International Journal of Application on Social Science and Humanities
Vol. 3, No. 1, February 2025: pp 123-130 ISSN-L 2987-8241 (Electronic Version)

THE ANALYSIS OF READING COMPREHENSION SKILLS IN ELEMENTARY SCHOOL CHILDREN: IMPLICATIONS FOR EFFECTIVE LEARNING STRATEGIES

Margareta[1,6], Sri Tiatri[2,6], Anisa Husnul Khotimah[3,6], Zahra Shafira[4,6] & Vienchenzia Oeyta Dwitama Dinatha[5,6]

[1]Psychology Undergraduate Program, Universitas Tarumanagara, Jakarta
Email: margareta.705210239@stu.untar.ac.id
[2]Faculty of Psychology, Universitas Tarumanagara, Jakarta
Email: sri.tiatri@untar.ac.id
[3]Psychology Undergraduate Program, Universitas Tarumanagara, Jakarta
Email: anisa.705210234@stu.untar.ac.id
[4]Psychology Undergraduate Program, Universitas Tarumanagara, Jakarta
Email: zahra.705210249@stu.untar.ac.id
[5]Doctoral of Business Administration Program, INTI International University, Malaysia
Email: I25033236@student.newinti.edu.my
[6]Science, Technology and Society Research Centre, Universitas Tarumanagara, Jakarta

ABSTRACT

Reading ability is a fundamental skill that every individual needs to possess, especially during school years. Reading ability, particularly reading comprehension, is essential for developing skills and adapting to various changes. Reading comprehension is a complex process in which the reader must extract and construct meaning from a text composed of written words. Reading comprehension skills can also promote the development of critical thinking, understanding the context of the text, analyzing information, and drawing conclusions based on the text. Therefore, reading comprehension needs to be improved and developed in education in Indonesia. This study was conducted with the aim of examining and analyzing the level of children's reading ability, particularly in reading comprehension. The research employed a quantitative research method. The participants in this study consisted of 42 fifth-grade elementary school children, selected using a purposive sampling method. Data collection for this research was carried out using a reading comprehension questionnaire. The questionnaire consisted of 4 reading passages, each containing 5 questions. In total, the questionnaire had 20 questions, each measuring children's reading comprehension ability based on the reading passages. The research questionnaire had a Cronbach's alpha of .753, indicating that the measurement tool used is reliable. The analysis results showed that children's reading abilities varied, but most children possess a fairly good basic level of reading comprehension. The findings are expected to serve as recommendations for implementing teaching strategies that can enhance children's reading comprehension skills.

Keywords: *reading, reading comprehension, elementary school children*

1. PREFACE

The revolutionary industry 4.0 has led to in significant changes in diverse domains, such as social structures, technology, and innovation, with significant impacts for society (Tiatri et al., 2023). These changes entail continuous adaptation by enhancing an individual's capacity to overcome future obstacles (Aspernäs et al., 2023). Education is a good method for supporting this adaptation process by allowing individuals to learn and improve future-relevant knowledge and skills (Tiatri et al, 2020). According to Chazan, education seeks to promote learning, comprehension, and behaviour through a variety of activities carried out in a variety of environments (Chazan et al., 2022). Reading ability is a fundamental skill that every individual needs to possess, especially during school years (Smith et al., 2021; Erya et al., 2021). Reading ability has emerged as a vital talent for success in this period, given that it enhances one's capacity to efficiently process and comprehend information (Retaminingrum et al., 2019).

However, Indonesian children demonstrate low reading ability, as seen by PISA findings (Tiatri et al., 2020; Tiatri et al., 2023). The 2022 PISA results show that Indonesia's scores in mathematics, reading, and science are below the OECD average. These findings emphasize Indonesian children' s ongoing issues with reading comprehension, which is essential for developing critical thinking abilities and integrating textual information to past knowledge (Yu et al., 2022). As a result, effective strategies are required to improve children's reading abilities and comprehension levels. Therefore, reading comprehension needs to be improved and developed in education in Indonesia.

Snow defines reading comprehension as a process by which readers extract and construct meaning from written text (Snow, 2002). This dynamic interplay between the reader, the text, and the aim of reading encompasses prior knowledge, critical thinking, and inferential reasoning (Aloqaili, 2012; Li et al., 2016). According to Kintsch, the basic purpose of reading is to understand, in which that includes interpreting words, phrases, and whole texts (Kintsch, 1998). Children with comprehension skills are able to objectively analyze information and contextually comprehend textual meaning. However, children with poor reading comprehension frequently struggle to understand deeper meanings, create mental images, or draw conclusions from texts (Bowyer-Crane et al., 2005). Such difficulties are closely related to a limited vocabulary (Nation, 1997).

