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The Effects of Graphic Organiser-based Reading Instruction on Reading Comprehension among Malaysian ESL Learners

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ABSTRACT

This study investigated the impact of two graphic organizer (GO) instruction methods on reading comprehension in Malaysian ESL learners. The experiment involved 180 Malaysian ESL students from three international schools, with one group received GO 1 instruction, another group received GO 2 instruction, and a control group received traditional instruction (NGO). Three instruments were used: a reading ability test, five practice sessions with five expository passages, and a reading comprehension test. The results of the 2-way ANOVA analysis indicated a significant interaction between GO instruction, reading ability, and reading comprehension performance. The study found that GO instructions, specifically the concept mapping (GO 1) and KWL strategies (GO 2), were effective in enhancing reading comprehension, particularly among good readers. The KWL strategy also demonstrated benefits for improving reading comprehension, promoting active participation and critical thinking compared to the concept mapping group. This research contributes to the advancement of knowledge in ESL education by comparing the effects of the Concept Mapping strategy and the KWL strategy on reading comprehension among Malaysian ESL learners, thereby enriching the existing understanding of instructional methodologies in the field. Additionally, it diversifies generative learning strategies research by focusing on specific strategies, namely Concept Mapping and KWL, in a comparative analysis against the traditional NGO method, providing valuable insights for ESL educators to make informed decisions about instructional approaches. The study's findings have important pedagogical implications for ESL instruction.

KEYWORDS: **Graphic organizers, concept mapping strategy, KWL strategy, Initiation-Response-Evaluation strategy, reading comprehension performance, Malaysian ESL learners**

Introduction

In the context of English as a Second Language (ESL), the need to improve students' reading comprehension is gaining more importance, especially in Malaysian reading classrooms (Tabitha, 2013). Reading comprehension abilities are necessary for ESL learners to meet educational objectives and expectations. For example, they must be able to comprehend textual material, rapidly find important information within the text while eliminating unnecessary information and select the critical information to concentrate on. Thus, comprehending tricky words' meanings and content-rich text, and critically analyzing the authors' points of view are fundamental reading skills that support reading comprehension (Stephen, 2013). Additionally, academic achievement demands Malaysian ESL learners to comprehend, evaluate critically, and apply the knowledge gleaned from their reading (Kadir et al., 2014).

Sidek & Wahi (2018) contends that the Initiation-Response-Evaluation (IRE) method used in Malaysian ESL reading classrooms is a teacher-centered approach that limits creative thinking and critical reading skills. The IRE method focuses on memorizing facts rather than constructing meaning from texts and does not enhance critical thinking or creativity. This approach has been ingrained in the Malaysian educational system for many years, which has resulted in poor English reading proficiency among Malaysian ESL learners (Nurhadi, 2017). Therefore, there is a need to introduce alternative methods of teaching reading to Malaysian ESL learners in the Malaysian classroom.

One reading approach cited in the available literature review and proposed by many reading experts to promote critical reading among students is the use of Graphic Organizers (GO). Reviewing the literature on reading comprehension, the Malaysian Reading Panel (2019) introduced the GOs as one of the most effective teaching strategies for reading comprehension as this critical thinking-based instruction can engage the cognitive processes which may improve language learners' reading comprehension and critical thinking (Mahdi, 2015; Manoli, 2012).

Developing critical thinking and reading comprehension is crucial for Malaysian ESL learners and these abilities should be carefully cultivated throughout reading lessons (Kadir et al., 2014). Critical thinking-based training that involves cognitive processes such as judging, reasoning, and evaluation can enhance reading comprehension and critical thinking skills in ESL learners.

Wills and Ellis (2018) contend that there are inconclusive findings on reading comprehension performance when using either the Concept Mapping Strategy or the KWL strategy, and evidence on which strategy is superior in promoting student reading comprehension is still lacking. In a study conducted by Nguumbur (2017), students reported that the KWL strategy effectively increases student engagement, uses deeper learning, and promotes critical thinking. In contrast, in another study conducted by Marashi (2015), students showed a preference for the Concept Mapping strategy over the KWL strategy. Furthermore, the Concept Mapping strategy is distinct from the KWL strategy, and their differences may have varying effects on student reading performance. Therefore, Wills and Ellis (2018) suggested that further research is needed to provide more conclusive evidence of their relative effectiveness on learners' reading performance. Therefore, this study aims to investigate the effectiveness of two types of critical thinking-based reading instruction (Concept Mapping strategy, GO 1 and KWL

strategy, GO 2) compared to a traditional reading strategy, no GO instruction (NGO) or IRE, in improving the reading comprehension of Malaysian ESL learners in this study.

