DIFFERENCES IN THE READING COMPREHENSION ABILITY OF STUDENTS IN THE PQ4R LEARNING MODEL FOR INDONESIAN LANGUAGE SUBJECTS

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ABSTRACT

The purpose of this research is to determine students' reading comprehension skills before and after using the PQ4R learning model. This research was motivated by preliminary studies, which showed that students' reading comprehension skills are still low in conventional learning models. This is a quantitative research consisting of a one-group pretest-posttest research design. Data were obtained from 22 students of state elementary school 03 Sontas using a written test of 6 (six) questions. The research showed differences in students' reading comprehension skills before and after learning using the PQ4R model.

Keywords: reading comprehension skills, PQ4R learning model, indonesian

INTRODUCTION

Reading is a language skill besides listening, speaking, and writing¹. This skill requires one to have extensive knowledge of science, technology, social and other fields of science². The ability to read is crucial in an educated society because its goal is to understand what has been read. Therefore, the purpose of reading development needs a system that allows children to construct meaning from printed materials³. Learning to read is a continuous effort⁴, which has a strategic position in education and teaching⁵.

⁵ Sukamong Boliti, "Peningkatan Kemampuan Membaca Pemahaman Siswa Kelas IV SDN 1 Lumbi-Lumbia Melalui Metode Latihan Terbimbing," *Jurnal Kreatif Online* 2, no. 2 (August 8, 2014), http://jurnal.untad.ac.id/jurnal/index.php/JKTO/article/view/2831.



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¹ Yenni Rozimela, "The Students' Genre Awareness And Their Reading Comprehension Of Different Text Types," *International Journal of Asian Social Science* 4, no. 4 (2014): 460–69, http://www.aessweb.com/pdf-files/ijass-2014-4(4)-460-469.pdf.

² Larry Yore, Gay L. Bisanz, and Brian M. Hand, "Examining the Literacy Component of Science Literacy: 25 Years of Language Arts and Science Research," *International Journal of Science Education* 25, no. 6 (June 2003): 689–725, https://doi.org/10.1080/09500690305018.

³ Anne Castles, Kathleen Rastle, and Kate Nation, "Ending the Reading Wars: Reading Acquisition From Novice to Expert," *Psychological Science in the Public Interest* 19, no. 1 (June 2018): 5–51, https://doi.org/10.1177/1529100618772271.

⁴ Nathan R. Whitman, "A Comparison of the Impacts of PQ4R and Mind Mapping," *Victoria Stewart, University of Toledo, Toledo, OH*, 2015, 63.

Reading activities also help people to understand the incidence or purpose of an article⁶. Therefore, the process of understanding the meaning of writing is defined as an activity of reading comprehension⁷.

According to Tusfiana & Tryanasari,⁸ reading is a person's ability to construct messages contained in a written material by connecting knowledge with the main idea and essence of the lesson read. Reading comprehension is also interpreted as a process carried out by readers to obtain information, messages, and meanings⁹. Therefore, it can be concluded that reading comprehension is the process of reading a written material carefully and thoroughly to understand and express its content in order to produce optimal results.

Somadayo¹⁰ stated that students still experience obstacles in the reading process, which are associated with the inability to (1) identify themes, topics, or discourse titles, (2) assess discourse organization about main ideas, explanatory ideas, topic sentences, explanatory sentences, and types of paragraphs, (3) determine information in the form of facts, definitions, or concepts, (4) Able to understand the meaning of words, terms and expressions, and (5) provide conclusion to things, concepts, problems, or opinions. According to Slamet¹¹, the problem of low-quality reading skills is caused by several factors, including (1) the emphasis on more theoretical learning materials, (2) lack of practical activities in developing and improving reading comprehension skills, (3) inadequate strategies/approaches in selecting information, (4) poor conditions of teaching materials, (5) low reading comprehension of students caused by mastery of structures and derivation. Therefore, efforts are needed to overcome these difficulties and help students

⁶ Mar Mateos et al., "Reading and Writing to Learn in Secondary Education: Online Processing Activity and Written Products in Summarizing and Synthesizing Tasks," *Reading and Writing* 21, no. 7 (October 2008): 675–97, https://doi.org/10.1007/s11145-007-9086-6.