According to research, children with lower comprehension skills experience struggles identifying context-appropriate words than their higher-performing peers (Oakhill, 1983). This constraint has an impact on their capacity to analyze texts, decipher nuanced meanings, and relate new information to existing knowledge. Addressing these issues necessitates specific solutions for improving reading comprehension that are aligned with children' s learning needs and educational objectives.

Based on the explanation above, researchers realize that children' s reading comprehension skills are needed. In addition, researchers see that research related to children' s reading comprehension levels is very interesting. Therefore, this study aims to examine and analyze the level of children's reading ability, especially in reading comprehension.

2. RESEARCH METHOD

Samples

This technique selects participants based on certain criteria that are in accordance with the research needs. The non-random sampling technique used is a purposive sampling technique. Purposive sampling aims to group participants into certain categories according to existing criteria.

Measurement

Data collection in this study was carried out using a reading comprehension questionnaire. The reading comprehension questionnaire was developed to measure children' s ability to comprehend, summarize, and integrate information in the text. This ability can be assessed by composing questions based on the reading text. The research questionnaire had Cronbach's alpha value of .753. This result shows that the measuring instrument used in the study is reliable.

The questionnaire consisted of 4 expository reading texts. Each text was equipped with 5 questions. So overall, the reading comprehension questionnaire has a total of 20 items. Each item

https://doi.org/10.24912/ijassh.v3i1.35770

was designed to measure children' s reading comprehension ability based on the text. Each item comes with 4 answer options, namely a to d, with one correct answer. Reading comprehension was assessed by giving a score of 1 for each correct answer and 0 for incorrect answers. Participants can achieve the highest score of 20, and the lowest score that can be achieved is 0. The higher the score obtained by the participant, the better the ability in reading comprehension. Conversely, the lower the score, the lower the reading comprehension skills.

Data collection and analysis

This research was conducted using quantitative research to achieve the research objectives. Quantitative research was chosen to enable systematic and specific data collection and analysis. Data collection was carried out by distributing questionnaires to participants. Data from questionnaires that have been filled out by participants are then analyzed using statistical techniques. Data processing was carried out with the help of SPSS software.

3. RESULTS AND DISCUSSIONS

This study involved 42 participants who were in grade 5 of elementary school. This study was conducted in two schools in area B. Participants can be classified based on gender, grade, and school. Information on the classification of participants can be seen in Table 1 and Table 2.

Table 1

Number of Participants

	N
School 1	12
School 2	27
Total	42

Table 2

Gender of Research Participants

	N
Male	23
Female	19
Total	42

In this study, data processing techniques began with descriptive analysis. This analysis aims to identify and understand the participants' demographic data. With descriptive analysis, the basic characteristics of participants can be known, such as gender, school and education level. After the descriptive analysis was conducted, the data was then processed using several statistical tests, namely the reliability test, and the normality test. In addition, the data that has been obtained is processed to determine and group children based on their reading comprehension ability level.

The reliability test is used to ensure and determine the consistency of the research measuring instrument, the results of this reliability test can be seen in Table 3. The normality test was carried out to determine the distribution of data, the results of the normality test can be seen in Table 4. Grouping children based on reading comprehension ability was carried out to determine

the overall level of children' s reading ability. The entire research data processing process was carried out using software SPSS.

Table 3
Reliability Statistics

Cronbach's Alpha	***N of Items***
.753	20

Table 4
Test of Normality

	Kolmogorov-Smirnov	
Statistic	df	Sig.
.136	42	.049

Based on the research data, researchers found that out of 42 children, 1 child was in the very low category (2.4%). 8 children are in the low category (19.0%). 14 children are in the good enough category (33.3%). 8 children are in the good category (19.0%). And 11 children are in the excellent category (26.2%). The categorization of participant groupings can be seen in Table 5.

Table 5
Categorization of Participants

	Frequency	*Percent*	*Cumulative Percent*
Very Low	1	2.4	2.4
Low	8	19.0	21.4
Good Enough	14	33.0	54.8
Good	8	19.0	73.8
Very good	11	26.2	100/0
Total	42	100.0	

The results showed that overall children' s ability in reading comprehension varied. In addition, it can be concluded that most children already have reading comprehension skills at a fairly good level. Therefore, it is necessary to develop children' s reading comprehension skills with certain strategies.

One of the strategies that can be used to help children in understanding a reading in depth is by including relevant images in the reading. This method of learning through images or visualization can also be applied to support children in learning texts more deeply (Leopold & Mayer, 2015). This learning method is also often known as the multimedia principle. Many research focus on multimedia principles that state students can learn more effectively while

https://doi.org/10.24912/ijassh.v3i1.35770

combining text and images rather than with text alone (Butcher, 2014; Mayer, 2009; Mayer, 2014). This principle reveals that students who are given learning materials in the form of a combination of sentences and visual elements, such as pictures or graphs, tend to have a greater chance of broadening and deepening their understanding of the material learned. Not only does this approach improve overall understanding, but it also makes it easier for students to relate new information to their prior knowledge. Thus, the integration of text and visuals can create a more effective and meaningful learning experience. In addition, some studies also explain that applying a combination of verbal and visual material can help in learning (Leutner et al., 2009; Mayer, 2001; Mayer 2005; Schnotz, 2005; Hu et al., 2021).

