

# **Student-Selected Peer Reading Strategy to Improve Reading Comprehension Skills**

**Cloudine R. Banaybanay and Carmelin P. Mosa**

Graduate School, Surigao del Norte State University, Surigao City, Philippines

Graduate Studies, Professor, Surigao del Norte State University, Philippines

cloudine.banaybanay@deped.gov.ph

**Abstract:** *This study determined the effectiveness of the Student-Selected Peer Reading Strategy on the reading comprehension skills of students. Specifically, it determined the students' level of reading comprehension in terms of literal, inferential and critical questions before and after exposure to instructions; the significant difference in the pre-test and post-test on the students' level of reading comprehension and the significant mean gain difference of pre-test and post-test scores of participants. A quasi-experimental research design with a one-group pretest-posttest design approach was used and data were analyzed using mean, standard deviation, percentages, paired sample t-test and one-sample t-test.*

*This study revealed that the level of students' reading comprehension has increased in all comprehension levels after the integration of the strategy, the differences between pre-test and post-test scores were statistically significant. Lastly, there is a significant mean gain difference between pre-test and post test scores of participants' performance after the implementation of the strategy. This study concluded that student-selected peer reading strategy is deemed effective on students' reading comprehension.*

**Keywords:** Peer Reading, Reading Comprehension.

## **I. INTRODUCTION**

Reading is a fundamental life skill that children develop early on, serving as the foundation for their academic success and overall growth (Graham, Liu, Aitken, Ng et al., 2018; Ionescu, 2017). Proficiency in reading underpins learning in all subject areas, making it a critical determinant of a child's educational progress (Graham et al., 2018).

However, recognizing letters and words alone is not reading; it should involve the ability of a person to comprehend to be functionally literate. Functional literacy includes higher levels of comprehension skills, such as integrating two or more pieces of information and making inferences based on the given information (PSA, 2024).

As revealed in Bordey's (2025) report during the Senate Basic Education Committee hearing on the results of the 2024 Functional Literacy, Education, and Mass Media Survey (FLEMMS), an increasing number of junior high school graduates are now being identified as lacking reading comprehension skills.

Moreover, according to the Philippine Statistics Authority (2024), Caraga Region recorded a rate of only 63.1% of individuals aged 10 to 64 considered functionally literate, meaning that around six in every ten people in that age group were functionally literate. Among the provinces in Caraga, the provinces of Agusan del Norte and Surigao del Norte, where the current research environment is located, had the lowest functional literacy rates of 55.7% and 57.1%, respectively. These data were alarming since in the assessment guidelines of the Department of Education, the percentages qualitatively mean "Did not meet expectations".

In addition with this problem in reading comprehension, the researcher often observed that her students were at times unable to grasp the essence of what they were reading especially if the stories were long and required their greater understanding. In a Phil IRI pre-test result she conducted last August 2024, out of 62 total number of Grade 7 students of Union National High School, 29 of them were under frustration level. At this level, the reader struggles significantly and was unable to decode or understand the text.



This issue stems from the weak reading comprehension abilities of students, which Nanda & Azmy (2021) identified as a lack of motivation as one of the primary causes in English as a Foreign Language (EFL) classrooms. They suggested that increasing student motivation could lead to better comprehension.

Additionally, in a study by Anji et al. (2025), they recommended that teachers are encouraged to adopt context-based instruction and collaborative reading activities to strengthen students' comprehension skills.

Hence, peer reading strategy is an effective approach to enhance the reading comprehension of the students by giving them the opportunity to share with their partners what they read (Gal et al. 2025). The researchers further claimed that collaboration between peers marks a notable transition from conventional teacher-led approaches to more student-focused and engaging learning settings.

With this, the autonomy of selecting their partners was given to students to hasten their reading comprehension.

All of these reasons prompted the researcher to propose the infusion of a student-selected peer reading strategy to improve the comprehension ability of the learners, particularly in promoting creative and critical thinkers/learners with proper guidance from the teacher.