⁷ Gary Woolley, "Reading Comprehension," in *Reading Comprehension*, by Gary Woolley (Dordrecht: Springer Netherlands, 2011), 15–34, https://doi.org/10.1007/978-94-007-1174-7_2.

⁸ Intan Ayu Tusfiana and Dewi Tryanasari, "Kesulitan membaca pemahaman siswa SD," *Prosiding Konferensi Ilmiah Dasar* 2 (2020): 8.

⁹ Risma Amalia Rahayu, Arie Rakhmat Riyadi, and Tatat Hartati, "Keterampilan Membaca Pemahaman Dengan Metode PQ4R (Preview, Question, Read, Reflect, Recite, Review) Siswa Sekolah Dasar Kelas Tinggi," *Jurnal Pendidikan Guru Sekolah Dasar* 3, no. 2 (November 26, 2018): 46–56, https://doi.org/10.17509/jpgsd.v3i2.14068.

¹⁰ Samsu Somadayo, "Pengaruh Model Pembelajaran PQRST Terhadap Kemampuan Membaca Pemahaman Ditinjau Dari Minat Baca," *EDUKASI* 13, no. 1 (August 11, 2016), https://doi.org/10.33387/j.edu.v13i1.24.

¹¹ St Y. Slamet, "Kemampuan Membaca Pemahaman Mahasiswa," *Paedagogia* 12, no. 2 (August 14, 2009), https://jurnal.fkip.uns.ac.id/index.php/paedagogia/article/view/135.

understand the content of the reading. One of such efforts is the PQ4R, which is appropriate for most subject areas in which reading informational textbook chapters are stressed¹².

According to Rikmasari & Lestari¹³, the Preview, Question, Read, Reflect, Recite, and Review (PQ4R) strategy is a series of innovations from a constructivist learning approach. These steps can help students master or better understand information¹⁴. Generally, students are asked to explore their ability to make thinking structures before reading by arranging questions that become a reference for students to dig up the required information from the reading text¹⁵. Then they independently read the text while answering the questions they have made.

RESEARCH METHODS

This is a quantitative research comprising of the One Group Pretest Posttest design method. Furthermore, this research was carried out at SD Negeri 03 Sontas in 2019, with a total sample was 22 students consisting of 8 boys and 14 girls. Data were obtained from these students through written tests. The instrument used in this study was a test to measure students' reading comprehension skills in a class consisting of 6 questions. The indicators include students' ability to mention the main character in an essay, explain the meaning of a word, determine the main idea of a paragraph, analyze the content of an essay, and able to summarize an article. Table 1 categorize students' comprehension reading ability, measured using the indicator of reading comprehension ability.

The validity of the instrument used the content validity test carried out by two experts. The Shapiro Wilk test was used to determine whether the result is normal or not, while the pre-test and post-test data were tested using the Wilcoxon test to determine a

¹² Joseph Sanacore, "Transferring the PQ4R Study Procedure: Administrative Concerns," *The Clearing House: A Journal of Educational Strategies, Issues, and Ideas* 55, no. 5 (2010): 234–36, https://doi.org/10.1080/00098655.1982.9958234.

¹³ Rima Rikmasari and Mega Lestari, "Metode Pembelajaran PQ4R Dalam Peningkatan Kemampuan Membaca Pemahaman Siswa Kelas V Di Bekasi," *JMIE (Journal of Madrasah Ibtidaiyah Education)* 2, no. 2 (November 30, 2018): 265–75, https://doi.org/10.32934/jmie.v2i2.78.

¹⁴ Whitman, "A Comparison of the Impacts of PQ4R and Mind Mapping."

¹⁵ Nur Nur Aini, "Penerapan Strategi PQ4R Untuk Meningkatkan Kemampuan Membaca Intensif Siswa Kelas VIII MTs Muhammadiyah 1 Malang Tahun Pelajaran 2008/2009" (other, University of Muhammadiyah Malang, 2009), https://eprints.umm.ac.id/776/., "Penerapan Strategi PQ4R Untuk Meningkatkan Kemampuan Membaca Intensif Siswa Kelas VIII MTs Muhammadiyah 1 Malang Tahun Pelajaran 2008/2009," *Jurnal Artikulasi* 8, no. 2 (2013).

statistical difference. The authors chose this tool because it is often used to compare the means or medians of two independent, possibly non-normal distributions ¹⁶. The Wilcoxon test was carried out using the SPSS application to simplify calculations. Its withdrawal was carried out by comparing the Asymp values. Sig. (2-tailed) to a significance value of 0.05. It is concluded that there is a statistical difference in students' reading comprehension ability before and after participating in learning using the PQ4R model.