Also, learning using imagery can also be used to help children in reading comprehension (Leahy & Sweller, 2004). This result is also known as the multimedia effect. Multimedia effects have the potential to enhance an individual's ability to solve problems more effectively. This problem-solving ability can be implemented by adding visual elements, such as relevant images. These visuals can be added to the learning material or replace some of the text content. In addition, by including images that support the learning context, children can more easily grasp learning concepts, as well as connect them to prior knowledge, and apply them in problem solving. This approach not only has an effect on the learning process, but can also promote deeper understanding and better practical application. The use of this method can also help children in the process of remembering. Several studies have found that the better the ability to imagine the context of a text, the higher the ability to remember it in the long term (Leopold & Mayer, 2015; Paivio, 1990; Sadoski & Quast, 1990). With these methods, it is expected that children can more easily understand and remember the readings studied.

The second method that can be used is imagining the context of the text, which involves trying to create a mental picture of the content of the text. This method can be applied by asking children to read a text, then close their eyes to imagine the context in the text. This method can also be used to utilize an individual's ability to form mental images. Mental images are visual representations in the mind. This representation can be applied to understand and integrate information more deeply.

The method of imagining the context of the text can provide many benefits during the learning process. When creating mental images, children can more easily understand the context conveyed in the text. In addition, this method also facilitates the information recall process as mental imagery strengthens the connection between new and pre-existing knowledge. The imagination-based learning principle is based on the realization that mental imagery plays an important role in learning, memory and thinking processes. Many studies have focused on exploring the basic characteristics and functions of mental imagery that can support cognitive abilities.

4. CONCLUSIONS AND SUGGESTIONS

This study discusses the reading comprehension skills of children in two schools in area B. The study involved 42 children from grade 5 elementary schools. The purpose of this study is to determine the level of children' s reading comprehension. So that it can apply learning strategies that can improve children' s reading comprehension skills. The results showed that the children already had a fairly good ability in reading comprehension. However, the results of this study cannot show that children have fully possessed good comprehension skills. The results of this study were obtained by comparing them with their peers only.

Based on the results of the above research, the researcher provides suggestions in paying attention to and developing children' s reading comprehension. The application of developing children' s reading comprehension is by providing variations in learning. One way that can be used to improve reading comprehension is to use the method of drawing or imagining text or visualization in the form of images. By using these methods, it is hoped that children can be more interested in learning and improving children' s abilities in reading comprehension.

Acknowledgment
This work was made possible through the support of the Institute for Research and Community Service (LPPM), whose encouragement and research assistance were vital in bringing this study to completion. I am also deeply thankful to each participant involved in this research who enriched the findings and gave life to the data.

REFERENCES

Aloqaili, A. S. (2012). The relationship between reading comprehension and critical thinking: A theoretical study. *Journal of King Saud University - Languages and Translation, 24*(1), 35–41. https://doi.org/10.1016/j.jksult.2011.01.001

Aspernäs, J., Erlandsson, A., & Nilsson, A. (2023). Motivated formal reasoning: Ideological belief bias in syllogistic reasoning across diverse political issues. *Thinking & Reasoning, 29*(1), 43–69. https://doi.org/10.1080/13546783.2021.1975940

Bowyer-Crane, C., & Snowling, M. J. (2005). Assessing children's inference generation: What do tests of reading comprehension measure? *British Journal of Educational Psychology, 75*(2), 189–201. https://doi.org/10.1348/000709904X22674

Butcher, K. R. (2014). The multimedia principle. In R. E. Mayer (Ed.), *The Cambridge handbook of multimedia learning* (2nd ed., pp. 174–205). Cambridge University Press.

Chazan, B. (2022). *Principles and pedagogies in Jewish education*. Springer International Publishing. https://doi.org/10.1007/978-3-030-83313-8

Erya, W. I., & Pustika, R. (2021). Students' perception towards the use of Webtoon to improve reading comprehension skill. *Journal of English Language Teaching and Learning (JELTL), 2*(2). http://jim.teknokrat.ac.id/index.php/english-language-teaching/article/view/25

Fiorella, L., & Mayer, R. E. (2016). Eight ways to promote generative learning. *Educational Psychology Review, 28*(4), 717–741. https://doi.org/10.1007/s10648-015-9348-9

Hu, L., Chen, G., Li, P., & Huang, J. (2021). Multimedia effect in problem solving: A meta-analysis. *Educational Psychology Review, 33*(4), 1717–1747. https://doi.org/10.1007/s10648-020-09586-0

Kintsch, W. (1998). *Comprehension: A paradigm for cognition*. Cambridge University Press.