Research Objectives, Questions and Research Hypothesis

The researchers compared the effectiveness of these two methods on improving comprehension and the following are the research questions formulated for the current study.

RQ 1: Is there a significant main effect of Graphic Organiser Instruction (GOI) on the reading comprehension performance of Malaysian ESL students?

    a) Is there any significant main effect of the Concept Mapping strategy (GO 1) on reading comprehension performance among Malaysian ESL learners?

        $H0_1$: There is no significant main effect of Concept Mapping strategy on reading comprehension performance among Malaysian ESL learners.

    b) Is there any significant main effect of KWL strategy Instruction (GO 2) on reading comprehension performance among Malaysian ESL learners?

        $H0_2$: There is no significant main effect of KWL strategy on reading comprehension performance among Malaysian ESL learners.

    c) Is there any significant differential main effects between the Concept Mapping strategy (GO 1) and KWL strategy (GO 2) on reading comprehension performance among Malaysian ESL learners?

        $H0_3$: There is no significant differential main effect between Concept Mapping strategy and KWL strategy on reading comprehension performance among Malaysian ESL learners.

RQ 2: Is there any significant interaction effect of GOI with Reading Ability (RA) on reading comprehension performance among Malaysian ESL learners?

    a) Is there any significant interaction effect of the Concept Mapping strategy (GO1) on the reading comprehension performance of high and average reading ability of Malaysian ESL learners?

        $H0_1$: There is no significant interaction effect between the Concept Mapping strategy (GO 1) on the reading comprehension performance of average and good ESL readers.

    b) Is there any significant interaction effect of the KWL strategy (GO 2) on the reading comprehension performance of high and average reading ability of ESL learners?

        $H0_2$: There is no significant interaction effect of the KWL strategy (GO 2) on the reading comprehension performance of average and good ESL readers.

c) Is there any significant comparative effect of the two types of GO instructional strategies (GO 1 and GO 2) on the reading comprehension performance of high and average reading ability of ESL learners?

H0$_3$: There is no significant comparative effect of the GOI types (GO 1 and GO 2) on the reading comprehension performance of average and good ESL readers.

Role of Graphic Organizers on Reading Comprehension of Malaysian ESL Learners

GOs, as defined by Sharpe (2013), are visual displays that show the connections between facts, words, and ideas in an activity. They used keywords and phrases that are visually connected to create a meaningful representation that can help students identify connections between concepts and ideas. GOs can accelerate understanding, improve note-taking, and provide a storyboard that is difficult to achieve with linear outlines. They also help develop thinking abilities by promoting brainstorming, idea generation, and evaluating causes and consequences.

Visual Representation

GOs offer a clear and concise visual representation of the text's structure, which can significantly enhance the understanding of ESL learners (Jiang & Grabe, 2017). By presenting the organization and relationships between ideas in a visually appealing format, learners can easily grasp the main concepts and themes of the text. This approach helps learners to comprehend the text more effectively, leading to improved reading comprehension and overall language proficiency (Mahdi, 2015).

Active Engagement

GOs require learners to actively engage with the text by analyzing and breaking it down into smaller, more manageable pieces. This process helps learners to focus their attention on the crucial aspects of the text, leading to better comprehension. By utilizing GOs, learners can visually organize their thoughts and ideas, making it easier to understand complex concepts (White, 2017). This method of active engagement promotes critical thinking and problem-solving skills, which are essential for success in academic and professional settings. Overall, incorporating GOs into learning environments can enhance the learning experience and improve overall comprehension (Griffin, 1995).

Effective Idea Organization

GOs provide learners with a powerful tool to arrange their thoughts and ideas in a coherent and logical manner (Biria, 2016). This process enables learners to gain a deeper understanding of the relationships between various components of the text and the overall structure of the material (Davoudi & Yousefi, 2014). By utilizing graphic organizers, learners can enhance their comprehension and retention of the information presented (Praveen & Rajan, 2013).

