

Research Article

Improving Reading Comprehension Using a Contextualized Metacognitive Strategies of 10th Grade Learners

Osias R. Del Valle

Palm Beach Maritime Academy, Florida, USA

Email:- Jr.delvalleosias@gmail.com

Abstract: Metacognitive reading strategy has been recognized in the literature as an effective instructional approach to address reading gaps. However, the use of such approach is not much explored in many classrooms in the Philippines. This study attempts to blend the metacognitive with contextualization procedure to enhance effectiveness. It is considered as a timely solution to address the reading comprehension issues among Filipino learners considering the dismal performance in international assessments.

The present study aims to determine the effectiveness of contextualized metacognitive reading strategies (CMRS) on the reading comprehension of Grade 10 students. A total of 59 San Francisco High School students in City District 1-Quezon City participated in this quasi-experimental study. A pretest-posttest was used to measure the students' reading comprehension performance focusing on competencies such as identifying the meaning of unfamiliar word synonyms and antonyms, identifying the meaning of unfamiliar words using context clues, comparing and contrasting using a graphic organizer, making generalizations, providing supporting details for a topic sentence/claim, noting important details, identifying the characters through characterization, identifying sensory images, getting the main idea or theme of a text, using figures of speech, identifying author's purpose and answering constructed-response questions or formulating a statement of opinion or assertion.

Data showed that the student's reading performance during the pretest is below the average (Mean= 30.97, SD= 6.277), and the posttest result is above average rating (Mean= 47.10, SD= 12.382). The mean score in the post-test is notably higher than in the pretest as evidenced by a mean difference of 16.13. This mean gain definitely indicates for a huge improvement in the reading comprehension performance of the students when exposed to the CMRS. Moreover, the Wilcoxon signed rank test yielded a p-value of <0.001 which signifies for a statistical significance on the mean scores between the pretest and posttest.

Certainly, the study does not only provide empirical evidence supporting the effectiveness of CMRS in addressing reading gaps, but also opens an appropriate solution to address the reading comprehension problems that evidently exists in many classrooms in the country.

Keywords: Contextualized Metacognitive, Metacognitive, Contextualization, Reading Comprehension

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1. Introduction

Reading comprehension is a crucial skill that significantly influences each learner's overall cognitive development and academic achievement. According to Vaughn et al. (2024), reading comprehension is a crucial component of every school curriculum because students at different levels must learn and understand various expressions and use the knowledge they gained in the exam. Mbato (2013) stated that reading comprehension plays a central role in achieving higher education goals, including implementation, analysis, evaluation, and design. Without reading comprehension, students cannot access these important advanced techniques. The benefits of reading comprehension are many and encouraging. It improves students' academic performance and helps students improve their ability to understand and navigate the world around them.

With emphasis on reading comprehension, many countries have mandated its education ministries or departments to design curriculum and instruction that ensures comprehension ability of all learners. In the Philippines, several efforts have been made by the Department of Education (DepEd) to foster better reading comprehension ability. To make every learner a proficient reader and bring together all education and literacy champions and supporters to take an active role in teaching Filipino children how to read and become educated for life, the Department of Education, under Memorandum No. 173, s. 2019, and through External Partnerships Service and its Brigada Eskwela Program, every learner is encouraged to develop a love for reading to help them become functionally literate individuals. Also, the goal of the schools is to help learners develop their reading skills. The agency strengthens the Every Child A Reader Program. It encourages all offices at the Central Office, Regional Offices, Schools Division Offices, and school levels to respond to Hamon: Bawat Bata Bumabasa (3Bs Initiative) to make every learner a reader at their grade level.

