

# Reciprocal Teaching Strategy: It's Implication on Teaching and Learning the General Education Core Subject "The Contemporary World"

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**Abstract-** The study focus on determining the implications of reciprocal teaching strategy on teaching and learning the subject The Contemporary World under the New General Education Curriculum. The study used a randomized pretest-posttest control group design to determine the effect of reciprocal teaching strategy on students' performances. Two groups of first year college students from Quezon City University are randomly selected to participate in this study (n=90). Using independent sample t-test, pretest results of two groups shows no significant difference on the level of their prior knowledge before the conduct of the study. After the two-week experimentation, paired-sample t-test results showed a significant improvement on the performances of the students on both groups. However, using independent sample t-test, students under the experimental group perform better than those in the control group. The study suggest that the reciprocal teaching strategy is effective in teaching the subject The Contemporary World and in improving students' performances.

**Index Terms-** Reciprocal teaching, Teaching strategy, Teaching and Learning, Social Science Education, Higher education

## I. INTRODUCTION

Reciprocal teaching is designed to teach students cognitive strategies such as summarization, question generation, clarification, and prediction that might lead to improved reading comprehension (Marks, et al., 1993; Palincsar & Brown, 1984). This instructional style was originally developed for struggling readers (Palincsar & Brown, 1984), and it is categorized as an interactive learning, where in teachers and students take turns in sharing information that leads to a meaningful discussion and interaction. In addition, reciprocal teaching allows the students to interact not only in the four corners of the classroom but as wee as in the outside world (Palincsar & Brown, 1984).

Reciprocal teaching is characterized as a dialogue taking place between the teacher and students (or student leader and members of the group) that results in students learning how to construct meaning when they are placed in must read situations (Salehi & Vafakhah, 2013; Carter & Fekete, 2001). In 1997 Carter pointed out that in reciprocal teaching, the students learn

new information, main ideas, and arguments by using prior experience as a channel. They construct meaning from the text by relying on prior experience to parallel, contrast or affirm what the author suggests.

According to Alfassi (1998) various approach might be used to deliver the instruction but usually incorporates scaffolding, small group discussion, and the teaching of four reading strategies: (1) generating questions, (2) summarizing, (3) clarification, and (4) prediction.

According to Palincsar and Brown (1984) the components of reciprocal teaching are directly related to elements of zone of proximal development and scaffolding as described by Vygotsky in 1978. Palincsar (1998) also pointed out that the cycle of effective reading comprehension instruction starts with explicit strategy instruction delivered by the teacher. During the succeeding phase, the teacher provides different levels of support as students practice the strategy. Thus, suggesting that explicit teaching of comprehension strategies will provide a scaffold for students to begin to realize and understand the strategies used and apply them on their own learning.

Moreover, in 2013 Salehi and Vafakhah conducted a study that focus on identifying the difference between reciprocal teaching only and explicit teaching of strategies before reciprocal teaching on reading comprehension of Iranian female EFL learners. The results revealed that reciprocal teaching can improve reading comprehension of EFL learners, and explicit teaching of strategies before reciprocal teaching resulted to a more gains in reading comprehension among students at the intermediate level.

In a study conducted by Rodilil and Prastyo (2017), they claimed that reciprocal teaching method can be an alternative to help students comprehend English reading texts better and develop reading skills and habit. In addition, reciprocal teaching helps the students to remember what they have read better (Rodilil & Prastyo, 2017).

Choo et al. (2011) on the effects of reciprocal teaching strategies on reading comprehension suggested that reciprocal teaching strategy is effective and brought out a positive feedback regarding the use and effects of this strategy among the students in the experimental group. While on the other hand, the study of Reilly et al. (2013) on reciprocal teaching in Mathematics

revealed that the students in the non-reciprocal teaching group (control group) complete their test faster than the students in the reciprocal teaching group (Experimental group). However, when reviewing their responses, majority of the students in the experimental group got a correct answers as compared to those in the control group.

It is imperative to note that since the development of the reciprocal teaching strategy, various research studies have been conducted to determine the advantages and disadvantages of this teaching strategy (Oczkus, 2003; Carter, 1997; Rosenshine & Meister, 1994), and to examine its effectiveness in improving students' reading comprehension skills in the elementary level (Hashey & Connors, 2003; Hacker & Tenent, 2002), middle (King & Johnson, 1999), and high school students (Westera & Moore, 1995). However, there is a limited studies conducted in the tertiary level.