## **II. RESULTS AND DISCUSSION**

### **On Students' Level of Reading Comprehension Before and After Exposure to Instruction**

The students' level of reading comprehension on the selected genres before and after instruction was described using the mean, standard deviation, and percentages.

**TABLE I: STUDENTS' LEVELS OF READING COMPREHENSION BEFORE EXPOSURE TO PEER READING STRATEGY**

<b>Levels</b>	<b>Genre</b>	<b>Mean</b>	<b>SD</b>	<b>% Score</b>	<b>Qualitative Description</b>
Literal	Short Story	5.57	1.61	81%	Satisfactory
	Poetry	2.27	1.01	74%	Did Not Meet Expectation
Inferential	Short Story	2.80	1.25	71%	Did Not Meet Expectation
	Poetry	1.18	0.85	69%	Did Not Meet Expectation
Critical	Short Story	2.73	1.38	71%	Did Not Meet Expectation
	Poetry	0.62	0.78	65%	Did Not Meet Expectation

**Legend:** 90-100% (Outstanding), 85-89% (Very Satisfactory), 80-84 (Satisfactory), 75-79% (Fairly Satisfactory), Below 75% (Did Not Meet Expectations)

As shown in Table I, in both short story and poetry, students' performance before instruction generally did not meet expectations for inferential and critical level questions with qualitative description of below 75% and satisfactory for literal level questions with qualitative description of only 81%.

The pre-test results reveal that most participants were either struggling or barely meeting expected standards in comprehension, especially for poetry and higher-order thinking skills. This can be attributed to students' lack of background knowledge on literary analysis, to their poor reading motivation, and to their limited understanding, as noted by Prihatini (2020) and to the fact that students had difficulties in answering vocabulary questions and main idea questions as cited by Septia et al., (2022).



**Table II: STUDENTS' LEVELS OF READING COMPREHENSION AFTER EXPOSURE TO PEER READING STRATEGY**

Levels	Genre	Mean	SD	% Score	Qualitative Description
Literal	Short Story	7.30	1.01	94%	Outstanding
	Poetry	3.60	0.56	93%	Outstanding
Inferential	Short Story	4.63	1.33	85%	Very Satisfactory
	Poetry	2.42	0.67	88%	Very Satisfactory
Critical	Short Story	4.30	1.34	82%	Satisfactory
	Poetry	1.92	0.91	77%	Fairly Satisfactory

**Legend:** 90-100% (Outstanding), 85-89% (Very Satisfactory), 80-84 (Satisfactory), 75-79% (Fairly Satisfactory), Below 75% (Did Not Meet Expectations)

As revealed in Table II, after class discussion, significant improvements were observed in all reading comprehension areas. The literal level had significantly improved to outstanding for both genres with qualitative description of 94% for short story and 93% for poetry with mean scores of 7.30 and 3.60, respectively. On the inferential level, scores increased to very satisfactory for both genres. Short story has a mean of 4.63 and poetry of 2.42, demonstrating improved ability to read between the lines and make logical assumptions. In critical level, short story gained a mean of 4.30, which reached a satisfactory level, and poetry with a mean of 1.92 progressed to Fairly Satisfactory. Although still the weakest area, gains show better analytical engagement with texts. The post-test results indicate that the peer reading strategy was effective in elevating students' comprehension skills across all cognitive levels and genres, with the most notable gains in literal and inferential skills.

The increase in their performance standing in Table 2 can be linked to the respective instructions given to the class, which allows for a week-long immersion in the genres covered in the test, and also with the help of their peer reading partners, who motivated and helped them during the instruction. This result supports the claim of Alvarado et al., (2020) that social motivation for reading involves learners engaging in interpersonal activities. Hence, it is safe to say that the student-selected peer reading strategy was deemed effective and has contributed to gaining students' remarkable level of comprehension.