Improving Vocabulary

Utilizing GOs is an effective method for Malaysian ESL learners to acquire new vocabulary. By organizing and categorizing words based on their meaning or context within the text, learners can easily comprehend and retain new words (Miranda, 2011). This technique is particularly useful for individuals who struggle with memorization or have difficulty understanding complex texts. Incorporating GOs into language learning can enhance the overall learning experience and improve language proficiency (Griffin, 1995).

Graphic Organizer and Related Theories

Four crucial theories support the use of the GOs, and they are the Sociocultural Theory, Schema Theory, Constructivist Theory, and Ausubel Learning Theory.

i.   The Sociocultural Theory
    This theory suggests that using GOs can help learners develop cognition through social interaction and culturally relevant activities. This theory emphasizes the role of social and cultural factors in shaping learning and cognitive development. (Manoli, 2012).

ii. Schema Theory
    It is a psychological framework that explains how individuals use previous knowledge and experiences to process new information. The theory proposes that individuals develop a mental framework called a schema, which helps them organize information and guide cognitive processing (Scott, 2014). In other words, how individuals process new information is influenced by their existing schemas. This theory is useful in understanding how individuals learn and process information. (Spiro, 2014).

iii. The Constructivist Theory
    This theory suggests that learners play an active role in constructing their knowledge by integrating new experiences and information with existing knowledge and beliefs. It emphasizes social interaction and collaboration in learning and encourages learners to engage in real-world activities to apply their skills and knowledge. (Lin, 2016)

iv. Ausubel's Learning Theory
    It is also known as meaningful learning theory, which states that prior knowledge is important in promoting long-term retention and understanding. Learners must have a foundation of relevant prior knowledge to process and integrate new information effectively. Educators can support meaningful learning by providing clear, organized, and relevant learning experiences that build on learners' existing knowledge and experiences. (Shaaban & Ghaith, 2015)

Development of Reading Models and Theories

Reading theories have transitioned from a text-focused approach to one that acknowledges the reader's role. LI reading specialists have developed three models that explain the reading process: bottom-up, top-down, and interactive. These models differ in how they emphasize the way readers extract meaning from written content. In essence, these models focus on the reader's approach to understanding a piece of writing (Debat, 2016).

The bottom-up approach to reading requires decoding each word to understand the text, while the top-down approach relies on prior knowledge and experience. The interactive model combines both approaches and emphasizes the reader's interaction with the text (Scott, 2014). The interactive model currently is the most frequently accepted model for describing the process of reading comprehension, affirms the significance of the reader's interaction with the text (Almutairi, 2018).

The following graphic (Fig. 1) depicts the reading model used in this research.
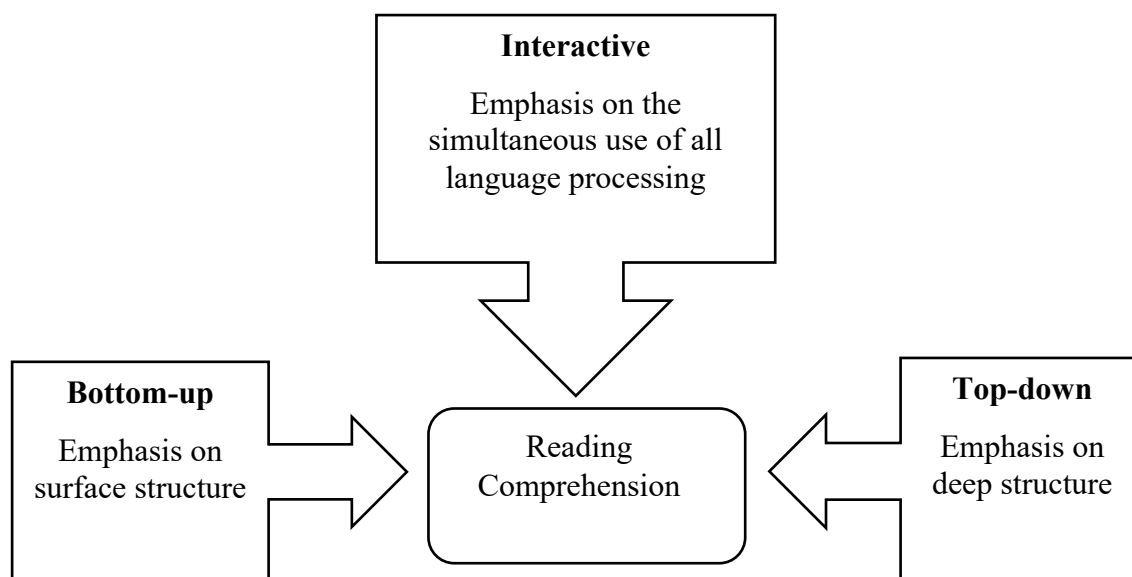