On a different note, in spite of the efforts made by DepEd to improve reading comprehension, international assessments show that many students have difficulty reading and comprehending at the required level, leading to poor learning outcomes. According to the 2018 OECD report based on PISA examinations, the Philippines ranked lowest in reading comprehension. One in four learners struggled with reading comprehension and related skills (San Juan, 2019). PISA assesses critical and creative thinking, which teachers should prioritize in all subjects. The 2022 PISA report showed the Philippines scoring 120 points below average in math, reading, and science. This indicates a five-to-six-year learning gap (DepEd). National assessments revealed early-grade learners struggling with language, literacy, and numeracy standards. Low English, Math, and Science achievement is linked to poor reading comprehension. Junior high school students aim to exhibit critical literacy, but many struggle with basic literacy. The McCall-Crabbs Reading Test (2021-2022) showed students failing to meet required reading levels. The Department of Education promotes reading programs and strategies under ECARP and the 3Bs Initiative to address this. Definitely, the dismal performance on Filipino students to several assessments is an indication for the need of appropriate actions and interventions.

This paper provides a solution to the existing problem on the poor reading comprehension skills of 10th grade learners in the San Francisco High School in City District 1- Quezon City,

Philippines. This school was considered due to the reported issues on the reading comprehension ability among high school students. On the literacy program at hand, our junior high school students are expected to exhibit critical literacy. The reality, though, is that some still struggle with basic literacy. They do not read at their expected reading level. This is reflected in the latest report on the McCall-Crabbs Reading Test for S.Y. 2021-2022 of San Francisco High School in City District 1- Quezon City. The test was administered virtually during the height of the pandemic. Of 1,562 Grade 10 students enrolled for the school year, 1087 online learners took the reading test. Results showed that some students could not read and comprehend the required level. These results indicate the need for a massive creation and implementation of specific and accurate reading programs and strategies for every learner.

Contextualizing strategies in the teaching-learning process has been known highly effective in the literature. Contextualization refers to the educational process of relating the curriculum to a particular setting, situation, or area of application to make the competencies relevant, meaningful, and useful to all learners. It benefits teachers and students; It increases interest, motivation, and reading retention (Baddane and Ennam, 2023). Within the process of contextualization, teachers can use appropriate content to enhance reading and encourage connections to knowledge, impacting students' lives and experiences (Atondo, 2022). By creating a learning environment that reflects real-world situations, teachers help students put what they have learned into practice, resulting in better learning outcomes.

In the context of this study, metacognition, or thinking about thinking, has become an important part of learning and knowledge, which is important in language classrooms and everyday life. According to Ceylan and Harputlu (2015), metacognition is important and is the key to revealing the potential of reading comprehension. Good metacognitive strategies are more than reading and understanding; They need a proper metacognitive understanding of the text and recognition of human understanding. Readers with accurate metacognitive-comprehension skills can effectively manage their learning, thus changing the learning environment. Though metacognitive strategies have been proven highly effective in improving students' reading comprehension, it is not however utilized nor explored in many local schools in the Philippines.

Hence, this study was conducted considering the concept that metacognition plays an essential role in the academic endeavor of students and that the teaching of reading must utilize metacognitive strategies. Teachers may utilize relevant lessons that can excite our students to find meaning inside the classroom and eventually ignite them to engage in contemporary issues outside. A lesson is meaningful if it provides learners with facts and empirical data and explains how these relate to each other. It is useful if it is applicable in everyday situations. Moreover, findings of this study do not only provide empirical support to the effectiveness of contextualizing metacognition strategies but also offer an innovative instructional mechanism to immediately address the evident gaps in the reading comprehension ability of 10th grade students.

In addition, this study guided by the following research questions;

1. What is the score of the students before the use of the Contextualized Metacognitive Reading Strategy or CMRS?
2. What is the score of the students after the use of the Contextualized Metacognitive Reading Strategy or CMRS?
3. Is there a significant improvement in the scores of the students before and after the use of the What is the score of the students before the use of the Contextualized Metacognitive Reading Strategy or CMRS?

2.0 Methodology

The study used a strong quasi-experimental research design, with the pretest-posttest as the instrument, to rigorously evaluate the effectiveness of contextualized metacognitive reading strategies. According to Rogers and Revesz (2019), this design investigates whether there is a causal relationship between independent and dependent variables, thereby increasing confidence in the study's methodology.

To address the study's research questions, the researcher used the One-Group Pretest-Posttest Design, which is a common research design in quasi-experimental research. This design, as the name implies, involves measuring the outcome of interest twice before and once after exposing a non-random group of participants to a specific intervention or treatment. Figure 1 below shows the visual representation of the design.