**Table III: SUMMARY OF THE STUDENTS' LEVELS OF READING COMPREHENSION BEFORE AND AFTER EXPOSURE TO PEER READING STRATEGY**

Levels	Genre	Test Period	Mean	SD	% Score	QD
Literal	Short Story	Pre-test	5.57	1.61	81%	Satisfactory
		Post-test	7.30	1.01	94%	Outstanding
	Poetry	Pre-test	2.27	1.01	74%	Did Not Meet Expectation
		Post-test	3.60	0.56	93%	Outstanding



Inferential	Short Story	Pre-test	2.80	1.25	71%	Did Not Meet
		Post-test	4.63	1.33	85%	Expectation
	Poetry	Pre-test	1.18	0.85	69%	Very Satisfactory
		Post-test	2.42	0.67	88%	Did Not Meet
Critical	Short Story	Pre-test	2.73	1.38	71%	Expectation
		Post-test	4.30	1.34	82%	Satisfactory
	Poetry	Pre-test	0.62	0.78	65%	Did Not Meet
		Post-test	1.92	0.91	77%	Expectation

**Legend:** 90-100% (Outstanding), 85-89% (Very Satisfactory), 80-84 (Satisfactory), 75-79% (Fairly Satisfactory), Below 75% (Did Not Meet Expectations)

Table III above shows a notable improvement across all levels: literal, inferential, and critical, and in both genres of short story and poetry. Initially, students generally performed poorly, particularly in inferential and critical comprehension for poetry, with most scores falling under “Did Not Meet Expectations.” However, after the implementation of the peer reading strategy, there was a marked increase in performance. Literal comprehension for both genres improved dramatically, reaching the “Outstanding” level. Inferential comprehension also improved from “Did Not Meet Expectations” to “Very Satisfactory,” indicating a stronger ability to interpret implicit meanings. Critical comprehension, while still the lowest among the three, showed significant progress from “Did Not Meet Expectations” to “Satisfactory” for short stories and “Fairly Satisfactory” for poetry. These results highlight the effectiveness of peer reading in enhancing students’ comprehension skills, especially in supporting collaborative meaning-making and deeper engagement with texts.

#### Significant Difference in the Pre-Test and Post-Test on the Students’ Level of Reading Comprehension

This section presents the differences in the pre-test and post-test on the students’ level of reading comprehension in the use of the peer reading strategy. By examining closely, the data in Table 1, Table 2, and Table 3 above showed that there were observed differences in students’ level of reading comprehension before and after the integration of the peer reading strategy.

Table IV presents the paired samples t-test on the pre-test and post-test on the students’ level of reading comprehension literal, inferential, and critical before and after instruction using the peer reading strategy. The results revealed statistically significant differences across all three levels.

**Table IV: PAIRED SAMPLES T-TEST ON THE PRE-TEST AND POST-TEST ON THE STUDENTS’ LEVEL OF READING COMPREHENSION USING THE PEER READING STRATEGY**

Levels	Student's t statistic	p	Interpretation	Decision	Effect Size
Literal	12.9	< .001	Significant	Reject Ho	1.17
Inferential	13.7	< .001	Significant	Reject Ho	1.25
Critical	11.3	< .001	Significant	Reject Ho	1.03

**Legend:**  $0.20 \leq \eta^2 \leq 0.50$ : (small effect),  $0.50 \leq \eta^2 \leq 0.80$ : (medium effect),  $\eta^2 \geq 0.80$ : (large effect) (Cohen, 2013)



For the literal level, the computed  $t$  value was 12.9 with a  $p$ -value less than .001, indicating a significant difference between pre- and post-test scores. The effect size was 1.17, which, according to Cohen's (2013) criteria, represents a large effect ( $\eta^2 \geq 0.80$ ), suggesting that the peer reading strategy had a strong impact on students' ability to understand explicitly stated information in texts.

Similarly, the inferential level showed a  $t$  value of 13.7, also with  $p < .001$  and an effect size of 1.25, which again indicates a large effect. This demonstrates that the strategy significantly enhanced students' skills in drawing conclusions and making logical inferences from the text.

For the critical level, the  $t$  value was 11.3 with a  $p < .001$ , and an effect size of 1.03, also categorized as a large effect. This suggests that peer reading helped students develop their evaluative and analytical reading skills, allowing them to assess and critique text content more effectively.

