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Improving the Reading Comprehension of Grade III Learners through the Use of Story Maps

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A B S T R A C T

Reading comprehension plays a vital role in a child's cognitive growth, helping them gain knowledge and build mental skills. This study explored how using story maps could improve the reading comprehension of Grade III learners in an online class setting. A pre-experimental one-group pretest-posttest design was used to measure changes before and after the intervention. The study involved quantitative data collection, analyzed using the Paired Sample T-test through SPSS software. Results showed a significant improvement in learners' reading comprehension after using story maps. These findings suggest that story mapping is an effective tool for enhancing comprehension skills, and it may be a valuable strategy for teachers conducting online classes with young learners.

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INTRODUCTION

Reading Comprehension is a significant skill since it consolidates in the development of the mind by offering a wealth of knowledge and lessons, as well as consolidating mental muscles. Reading is a critical skill which makes one successful in life, and every person is required to comprehend what he or she reads. This will also mean improved writing strategies (Asio et al., 2023) and public speaking (Asio et al., 2023; Asio et al., 2024).

According to Juniardi and Irmawanty (2011), reading comprehension simply means understanding what you're reading. Odwan (2012) explains it as a process that involves recognizing words, building vocabulary, and making sense of the overall meaning of a text. Dougherty-Stahl (2004) adds that strong comprehension comes from using different strategies like summarizing, asking questions, using prior knowledge, visualizing, predicting, and organizing ideas. Schmitz et al. (2017) emphasize that the type of text also affects how well students understand what they read. Miller (2002) points out that when students slow down and think about their reading, they become more aware of their thoughts and start using strategies that help them better understand the text.

To comprehend text, developing readers need basic reading proficiency followed by instruction in comprehension strategies (Tierney, 1982). Using differentiated instruction is a good example (Pasubillo & Asio, 2023). Story mapping is a reading comprehension technique proven to help secondary students with reading difficulties (Boon et al., 2015). This method guides learners to identify important story components from a text and organize them into a story map (Fore et al., 2017). Through this visual organization, students can more easily recognize and understand different parts of the narrative, which enhances their overall comprehension of the material (Boon et al., 2015).

Davis and McPherson (1989) describe a story map as a visual diagram that outlines all the elements of a story and how they are connected. According to Smith (1990), these graphic tools give students a visual aid that helps them break down and organize the story's content into clear, structured parts—essentially guiding them through the narrative.

Research has shown that graphic organizers, like the Story Mapping Strategy, are effective tools for improving reading comprehension (Boulineau et al., 2004). This strategy helps students identify key story elements—such as the main character, setting, and resolution—by organizing them visually.

According to Jiang and Grabe (2007), using visual aids like story maps makes it easier for students to process and understand the text. These tools support learners by breaking down the story structure in a clear and manageable way.

The purpose of this study is to assess the reading comprehension of Grade three learners in an online class using a story map to determine if this intervention will be accommodated or neglected.

LITERATURE REVIEW

The use of story maps in relation to students' reading comprehension of stories has been explored in previous research. Hasanah (2016) found that using

story maps as a teaching tool for narrative texts can enhance students' ability to understand what they read. According to Klinger et al. (2007), reading comprehension involves creating meaning by combining several complex skills, such as decoding words, applying background knowledge, and reading fluently.

Reading Comprehension is the skills need to be taught. To be able to be well in reading comprehension, Learners need to actively consider what they read. Learner's comprehension skills are enhanced when they practice using media and instrument to monitor their understanding and boost their innate curiosity about the stories they read.

Liu (2004), as cited in Wahyu Nugroho (2017), noted that many studies on reading comprehension explore how visuals—such as graphics or images that reflect parts of the text—can help readers understand factual content more effectively. Pransiska (2018) supports this idea by highlighting that short stories have distinct features, making them especially useful for developing students' reading comprehension skills. Their structure and content make them ideal for engaging learners and enhancing understanding.

To improve the learners' reading comprehension, the teacher should provide strategies that is appropriate the learners' interest. In addition, Chair (2002) in Megawati (2017), "Reading comprehension is the process of constructing meaning involving the written language by interpreting textual information in the light of prior knowledge and experiences using appropriate and efficiency comprehension strategies. Antonnaci and O'Callaghan (2012) suggest that the story mapping strategy offers a visual representation of story elements, aiding readers in remembering, comprehending, and retelling the story they listen to and read. A story maps provide learners with a visual representation of the parts of the story to help them follow the narrative. Using story maps as a strategy in reading a story helps learners organize their thoughts and ideas around the text elements, allowing them to understand stories on a deeper level; by doing so, learners improve their reading comprehension.

Using Story Maps makes it easier for students to comprehend narrative text because it has a graphic representation that will help them to understand the stories chronologically.