The one-group pretest-posttest design, represented above, is a quasi-experiment in which the outcome of interest is measured twice before and once after exposing a non-random group of participants to a specific intervention/treatment. It aims to establish a cause-and-effect relationship between an independent (Contextualized Metacognitive Reading Strategy or CMRS) and dependent variable (reading comprehension or performance on competencies stipulated in the 1st Quarter Most Essential Competencies, such as identifying the meaning of unfamiliar word synonyms and antonyms, identifying the meaning of unfamiliar word using context clue, comparing and contrasting using a graphic organizer, making generalization, providing supporting details for a topic sentence/claim, noting important details, identifying the characters through characterization, identifying sensory images, getting the main idea or theme of a text, using figures of speech, identifying author's purpose and answering constructed-response questions or formulating a statement of opinion or assertion).

Further, a total of 59 Grade 10 students of San Francisco High School enrolled for S.Y. 2021-2022 were selected as respondents. The researcher purposively selected these 59 respondents who performed poorly in English and the McCall Crabbs Test (1st Quarter) to be included in the shortlist by the English teacher.

The respondents were subjected to a 60-item pre-test and post-test examinations covering the competencies prescribed in the Most Essential Learning Competencies (MELCS) within the 1st Quarter period of the academic year such as identifying the meaning of unfamiliar word

synonyms and antonyms, identifying the meaning unfamiliar word using context clue, comparing and contrasting using a graphic organizer, making generalization, providing supporting details for a topic sentence/claim, noting important details, identifying the characters through characterization, identifying sensory images, getting the main idea or theme of a text, using figures of speech, identifying author's purpose and answering constructed-response questions or formulating a statement of opinion or assertion.

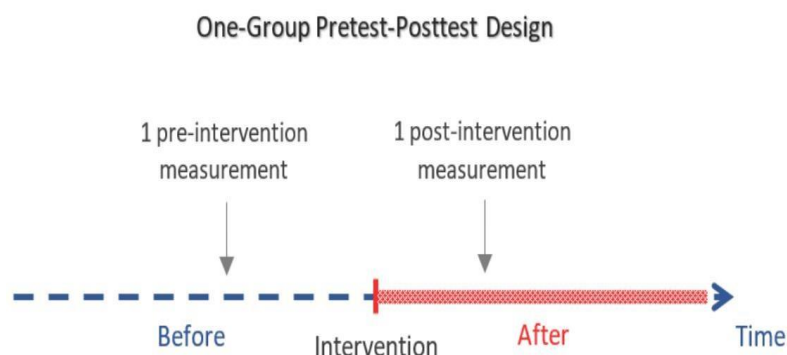


Figure 1. One-Group Pretest-Posttest Design

Moreover, the pretest and posttest were designed to assess students' reading competencies before and after the intervention. The questions were crafted to measure improvements in comprehension and application of metacognitive strategies by the learners. The validity of the tests was ensured by constructing aligned questions with the learning objectives and content covered in the contextualized metacognitive strategies. The materials were submitted to the experts in the field to review the tests and confirm their relevance and effectiveness in evaluating student progress. Hence, the validity and reliability were ensured. The tests were administered to students before and after the intervention. Clear instructions were provided to ensure consistent administration to measure students' reading competencies accurately.

3.0 Results and Discussions

This section presents the significant findings along with its substantial discussions and implications. Table 1 shows the pre-test scores of the respondents.