Hence, the use of the student-selected peer reading strategy was found to have a positive effect size to the students' performance before and after the class discussion, and this means that the null hypotheses were rejected. This can be attributed to the strong reading motivation of the student participants, which was likely influenced by the fact that they were allowed to choose their reading partners before the reading intervention. Toste et al. (2020) explained that how well students perform in reading is closely linked to how motivated they are to read; when students feel more motivated, they tend to achieve better reading results.

#### **Significant Mean Gain Difference of Pre-Test and Post-Test Scores**

This section presents the significant mean gain difference of the students' pre-test and post-test scores after being introduced with the peer reading strategy. The significant mean gain difference is understood to indicate a significant effect on students' understanding with the use of the peer reading strategy. In the context of this study, the significant effect was determined by the average learning gains. The average learning gains denote the overall improvement in students' knowledge, skills, or performance after an instructional intervention, which provide a quantifiable measure of how much students have improved compared to their starting point. They are typically done by subtracting the students' post-test and pre-test scores.

Table 6 summarizes the gain mean scores across three reading comprehension levels: literal, inferential, and critical, for two genres: short story and poetry. Across all categories, the results reflect a moderate improvement, indicating that instruction led to meaningful learning gains across both genres: short story and poetry.

**TABLE V: MEAN GAIN SCORES ON STUDENTS' READING COMPREHENSION**

Levels	Genre	Gain Mean Score	SD	Total Items	% Gain Mean Score	Qualitative Description
Literal	Short Story	1.74	1.44	8	22%	Moderate
	Poetry	1.34	0.92	4	33%	Moderate
	Average	1.54	1.18		28%	Moderate
Inferential	Short Story	1.84	1.29	6	31%	Moderate
	Poetry	1.23	0.93	3	41%	Moderate
	Average	1.53	1.11		36%	Moderate
Critical	Short Story	1.57	1.61	6	26%	Moderate
	Poetry	1.30	1.06	3	43%	Moderate
	Average	1.43	1.33		35%	Moderate



**Legend:**

Scale	Range	Qualitative Description
5	70%-100%	Very High (VH)
4	45%-69%	High (H)
3	19%-44%	Moderate (M)
2	5%-18%	Low (L)
1	4% and below	None (N)

As gleaned in Table V above, for the literal level, short stories had a higher mean gain score ( $M = 1.74$ ) than poetry ( $M = 1.34$ ), but poetry produced a higher percentage gain (33% vs. 22%). This can be attributed to the short story's text's accessibility, richer contextual clues, and more familiar format, which collectively make it easier for students to improve their literal comprehension when supported by peer reading strategies.

In the context of the study, the higher gain in poetry may also suggest that peer reading was particularly effective in helping students decode and understand the literal meanings of figurative or abstract language commonly found in poems. On average, literal comprehension improved by 28%, indicating that students showed enhanced ability to retrieve directly stated information after the intervention.

At the inferential level, short stories again had the higher raw gain ( $M = 1.84$ ), while poetry showed the highest percentage gain at 41%. The average gain in inferential skills was 36%, suggesting students became better at drawing logical conclusions and interpreting implied meanings—skills central to deeper comprehension.

In terms of critical comprehension, poetry again yielded the highest percentage gain (43%) compared to short stories (1.30 vs. 1.57). This suggests that students made significant improvements in analyzing, evaluating, and judging ideas in poetic texts. The average gain for critical comprehension stood at 35%, which is consistent with the moderate gains seen in other levels.

Although short stories consistently produced higher raw gain scores, poetry led to greater percentage improvements, especially in inferential and critical comprehension. This suggests that poetry, while potentially more challenging, may be more effective in fostering higher-order thinking when paired with targeted instruction.

The above results showed that there existed observable differences between the mean gain scores of the students after being exposed to the peer reading strategy.

