levels (Sintia & Ramadhan, 2023). Meanwhile, research conducted using teaching materials based on socio-scientific issues showed that there was a significant influence from very low to sufficient levels (Nazilah et al., 2019). Differences in achieving these levels can be influenced by differences in sample size, human resources, and teachers as facilitators. The research that has been carried out has had a positive impact and produced good findings in learning.

Based on the results of a preliminary study carried out in class VII of one junior high school in Ponorogo, the results showed that students' scientific reading abilities were still below the KKM (Minimum Completion Criteria) set by the school of 75. The average score for students' scientific reading abilities was 63.3. The results of the preliminary study analysis and observations at the school show that students' scientific reading abilities are still below the KKM due to several factors, such as teachers tending to use conventional strategies so that students are less active in participating in groups. As explained by Sanjaya (2006), in the conventional learning model students are placed as objects who act as passive recipients of information because the delivery of lessons uses lecture, question and answer, and assignment methods while the teacher dominates learning activities and students are the objects who must absorb all the information given by the teacher. Apart from that, based on the results of observations, it also shows that the supporting learning media used is less interesting and innovative. As is known, currently Indonesia has entered the 21st century era, so there is a need for innovation in learning to keep up with educational advances that require students to think at a higher level. According to Zulfah and Mahmudi (2021), the solution that can be implemented as an innovation is by using learning media with developments in science and technology following students' needs.

The learning media used in this research is big-book learning media based on scientific literacy, where the choice of learning media is based on the results of written scientific reading ability tests and observations carried out at one of the junior high schools in Ponorogo. Currently, students' learning achievement is affected because students tend to be less interested in reading books that are thick and only contain rigid information.

Based on PISA (Program for International Student Assessment) 2022 released by the Organization for Economic Co-Operation and Development (OECD), Indonesian students' reading ability is relatively low on the ASEAN scale. In 2022, Indonesian students will get a reading ability score of 359 points, far below the average score for OECD member countries, which is in the range of 472-180. Students' low interest in reading can be caused by the title, content, and presentation of the book being less interesting. Therefore, there is a need for effective and innovative books to attract students' interest, one of which is by using big-book learning media. Big-book is a book with a large size, writing and pictures containing stories with characteristic content according to students' needs (Adnan et al., 2019).

Research on big-book-based learning media in helping the learning process, especially in reading activities, is very extensive and the research results show that big-book-based learning media is feasible and useful for improving students' reading abilities (Ritonga & Rambe, 2022). Because it was considered effective, the big book was chosen and used as a learning medium. This is supported by Karumpa et al.'s (2022) research which states that big-books are suitable for use in increasing understanding of a material or subject and making the learning atmosphere more interesting because big-books are designed innovatively and creatively. In this research, the big book is equipped with indicators of scientific reading ability to support students' reading ability.

The use of big-book learning media is a solution that can be applied to help students meet their needs related to scientific reading skills. Big-book is a storybook with special properties, both text and images, which allows teachers and students to carry out collaborative reading activities. The book features colorful, repetitive, and simple text patterns. Big-book is a medium that allows teachers to choose content that suits the learning theme. Apart from that, large book media is very suitable for use in early literacy modeling (Karumpa et al., 2022).

Students who have difficulty reading comprehension need special guidance from their teachers so they need to use appropriate media to improve their reading ability and

understand what they read (Karumpa et al., 2022; Meneses et al., 2018). The use of big-book learning media can be used as an alternative learning media for the learning process, especially in reading comprehension activities. Big-book certainly has various advantages. The advantage of the big book is that through reading the big book learning media you can connect the text with the way it is pronounced. This is because big-book learning media, apart from containing pictures, is also equipped with text that is larger in size, making it easier for students to connect the text by pronouncing the words (Adnan et al., 2019; Diansyah et al., 2019; Mcnamara & Floyd, 2011). Large media is suitable for use in early literacy modeling. This is supported by Curtain and Dahlberg (2010) regarding big book media, which states that students can learn the ability to read repeatedly, and it is very suitable for use in the classroom.