Table	1
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	6 1	5
No	Level of Reading Comprehension Ability	Score
1	Too bad	0-20
2	Bad	21-40
3	Moderate	41-60
4	Good	61-80
5	Very well	81-100

Indicators of Reading Comprehension Ability

RESULT AND DISCUSSION

Result

The content validity assessed by the expert obtained a mean value of 5 in an outstanding category. These results showed that the research instrument is used without revision. The results of the normality test on the pre-test and post-test data were carried out using the Shapiro Wilk test for pre-test data which obtained 0.088> 0.05. Therefore, in conclusion, the the pre-test data has a normal distribution. As for the post-test data, the significance of Shapiro Wilk is 0.048 <0.05, which means that it is not normally distributed.

Table 2 Shapiro-Wilk Normality Test Results Using SPSS

		Tes	ts of Normal	ity		
	Kolm	ogorov-Sm	irnov ^a	SI	napiro-Wil	k
	Statistic	df	Sig.	Statistic	Df	Sig.
Pretes	.145	22	$.200^{*}$.923	22	.088
Postes	.216	22	.009	.910	22	.048

¹⁶ Morten W. Fagerland and Leiv Sandvik, "The Wilcoxon–Mann–Whitney Test under Scrutiny," *Statistics in Medicine* 28, no. 10 (2009): 1487–97, https://doi.org/10.1002/sim.3561.

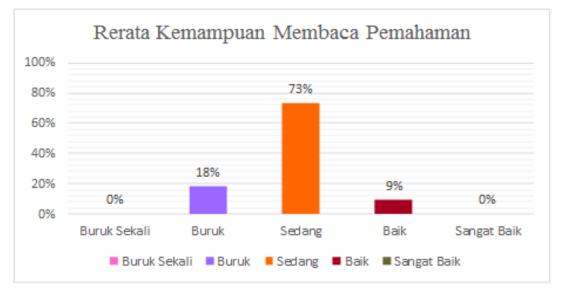
Table 3 shows the results of the Wilcoxon test using SPSS in with asymp Value. Sig. (2-tailed) significance value below 0.05. The table further shows that there are statistical differences in students' ability to read comprehension before and after participating in learning using the PQ4R model.

Table 3 Wilcoxon Test Results Using SPSS

Test Statistics ^a	
	Post-test - Pre-test
Z	-3.663 ^b
Asymp. Sig. (2-tailed)	.000

a. Wilcoxon Signed Ranks Test

b. Based on negative ranks.





Average Reading Comprehension Skills in The Pre-Test

Figure 1 shows the mean reading comprehension ability before participating in learning using the PQ4R model. The figure illustrates that there are no students capable of reading comprehension in a nasty category. Approximately 18%, 73%, 9%, and 0% of the students are in the wrong, medium, suitable, and outstanding categories of the reading comprehension, respectively.

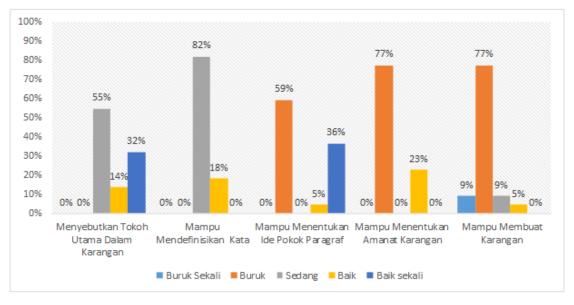
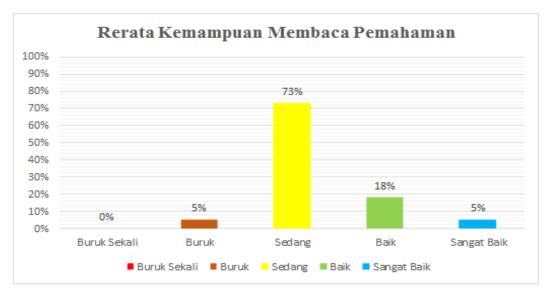


