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A Meta-analysis of Metacognitive Strategies in Improving Reading Comprehension

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ABSTRACT :

Reading is one of four English language skills that a student must acquire as a key goal of learning English, along with hearing, speaking, and writing. Reading can also be used to identify and contrast relevant ideas. Students can gain information from the material they have read since reading is flexible. When metacognitive methods are implemented, it allows students to have a wide range of educational link points about the necessity of improving reading comprehension. This study used qualitative research design involves collecting and analyzing non-numerical data to understand concepts, opinions, or experiences. The researchers were able to identify strategies used and administered through the meta-analysis procedure completed in five (5) research studies using metacognitive strategies in increasing reading comprehension. The metacognitive techniques of planning, monitoring, and evaluating strategy were investigated in three research papers. Meanwhile, problem-solving reading strategies, global reading strategies, and support reading strategies were used in the remaining two study projects. The aforementioned strategies had a positive impact on other variables, such as moderately high comprehension level and moderately high reading comprehension performance, while others had a negative impact on the findings, such as low reading achievement among students and weak correlation between variables.

Keywords: meta-analysis, metacognitive strategies, improving, reading comprehension

INTRODUCTION

Reading as one of the macro skills has been an enormous competency between the facilitator and the reader. Its comprehension takes a specific and strategic approach that addresses factors affecting the low level of reading comprehension. According to Elicay (2019), in her online news narrative entitled “The Philippines Scored the Lowest in Reading Comprehension Among 79 Countries”, in the 2018 Programme for International Student Assessment (PISA), a global assessment that measures students' competence in reading, Mathematics, and Science, the Philippines recorded the lowest reading comprehension score out of 79 countries. Because of the said result of the assessment, it is beneficial for the students to identify what is the possible ways and methods to improve the reading comprehension of the students. Determining what practical solution among factors can be a sole source of doing the aforementioned focus of the study because there are variety of factors that can contribute to poor reading comprehension of students. They are vocabulary working memory, insufficient reading, text type, and distant learning, with the first influencing students' reading comprehension. Furthermore, according to Breiseth (2019), reading comprehension is one of the most difficult human habits to master. Reading is done for the sake of comprehension, but mastering it can be tough, especially for English language learners. Because they cannot comprehend the textbooks for these disciplines, ELLs frequently have difficulty acquiring concepts in Science, Math, and Social Studies. Negatively speaking, many different theoretical models have been proposed in recent decades by reading theorists who have struggled to find a comprehensive and meaningful approach to represent reading comprehension. In addition, reading is one of the skills that needs comprehension. The goal of reading is comprehension. Comprehension is what entices the reader to continue reading. According to Dias, Montiel and Seabre (2015, p. 406) comprehension is the ultimate goal of competent reading, and many of the components involved in reading comprehension are not unique for written language. Teachers must devise methods for improving reading comprehension, ensuring topic acquisition through reading, and dealing with students' varying comprehension abilities. There are many reading strategies that the readers can apply. Reading strategies used to describe the planned and explicit actions that help the readers to encode their understanding about the text. It is the technique to help readers actively read and comprehend the materials they have read. According to Inclusive Schools Network (2014), in metacognitive strategies refers to methods used to help students understand the way they learn, it is the processes designed for students to think about their thinking'. The researchers believed that developing and practicing reading skills is difficult. It is also necessary to evaluate a variety of things in order to learn reading skills. The best strategies in improving reading comprehension are intended to explore in this study, as well as its significance in this new type of remote learning. Aside from that, students' difficulty in interpreting reading materials remained a major issue. Some students do not have a large enough vocabulary. Students are just unable to comprehend the material and will not speak up if they encounter unfamiliar terms. Some teachers, on the other hand, place a greater emphasis on students' reading results. Educators rarely focus on learning outcomes rather than learning processes. Another reason for this study is that there are numerous metacognitive strategies in improving reading comprehension but educators are not aware which strategies are the powerful tool in improving the skill of reading which can possibly lead that comprehension being canceled out.