Reading is considered as one of the important skills in acquiring information from various sources across all subjects, while comprehension is considered the heart and goal of reading, since the primary goal of reading is to obtain new information and knowledge from a printed or online page. Reading and comprehension is one of the most important skills needed in understating the concepts of the subject "The Contemporary World". The subject primarily aims to develop the competencies of the students in terms of distinguishing different interpretations of and approaches to globalization, describing emerging global economic, political, social, and cultural systems, analysing various drivers of globalization, understanding national issues, and assessing the effects of globalization on various sector of the community. In addition, the subject "The Contemporary World" aims to develop the students' skills in analysing contemporary news events in the context of globalization, globalization in general and global issues in relation to Filipinos and the Philippines in particular. For the students to be able to grasp all the necessary information and skills from this subject, they need to develop a skill of reading and developing comprehension. Thus the researcher opted to incorporate the use of reciprocal teaching strategy as developed by Palincsar and Brown in the 1980s.

From the above surveyed literature and studies, the researcher opted to explore the effect of reciprocal teaching strategy to the academic performance of college students in Quezon City University, specifically in the subject "The Contemporary World". Thus this study primarily aims to determine whether there is a change in the academic performances of selected QCU freshmen college students who are taking up the subject "The Contemporary World" if reciprocal teaching strategy is being used. This study hypothesize that there is no significant change in the academic performances of selected students when they are exposed to reciprocal teaching strategy.

## II. METHODOLOGY

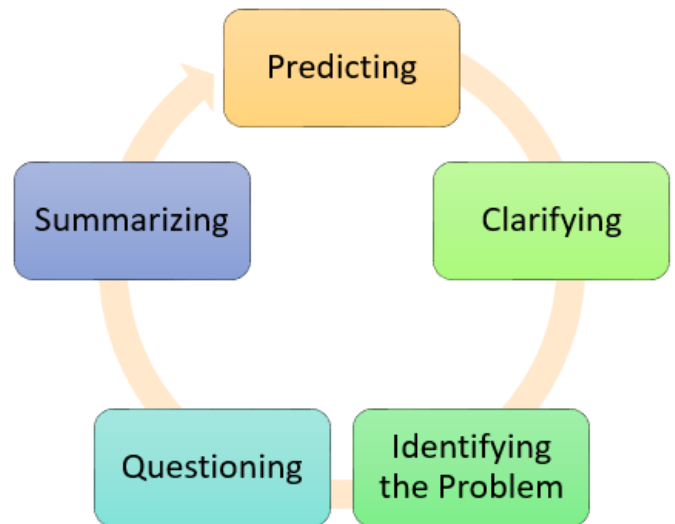
The study was conducted during the first semester of the academic year 2019–2020 at Quezon City University (QCU), Quezon City, Philippines. The respondents were composed of a total of sixty (90) first year college students under the General Education (GenEd) Program of the university.

Students were divided and assigned randomly as control (n = 45) and experimental (n = 45) groups. The experimental group received the reciprocal teaching strategy during the two-week experimental procedure in the subject "The Contemporary World", while the control group received a usual lecture discussion method during the experimental period.

Week 1 and Week 2 topics and objectives found in the outcomes-based course syllabus prepared by the researcher were used and given to the students in both control and experimental groups during the experimental procedure. And before the experimental procedure, both groups were given a 30-item pretest to determine the level of their prior knowledge to the topics. The pretest was evaluated by six (6) Social Science faculty for its face validity, and a total of twenty (20) freshmen college students who are not part of the experiment took the test to determine its reliability. The test was valid based on the evaluation of the Social Science teachers and reliable as well through its Chronbach alpha test coefficient value of 0.80, which denotes that the test questionnaire has a high internal consistency.

Prior to the experimentation, the researcher selected four (4) related text that are related to the topics that will be discussed in a two week experimental period, and considered the text appropriateness to the level of the students, where they can read it even without the full supervision of the researcher.

During the implementation of the reciprocal teaching, the researcher introduced the strategy to the experimental group. The researcher provide a brief but focus introduction to the topic and link the assigned selected text to the current topic, and support them in using the assigned text and constantly monitor their progress. The diagram below shows the process where the students do during the conduct of the study.



**Figure 1.** Implementation of the Reciprocal Teaching Strategy

In Predicting stage the researcher encourage the students to anticipate what will come next in the text, based on their appropriate prior knowledge and on the structure and content of the text. The purpose of this stage is to allow the students to confirm or reject their expectations. This promotes active thinking prior to the activity.

During the Clarifying stage, the learners are expected to deal with difficulties that they can be found or encounter in the text by noting unfamiliar vocabulary, unfamiliar structure of the text, new or difficult ideas. Clarifying and identifying the problem stage are two overlapping stages where the students find difficulties in understanding the text or connecting prior knowledge to the present situation. The teacher instructed them to write down things that they do not understand in the text or things that are unfamiliar to them. After which, the researcher ask the students to re-read, use the context of the passage, use dictionary and other reference materials, prior topics to understand the meaning of the text clearly.