In implementing the use of big-book learning media, it can be supported by big-book learning media based on scientific literacy. Scientific literacy is the ability to understand and utilize scientific knowledge to solve problems in everyday life and obtain new knowledge related to scientific phenomena (Sutrisna, 2021). Scientific literacy focuses on developing students' knowledge in applying scientific concepts significantly, and thoroughly, and being able to make decisions to overcome problems related to students' daily lives.

The use of big-book learning media based on scientific literacy is one effort that can be implemented to help students meet the needs of innovative learning media and scientific reading skills in the 21st century. Big-book learning media can be accommodated with scientific literacy in science learning because Learning media has a role in developing scientific literacy for all dominant literacies, namely, scientific competence, scientific knowledge, and students' attitudes toward science. With the accommodation of scientific literacy-based learning media, students can learn further and live in modern society which is currently influenced by developments in science and technology. Apart from being accommodated based on scientific literacy, the big-book learning media is designed with a scaffolding text display. This aims to attract students' interest in dynamic and effective discussion involvement.

Based on the problems that have been described related to students' scientific reading abilities and the learning support media used. Therefore, the researcher took a research theme with the title "The Influence of Big-Book Learning Media Based on Scientific Literacy on Students' Reading Ability: Scaffolding Text Skills and Reading Comprehension". This research aims to determine the implementation of learning using scientific literacy-based big-book learning media in the learning process and to determine the effect of scientific literacy-based big-book learning media on students' scientific reading abilities.

2. METHOD

The type of research used to influence big-book learning media based on scientific literacy is research with a quantitative approach. The method used in this research is the Quasi-Experimental method. The quasi-experimental method is a method that must provide treatment and examine changes in the treatment that has been given. Therefore, the choice of this method is based on the research subject, because students are research subjects which makes it impossible to mix students in taking random samples. It could be said that it is difficult to get a random control group as in quasi-experimental research.

The research design used in this research is a Nonequivalent Control Group design. This research was carried out by providing treatment to two groups, namely the experimental group and a control group which was used as a comparison. The research design consisted of two groups, each of whom was given a pre-test and post-test and then treated using big-book learning media for the experimental class and using regular LKS (Student Worksheet) books for the control class. The steps for the Nonequivalent Control Group research design can be seen in Table 1.

The experimental group was the group that was given

Table 1 Nonequivalent control group design

Group	*Pre-test*	Independent Variable	*Post-test*
A	O1	X	O2
B	O3		O4

Information :
A : Experimental class
B : Control class
O1 : Pre-test of the experimental group before treatment with big-book learning media
O2 : Post-test of the experimental group after treatment with big-book learning media based on scientific literacy
O3 : Pre-test control group before treatment with regular book learning media
O4 : Pre-test control group after treatment with regular book learning media

scaffolding text material and reading comprehension using scientific reading skills and big-book learning media based on scientific literacy. The control group was the group that was given scientific reading lessons on scaffolding texts using LKS (Student Worksheet) based ordinary books.

The subjects used in this research were class VII students, using 2 classes consisting of 30 students. Sampling was carried out using purposive sampling, namely taking samples with certain considerations. Where the sample selection was based on the considerations of the science teacher where the research took place. This research was conducted at one junior high school in Ponorogo. The research framework image in this study is described in Figure 1.