Figure 2

Average Reading Comprehension of Each Indicator In The Pre-Test

Figure 2 shows students' average reading comprehension ability before participating in learning using the PQ4R model on each indicator. The figure also illustrates the indicator's ability to mention the main character in the essay, with no students in the bad and very bad categories. However, as many as 55%, 14%, and 32% of students are in the medium, good and outstanding categories. There are no students in the very bad, bad, and outstanding categories of defining words' indicators. Meanwhile, 82% and 18% are in the medium and good categories. There are no students in the very bad and moderate types on the indicators of determining the main idea of paragraphs. However, there are 59%, 5%, and 36% in the bad, good and outstanding categories. There were no students with bad, moderate, and excellent types on the indicators of determining the essay mandate. Meanwhile, 77% and 23% were in the bad and good categories. In the summary indicators, there are no students in the outstanding category. However, 9%, 77%, 9%, and 5% are in the very bad, bad, moderate, and good categories.





Average Reading Comprehension Skills on The Post-Test

Figure 3 shows the mean reading comprehension ability after students' participation in learning using the PQ4R model. The figure illustrates that none of the students had feeble reading comprehension skills with 5%, 73%, 18%, and 5% in the wrong, moderate, good, and outstanding categories, respectively.





Average Reading Comprehension of Each Indicator In The Post-Test

Figure 4 shows the average reading comprehension ability of each indicator after participating in learning using the PQ4R model. The figure illustrates that the indicators

tend to determine the main character in the essay. There are no students in very bad and bad categories. Meanwhile, the medium, suitable, and good categories have students in percentages of 50%, 14%, and 36%, respectively. Furthermore, there are no students in the very bad, bad, and very good categories in the indicators defining the word. Meanwhile, 73% and 32% of the students are in the medium and good categories. There are no students in the very bad, medium, and good categories in the indicators determining the main idea in the paragraph. Subsequently, 36% and 64% of students are in the wrong and outstanding categories. There were no students in the very bad and moderate categories on the indicators of determining the essay mandate, while 59%, 27%, and 14% are in the bad, good and outstanding categories. On the indicators of making summary essays, there were no students in the very bad and outstanding categories. Meanwhile, 73%, 14%, and 14% are in the bad, medium, and good categories.

DISCUSSION

The results of statistical tests using the Wilcoxon test show a statistical difference in the ability to read comprehension before and after participating in learning using the PQ4R model. Figure 3 shows an increase in students' reading comprehension skills in the good and excellent categories after learning using the PQ4R model. This is in line with the research carried out by Wangka & Usman¹⁷. On the other hand, after participating in learning using the PQ4R model, there was a decrease in students' reading comprehension skills in the wrong category. This is in line with the research carried out by Sartika & Effendi¹⁸. There is an effect of the PQ4R learning model on the ability to analyze drama scripts. Higher-level skills are related to text comprehension because they are able to ensure that the reader makes necessary integrative and inferential links to construct a meaning-based representation¹⁹. PQ4R consists of different activities, therefore, the

¹⁷ Astriani Wangka and Mustahidang Usman, "Penerapan Strategi Pembelajaran PQ4R (Preview, Question, Read, Reflect, Recite, Dan Review) Dalam Meningkatkan Prestasi Belajar PAI," *TARBAWI*: *Jurnal Pendidikan Agama Islam* 1, no. 1 (2016): 68–76, https://doi.org/10.26618/jtw.v1i1.359.

¹⁸ Wila Sartika and M. Syahrun Effendi, "Pengaruh Model Pembelajaran PQ4R (Preview, Question, Read, Reflect, Recite, and Review) terhadap Kemampuan Menganalisis Unsur Naskah Drama Siswa Kelas XI SMA Negeri 3 Lubuklinggau," *Diksa : Pendidikan Bahasa dan Sastra Indonesia* 5, no. 2 (December 31, 2019): 86–93, https://doi.org/10.33369/diksa.v5i2.9987.

¹⁹ Kate Cain and Jane Oakhill, "Profiles of Children with Specific Reading Comprehension Difficulties," *British Journal of Educational Psychology* 76, no. 4 (December 2006): 683–96, https://doi.org/10.1348/000709905X67610.

reader need to complete to engage in more active rather than passive reading²⁰. Reflecting, reciting, and reviewing are essential study techniques for helping students understand and remember what they read. Reflecting is defined as understanding and making the current information meaningful by relating it to things that are already known. Reciting is to practice the process of remembering information by stating points loudly and asking and answering questions. Reviewing reviews actively one's learning on a subject by focusing on asking questions and repeating the learning process²¹.