METHOLOGY

Research Design

This quantitative study used a pre-experimental design with one group, measuring participants before and after the intervention. According to Creswell (2008), quantitative research involves defining a clear focus, developing specific questions, gathering measurable data, analyzing it statistically, and ensuring objectivity throughout.

Allen (2017) explains that the one-group pretest-posttest design is often used in behavioral research to evaluate the effects of a treatment by comparing scores before and after the intervention (Ary et al., 2010). In this study, the researcher applied this design to assess the reading comprehension of Grade three students using Story Maps.

Research Participants

The respondents of the study are the online learners of Grade III. These are the learners enrolled during the School Year 2021 – 2022 in one of the public elementary school at Olongapo City. They were selected as respondents because they experienced the shift from traditional classroom learning to online learning brought about the COVID – 19 pandemic. The selection focused specifically on Grade III learners to explore their unique experiences, challenges and adaptations in the early years of primary education, where foundational skills in reading, writing, and numeracy are being developed.

Instrumentation and Data Collection

This study utilized an online test as the primary tools to gather data, which included a pre – test and post – test to measure the changes in the respondents' reading comprehension. According to Lodico et al (2006: 178) a pre – test is administered prior to the implementation of test the experimental treatment to establish a baseline understanding of the participants' abilities. A post-test evaluates a specific attribute or characteristic in experimental participants after the administration of a treatment (Creswell, 2008, p. 297).

The Early Grade Reading Assessment (EGRA) was used to evaluate the reading comprehension levels of the participants. EGRA is a standardized tool that measures basic reading skills like letter recognition, phonemic awareness, fluency, and comprehension. By comparing the pre-test and post-test results from EGRA, the study gathered clear data to determine how effective the intervention was and to track improvements in the students' reading comprehension.

Tools and Data Analysis

The data for this study were collected through an online test administered via Google form. After data collection, the responses were downloaded and organized using Microsoft Excel, then further structured, analyzed, and processed using the Statistical Package for the Social Sciences (SPSS) software. To address the specific research questions and determine the effectiveness of the intervention, appropriate statistic treatment was applied.

The paired t – test was performed to see if there were any differences or changes evaluation test scores of Grade Three online learners' Reading Comprehension before and after the intervention

RESEARCH RESULT

Table 1. Reading Comprehension Levels of the Learners based on Early Grade Reading Assessment (EGRA)

Proficiency Level	Frequency	Percentage
Beginning	0	0.00%
Developing	6	30.00%
Consistent	14	70.00%
Total	**20**	**100.00%**

Table 1, reveals the results of the respondents' Reading Comprehension level based on the Early Grade Reading Assessment (EGRA). There are different numbers of respondents for each Reading Comprehension levels, beginning has 0, developing have 6 respondents, and consistent have 14 respondents with the total of 20 respondents.

The Early Grade Reading Assessment (EGRA) is an oral assessment given to children in the early grades to determine their core literacy skills. Developed to align with international standards the EGRA has been adapted by various educational bodies, including the Department of Education (DepEd) in the Philippines to enhance literacy measurement (Abejuela et al., 2023). Moreover, it serves as a critical tool for program monitoring and reporting, helping ensure that literacy initiatives are effective and accountable (Piper & Zuilkowski, 2015) The report *Early Grade Reading: Igniting Education for All* presented EGRA results from various continents, highlighting the percentage of students who scored zero—meaning they couldn't read a single word in a grade-level passage—across different languages and countries (Gove and Cvelich, 2011). In the local context, community-based needs assessments have similarly highlighted the urgency of addressing reading and mathematics literacy, particularly through initiatives led by pre-service teachers during their immersion programs (Obispo, 2023).

Table 2. Paired Samples Statistics of Pre – Test and Post – Test

Test	M	N	SD	SE
Pretest	7.90	20	1.21	0.27
Posttest	9.45	20	0.76	0.17

Table 2 presents the descriptive statistics of the pre-test and post-test scores of the participants, highlighting the mean, sample size (N), standard deviation, and standard error of the mean for each test. A total of 20 participants took part in both the pre-test and post-test.

The mean score of the pre-test was 7.90, with a standard deviation of 1.20961 and a standard error of 0.27048, indicating moderate variation in students' initial reading comprehension performance. Meanwhile, the post-test mean score increased to 9.45, with a smaller standard deviation of 0.75915 and a standard error of 0.16975, suggesting improved and more consistent performance after the intervention.

The rise in the average score from the pre-test to the post-test indicates that learners' reading comprehension improved following the intervention. Furthermore, the smaller standard deviation in the post-test shows that the scores were more closely grouped around the average, suggesting that the students' progress was more consistent overall.

While Table 2 provides insight into the direction and magnitude of the score differences, it does not determine whether this difference is statistically significant. To assess significance, one must refer to the results of the paired sample t-test (usually found in Table 3). Nonetheless, the descriptive statistics

strongly suggest that there was a measurable improvement in learners' performance.