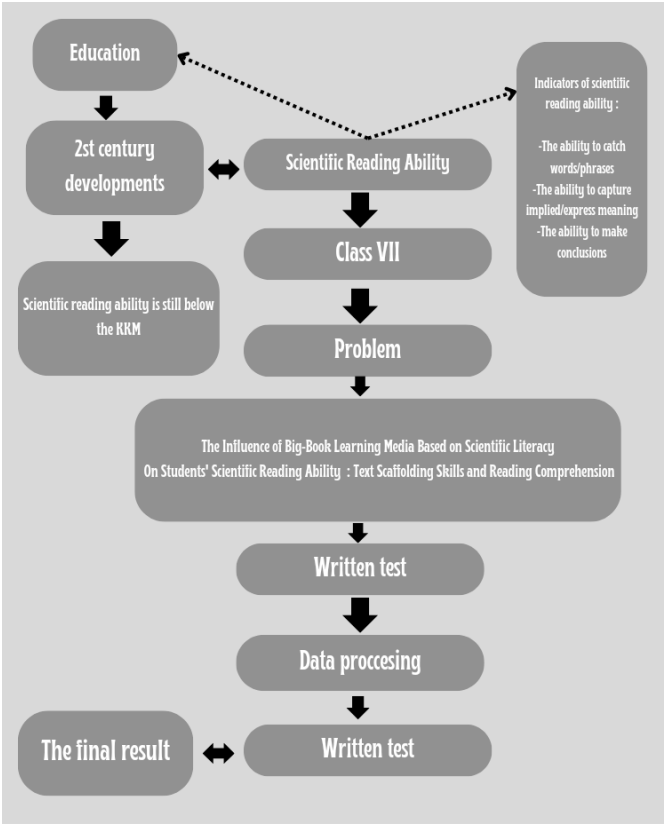

Figure 1 Illustrating the related research framework

In this research, an instrument in the form of a test was used. The type of test used is 10 multiple choice questions in the pre-test and post-test. A pre-test is a type of test given before learning activities are carried out to find out the extent of students' understanding of the material to be taught. Meanwhile, the post-test is a type of test given after teaching and learning activities to determine students' scientific reading skills based on the use of big-book learning media based on scientific literacy in class VII MTs Muhammadiyah 3 Yanggong. This test was carried out by students from the control group and the experimental group. The test refers to indicators of scientific reading ability. The indicators of scientific reading ability are shown in Table 2.

Data collection techniques in this research were carried out in two ways, namely test and non-test. The data collection method in this research used pre-test and post-test instruments. This instrument has been validated by experts and has gone through the validity test stage of the items using the product moment correlation formula, reliability test using the Cronbach alpha formula, difficulty index test, and item discrimination test. The validity test was carried out using SPSS statistics 22. Whether each question item was valid or not was determined by comparing the significance of the SPSS output with α = 0.05. This research shows that question items 1-10 are declared valid. Testing the reliability of the question items was also carried out using SPSS statistics 22. The reliability values of the question items can be seen in the statistical reliability table. Cronbach's alpha is a benchmark used to describe the correlation or relationship between the scale created and all existing variable scales. The instrument used in this variable is said to be reliable if it has a Cronbach alpha of more than 0.60. In this research, the resulting instrument reliability value was 0.699, meaning the instrument was declared reliable. To determine the discrimination index for test items, the calculated value used is r calculated in SPSS which is compared with the criteria 0.40-1.00 = good questions, 0.30-0.39 = questions accepted and corrected, 0.20-029 = questions corrected, 00.-0.19 questions rejected. Test the difficulty level of ability items using SPSS from the results shown by the MEAN value in the statistical table interpreted in the range of difficulty levels, namely, 0.00-0.20 = medium, 0.21-0.70 = medium, 0.71-1.00 = easy. The data obtained was then analyzed using the ANCOVA test with the help of SPPS version 22 for Windows to determine the differences after being given treatment.

3. RESULT AND DISCUSSION

This research discusses the influence and implementation of big-book learning media on scientific reading skills based on scaffolding text skills and reading comprehension of class VII students at one junior high school in Ponorogo. Data from research on the use of big-

Table 2 Indicators of scientific reading ability

No.	Indicator	Descriptor	Question Type	Question Number
1.	Ability to grasp the meaning of words/phrases	- Understand the meaning of words/phrases grammatically - Estimate unknown meanings/phrases from previous and subsequent contexts.	Multiple choice Multiple choice Multiple choice	1 2 3
2.	Ability to capture implied and explicit meaning,	- Understand the written/unwritten meaning of the text. - Explain the overall meaning of the reading, both express and implied.	Multiple choice Multiple choice Multiple choice	4 5 6
3.	Ability to make conclusions.	- Arrange statements in short, concise, and clear sentences based on what you read.	Multiple choice Multiple choice Multiple choice Multiple choice	7 8 9 10

book learning media in the experimental class and control class will show the minimum, maximum, mean, and standard deviation values for the pretest and posttest scores which are presented in Table 3 and Table 4.