### III. CONCLUSION

Participants' reading comprehension at all comprehension levels whether high or low, is dependent on the genre, pre-reading/ background knowledge, and the receptiveness of the readers.

The statistical results of the study confirm that the peer reading strategy brought significant and meaningful improvements in students' reading comprehension across all cognitive levels—literal, inferential, and critical.

Student-selected peer reading strategy not only supports comprehension at the surface level but also cultivates critical literacy skills essential for academic success.

### ACKNOWLEDGMENT

The once idle but now motivated researcher cannot conclude this work without expressing heartfelt gratitude to the individuals who provided unwavering support and guidance from the very beginning to the successful completion of this research. Primarily, her enormous appreciations go to the **Almighty Father** from whom the researcher gets her daily strength in battling against every inch of challenge in life;

To **Mr. Ronilo M. Banaybanay & Mrs. Daina R. Banaybanay**, her parents, whose extraordinary love stuffed her with so much gratitude in doing this output, and to **Ryan, Michelle, Justine**, and relatives whose fused moral support stirred her all the way;

To her husband **Flexer P. Elandag**, for the advices, motivation, and unending financial support. A very big thank you from the bottom of the author's heart. I LOVE YOU;





To **Dr. Carmelin P. Mosa**, her ever-God-centered and nurturing adviser, whose unwavering commitment and dedication to refining this research remained steadfast, tirelessly sharing her expertise without hesitation.

To **Dr. Ronita E. Talingting** the chair of the panel of examiners with **Dr. Annabelle N. Diaz**, **Dr. Alicia Z. Maghuyop**, **Dr. Jay Mark V. Fulgarinas**, as members, whose professional services thoroughly refined this product of endeavor;

To **Sir Manuel O. Caberte**, the Schools Division Superintendent, whose approval for letting the researcher conduct her study inspired her more;

To **Madam Giovanette D. Espejon**, her School Principal, whose consent and support in allowing her to do the study blazed her even more;

To **Union National High School Faculty** for understanding, consideration, and pieces of advice given to the researcher, and to **Union National High School Students (Grade 7 Charles Darwin)**, the ever-active research participants, whose precious time, attention, not to mention the effort, cooperation beyond doubt that made this research feasible;

Lastly, to the researcher's classmates and travel companions, whose presence transformed every challenging journey into one filled with joy and unforgettable moments.

## REFERENCES

- [1]. Anji, A. A., Malik, A. M., Cinco, C. B., Dela Cruz, J. B., Madriñan, N. L., Tomanggong, C. S., Andoyo, J. T., & Pondang, K. A. (2025). Lexical ability and reading comprehension among senior high school students. *International Journal of Research and Innovation in Social Science (IJRISS)*, 9(2). <https://dx.doi.org/10.47772/IJRISS.2025.9020251>. Retrieved May 1, 2025
- [2]. Alvarado, E., Adriatico, C.(2020). Reading motivation vis-s-vis academic performance. *Open Journal of Social Sciences*. 2019;7(6):92–106. <https://doi.org/10.4236/jss.2019.7.6007>. Retrieved May 1, 2025
- [3]. Bordey, H. (2025, April 30). *PSA: Over 18M high school grads don't understand what they read*. *GMA Integrated News*. <https://www.gmanetwork.com/news/topstories/nation/944513/over-18m-filipino-high-school-graduates-can-t-comprehend-2024-psa-study/story/>. Retrieved May 2, 2025
- [4]. Brandon, L. (2021). Strategies to improve reading comprehension. TeachHUB
- [5]. Brown, K. M., & Mangione, T. L. (2002). Qualitative analysis on stage: Making the research process more public. *Educational Researcher*, 31(7), 28-38.
- [6]. Campbell, D. T., & Stanley, J. C. (1963). Experimental and quasi-experimental designs for research. Houghton Mifflin.
- [7]. Caraig, R. V., & Quimbo, M. A. T. (2022). Assessing reading comprehension difficulties in core science subjects of senior high school students in a private school in Calamba City, Philippines. *International Journal of Curriculum and Instruction*, 14(3), 1983–2010. Available online at <https://files.eric.ed.gov/fulltext/EJ1364296.pdf>. Retrieved May 1, 2025
- [8]. Chi, C. (2024, January 11). *Explainer: With students' poor literacy, are all teachers now 'reading teachers'?* *Philstar.com*. <https://www.philstar.com/headlines/2024/01/11/2325063/explainer-students-poor-literacy-are-all-teachers-now-reading-teachers>. Retrieved May 1, 2025
- [9]. Cohen, J. (2013). *Statistical power analysis for the behavioral sciences*. Elsevier Science. <https://ebookcentral.proquest.com/lib/kxp/detail.action?docID=188284>
- [10]. Deci, E. L., & Ryan, R. M. (1985). Self-determination theory: Basic psychological needs in motivation, development, and wellness. Guilford Publications.
- [11]. Department of Education. (2018). *Philippine informal reading inventory manual* (1st ed.)
- [12]. Donald, W.E. & Ford, N. (2023) Fostering social mobility and employability: the case for peer learning, *Teaching in Higher Education*, 28(3), 672-678, <https://doi.org/10.1080/13562517.2022.2145467>