Figure 1: Reading Model

Several reading models incorporate graphic organizers to enhance comprehension and facilitate a deeper understanding of texts. One prominent approach is the "Reciprocal Teaching" model, which emphasizes the reciprocal interaction between the teacher and students. In Reciprocal Teaching, graphic organizers such as prediction charts, question grids, and summarization tools are seamlessly integrated into the reading process. These visual aids provide a structured framework for students to engage in predicting, questioning, clarifying, and summarizing as they interact with the text. By employing graphic organizers, Reciprocal Teaching not only promotes active participation but also assists learners in organizing their thoughts and making connections within the text, ultimately fostering improved reading comprehension.

Another influential reading model that incorporates graphic organizers is the "SQ3R" model, which stands for Survey, Question, Read, Recite, and Review. Graphic organizers such as question maps, story maps, and summarization charts align with each phase of the SQ3R model. These tools guide students through the stages of surveying the text, generating questions, actively reading and reciting information, and reviewing key concepts. The visual representation provided by graphic organizers aids in structuring the information and supports learners in extracting meaningful insights from the text.

Methodology

Research Design

This study aimed to investigate the effects of different types of instruction on the reading comprehension performance of Malaysian ESL learners. It used a quantitative research method and involved an experiment with a control group. The goal was to test the impact of a treatment while controlling for other factors. The study included 180 Malaysian ESL learners from three international schools in Selangor. The researchers used a 3 x 2 factorial design to compare the effects of three types of instruction (Concept Mapping, KWL, and IRE) on the reading achievement of Malaysian ESL learners with good and average reading ability. The learners' reading ability acted as a moderating variable that influenced the relationship between instruction and reading comprehension.

Table 1: Distribution of Subjects in 3 x 2 Factorial Design

3 x 2 Factorial	GO 1	GO 2	NGO (IRE)
Good Readers	n = 30	n = 30	n = 30
Average Readers	n = 30	n = 30	n = 30

n = number of subjects
GO Instruction–Between-Subject Factor (GO1 vs GO2 vs NGO)
Reading Ability – Between-Subject Factor (Good vs Average)

Sampling

To prevent experimental mortality, the researchers recruited a larger sample to account for dropouts (Anthony, 2020). Therefore, 180 Malaysian ESL learners were randomly selected to participate in this research to examine the effect of the two types of GO instruction on the reading comprehension performance among Malaysian ESL learners in Malaysia. International schools often enroll students for whom English is a second language. This presents a valuable cohort of ESL learners, allowing researchers to focus on interventions specifically designed to enhance language development, literacy skills, and academic achievement in a context where English proficiency is crucial. Besides, if the large sample was randomly drawn, the sample would likely resemble the population from which it was drawn (Creswell, & Creswell, 2018).

Instrumentation

In this study, the researchers employed three instruments for data collection.

i.   A Reading Ability Test (pre-experimental stage)

The 2019 IGCSE English Language test paper served as the basis for this assessment. More specifically, the researchers adapted the reading ability test to the format of the IGCSE English Language Paper 2, which only includes the three reading passages from the paper. The objective of the reading ability test was to distinguish between average readers (50% - 70%) and strong readers (more than 70%). To establish the reliability of the test, the researchers employed the test-retest method to calculate the Stability Coefficient. The result of the Pearson Correlation Coefficient of this study is 0.896, which means it had fulfilled the criterion of appropriate reliability (0.84). This result shows that the test is consistent and valid for conducting this study.

ii.   Five Expository Passages for Practice Sessions (experimental stage)

In this study, the researchers selected five reading passages from a textbook used by Malaysian ESL learners in international schools. These passages were chosen because two strategies, the Concept Map strategy and the KWL strategy, had been found to have a significant impact on this type of text (Griffin, 1995). Exposition texts are important in academic life, especially in secondary education (Wijaya & Puti, 2015). The aim of the practice sessions was to introduce the experimental group to graphic organizers in their reading, while the control group read the same texts without any additional instruction.

iii.   Reading Comprehension Test (post-experimental stage)

The test paper contained ten short-answer items, each carrying varying marks, with a total of 40 marks allotted for the short-answer section. The test was administered to three distinct groups: the Concept Mapping strategy group (GO 1), the KWL strategy Group (GO 2), and the IRE strategy Group (NGO). Each group received unique instructions for their reading comprehension test. Three language education experts were asked to review test items for validity. They assessed the items based on factors like clarity, relevance, alignment, and difficulty in relation to the learning objectives and subject matter being tested. To establish the test's reliability, the researchers utilized the test-retest method and calculated the Stability Coefficient. The study found a Pearson Correlation Coefficient of 0.896, indicating evidence of test-retest reliability. This suggests that the test is consistent and valid for use in the study.