In the descriptive statistical table, it can be seen that 30 students took part in learning activities in the control group. In Table 3, it can be seen that there is a decrease in the average pretest and posttest scores. In obtaining the pretest score, there was a decrease in the average score from 65.7 to 60, there was a closing of 5.7 from the average of the pretest and posttest. In obtaining the minimum pretest score, there was an increase in the score from 60 to 80 with a minimum increase of 20, while in the maximum posttest score, there was a decrease from 60 to 50 with a decrease of 10. There was a standard deviation gain in each pretest and posttest score, namely 6.789106 for the standard pretest value deviation and 4.548588 for the standard posttest value deviation.

In the descriptive statistical table, it can be seen that 30 students took part in learning activities in the experimental group. In Table 4, it can be seen that there is an increase in the average pretest and posttest scores. In obtaining the pretest score, there was an increase in the average score from 60.3 to 79.3, there was an increase in the score of 9 from the average of the pretest and posttest. In obtaining the minimum pretest score, there was an increase in the score from 40 to 80 with a minimum increase of 20, while in the maximum posttest score, there was an increase from 60 to 90 with a decrease of 10. There was a standard deviation gain in each pretest and post-test score, namely 10.9806517 standard deviations for pretest scores and 8.68344971 for the standard deviation of post-test scores.

The comparison description is a comparison of measurement results between the experimental group and the control group based on pretest and posttest scores. A comparative description of the experimental and control groups based on pretest and posttest scores will be presented in Table 5.

In Table 5 for the experimental group, it can be seen that there was an increase in the pretest and posttest scores from an average of 60 to 79.3, while the control group experienced a decrease in pretest and posttest scores from an average of 65.7 to 60.3.

The ANCOVA test is a test that combines comparative and correlational tests. ANCOVA is used to compare the dependent variable (Y), namely scientific reading ability in terms of the independent variable (X), big-book learning media with scientific literacy (X'). With the ANCOVA test, the role of the independent variable and the dependent variable, both through prediction and comparison, can be carried out simultaneously. This test uses SPSS 22 software concerning covariance analysis if the probability or significance value is <0.05.

The results of the ANCOVA test are presented in Table 6, which is the result of testing the effectiveness of the treatment given in the research experiments that have been carried out. Treatment is said to be effective if there is a change in scores between the experimental group and the control group. The reference for covariance analysis is if the probability or significance value is <0.05. Based on the results of the ANCOVA test using SPSS 22 for Windows software above, it can be seen that the corrected model shows a significance figure of 0.00 - <0.05, meaning that the pretest and learning media simultaneously have different impacts on learning outcomes. Intercept shows a constant value with a significance of 0.00 - <0.05 with a contribution to the impact of treatment on learning outcomes (scientific reading ability). amounting to 53.6 percent. The pretest significance value shows 0.00 <0.05, meaning the pretest has an impact on learning outcomes

Table 3 Descriptive statistics of control group pretest and posttest scores

Descriptive Statistics					
	N	**Minimum**	**Maximum**	**Mean**	**Std. Deviation**
Pretest	30	60	80	65.7	6.789106
Postet	30	60	50	60	4.548588
Valid N (listwise)	30				

Table 4 Descriptive statistics of pretest and posttest scores for the experimental group

Descriptive Statistics					
	N	**Minimum**	**Maximum**	**Mean**	**Std. Deviation**
Pretest	30	40	80	60.3	10.9806517
Postet	30	60	90	79.3	8.68344971
Valid N (listwise)	30				

Table 5 Mean measurement results for the experimental group and control group

Measurement Stage	**Group Mean Score**		**Description of Score Difference**
	Control Group	**Experimental Group**	
Pretest	65.7	60.3	5.4
Posttest	60	79.3	19.3