During the Questioning stage, the researcher encourage the students to explore the meaning of the text in depth by asking series of questions before, during, and after reading the assigned text, and write it on their notebook. This stage allows the students to identify the kind of information that provides the substance for an appropriate question, they can also think of possible solutions, search for relevant information to answer their questions, monitor their own comprehension, and answer the questions that they have. Furthermore, the students develop ownership of their learning during the activity. And lastly, during the Summarizing stage, the students will identify and integrate important information presented in the text.

After the two-week experimental procedure, each group was given a posttest examination using the same 30 item test questionnaire which was used in the pretest. The results of the pretest and posttest examinations of each group were analyzed using independent-sample and paired-sample t-test to draw a sound and valid conclusion on the effect of reciprocal teaching strategy to students' academic performance in the subject "The Contemporary World".

#### 2.4 Research Instrument

Since the intention of this study is to describe the existing situation without any attempt to influence it, this study used a researcher-made survey checklist to determine whether the students manifest symptoms of cabin fever, their coping mechanism to overcome cabin fever, and whether their responses are affected by their gender.

To determine the instrument's validity, three experts from the field of education and psychology were asked to validate the form and content of the survey checklist. Their comments and suggestions were reflected in the final form of the instrument. In addition, to test the instrument's reliability, a total of fifteen students who are not part of this study were asked to answer the online survey checklist and the results were subjected for a Cronbach's alpha test. The results show that the instrument is reliable having a Chronbach's alpha value of 0.78.

After having found that that instrument is valid and reliable, the researcher-made survey checklist was converted into an electronic survey questionnaire using Google Forms Application and the link was posted to different social media platforms to reach wider participants. The online survey last for about five days during the first week of August, 2020.

The online survey checklist is divided into three parts: Part 1 – Informed Consent Form, Part 2 – Respondent's Profile, and Part 3 – Checklist of Cabin Fever Symptoms and Effects. Part 3

of the online survey checklist consist of five questions that gathered the self-assessment of the respondent towards the symptoms of cabin fever, which includes where do they stayed during the community quarantine, who are their companion/s during the community quarantine, what do they feel during the implementation of the community quarantine, what sudden change in their behavior and routine that they have noticed, and how do they spend their days during the implementation of the community quarantine. Questions number three and four consists of five choices which represents the degree of agreement of each respondent had on the given statement.

Statistical measures are used in making inferences, interpretations, conclusions, or generalizations of this study. After the retrieval of the online survey checklist, responses of the students were tallied, tabulated, analyzed, and interpreted by the researchers using statistical tools such as percentage, mean, and Chi-square test.

### III. RESULTS AND DISCUSSION

Data were analyzed by using IBM SPSS STATISTICS version 22. Before analyzing the data, all assumptions of the analysis were checked.

#### 3.1 Mean Score of the Pretest and Posttest Examination

As part of the experimental procedure, the researcher gave a 30-item pretest examination to control and experimental groups to determine the level of their prior knowledge about the topics that will be discussed within the two-week experimental procedure. After which, the same test was given that served as a posttest to determine whether the use of reciprocal teaching strategy influence the academic performance of the students under the experimental group. For comparison, posttest was also given to those students who does not received reciprocal teaching strategy.

The mean score of the Pretest and Posttest of the two groups of students is shown in Table 1. As glean from the table, the mean score of the control ( $X=15.07$ ) and experimental group ( $X=15.09$ ) shows no significant difference. Their mean scores are almost the same, implying that students in both groups have the same level of prior knowledge during the conduct of this study.

After the two-week experimental procedure, a change in the students' academic performances is observe. Both control and experimental groups showed an increase in their mean score after the procedure. Mean score of the posttest of the control group ( $X=18.62$ ) and experimental group ( $X=23.09$ ) shows a significant increase, as compared to the mean score of their pretest examination results. This denotes that, students under the control group, despite of not receiving reciprocal teaching strategy shows an improvement, and same as those students who received reciprocal teaching strategy.

**Table 1.** Mean Score of the Pretest and Posttest Examination of the Control and Experimental Groups

Group	Count	Mean (X)		Variance	
		Pretest	Posttest	Pretest	Posttest
Control	45	15.07	18.62	8.109	11.695
Experimental	45	15.09	23.09	6.356	13.083

3.2 Comparison between Pretest Examination Results using Independent sample t-test

To further support the claim of the above-mentioned results, Table 2 shows the result of the independent-sample t-test of the pretest examination of the control and experimental groups independent sample t –test is used to investigate whether a significant difference between the results of the pretest exists in both groups. The results shows that the computed t -value is 0.039 with 88 degrees of freedom (df). This value is not significant at 0.05 level of confidence since the computed t -value is less than the critical value which is 1.988. This denotes that the level of understanding and prior knowledge of the students in both groups are the same. Thus, any change in their achievement after the experimental process is directly affected by the intervention used.