Research Procedure

The researchers conducted pilot studies before starting actual research to ensure that research instruments were reliable and valid. 18 Year-10 Malaysian ESL learners from three international schools were chosen randomly for the pilot study. To avoid the Hawthorne effect, ESL teachers participated in the study as research instructors and received uniform training on how to effectively implement experimental conditions and strategies in reading comprehension (Keppel & Wickens, 2004). The experimental stage included five practice sessions lasting two

hours each, with comprehensive practice sessions scheduled after school hours. The researchers conducted a reading comprehension test on two groups receiving a teaching intervention (GO) and one group not receiving the intervention (NGO) in the eighth week. Scores were recorded by the researchers, and there were different instructions for each group.

Results & Discussion

Result

RQ 1: Is there a significant main effect of Graphic Organizer Instruction (GOI) on the reading comprehension performance of ESL students?

This study looked at how two different ways of teaching graphic organizers affected the reading comprehension of Malaysian ESL learners. According to the descriptive statistics of the reading comprehension scores for GOI according to the RA levels, both methods were helpful, but the KWL strategy was better than the concept mapping strategy. Also, students who were better at reading did better in all the instruction groups. The 2-way ANOVA shows that there was a significant interaction between GO instruction and reading ability. This means that GO instruction may have different effects on the reading comprehension of average and good ESL readers.

RQ 1a: Is there any significant main effect of the Concept Mapping strategy (GO 1) on reading comprehension performance among Malaysian ESL learners?

The investigation into the impact of the Concept Mapping strategy (GO 1) on reading comprehension performance among Malaysian ESL learners yielded noteworthy findings. The current study revealed a significant main effect of the Concept Mapping strategy on enhancing reading comprehension abilities in this particular learner demographic. Participants who underwent Concept Mapping instruction demonstrated a substantial improvement in their comprehension scores when compared to the control group. This suggests that incorporating Concept Mapping into ESL instruction provides a promising avenue for fostering deeper understanding and engagement with textual materials. Moreover, the observed positive effects align with the broader literature emphasizing the cognitive benefits of visual representation and organizational frameworks in facilitating comprehension.

RQ 1b: Is there any significant main effect of KWL strategy instruction (GO 2) on reading comprehension performance among Malaysian ESL learners?

The results revealed a significant main effect of KWL strategy instruction on enhancing reading comprehension abilities in this specific learner population. Participants who received KWL strategy instruction demonstrated a statistically significant improvement in their comprehension scores compared to the control group. The findings suggest that incorporating KWL strategy into ESL instruction can be an effective pedagogical approach to enhance students' ability to comprehend written texts. The KWL strategy, with its emphasis on activating prior knowledge, setting reading goals, and reflecting on learning outcomes, appears to provide learners with a structured and scaffolded framework that positively influences their reading comprehension skills. This study contributes valuable insights to the field of ESL

instruction in Malaysia and underscores the potential benefits of integrating KWL strategy into language learning curricula to promote effective reading comprehension among ESL learners.

RQ 1c: Is there any significant differential main effects between the Concept Mapping strategy (GO 1) and KWL strategy (GO 2) on reading comprehension performance among Malaysian ESL learners?

Based on the Tukey's Honestly Significant Difference (HSD) test, it unveiled compelling insights into the differential effects of instructional strategies on reading performance among Malaysian ESL learners. Irrespective of the participants' initial reading abilities, a significant disparity was observed between the KWL strategy (GO 2) and the non-guided instruction group (NGO), with a notable main effect difference of 5.05 (p < .05). This discrepancy indicates that, regardless of the learners' baseline reading proficiency, the KWL strategy significantly outperformed the non-guided instruction approach. However, it is noteworthy that no significant differences were detected between the Concept Mapping strategy (GO 1) and either the KWL strategy or the non-guided instruction group at the specified significance level (p > .05). Therefore, it is concluded that, while the KWL strategy proved effective in enhancing the reading comprehension performance of Malaysian ESL learners, the Concept Mapping strategy did not yield a statistically significant improvement under the conditions of this study. These findings underscore the importance of considering the differential impact of instructional strategies, guiding educators in making informed decisions about the most effective approaches tailored to the needs of ESL learners.