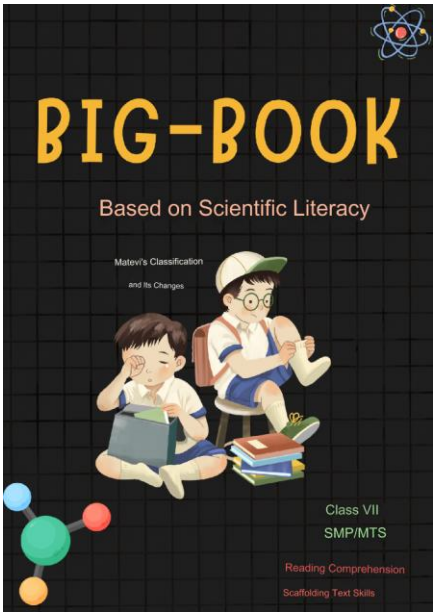

Figure 2 View of the BigBook cover

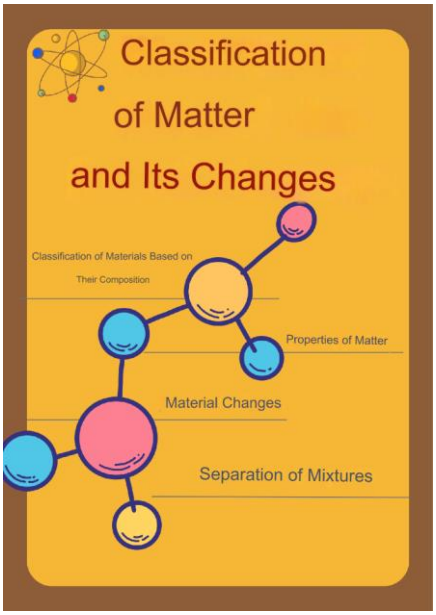

Figure 3 View of one of the contents of the Big-Book

(scientific reading ability). Learning media shows a significance value of 0.00 <- 0.05, meaning that big-book learning media based on scientific literacy has a significant difference or influence on students' scientific reading abilities.

Several studies show that choosing the right learning media can influence student learning outcomes. Where learning media is one of the supports in learning activities. The early-grade learning process requires media to convey lesson material optimally because early-grade children have a short concentration span so they need support to attract attention to what they are learning (Helwig et al., 2002). So by using media, it is hoped that it can improve students' characteristics and skills, especially in reading. Therefore, by using learning media it is hoped that it can improve students' characteristics and skills, especially in reading. Several things that can help in learning to read, namely (1) using pictures as a tool, (2) asking questions, (3) showing the title and asking students to guess it, and (4) reading sentences are not too long so they are easy to understand.

This scientific literacy-based big-book learning media uses material classification materials and changes made in the experimental class, whereas, in the control class, they do not use big-book-based learning media but instead use regular books such as LKS (Student Worksheet). Figure 2 above is a display of the cover of a big book based on scientific literacy. It can be seen that the book is designed for class VII with material classification and changes. Next, Figure 3 shows one of the contents of the big-book learning media. It can be seen that the image shows the sub-chapters of the material that students will study. Meanwhile, Figure 4 shows a display of one of the simplest scaffolding text contents to test students' scaffolding text skills and reading comprehension.

The results of the research that has been carried out show that big-book learning media based on scientific literacy can visualize teaching materials and convey several terms used in material classification and their changes. The appearance of the big-book learning media based on scientific literacy and the images in the media make it easier for students to carry out reading comprehension activities.

Various studies originating from the fields of cognitive psychology and science show that images have a positive effect on complex learning processes (Jo, 2011). Using images to illustrate scientific concepts is very helpful because they can represent various relationships and processes that are difficult to explain through linear verbal language (Jo, 2011). This is in accordance with research regarding the details of the use of images and learning from an interesting reading text which influences the negative

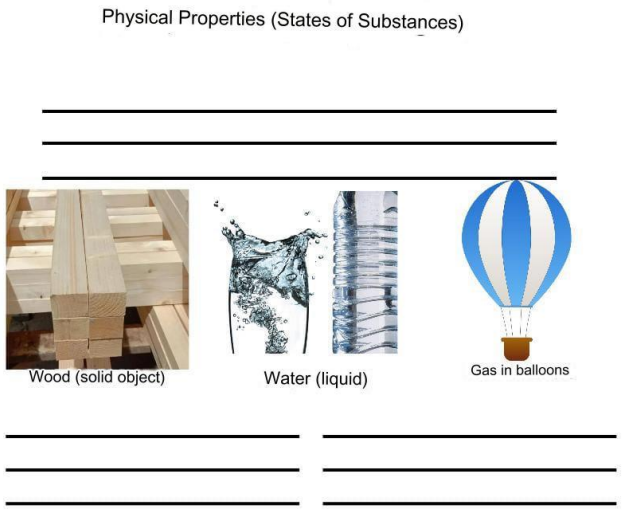

Figure 4 View of one simple scaffolding text

effects of visual representation which diverts the reader's attention from key ideas in the text (Garner et al., 1989)