Table 1. Pre-test scores of the students across competencies

Competency	Mean	Number of Items	Verbal	Interpretation
1. Identifying the meaning of an unfamiliar word using context clues.	1.02	5	Very	Low
2. Identifying sensory images.	1.08	5	Very	Low
3. Identifying author's purpose.	1.11	5	Very	Low
4. Answering constructed-response questions or formulating a statement of opinion or assertion.	1.16	5	Very	Low
5. Identifying characteristics through characterization.	1.21	5	Very	Low
6. Providing supporting details for a topic sentence/claim.	1.25	5	Very	Low
7. Getting the main idea or theme of a text.	1.76	5	Very	Low

8. Identifying the meaning of unfamiliar words through synonyms and antonyms.	1.77	5	Very	Low
9. Noting important details.	2.61	5	Average	
10. Comparing and contrasting using a graphic organizer.	2.62	5	Average	
11. Making a generalization.	2.64	5	Average	
12. Using figures of speech.	2.66	5	Average	
Overall	1.74	--	Very Low	

Note: Mean scores falling within 1.00-1.79: Very low, 1.80-2.59: Low, 2.60-3.19: Average, 3.20-4.19: High, 4.20-5.00: Very High

The pretest mean score data provided in Table 1 indicate varied proficiency levels among Grade 10 students across different reading comprehension competencies. Competencies such as "Identifying the meaning of an unfamiliar word using context clue" received particularly low mean scores of 1.02 with the verbal interpretation of "Very Low". These results suggest significant challenges for students deciphering word meanings and understanding contextual clues within texts. Addressing these areas of weakness is crucial for improving overall reading comprehension skills.

Moreover, the competencies on "Identifying sensory images" received a very low mean score of 1.08, the lowest, indicating the noticeable struggle among students in recognizing and understanding the descriptive language that appeals to the senses. Additionally, "Identifying author's purpose" achieved a low mean score of 1.11, which indicates difficulties among students in determining the intended purpose or message behind a text since this has a verbal interpretation of very low. These specific areas where they should be able to engage with sensory imagery in texts and understand the author's purpose are essential for interpreting the meaning and context of a passage. They need targeted support and instruction to enhance their reading skills, which is crucial for improving their overall comprehension skills.

Despite these challenges, it is noteworthy that the competency "Using figures of speech" attained an average mean score of 2.66. While this competency performed relatively better than others, there is room for improvement to ensure students can effectively discern between significant and supporting details within texts.

The total mean score is 1.74, described as "Very Low." This suggests that, overall, Grade 10 students scored below the expected level for different reading skills in the pretest. The verbal interpretation indicates that the overall performance is considered below satisfactory or proficient levels. To address the identified weaknesses in reading comprehension, it is imperative to implement targeted interventions, such as contextualized metacognitive reading strategies, to help students develop essential skills. As Mauliza et al. (2019) stated, readers deal with a wide range of words and their definitions, and once they misunderstand unfamiliar ones, learners become trapped in comprehending the whole text. Among other reading skills, this particular reading competency skill is significant for creating and achieving an excellent understanding, especially of the implied meaning of some words used.

On the other hand, table 2 showcases the scores of the students after being exposed to the CMRS. The posttest data presented in Table 2 demonstrate significant improvements in the reading comprehension skills of Grade 10 students after being immersed in Contextualized Metacognitive Reading Strategies (CMRS) for five weeks. The results revealed several competencies with remarkable enhancements and high verbal interpretations.

Starting with the competency "Identifying sensory images," the students achieved a high mean score of 4.01, which means there was substantial growth in their ability to

recognize and understand descriptive language that appeals to the senses. These improvements suggested that students could better engage with and comprehend sensory imagery within texts, which reflected the effectiveness of the CMRS intervention implemented among the learners.

Furthermore, several competencies demonstrated high mean scores and high verbal interpretations in the posttest. For instance, competencies such as "Noting Details Important Details, Getting the main idea or theme of a text all showed substantial improvements together with the rest of the other competencies. These results revealed that students made significant strides in various aspects of reading comprehension, including vocabulary acquisition, inference-making, and understanding textual structure and elements.

Moreover, while most competencies have indicated significant improvements, the skill in answering constructed-response questions or formulating a statement of opinion or assertion has only achieved an average mean score of 2.60 but still demonstrated improvement compared to the pretest results and is labeled as average. This data indicated that although there may be areas where further growth is needed, the overall effectiveness of the CMRS intervention in enhancing students' reading comprehension skills is evident.