Leahy, W., & Sweller, J. (2004). Cognitive load and the imagination effect. *Applied Cognitive Psychology, 18*(7), 857–875. https://doi.org/10.1002/acp.1027

Leopold, C., & Mayer, R. E. (2015). An imagination effect in learning from scientific text. *Journal of Educational Psychology, 107*(1), 47–63. https://doi.org/10.1037/a0037146

Leutner, D., Leopold, C., & Sumfleth, E. (2009). Cognitive load and science text comprehension: Effects of drawing and mentally imagining text content. *Computers in Human Behavior, 25*(2), 284–289. https://doi.org/10.1016/j.chb.2008.12.010

Li, H., Hunter, C. V., & Lei, P. W. (2016). The selection of cognitive diagnostic models for a reading comprehension test. *Language Testing, 33*(3), 391–409. https://doi.org/10.1177/0265532215590848

Mayer, R. E. (2001). *Multimedia learning*. Cambridge University Press.

Mayer, R. E. (2005). Cognitive theory of multimedia learning. In R. E. Mayer (Ed.), *The Cambridge handbook of multimedia learning* (pp. 31–48). Cambridge University Press.

Mayer, R. E. (2009). *Multimedia learning* (2nd ed.). Cambridge University Press.

Mayer, R. E. (2014). Multimedia instruction. In J. M. Spector, M. D. Merrill, J. Elen, & M. J. Bishop (Eds.), *Handbook of research on educational communications and technology: Fourth edition* (pp. 385–399). Springer New York. https://doi.org/10.1007/978-1-4614-3185-5_31

Nation, K., & Snowling, M. J. (1997). Assessing reading difficulties: The validity and utility of current measures of reading skill. *British Journal of Educational Psychology, 67*(3), 359–370. https://doi.org/10.1111/j.2044-8279.1997.tb01250.x

Oakhill, J. (1983). Instantiation in skilled and less skilled comprehenders. *The Quarterly Journal of Experimental Psychology Section A, 35*(3), 441–450. https://doi.org/10.1080/14640748308402464

Paivio, A. (1990). *Mental representations: A dual coding approach*. Oxford University Press.

Retaminingrum, A. N., Tiatri, S., & Patmonodewo, S. (2019). Peran membaca awal terhadap pemahaman bacaan pada siswa kelas IV sekolah dasar. *Jurnal Muara Ilmu Sosial, Humaniora, dan Seni, 3*(2), 333–341. https://doi.org/10.24912/jmishumsen.v3i2.4443

Sadoski, M., & Quast, Z. (1990). Reader response and long-term recall for journalistic text: The roles of imagery, affect, and importance. *Reading Research Quarterly, 25*(4), 256–272. https://doi.org/10.2307/747693

Schnotz, W. (2005). An integrated model of text and picture comprehension. In R. E. Mayer (Ed.), *The Cambridge handbook of multimedia learning* (pp. 49–70). Cambridge University Press.

Smith, R., Snow, P., Serry, T., & Hammond, L. (2021). The role of background knowledge in reading comprehension: A critical review. *Reading Psychology, 42*(3), 214–240. https://doi.org/10.1080/02702711.2020.1865336

Snow, C. E. (2002). *Reading for understanding: Toward an R & D program in reading comprehension*. RAND.

Tiatri, S., Beng, J. T., Fiscarina, C., & Dinata, H. (2020). Challenges in developing literacy learning models for teachers to develop cognitive strategies for elementary school students. *Proceedings of the 2nd International Conference on Social Science and Character Educations (ICoSSCE 2019), 418*, 301–304. Atlantis Press. https://doi.org/10.2991/assehr.k.200130.061

Tiatri, S., Ie, M., Hussy, C., Bagus, I., Tirtha, A. V., Teresa, L., et al. (2023). Development of the critical thinking categorical syllogism learning model in elementary students. *International Journal of Application on Social Science and Humanities, 1*(3), 1–8. https://doi.org/10.24912/ijassh.v1i3.27015

Tiatri, S., Veronica, C., Fiscarina, C., Nurkholiza, R., Wakano, V. Y., Ie, M., et al. (2023). Elementary school teachers' perceptions of critical thinking in STEM learning.

International Journal of Application on Social Science and Humanities, 1(1), 648–658. https://doi.org/10.24912/ijassh.v1i1.26519

Yu, J., Zhou, X., Yang, X., & Hu, J. (2022). Mobile-assisted or paper-based? The influence of the reading medium on the reading comprehension of English as a foreign language. *Computer Assisted Language Learning, 35*(1–2), 217–245. https://doi.org/10.1080/09588221.2019.1668819