According to Tangen, readers who are faced with images that are interesting and in line with their needs will perform better than those who are faced with incongruent images (Tangen et al., 2011). This is supported by Mayer and Jackson who say that details that are interesting but not relevant to the content can distract attention or increase the cognitive load of the task, thereby detrimental to learning. Therefore, it is important to understand and adapt the images in the text so that they can specifically encourage the formation of more meaning.

Apart from images and text or visual details, verbal sources in big-book-based learning media also influence reading comprehension (Mcnamara & Floyd, 2011). Many education experts state that big books are very good to use in early grades because they help increase students' interest in reading (Helwig et al., 2002). Big books not only teach students to read but can also develop good attitudes and character and can increase students' insight and knowledge. It is called a big book because its size is larger than books in general. The big book contains simple sentences and pictures that illustrate the contents of the sentences. Because the writing is large and standard for early grades, it is much easier for students to understand the alphabet, letters, and words (Rahmadini et al., 2020).

By using big-book media, it is hoped that it will trigger students' interest in reading in the early grades. If in the early grades, children enjoy reading, their reading ability will also increase, and that means their learning achievement will also increase. In learning in the early grades, reading skills need to be emphasized because it is a basic skill that students must have to be able to support other subject matter. Beginning reading is a stage in the process of learning to read for early-grade elementary school students which is expected to support children's abilities, including ability, skill, and strength to try on their own (Mahsun & Koiriyah, 2019). For students in the early grades, improving skills can be implemented through reading modeling, because apart from helping students speed up and become fluent in reading, it is also considered important in the psychological arena, students at that age need special attention and motivation from the teacher (Mahsun & Koiriyah, 2019).

Based on research conducted by Maximilian Pfost, shows that normal readers acquire physiological awareness of skills relatively quickly and fully master phonological awareness tasks relatively early when starting reading (Pfost, 2015). Children with below-average emergent literacy skills later achieve higher levels of word reading accuracy, compared to children with verbal abilities and code-related skills (Rahmalia et al., 2020). Therefore, the way ideas are organized in big-book based learning media is used to help improve students' reading comprehension, especially for students who have relatively good skill mastery so that it can be beneficial for their understanding to be maximized.

In short, this research shows that big-book learning media based on scientific literacy is complex and enriched and designed at the thematic, discursive, textual, and lexico-grammatical levels. The literature review shows that selecting appropriate learning media as supporting media in reading activities, such as big-book based learning media, is often used to improve students' reading abilities. On the other hand, the scientific reading abilities of class VII students with comprehension and literacy skills receive less attention except from within the students themselves. Therefore, it is a good idea to explore the effects of big-book-based learning media on the scientific reading abilities of class VII students with comprehension and scientific literacy skills.

The difference in the average results of the pretest and posttest scores from the experimental group and the control group can be seen in Table 5. Table 5 shows the average results of the pretest and posttest from the control group and the experimental group based on students' scientific reading abilities which were analyzed from ability indicators. read. In Table 5 for the experimental group, it can be seen that there was an increase in the pretest and posttest scores from an average of 60 to 79.3, while the control group experienced a decrease in pretest and posttest scores from an average of 65.7 to 60.3. Furthermore, table 6 shows the results of the ANCOVA test which shows that the corrected model shows a

Table 6 ANCOVA test results
Tests of Between-Subjects Effects
Dependent Variable: Posttest Bigbook

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	6439.779 [a]	2	3219.890	93.949	.000	.767
Intercept	2259.611	1	2259.611	65.930	.000	.536
Pretest	833.113	1	833.113	24.308	.000	.299
Group	6399.551	1	6399.551	186.723	.000	.766
Error	1953.554	57	34.273			
Total	299600.000	60				
Corrected Total	8393.333	59				

a. R Squared = .767 (Adjusted R Squared = .759)

significance figure of 0.00 - <0.05, meaning that the pretest and learning media simultaneously have different impacts on learning outcomes. Intercept shows a constant value with a significance of 0.00 - <0.05 with a contribution to the impact of treatment on learning outcomes (scientific reading ability). amounting to 53.6 percent. The pretest significance value shows 0.00 <0.05, meaning the pretest has an impact on learning outcomes (scientific reading ability). Learning media shows a significance value of 0.00 <- 0.05, meaning that big-book learning media based on scientific literacy has a significant difference or influence on students' scientific reading abilities.