- [13]. Gal, C., & Ryder, C. H. (2025). Unlocking potential: Comparing collaborative and traditional learning methods for students with learning disabilities in special education classrooms. *Social Sciences & Humanities Open*, 11, 101521. <https://doi.org/10.1016/j.ssaho.2025.101521>. Retrieved May 1, 2025
- [14]. Garcia-Melgar, A., East, J. and Meyers, N. (2015). Hiding in plain sight: the 'relationship' in peer-assisted learning in higher education. *Journal of Learning Development in Higher Education*. <https://doi.org/10.47408/jldhe.v0i0.361>
- [15]. Graham, S., Liu, X., Aitken, A., Ng, C., Bartlett, B., Harris, K. R., & Holzapfel, J. (2018). Effectiveness of literacy programs balancing reading and writing instruction. A meta-analysis. *Reading Research Quarterly*, 53(3), 279-304. Doi:10.1002/rrq.194
- [16]. Hasnani, & Ismail, A. (2020). Enhancing students' reading ability through Peer-Assisted Learning Strategies (PALS). *Lentera Pendidikan*, 23(2), 260-270.
- [17]. Harianingsih, I., & Jusoh, Z. (2022). A review of studies on cooperative learning in language classroom seen from students' attitudes. *International Journal of English and Applied Linguistics (IJEAL)*, 2(1), 62–74. <https://doi.org/10.47709/ijeal.v2i1.1423>
- [18]. Imam, O. A. (2016). Effects of reading skills on students' performance in science and mathematics in public and private secondary schools. *Journal of Education and Learning*, 10(2), 177-186.
- [19]. Jin, T., Liu, X., & Lei, J. (2020). Developing an effective three-stage teaching method for collaborative academic reading: evidence from Chinese first-year college students. *Journal of English for Academic Purposes*, 45, 100853. <https://doi.org/10.1016/j.jeap.2020.100853>
- [20]. Kivak, R. (2024). *Reading motivation*. EBSCOHost. <https://www.ebsco.com/research-starters/psychology/reading-motivation>
- [21]. Kheang, T., Chin, P., & Em, S. (2024). *Reading motivation to promote students' reading comprehension: A review study*. <https://doi.org/10.13140/RG.2.2.25641.81766>. Retrieved May 1, 2025
- [22]. Krashen, S. D. (1982). *Principles and practice in second language acquisition*. Pergamon Press.
- [23]. Lee, L., & Szczerbinski, M. (2021). Paired Reading as a method of reading intervention in Irish primary schools: an evaluation. *Irish Educational Studies*, 40(3), 589–610. <https://doi.org/10.1080/03323315.2021.1927797>. Retrieved May 1, 2025
- [24]. Liu, X., Gu, M. M., & Jin, T. (2021). Strategy use in collaborative academic reading: Understanding how undergraduate students co-construct comprehension of academic texts. *Language Teaching Research*. Advance Online Publication. <https://doi.org/10.1177/13621688211025688>
- [25]. Loes, Chad N. 2022. "The Effect of Collaborative Learning on Academic Motivation." *Teaching & Learning Inquiry* 10. <https://doi.org/10.20343/teachlearningqu>. Retrieved May 1, 2025
- [26]. Nanda, D. W., & Azmy, K. (2021). Poor reading comprehension issue in EFL classroom among Indonesian secondary school students: Scrutinizing the causes, impacts and possible solutions. *Englisia: Journal of Language, Education, and Humanities*, 8(1), 1–13. <https://jurnal.arraniry.ac.id/index.php/englisia/article/view/6771>
- [27]. Oczkus, L. D. (2018). Reciprocal teaching at work: Powerful strategies and lessons for improving reading comprehension.
- [28]. Onyekuru, B. U., & Ibegbunam, J. O. (2020). Effectiveness of paired reading strategy on reading ability of struggling readers in primary schools in Uyo L.G.A, Akwa Ibom State. *American Journal of Creative Education*, 3(1), 1-12.
- [29]. Pavo, M. Á. (2021). Collaborative learning for virtual higher education. *Learning, Culture and Social Interaction*, 28, 100437. <https://doi.org/10.1016/j.lcsi.2020.100437>. Retrieved May 1, 2025
- [30]. Philippine Statistics Authority. (2024). *2024 Functional Literacy, Education and Mass Media Survey*. <https://rssocaraga.psa.gov.ph/content/nine-10-caraganons-have-basic-literacy-while-six-10-are-functionally-literate>