The difference in reading comprehension skills before and after participating in learning using the PQ4R model occurs because it encourages students to determine the material they have the ability to explore through reading activities carried out actively and systematically²². This model aims to provide opportunities for students to construct their knowledge by actively learning individually and cooperatively²³. These differences occur due to several factors. Firstly, there is an increase in reading comprehension in indicators capable of determining the main character in the essay by 2% in the outstanding category. The reflected phase is related to the reading process where students are given problems with related topics and expected to develop their building of knowledge by connecting information to solve problems²⁴. The PQ4R learning model provides an opportunity for students to understand the reading through the question step better, where they are asked questions associated with what, why, who and how²⁵. By asking questions, they are expected to better understand the reading and determine the characters in the essay. This is in line with the research carried out by Linayaningsih²⁶ which stated that

²⁰ Whitman, "A Comparison of the Impacts of PQ4R and Mind Mapping."

²¹ Ibrahim Kisac and Yusuf Budak, "Metacognitive Strategies of the University Students with Respect to Their Perceived Self-Confidence Levels about Learning," *Procedia - Social and Behavioral Sciences* 116 (February 2014): 3336–39, https://doi.org/10.1016/j.sbspro.2014.01.759.

²² Kadek Agus Bayu Pramana and I Wayan Lasmawan, "Pengaruh Penerapan Pembelajaran PQ4R Kontekstual Terhadap Hasil Belajar IPS dan Sikap Peduli Lingkungan Siswa Kelas V SD Gugus I Gianyar," *Doctoral dissertation, Ganesha University of Education* 4 (2014): 11.

²³ Rody Putra Sartika and Lukman Hadi, "The Improvement of Students' Conceptual Understandings through the PQ4R Aided the 5E Learning Cycle Model on the Topic of Salts Hydrolysis," *Journal of Physics: Conference Series* 1788, no. 1 (February 1, 2021): 012036, https://doi.org/10.1088/1742-6596/1788/1/012036.

²⁴ Sartika and Hadi.

²⁵ Nurul Hidayah Nasution, "Pengaruh Model Pembelajaran PQ4R Terhadap Hasil Belajar Siswa Kelas X SMA Materi Ekosistem," *Proceeding Of Biology Education* 1, no. 1 (2017): 24–29.

²⁶ Fitria Linayaningsih, "Metode PQ4R (Preview, Question, Read, Reflect, Recite, Review) Untuk Meningkatkan Prestasi Belajar Pendidikan Kewarganegaraan," *Majalah Ilmiah INFORMATiKA* 2, no. 2 (2011): 12.

experience has shown that when people read to answer some questions, it makes them to read more carefully and thoroughly.

Secondly, the indicators tend to define words in the essay with an increase by 14% and in the good category. This happens because the learning steps in the PQ4R model allow students to repeat the essays to enable them to remember the information contained for a long term. One way of conceiving a word's meaning is by considering it as the content associated with the expression. For instance, meaning is the content of any semiotic function, which means that it is the range of the correspondences (relations of dependence or function) between an antecedent (expression, signifier) and a consequent (content, signified, or meaning), established by a subject (person or institution) according to distinct criteria or a corresponding code²⁷. This is in line with the research carried out by Linayaningsih²⁸ through the stages in the PQ4R method, such as repetition and practice received by students for long-term memory. This type of information is more permanent, therefore, it is beneficial for students because it enables them to have adequate knowledge of previous lessons. Besides, the PQ4R learning method has a procedure that focuses students on organizing meaningful information, questioning skills, and review obtained information.

Thirdly, the indicator determines the main idea in the paragraph, with 28% in the outstanding category. This increase is possible because the reflect and recite steps in the PQ4R model emphasize students to understand the information represented by connecting the subtopics in the essay with the main concepts or principles. This is in line with the research carried out by Rikmasari & Lestari²⁹ PQ4R provides opportunities for students to determine main ideas independently for a better understanding of the content. Besides, the PQ4R method is essentially a question-and-answer generator that encourages text readers to process the material broadly and deeply³⁰.