Table 3. Paired Samples Correlations of Pre – Test and Post – Test

	N	Correlation	Sig
Pair 1 PRETEST & POSTTEST	**20**	**.510***	**.022**

*Note: *p < .05*

Table 3 displays the correlation between the pre-test and post-test scores of the 20 participants. The correlation coefficient is reported as r = .510, with a significance level (p-value) of .022, which is below the conventional threshold of p < .05. This indicates that the correlation is statistically significant.

The correlation coefficient of .510 suggests a moderate positive relationship between the pre-test and post-test scores. This means that students who scored relatively high on the pre-test also tended to score high on the post-test, and similarly, those with lower pre-test scores generally had lower post-test scores. This relationship implies that the participants' performance remained relatively consistent in rank order before and after the intervention, even though the mean scores improved.

The statistically significant correlation further supports the reliability of the observed changes in performance. It suggests that the improvement in scores is not random, and that the intervention may have had a consistent effect across different levels of learners

Table 4. Paired Samples Test of Pre – Test and Post – Test

Comparison	M Difference	SD	*t*	*p* (2-tailed)
Pretest – Posttest	-1.55	1.05	-6.60	.000*

*Note: df= 19; *p < .05*

Table 4, Paired Samples Test. The table shows the average difference between the two condition, Standard Deviation and Standard Error. The t – value is – 6.601, degrees of freedom (df) 19 and p – value is .000. The p – value is lower than the alpha level 0.05. The results, there is a significant difference between the pre – test and post – test. (before and after the use of story maps)

The t – test is one of inferential statistics. It's used to see I there's a significant difference between two groups' means. Paired t – tests are used to see if the means of two paired measurements are significantly different, such as pre – test and post – test scores. In the tables above, when comparing pre – test and post – test results, there was an increase in the post – test when a story map intervention was used. The learners' ability to identify the problem and solutions in the story improved by the end of the intervention. It shows on tables that there is a significant difference in reading comprehension of Grade III online learners before and after using the story maps.

CONCLUSION

This study aimed to enhance the reading comprehension of Grade III online learners by using Story Maps. The Story Maps were designed to support students in better understanding the texts they read. The study concluded the following:

1. Students performed better on tests when a graphic organizer, like a story map, was used compared to when it was not.
2. Using graphic organizers or story maps helped learners grasp the meaning of their reading more effectively.
3. There was a significant improvement in the reading comprehension of Grade III learners after using story maps compared to before.

RECOMMENDATION

The researcher came up with the following recommendations based on the findings in this study:

1. At the beginning of the school year, story maps should be introduced as a reading strategy to familiarize students with its structure and purpose.
2. The teacher should use story maps as strategy when learners' are reading stories.
3. When using the story map, teachers should continue prompt and guide students as needed, but they should attempt to encourage students toward using the story map independently.

FUTURE STUDY

Future research studies could explore the long-term effects of the use of story maps on reading comprehension of students at different grade levels and channels of learning, both face-to-face and blended learning. Other studies could compare the relative effectiveness of different graphic organizers in enhancing some reading abilities, such as inferencing, summarizing, and the location of main ideas. Additionally, qualitative research using student surveys and observation by teachers could give useful data on the effect of story maps on students' engagement and comprehension in performing reading activities.

REFERENCES

Abejuela, H. J. M., Akut, K. B., Balane, C. T., & Del Rosario, A. S. C. (2023). Assessment of the Reading Curriculum in Basic Education in the Philippines Context. *International Journal of Language Education*, *7*(1), 26-45.

Allen, M. (2017). The SAGE encyclopedia of communication research methods. SAGE Publications.

Antonacci, P. A., & O'Callaghan, C. M. (2012). Promoting literacy development: 50 research-based strategies for K–8 learners. Pearson.

Ary, D., Jacobs, L. C., Razavieh, A., & Sorensen, C. (2010). Introduction to research in education (8th ed.). Wadsworth.

Asio, J. M., Mobo, C., Anico, M. J., Calderon, A. A., & Capistrano, M. (2023). Writing Strategies of Freshmen and Sophomore Students in a Tertiary Institution: Implications to English Teacher. *Asian Journal of Applied Education (AJAE)*, *2*(4), 567-580. https://doi.org/10.55927/ajae.v2i4.5895

Asio, J. M., Pasubillo, M. A., & Valenzuela, C. L. (2023). EDUTOKING: Improving the English-speaking skills of grade 9 learners using Tiktok-Based activities. *Journal of English as A Foreign Language Teaching and Research*, *3*(1), 57-70.

Block, C. C., & Pressley, M. (2002). Comprehension instruction: Research-based best practices. Guilford Press.

Boon, R. T., Fore, C., & Spencer, V. G. (2015). Story mapping as a strategy to improve reading comprehension of students with learning disabilities. Intervention in School and Clinic, 50(4), 212–218.