OBJECTIVES

The study described the metacognitive strategies in improving reading comprehension: metacognitive strategy/ies seem/s to be the most effective in improving reading comprehension and the metacognitive strategies that may be proposed for the enhancement of pre-service teachers' reading comprehension. The study covers five (5) subjects or the related studies indicating metacognitive strategies in improving reading comprehension. The distinction, comparison and analysis of research studies' title, metacognitive strategy explored, research design, instruments administered, respondents and findings are the main focus of the studies.

MATERIALS AND METHODS

1.1 Research Design

The researchers intended to determine, investigate and analyze metacognitive strategies used for improving reading comprehension in the research studies. This also provides comparison of findings among the studies selected. Augmenting metacognitive strategies which seem to be the most effective in improving reading comprehension is also considered. The research work will use qualitative research design. According to Bhandari (2021), in qualitative research, non-numerical data is gathered and analyzed to better comprehend ideas, viewpoints, or experiences. It can be utilized to uncover intricate details about a situation or to spark fresh study concepts. In contrast, quantitative research gathers and examines numerical data in order to do statistical analysis. It is frequently employed in the social and humanities sciences, education, medicine, and history. As the study uses qualitative research design, it inclines the focus in meta-analysis method. The researcher will be dealing with meta-analysis of meta-cognitive strategies in improving reading comprehension. McAllister (2021), in her study of Systematic Reviews and Meta- Analyses defines the use of techniques to compile the findings of various independent research. Instead of a review, a meta- analysis can offer more accurate estimates by pooling the data from all pertinent studies. Beyond criticism and integration, meta-analysis also does secondary analysis on the findings of research that are comparable to its own. It is a methodical review that use techniques to synthesize and compile the findings. The ability to evaluate study findings in an entirely objective manner is a benefit of a meta- analysis.

1.2 Data Gathering Instrument

The document analysis is given into consideration as to relate in the process of the study and its anticipation. According to Hoover (2021), in document analysis, the researchers can glean pertinent information from both print and electronic sources. To derive inferences from the body of associated documents, careful analysis is required. This merely indicates that the researcher interprets the data in a flexible manner while putting a premium on rich meaning. Systematic content analysis is also anticipated in order to assess the text's results, structure, and design as well as its capacity for synthesis and comparison. Furthermore, the document analysis as a guide used the aforementioned focus in the study. This entails research studies' title, metacognitive strategy explored, research design, instruments administered, respondents and findings. This will let the researcher make an in-depth analysis in the subjects of the study. The comparison of similarities and differences in the findings of each study will be considered as the data extraction takes place. In the study of Morgan (2022), he mentioned that the method of document analysis has been applied to qualitative research. There are many benefits to using this strategy. This technique and tool enable academics to carry out investigations that they might not otherwise be able to do when utilized to evaluate pre-existing texts. The researcher used recommendations to thoroughly examine the data when studying the document. The presentation of particular research papers raises the credibility of the data.

Data Gathering Procedure

A preliminary search and selection of the total number of studies for meta-analysis will be conducted. Identifying its sites, sources, titles and authors, publishing dates and journal references will be considered. The research studies' title, metacognitive strategy explored, research design, instruments administered, respondents and findings are the main focus in the selection of the studies. This follows the meta-analysis method to be employed in the process. The researchers decided to adapt the procedure in relevant with the approach for qualitative document analysis of Rasch (2018). According to him, one of the most popular qualitative methodologies across several disciplines is qualitative text or document analysis. Because it can be applied to almost any situation, this procedure makes it possible for researchers to employ it. This discusses the following process. The research questions, or the precise things you hope to learn, come first. This will direct the researcher in achieving the main objective or target of the study. The gathering of data is the following step. The researcher will consider and gather information about the papers to be obtained now after crafting the questions. The selection and preparation of the data, analysis and comparison-during which it will be looked for patterns and distributions of the results and discoveries specifically-as well as interpretation of the gathered data with a focus on the areas indicated in the preceding portion or parts- --come next.