²⁷ Juan D. Godino et al., "Why Is the Learning of Elementary Arithmetic Concepts Difficult? Semiotic Tools for Understanding the Nature of Mathematical Objects," *Educational Studies in Mathematics* 77, no. 2–3 (July 2011): 247–65, https://doi.org/10.1007/s10649-010-9278-x.

²⁸ Linayaningsih, "Metode PQ4R (Preview, Question, Read, Reflect, Recite, Review) Untuk Meningkatkan Prestasi Belajar Pendidikan Kewarganegaraan."

²⁹ Rikmasari and Lestari, "Metode Pembelajaran PQ4R Dalam Peningkatan Kemampuan Membaca Pemahaman Siswa Kelas V Di Bekasi."

³⁰ Ira Yuliana and Noor Fajriah, "Penerapan Metode PQ4R dalam Pembelajaran Matematika di Kelas VII SMP," *EDU-MAT: Jurnal Pendidikan Matematika* 1, no. 1 (October 1, 2013), https://doi.org/10.20527/edumat.v1i1.550.

Fourthly, the indicators determine the mandate in the essay, with an increase in the good and outstanding categories by 4%, and 14%, respectively. The increase in the ability to determine the mandate in this essay occurs because the PQ4R learning model develops students' understanding of concepts. This activity is carried out systematically, thereby enabling a good memory storage process or retention. This is in line with the research carried out by Setiawati & Corebima³¹ which stated that the PQ4R strategy is a strategy that helps transfer and translate new information from short to long-term memory by making connections between details and previously known information. Besides, in the recite learning step, students were asked to evaluate the reading results and answer questions raised by themselves.

Fifthly, the indicator makes a summary of the essay with a 5% and 9% increase in the good and outstanding categories. This is possible because, in the review learning step in the PQ4R model, students need to summarize and explain the reading results using their language³². Besides, in the review step, they read the essence of the summary that has been made³³.

In addition to an increase in the results of this study, it also shows that most students are still in the bad category on the indicators of determining the mandate of an essay and in making summaries. This is because they still have difficulty recalling and poking the content. Tusfiana & Tryanasari³⁴ stated that students have difficulties in forming concepts and developing them into semantic units/ relations, recalling the contents of the reading, and establishing the meaning of a new word.

CONCLUSION

Based on the research and discussion results, it can be concluded that there are statistical differences in students' ability to read and understand before and after

³¹ Henny Setiawati and Aloysius Duran Corebima, "The Correlation Between Concept Gaining And Retention In PQ4R, TPS, And PQ4R-TPS Learning Strategies," *Advances in Social Sciences Research Journal* 4, no. 9 (2017): 29–44, http://biologi.fmipa.um.ac.id/wp-content/uploads/2018/07/48.-3141-8123-1-PB.pdf.

³² Eri Sarimanah, "Effectiveness Of PQ4R Metacognitive Strategy Based Reading Learning Models in Junior High School," *Ijlecr-International Journal Of Language Education And Culture Review* 2, no. 1 (2016): 74–81.

³³ Nindy Rahayu and Tiara Anggia Dewi, "Pengaruh Penggunaan Metode PQ4R (Preview, Question, Read, Reflect, Recite, Refiew) Tehadap Hasil Belajar Ekonomi Siswa Kelas X Semester Genap SMA Negeri 1 Punggur," *Promosi: Jurnal Program Studi Pendidikan Ekonomi* 5, no. 2 (2017).

³⁴ Tusfiana and Tryanasari, "Kesulitan membaca pemahaman siswa SD."

participating in learning using the PQ4R model. This is possible because the PQ4R learning model emphasizes the activeness of students in understanding the reading content. The learning steps in to provide opportunities for them to activate long-term memory skills by managing short-term information obtained through reading repetitions.

On the other hand, most students still have difficulty determining the mandate of an indicator in an essay and making summaries. Therefore, further research is needed to determine this process, and efforts need to be made to overcome this process.