The results of the ANCOVA test carried out showed that there was a difference in the reading ability scores of students who used big-book based learning media and students who did not use big-book based learning media. This is based on the results of student work from the pretest and posttest given. The result was that the classes given big-book-based learning media or the experimental group experienced an increase in grades after using this learning media. Table 6 is a table of ANCOVA test results comparing the pretest and posttest results in two groups based on scaffolding text skills and reading comprehension according to indicators of scientific reading ability.

In short, this big-book based learning media has different or influential values that are significant for the reading ability of class VII students in scaffolding text skills and reading comprehension following the indicators of scientific reading ability based on the results of the ANCOVA test that has been carried out. So, it can be said significantly that big-book learning media based on scientific literacy can improve the reading ability of class VII students as evidenced by the differences in scores produced after using the media and also from the results of the ANCOVA test that has been carried out.

In the experimental class, class VII students' comprehension abilities showed better performance after using big-book learning media based on scientific literacy compared to before using this media. This is based on researchers' observations when learning activities took place using big-book media, where children read and looked at pictures. When the teacher points to pictures or explanations in the big-book learning media, namely scaffolding text, students can repeat the reading well. Students can repeat the reading on the next page without the teacher repeating the words first, however, they are assisted by the presence of pictures in the reading and also. So, pictures make it easier for students to read and understand reading (Meneses et al., 2018; Ritonga & Rambe, 2022).

Despite its limitations, this research explains relevant implications for teachers in choosing one of the learning media that can be used in learning. Although this research shows a significant effect on the reading ability of class VII students. Things that must be considered in the design of big-book-based learning media are (1) image function, (2) visual-verbal relationships, (3) explicit explanatory structure, and (4) lexico-grammatical sources.

The results of data analysis also have implications for pedagogy based on the reading ability of students from the experimental and control classes. This study provides exploratory evidence regarding the practice of using certain learning media in teaching and learning activities on students' reading abilities which requires the development of not only general skills for understanding verbal language but also general skills of visual literacy strategies based on the epimestics of lesson material guidelines (Unsworth et al., 2014). In addition, this research suggests that teachers must also have special resources, activities, and strategies to design science learning for low-skill students so that they do not fall behind.

4. CONCLUSION

Based on the research results, it can be concluded that big-book learning media based on scientific literacy has a significant influence on students' scientific reading abilities. This can be seen based on the results of learning implementation using this learning media.

Big-book learning media based on scientific literacy influences the scientific reading abilities of class VII students. This is proven based on the results of the ANCOVA analysis test which produces a corrected model showing a significance figure of 0.00 <- 0.05, meaning that the pretest and learning media simultaneously have different impacts on learning outcomes. Intercept shows a constant value with a significance of 0.00 - <0.05 with a contribution to the impact of treatment on learning outcomes (scientific reading ability). amounting to 53.6 percent. The pretest significance value shows 0.00 <0.05, meaning the pretest has an impact on learning outcomes (scientific reading ability). Learning media shows a significance value of 0.00 <- 0.05, meaning that big-book learning media based on scientific literacy has a significant difference or influence on students' scientific reading abilities. Apart from that, big-book learning media based on scientific literacy can be used as an alternative learning media for students' scientific reading skills as well as scaffolding text skills and reading comprehension. Although this research shows a significant effect on the reading ability of class VII students. Things that must be considered in the design of big-book-based learning media are (1) image function, (2) visual-verbal relationships, (3) explicit explanatory structure, and (4) lexico-grammatical sources. More research is needed to replicate this research with other scientific processes because this study only explored data on seventh-grade students.

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