- [31]. Prihatini, S. O. (2020). An analysis of students' difficulties in reading comprehension at SMA Negeri 1 Sukodadi Lamongan. *E-Link Journal*, 7(1), 21–29. <https://doi.org/10.30736/ej.v7i1.261>. Retrieved April 28, 2025
- [32]. R Core Team (2021). *R: A Language and environment for statistical computing*. (Version 4.1) [Computer software]. Retrieved from <https://cran.r-project.org>. (R packages retrieved from MRAN snapshot 2022-01-01).
- [33]. Reading Horizons. (2020). The Four Keys to Motivating Struggling Readers. Retrieved from <https://www.readinghorizons.com>
- [34]. Septia, N. W., Indrawati, I., Juriana, J., & Rudini, R. (2022). An analysis of students' difficulties in reading comprehension. *EEdJ: English Education Journal*, 2(1), 11–22. <https://doi.org/10.32923/eedj.v2i1.2519>. Retrieved May 1, 2025
- [35]. Smith, C.P. (2018). Body-based activities in secondary geometry: An analysis of learning and viewpoint. *School Science and Mathematics*, 118(5), 179–189. <https://doi.org/10.1111/ssm.12279>
- [36]. The jamovi project (2022). *jamovi*. (Version 2.3) [Computer Software]. Retrieved from <https://www.jamovi.org>.
- [37]. Toste, J. R., Didion, L., Peng, P., Filderman, M. J., & McClelland, A. M. (2020). A meta analytic review of the relations between motivation and reading achievement for K–12 students. *Review of Educational Research*, 90(3), 420–456. <https://doi.org/10.3102/0034654320919352>. Retrieved April 28, 2025
- [38]. Wagino, W., Maksun, H., Purwanto, W., Krismadinata, K., Suhendar, S., Koto, R. D. (2023). Exploring the full potential of collaborative learning and e-learning environments in universities: A systematic review. *TEM Journal*, 12(3), 1772–1785. DOI: 10.18421/TEM123-60, May 2025
- [39]. Yiğit, F., & Durukan, E. (2023). Effect of Peer-Assisted and Learning Together Techniques on 6th Grade Students' Reading Comprehension Achievement and Attitudes towards Reading. *International Journal of Education and Literacy Studies*, 11(2), 45–54. <https://journals.aiac.org.au/index.php/IJELS/article/view/7533>. Retrieved April 28, 2025