REFERENCES

- Aini, Nur. "Penerapan Strategi PQ4R Untuk Meningkatkan Kemampuan Membaca Intensif Siswa Kelas VIII MTs Muhammadiyah 1 Malang Tahun Pelajaran 2008/2009." Other, University of Muhammadiyah Malang, 2009. https://eprints.umm.ac.id/776/.
- Boliti, Sukamong. "Peningkatan Kemampuan Membaca Pemahaman Siswa Kelas IV SDN 1 Lumbi-Lumbia Melalui Metode Latihan Terbimbing." *Jurnal Kreatif Online* 2, no. 2 (August 8, 2014). http://jurnal.untad.ac.id/jurnal/index.php/JKTO/article/view/2831.
- Cain, Kate, and Jane Oakhill. "Profiles of Children with Specific Reading Comprehension Difficulties." *British Journal of Educational Psychology* 76, no. 4 (December 2006): 683–96. https://doi.org/10.1348/000709905X67610.
- Castles, Anne, Kathleen Rastle, and Kate Nation. "Ending the Reading Wars: Reading Acquisition From Novice to Expert." *Psychological Science in the Public Interest* 19, no. 1 (June 2018): 5–51. https://doi.org/10.1177/1529100618772271.
- Fagerland, Morten W., and Leiv Sandvik. "The Wilcoxon–Mann–Whitney Test under Scrutiny." *Statistics in Medicine* 28, no. 10 (2009): 1487–97. https://doi.org/10.1002/sim.3561.
- Godino, Juan D., Vicenç Font, Miguel R. Wilhelmi, and Orlando Lurduy. "Why Is the Learning of Elementary Arithmetic Concepts Difficult? Semiotic Tools for Understanding the Nature of Mathematical Objects." *Educational Studies in Mathematics* 77, no. 2–3 (July 2011): 247–65. https://doi.org/10.1007/s10649-010-9278-x.
- Kisac, Ibrahim, and Yusuf Budak. "Metacognitive Strategies of the University Students with Respect to Their Perceived Self-Confidence Levels about Learning." *Procedia - Social and Behavioral Sciences* 116 (February 2014): 3336–39. https://doi.org/10.1016/j.sbspro.2014.01.759.
- Linayaningsih, Fitria. "Metode PQ4R (Preview, Question, Read, Reflect, Recite, Review) Untuk Meningkatkan Prestasi Belajar Pendidikan Kewarganegaraan." *Majalah Ilmiah Informatika* 2, no. 2 (2011): 12.
- Mateos, Mar, Elena Martín, Ruth Villalón, and María Luna. "Reading and Writing to Learn in Secondary Education: Online Processing Activity and Written Products

in Summarizing and Synthesizing Tasks." *Reading and Writing* 21, no. 7 (October 2008): 675–97. https://doi.org/10.1007/s11145-007-9086-6.