**Table 2.** Result of the Independent-sample t-test of the Pretest Examination of the Control and Experimental Groups

Test	t-stat	df	p-value	t-crit	Upper	Lower	Significant*
Two Tail	0.039	88	0.969	1.988	-1.149	-1.105	no

\*Alpha = 0.05

3.3 Comparison between Pretest and Posttest Examination Results using Paired sample t-test

Table 3 shows the result of the Paired-sample t-test of the Pretest and Posttest Examinations of the Control Group. As glean from the table, there is a significant change in the academic performance of the students before and after the experimental procedure. Despite the fact that the group does not received any intervention, the usual lecture discussion method brought a significant change in their performance before and after the conduct of this study. Table 3 shows that the computed t-value is -5.202 with 44 degrees of freedom (df). This value is significant at 0.05 level of confidence since the absolute computed t -value is greater than the critical value which is 2.015.

**Table 3.** Result of the Paired-sample t-test of the Pretest and Posttest Examinations of the Control Group

Test	t-stat	df	p-value	t-crit	Upper	Lower	Significant*
Two Tail	-5.202	44	0.000	2.015	-4.933	-2.178	yes

\*Alpha = 0.05

Furthermore, the results of the pretest and posttest examination of the experimental group was compared using the paired-sample t-test, as shown in Table 4. As expected, there is a significant change in the academic performance of the students, since they are subjected to an intervention which is the reciprocal teaching strategy. The result shows that the computed t-value is -11.736 with 44 degrees of freedom (df). This value is significant at 0.05 level of confidence since the absolute computed t -value is greater than the critical value which is 2.015. This results denotes that after the two-week experimental procedure with the use of reciprocal teaching strategy, students under the experimental group shows a significant change on their academic performances.

**Table 4.** Result of the Paired-sample t-test of the Pretest and Posttest Examinations of the Experimental Group

Test	t-stat	df	p-value	t-crit	Upper	Lower	Significant*
Two Tail	-11.736	44	0.000	2.015	-9.373	-6.626	yes

\*Alpha = 0.05

3.4 Comparison between Pretest Examination Results using Independent sample t-test

To support the claim of this study, Table 5 shows the result of the independent-sample t-test of the posttest examination of the control and experimental groups. The independent sample t –test was also used to determine whether there is a significant difference between the results of the posttest examination results of the control and experimental groups, and identify whether the utilization of the reciprocal teaching strategy brought a significant change in the students’ academic performances. The results revealed that the computed t -value is 6.019 with 88 degrees of freedom (df). This value is significant at 0.05 level of confidence since the computed t -value is greater than the critical value which is 1.99. This denotes that students under the experimental group and exposed to reciprocal teaching strategy performed better than that of the students under the control group. Thus, rejecting the hypothesis of this study which is previously mentioned that there is no significant difference in the academic performances between the two groups. This study claims that after the implementation of the reciprocal teaching strategy, a significant change in the academic performance of the students in the subject “The Contemporary World” is seen and observed.

**Table 5.** Result of the Independent-sample t-test of the Posttest Examination of the Control and Experimental Groups

Test	t-stat	df	p-value	t-crit	Upper	Lower	Significant*
Two Tail	6.019	88	0.000	1.99	-5.941	-2.992	yes

\*Alpha = 0.05

Furthermore, the above result supported the claims of the study conducted by Mohammad Salehi, and Sepideh Vafakhah (2013), Rodilil and Prastyo (2017), Choo et al., (2011), and Reilly et al.

(2013) concerning the positive effects of reciprocal teaching strategy on the academic performances of the students. In addition, the researcher found out that after the two-week study, students in the experimental group gain an improved understanding of complex text in the subject ‘The Contemporary World’ which leads to developing an increase conceptual knowledge of the topic, improved students’ reading and comprehension skills, develop a more positive attitudes towards extracting, organizing, and recording information within the subject, confidence to read, developed leadership skills, and develop collaborative skills among the learners. This study shown that when reciprocal teaching is used, the students develop a substantial gains in understanding the concepts being discussed in the class.

#### IV. CONCLUSION AND RECOMMENDATIONS

After the two-week experimental procedure, a significant change in the academic performances of the students in both control and experimental groups. Pretest support the claim that students in both groups have the same level of prior knowledge as revealed by their mean score, however after the experimental procedure, students show an improvement on their posttest score. The result of the independent sample t-test revealed that students in the experimental group performed better as compared to those students under the control group. This study concludes that the use of reciprocal teaching strategy in teaching the subject ‘The Contemporary World’ greatly affects the academic performances of the students. Also, structured reading and comprehension strategy allows the students to develop reading and comprehension skills, positive attitudes towards extracting, organizing, and recording information within the subject, confidence to read, leadership skills, and collaborative skills. The use of reciprocal teaching is highly encourage in the tertiary level, most especially in the subjects across the General Education Curriculum, since subjects under the New General Education Curriculum requires an in-depth comprehension skills among college students.

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