Boulineau, T., Fore III, C., Hagan-Burke, S., & Burke, M. D. (2004). Use of story-mapping to increase the story-grammar text comprehension of elementary students with learning disabilities. Learning Disabilities Quarterly, 27(2), 105–121.

Chair, R. (2002). In Megawati, D. (2017). Story mapping: Improving students' reading comprehension. English Language Teaching Journal, 2(1), 32–38.

Creswell, J. W. (2008). Educational research: Planning, conducting, and evaluating quantitative and qualitative research (3rd ed.). Pearson.

Caingal, C. A., Alla, E. R. N., Bulan, W. J., Marcial, M. B., & Asio, J. M. R. (2024). English Public Speaking Anxiety of Third-Year Students from a Tertiary Education Institution. *Journal of Educational Analytics (JEDA)*, *3*(1), 9-22.

Davis, Z. T. (1994). Effects of prereading story mapping on elementary readers' comprehension. *The Journal of Educational Research*, *87*(6), 353-360.

Dougherty-Stahl, K. A. (2004). Proof, practice, and promise: Comprehension strategy instruction in the primary grades. The Reading Teacher, 57(7), 598–609.

Dubeck, M. M., & Gove, A. (2015). The early grade reading assessment (EGRA): Its theoretical foundation, purpose, and limitations. *International Journal of Educational Development*, *40*, 315-322.Block, C., & Pressley, M. (2002) Comprehension instruction: Research – based practices. Guilford Press: New York, NY.

Hasanah, N. U. (2016). Improving Students' Reading Comprehension in Narrative Texts With the Medium of Story Map.

Jiang, X., & Grabe, W. (2007). Graphic organizers in reading instruction: Research findings and issues. Reading in a Foreign Language, 19(1), 34–55.

Klinger, J. K., Vaughn, S., & Boardman, A. (2007). Teaching reading comprehension to students with learning difficulties. Guilford Press.

Liu, M. (2004). The effect of multimedia annotations on vocabulary acquisition and reading comprehension: A meta-analysis. In Wahyu Nugroho (2017). Journal of ELT Research, 2(1), 45–53.

Millah, R. (2018). Utilizing Story Mapping Strategy to Improve Students' Reading Comprehension in Finding Main Idea. *NOBEL: Journal of Literature and Language Teaching*, *9*(1), 57-72.

Miller, D. (2002). Reading with meaning: Teaching comprehension in the primary grades. Stenhouse Publishers.

Obispo, K. P. C. (2023). Initial Assessment on Learners' Need in a Community: Basis for Pre-service Teachers' Teaching Immersion. Formosa Journal of Multidisciplinary Research, 2(3), 641-648.

Pasubillo, M. A. C., & Asio, J. M. R. (2023). Virtual Differentiated Instructions: Effects on English Language Proficiency of Grade 9 Students. *Contemporary Journal of Applied Sciences (CJAS)*, *1*(2), 103-114.

Piper, B., & Zuilkowski, S. S. (2015). Assessing reading fluency in Kenya: Oral or silent assessment?. *International Review of Education*, *61*(2), 153-171.

Pransiska, T. E. (2018). The use of short story as materials in reading comprehension in MTS Yapi Pakem Sleman Yogyakarta grade IX.

Reutzel, D. R. (1984). Story mapping: An alternative approach to comprehension. *Literacy Research and Instruction*, *24*(2), 16-25.

Reutzel, D. R. (1985). Story maps improve comprehension. *The Reading Teacher*, *38*(4), 400-404.

Reutzel, D. R. (2015). Investigating a Synthesized Comprehension Instructional Strategy: The Cloze Story Map. The Journal of Educational Research, 6(79), 343-349. https://doi.org/10.1080/00220671.1986.10885703

Schmitz, A., Gräsel, C., & Rothstein, B. (2017). Students' genre expectations and the effects of text cohesion on reading comprehension. *Reading and Writing*, *30*(5), 1115-1135.

Smith, F. (1990). Understanding reading (4th ed.). Lawrence Erlbaum Associates.

Splittstoesser, J. (2020). The effectiveness of story maps on reading comprehension.

Syarief, I. F., Apsari, Y., & Dewi, A. N. K. (2020). The use of book story in teaching reading comprehension. *Professional Journal of English Education*, *3*(2), 276-282.

Tierney, R. J. (1982). Learning from text: A framework for improving classroom practice. Reading Education Report, 32, 1–24.

Williams, C. (2007). Research methods. Journal of Business and Economic Research, 5(3), 65–72. https://clutejournals.com/index.php/JBER/article/view/2532

Zimmerman, E. (2020). Locating visual communication across disciplines: How visual instruction in composition textbooks differs from that in science-writing textbooks. *Across the Disciplines*, *17*(1-2), 59-80.