Results and Discussion

The Metacognitive Strategies in Improving Reading Comprehension Investigated in the Research Studies

In the meta-analysis process conducted in five (5) research studies using metacognitive strategies in improving reading comprehension, the researcher was able to enumerate strategies utilized and administered. The three research studies explored the metacognitive strategies of planning, monitoring and

evaluating strategy. Meanwhile, the remaining two research studies employed the use of problem-solving reading strategies, global reading strategies and support reading strategies. The results of the aforementioned strategies gleaned positive impact in other variables, moderately high comprehension level and moderately high reading comprehension performance while some indicated weak result in the findings such as low level in students' reading achievement and weak correlation between variables.

Comparison of Findings in the Research Studies

The meta-analysis and documentary analysis conducted in the aforementioned studies had determined the metacognitive strategy employed in each of it. The differences and similarities were also observed during the process. Similarities in the use of metacognitive strategy in improving reading comprehension were all perceived in the studies. The use of planning, monitoring and evaluating as metacognitive strategy was revealed in the study of Absida et al. (2017), Togatorop and Vista (2018) and Amalia et al. (2020). The use of problem-solving reading strategies, global reading strategies and support reading strategies was both exhibited as metacognitive strategy in the studies of Ramadhan (2018) and Villanueva (2022). However, the studies differed in some aspects such as the content of data gathering instruments, the methodology used, locale, timeframe, number of respondents and statistical treatments.

Metacognitive Strategy/ies Seemed to be the Most Effective in Improving Reading Comprehension

The researchers intended to find out the metacognitive strategy/ies which seem/s to be the most effective in improving reading comprehension. The meta-analysis conducted during the process correlates to come up with the aforementioned quality of strategies. As the subject of the studies differed in some domains like content of data gathering instruments, the methodology used, locale, timeframe, number of respondents and statistical treatments, the researchers enable to compare and contrast, analyze and comprehend the most effective strategies through various analysis as follows: in data analysis, three (3) out of five (5) research studies as subject of the study administered the use of these metacognitive strategies; studies that used the metacognitive strategies gleaned positive result of findings in its impact or effect and correlation between other variables; data gathering instruments utilized in the collection of data were commonly similar with each other like the pre-test and post-test treatment; the metacognitive strategies in the research studies received high indicator of achievement in findings such as moderately high comprehension level and moderately high reading comprehension performance; there is a specific category between the metacognitive strategy that makes it more comprehensive and well-equipped and; the researcher delimits other metacognitive strategies due to the reason that they garnered weak result in the findings such as low level in students' reading achievement and weak correlation between two variables. The metacognitive strategies which seemed to be the most effective in improving reading comprehension are enumerated as planning strategy (pre-reading), monitoring strategy (while reading) and evaluating strategy (post-reading)

Metacognitive Strategies Proposed for the Enhancement of Pre-service Teachers' Reading Comprehension

Different metacognitive strategies were investigated by the proponents of the studies discovered and analyzed during the meta-analysis process conducted by the researchers. This intended them to determine the metacognitive strategies that may be proposed for the enhancement of pre-service teachers' reading comprehension. This can be timely relevant as the aforementioned participants indeed need it in their profession. The researchers came up to utilize the metacognitive strategy/ies which seemed to be the most effective in improving reading comprehension that were all answered in the previous query. This included the planning, monitoring and evaluating strategy as main focus and the delimited metacognitive strategies were also considered. This came up with an output wherein the most effective metacognitive strategies were detailed and specified through a set of activities in the form of a handbook. This was designed, adapted and augmented by the researchers through the use of research, journals and books and may be proposed for the enhancement of pre-service teachers' reading comprehension.

Conclusion

The research studies used for meta-analysis in metacognitive strategies in improving reading comprehension were all employed strategies in dealing with the study's purpose and main focus. The results of the aforementioned strategies gleaned positive impact in other variables, moderately high comprehension level and moderately high reading comprehension performance while some indicated weak result in the findings such as low level in students' reading achievement and weak correlation between variables. This can be concluded that strategies explored in studies were all analyzed, comprehended and identified.