RQ 2: Is there any significant interaction effect of Graphic Organizer Instruction (GOI) with Reading Ability (RA) on reading comprehension performance among ESL learners?

To gain further insights, the 3 x 2 factorial design was transformed into a set of 3 smaller factorials of 2 x 2 ANOVA. These were used to address three sub-questions and examine the effects of different GO strategies on the reading comprehension performance of average and good ESL readers. The interaction comparisons were examined using Tukey's HSD test.

RQ 2a: Is there any significant interaction effect of the Concept Mapping strategy (GO1) on the reading comprehension performance of high and average reading ability of Malaysian ESL learners?

The two-way ANOVA analysis found that there was no significant main effect for GO 1 but a significant main effect for reading ability. The study also found a significant interaction between GO 1 and reading ability, indicating that the concept mapping strategy had differential effects on the reading comprehension performance of average and good readers. Further analysis was conducted to determine which group of readers was affected by the concept mapping strategy.
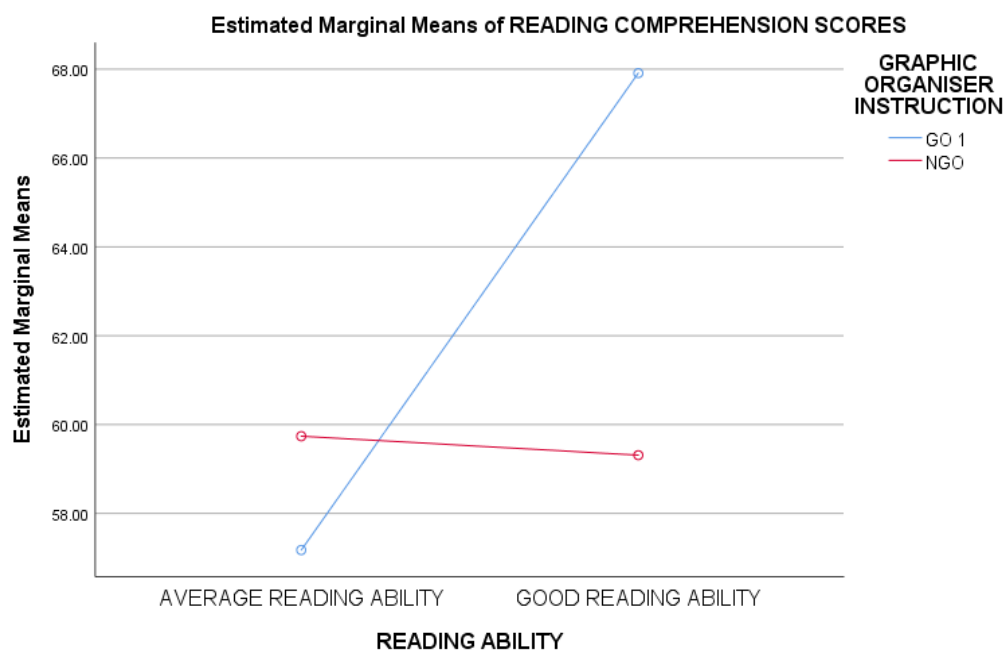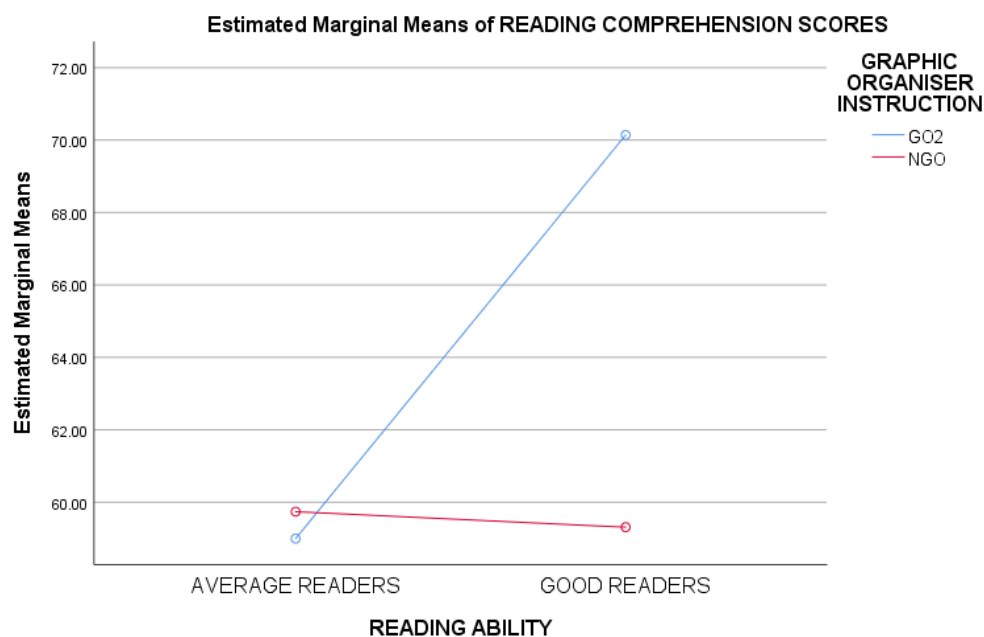
Figure 2: Disordinal Interaction between the Concept Mapping Strategy and Reading Ability