Table 2. Post-test scores of the students across competencies

Competency	Mean	Number of Items	Verbal Interpretation
1. Identifying the meaning of an unfamiliar word using context clues.	3.30	5	High
2. Identifying sensory images.	4.01	5	High
3. Identifying author's purpose.	2.63	5	Average
4. Answering constructed-response questions or formulating a statement of opinion or assertion.	2.60	5	Average
5. Identifying characteristics through characterization.	3.35	5	High
6. Providing supporting details for a topic/sentence/claim.	3.34	5	High
7. Getting the main idea or theme of a text.	3.29	5	High
8. Identifying the meaning of unfamiliar words through synonyms and antonyms.	3.32	5	High
9. Noting important details.	3.26	5	High
10. Comparing and contrasting using a graphic organizer.	3.37	5	High
11. Making a generalization.	3.41	5	High
12. Using figures of speech.	3.05	5	Average
Overall	3.24	--	High

Note: Mean scores falling within 1.00-1.79: Very low, 1.80-2.59: Low, 2.60-3.19: Average, 3.20-4.19: High, 4.20-5.00: Very High

The remarkable increase in the overall mean score from 1.74 in the pretest to 3.24 in the posttest further emphasizes the positive impact of the CMRS intervention. This significant improvement highlights the effectiveness of utilizing contextualization to enhance reading comprehension among Grade 10 students. By immersing the students in meaningful contexts and equipping them with vital metacognitive reading strategies, they become empowered students and more proficient readers capable of comprehending and analyzing texts more effectively.

The results from the posttest resonate with the principles of constructivism, which highlight the importance of students actively constructing knowledge through engaging activities. The skills such as identifying word meanings, comparing and contrasting, making generalizations, and providing supporting details demonstrate how students are actively involved in understanding and interpreting textual content. This engagement aligns well with constructivist learning theory, which primarily views learning as an active process in which students construct meaning and understanding through their interactions with the material. By practicing these skills, students are not just passively receiving information but actively engaging with and making sense of the text, an essential aspect of constructivist learning theories.

While the difference between the pretest and posttest scores are highly evident, table 3 below provides supplemental and statistical evidences that the improvement in the scores after the use of the CMRS is significant.

Table 3. Wilcoxon signed ranks test results on the difference between the pretest and posttest scores

Test Setting	Mean Score	Standard Deviation	Z-stat	P-value	Remarks
Pretest	30.97	6.28	5.933	<0.001	Significant
Posttest	47.10	5.38			

Table 3 above shows the Wilcoxon-signed ranks test results of the pretest-posttest. As gleaned from the table, there is a significant difference in test scores of students (n=59) reflective of the Z value of -5.933, $p < 0.05$. Hence, the null hypothesis is rejected and explains that the utilization of CMRS in improving the student's reading comprehension is effective. Moreover, the mean score in the post-test is notably higher than in the pretest as evidenced by a mean difference of 16.13. This mean gain definitely indicates for a huge improvement in the reading comprehension performance of the students when exposed to the CMRS.

This affirms the findings of Chang et al. (2017) and Jitendra and Hoppes (2000), which revealed that metacognition reading strategies increased students' overall reading comprehension. Further, this supports the study of Bonganciso (2016), who claimed that contextualizing reading comprehension instruction places the learners in a vivid and meaningful authentic situation and that contextualized teaching and learning is recommended to help learners improve their reading performance. This implies that the contextualized metacognitive reading strategies effectively improve the students' reading comprehension. Finally, the findings of Batang (2015) revealed that respondents' reading comprehension level had a significant relationship with the metacognitive strategies they apply in understanding the text in English.

4.0 Conclusions and Recommendations

Contextualizing metacognitive reading strategies is timely and relevant since it places the students in concrete and meaningful experiences. These reading strategies can be reflected in reading lessons and activities designed by teachers to enhance reading performance. Definitely, the results demonstrated the effectiveness of CMRS in enhancing Grade 10 students' reading comprehension abilities and facilitating the process of becoming more proficient readers. Furthermore, the findings of the study do not only provide additional empirical evidences to the existing literature but also an effective solution to address the existing gaps in the reading comprehension of the

students.

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