Moreover, the differences and similarities were observed and manifested during the meta-analysis process and data extraction. Similarities in the use of metacognitive strategy in improving reading comprehension were all perceived in the studies. The use of planning, monitoring and evaluating as metacognitive strategy was revealed in three studies. The use of problem-solving reading strategies, global reading strategies and support reading strategies was both exhibited as metacognitive strategy in the remaining studies. However, the studies differed in some aspects such as the content of data gathering instruments, the methodology used, locale, timeframe, number of respondents and statistical treatments. This showed that uniqueness of a research study can be analyzed through textual and careful deliberation of analysis and data gathering.

In addition, the researchers enable to compare and contrast, analyze and comprehend the most effective strategies through various analysis as follows: in data analysis, three out of five research studies as subject of the study administered the use of these metacognitive strategies; studies that used the metacognitive strategies gleaned positive result of findings in its impact or effect and correlation between other variables; data gathering instruments utilized in the collection of data were commonly similar with each other like the pre-test and post-test treatment; the metacognitive strategies in the research studies received high indicator of achievement in findings such as moderately high comprehension level and moderately high reading comprehension

performance; there is a specific subcategory between the metacognitive strategy that makes it more comprehensive and well- equipped and; the researcher delimits other metacognitive strategies due to the reason that they garnered weak result in the findings such as low level in students' reading achievement and weak correlation between two variables. The metacognitive strategies which seemed to be the most effective in improving reading comprehension are enumerated as planning strategy (pre-reading), monitoring strategy (while reading) and evaluating strategy (post-reading).

Lastly, the researchers came up to utilize the metacognitive strategy/ies which seemed to be the most effective in improving reading comprehension that were all answered in another query. This included the planning, monitoring and evaluating strategy as main focus and the delimited metacognitive strategies were also considered. This came up with an output wherein the most effective metacognitive strategies were detailed and specified through a set of activities in a form of a handbook. This was designed, adapted and augmented by the researchers through the use of research, journals and books and may be proposed for the enhancement of pre-service teachers' reading comprehension.

Recommendations

Based on the results of the findings and conclusions in the study, the following recommendations are hereby presented. First, metacognitive strategies may be integrated during the specific area it may requires. The various metacognitive strategies in improving reading comprehension explored in the studies may be augmented during the teaching- learning process especially in terms of reading and writing skills. Strategies can be used by the future researchers, educators or curriculum planners to be able to apply in different learning field. Second, curriculum planners and teachers may inculcate aforementioned strategies in their objectives or learning competencies and make further comparison for the future academic purposes. Furthermore, metacognitive strategies explored can be used and compared to determine what should be indicated in teaching and reading. This may also help in an analytical approach because careful study may be taken by the future researchers. Writers may also distinguish the differences and similarities to adapt the writing and the modification. Next is ensuring effectiveness in terms of metacognitive strategies may require passion and enthusiasm along the readers and teachers. This may entail resources that will add on how learners will perceive the process. In this part, providing research studies with metacognitive strategies along readers may enhance self-reliance and encourage the act of resourcefulness. Future researchers and other entities beneficial for the study may involve studies that guarantee effectiveness to maintain the consistency of knowledge and comprehension. This may also put evidence of analysis for strategies to be considered during the reading tasks. However, the delimits strategies may be added and considered with supplemental or enrichment activities prior to the strategy which is in need of it. Lately, an output wherein the most effective metacognitive strategies were detailed and specified through a set of activities in a form of a handbook may help the readers and the reading facilitators, the writers and curriculum planners in adapting, applying or integrating it during the reading comprehension tasks. The researchers' designed, adapted and augmented through the use of research, journals and books. Handbook may be proposed for the enhancement of pre-service teachers' reading comprehension specifically this correlate along their profession.

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