Furthermore, the Tukey's HSD test results show that the use of a concept mapping strategy (GO 1) significantly improved reading comprehension for good readers compared to average readers. However, the strategy did not have a significant effect on average readers under the NGO condition. Additionally, the use of the concept mapping strategy had a greater significant effect on good readers than on average readers. In conclusion, the strategy was found to only be beneficial for good readers.

RQ 2b: Is there any significant interaction effect of the KWL strategy (GO 2) on the reading comprehension performance of high and average reading ability of ESL learners?

The study found that GO 2 strategy had a significant main effect on reading comprehension with a higher score compared to the NGO group. Good readers also had a higher reading score compared to average readers. There was a significant interaction between GO 2 and reading ability, indicating no meaningful difference between the two strategies. Additionally, the Tukey's HSD test reveals that using the KWL strategy had a significant positive effect on reading comprehension for good readers in the GO 2 group, but not for average readers in the NGO group. The facilitative effect of the KWL strategy was only seen in good readers.

Figure 3: Disordinal Interaction between the KWL Strategy and Reading Ability

RQ 2c: Is there any significant comparative effect of the two types of GO instructional strategies (GO 1 and GO 2) on the reading comprehension performance of high and average reading ability of ESL learners?

The 2-way ANOVA shows that the difference between GO instruction types on reading comprehension performance among ESL learners was not significant. However, reading ability had a significant effect. The interaction effect between GO instruction types and reading ability was also not significant, indicating that the concept mapping strategy and the KWL strategy have similar effects on ESL readers' comprehension of expository text.

Discussion

The purpose of this study was to investigate the impact of GO instruction on the reading comprehension performance of ESL learners in Malaysia. The results of the study revealed that using GOs (post-reading activities) had a significant positive impact on the reading comprehension scores of Malaysian ESL learners compared to those who did not use GOs. GOs helped direct attention to important elements of the reading material, promoted cognitive and language activities, and integrated new information with prior knowledge. These findings are consistent with previous research that has demonstrated the positive effects of graphic organizer instruction on reading comprehension in Malaysian ESL learners (Sharpe, 2013; Davoudi & Yousefi 2014; Griffin, 2015; Mahdi, 2015; Ghaffari, 2017)

The study found that using scaffolding strategies, specifically the Concept Mapping and KWL strategies along with a GO, improved the reading comprehension of ESL learners compared to conventional methods that relied on memorization. Students who received these strategies scored higher on comprehension tests and were able to analyze texts more easily. The KWL strategy helps students link new information with their background knowledge while the

Concept Mapping strategy helps Malaysian ESL learners summarize important information in the text. It can be used before, during, and after reading to aid in the learning process. Before reading, they can be used to assess prior knowledge. During reading, they help students approach the content and construct maps tailored to their learning styles. After reading, they serve as a summarization tool and allow students to evaluate their understanding and track progress. Effective use of GOs can help students connect prior knowledge with new information and identify relationships between ideas (Manoli, 2012). Overall, the use of graphic organizers supports the social constructivism theory that emphasizes the valuable role of GOs in facilitating learning.