- Nasution, Nurul Hidayah. "Pengaruh Model Pembelajaran PQ4R Terhadap Hasil Belajar Siswa Kelas X SMA Materi Ekosistem." *Proceeding Of Biology Education* 1, no. 1 (2017): 24–29.
- Pramana, Kadek Agus Bayu, and I Wayan Lasmawan. "Pengaruh Penerapan Pembelajaran PQ4R Kontekstual Terhadap Hasil Belajar IPS dan Sikap Peduli Lingkungan Siswa Kelas V SD Gugus I Gianyar." *Doctoral dissertation, Ganesha University of Education* 4 (2014): 11.
- Rahayu, Nindy, and Tiara Anggia Dewi. "Pengaruh Penggunaan Metode PQ4R (Preview, Question, Read, Reflect, Recite, Refiew) Tehadap Hasil Belajar Ekonomi Siswa Kelas X Semester Genap SMA Negeri 1 Punggur." *PROMOSI: Jurnal Program Studi Pendidikan Ekonomi* 5, no. 2 (2017).
- Rahayu, Risma Amalia, Arie Rakhmat Riyadi, and Tatat Hartati. "Keterampilan Membaca Pemahaman Dengan Metode PQ4R (Preview, Question, Read, Reflect, Recite, Review) Siswa Sekolah Dasar Kelas Tinggi." Jurnal Pendidikan Guru Sekolah Dasar 3, no. 2 (November 26, 2018): 46–56. https://doi.org/10.17509/jpgsd.v3i2.14068.
- Rikmasari, Rima, and Mega Lestari. "Metode Pembelajaran PQ4R Dalam Peningkatan Kemampuan Membaca Pemahaman Siswa Kelas V Di Bekasi." *JMIE (Journal of Madrasah Ibtidaiyah Education)* 2, no. 2 (November 30, 2018): 265–75. https://doi.org/10.32934/jmie.v2i2.78.
- Rozimela, Yenni. "The Students' Genre Awareness And Their Reading Comprehension Of Different Text Types." *International Journal of Asian Social Science* 4, no. 4 (2014): 460–69.
- Sanacore, Joseph. "Transferring the PQ4R Study Procedure: Administrative Concerns." *The Clearing House: A Journal of Educational Strategies, Issues and Ideas* 55, no. 5 (2010): 234–36. https://doi.org/10.1080/00098655.1982.9958234.
- Sarimanah, Eri. "Efeectivenes Of PQ4R Metacognitive Strategy Based Reading Learning Models in Junior High School." *Ijlecr-International Journal Of Language Education And Culture Review* 2, no. 1 (2016): 74–81.
- Sartika, Rody Putra, and Lukman Hadi. "The Improvement of Students' Conceptual Understandings through the PQ4R Aided the 5E Learning Cycle Model on the Topic of Salts Hydrolysis." *Journal of Physics: Conference Series* 1788, no. 1 (February 1, 2021): 012036. https://doi.org/10.1088/1742-6596/1788/1/012036.
- Sartika, Wila, and M. Syahrun Effendi. "Pengaruh Model Pembelajaran PQ4R (Preview, Question, Read, Reflect, Recite, and Review) terhadap Kemampuan Menganalisis Unsur Naskah Drama Siswa Kelas XI SMA Negeri 3 Lubuklinggau." *Diksa*: *Pendidikan Bahasa dan Sastra Indonesia* 5, no. 2 (December 31, 2019): 86–93. https://doi.org/10.33369/diksa.v5i2.9987.
- Setiawati, Henny, and Aloysius Duran Corebima. "The Correlation Between Concept Gaining And Retention In PQ4R, TPS, And PQ4R-TPS Learning Strategies." Advances in Social Sciences Research Journal 4, no. 9 (2017): 29–44.

http://biologi.fmipa.um.ac.id/wp-content/uploads/2018/07/48.-3141-8123-1-PB.pdf.

- Somadayo, Samsu. "Pengaruh Model Pembelajaran PQRST Terhadap Kemampuan Membaca Pemahaman Ditinjau Dari Minat Baca." *EDUKASI* 13, no. 1 (August 11, 2016). https://doi.org/10.33387/j.edu.v13i1.24.
- Slamet, St Y. "Kemampuan Membaca Pemahaman Mahasiswa." *Paedagogia* 12, no. 2 (August 14, 2009). https://jurnal.fkip.uns.ac.id/index.php/paedagogia/article/view/135.
- Tusfiana, Intan Ayu, and Dewi Tryanasari. "Kesulitan membaca pemahaman siswa SD." Prosiding Konferensi Ilmiah Dasar 2 (2020): 8.
- Wangka, Astriani, and Mustahidang Usman. "Penerapan Strategi Pembelajaran PQ4R (Preview, Question, Read, Reflect,Recite, Dan Review) Dalam Meningkatkan Prestasi Belajar PAI." *TARBAWI*: Jurnal Pendidikan Agama Islam 1, no. 1 (2016): 68–76. https://doi.org/10.26618/jtw.v1i1.359.
- Whitman, Nathan R. "A Comparison of the Impacts of PQ4R and Mind Mapping." Victoria Stewart, University of Toledo, Toledo, OH, 2015, 63.
- Woolley, Gary. "Reading Comprehension." In *Reading Comprehension*, by Gary Woolley, 15–34. Dordrecht: Springer Netherlands, 2011. https://doi.org/10.1007/978-94-007-1174-7_2.
- Yore, Larry, Gay L. Bisanz, and Brian M. Hand. "Examining the Literacy Component of Science Literacy: 25 Years of Language Arts and Science Research." *International Journal of Science Education* 25, no. 6 (June 2003): 689–725. https://doi.org/10.1080/09500690305018.
- Yuliana, Ira, and Noor Fajriah. "Penerapan Metode PQ4R dalam Pembelajaran Matematika di Kelas VII SMP." *EDU-MAT: Jurnal Pendidikan Matematika* 1, no. 1 (October 1, 2013). https://doi.org/10.20527/edumat.v1i1.550.