The comparison between pre-test and post-test results in this study illuminates the impact of the instructional strategies, specifically the KWL strategy (GO 2) and the Concept Mapping strategy (GO 1), on the reading comprehension performance of Malaysian ESL learners. The substantial improvement observed from pre-test to post-test within each instructional group underscores the effectiveness of both strategies in fostering enhanced comprehension abilities over the course of the study.

The notable increase in scores following exposure to the KWL strategy suggests that the structured approach of activating prior knowledge, setting reading goals, and reflecting on learning outcomes has a discernible positive effect on the development of reading comprehension skills. This finding aligns with existing literature highlighting the cognitive benefits of metacognitive strategies embedded in the KWL approach.

Similarly, the Concept Mapping strategy demonstrated a significant positive impact from pre-test to post-test, indicating its potential efficacy in facilitating increased reading comprehension among Malaysian ESL learners. The visual representation and organizational aspects of Concept Mapping likely played a role in assisting learners in connecting and organizing information, contributing to improved comprehension.

The comparison between the two instructional strategies reveals nuanced insights. While both strategies led to significant improvements, the extent of enhancement might vary. Future research could delve deeper into the specific cognitive processes engaged by each strategy to better understand their differential impacts on reading comprehension.

Furthermore, the observed improvements in both groups emphasize the adaptability of these strategies to different learner profiles. Educators may benefit from a flexible instructional approach, incorporating elements from both KWL and Concept Mapping based on the unique needs and preferences of their students.

In conclusion, the study's comparison between pre and post-test results indicates that both the KWL strategy and the Concept Mapping strategy effectively contribute to the development of reading comprehension skills among Malaysian ESL learners. This suggests the potential for a diversified instructional approach, enabling educators to tailor strategies based on individual characteristics and preferences. However, it becomes evident that the KWL strategy outperforms the Concept Mapping strategy in improving students' reading comprehension. The active engagement facilitated by the KWL strategy during practice sessions leads to a more substantial improvement in post-reading comprehension test scores. This approach not only enhances reading performance but also serves as a valuable tool for assessing learners' competence and promoting independent learning. Furthermore, the study indicates that proficient readers benefit more from these strategies than average readers, emphasizing the relevance of the KWL strategy for skillful readers. The KWL Strategy's ability to enhance

critical thinking by actively involving students in their learning process and activating background knowledge is highlighted. This activation of prior knowledge is crucial for facilitating reading comprehension, as skilled readers regularly connect their knowledge with new material, restructuring it to construct meaning. In essence, the findings underscore the importance of leveraging prior knowledge and relevant schemata in predicting reading success and constructing meaning.

Conclusion and Recommendations

In conclusion, this study provides further evidence for the effectiveness of GO instruction in enhancing reading comprehension among ESL learners. The findings of this study have important implications for educators and policymakers who are interested in improving the reading comprehension skills of ESL learners. By incorporating GO instruction into their teaching practices, educators can help their students to better understand and retain the information they read.

Implications of the Study

Using scaffolding techniques, such as the Concept Mapping strategy and KWL strategy, significantly improved reading comprehension for ESL learners compared to a group that did not use these techniques. This suggests that scaffolding techniques are more effective in improving reading comprehension for ESL learners. The explicit teaching of these techniques positively influences reading comprehension and has been shown to create successful learners (Ghaffari, 2017).

The implications of the study comparing the KWL strategy (GO 2) and the Concept Mapping strategy (GO 1) with the non-guided instruction control group (NGO) hold significant ramifications for ESL instruction among Malaysian learners. The observed superiority of the KWL strategy in enhancing reading comprehension performance implies that educators should consider incorporating this approach into their pedagogical repertoire. The emphasis on activating prior knowledge, setting reading goals, and reflecting on learning outcomes inherent in the KWL strategy aligns with the cognitive processes essential for effective comprehension. This finding suggests that structured, goal-oriented strategies, such as KWL, could be particularly beneficial in the Malaysian ESL context.

On the other hand, the lack of a significant difference between the Concept Mapping strategy and the control group underscores the need for educators to critically assess the efficacy of instructional tools. While Concept Mapping has demonstrated benefits in various educational contexts, its effectiveness in enhancing reading comprehension among Malaysian ESL learners may be contingent on specific factors that warrant further investigation. Educators should exercise caution when adopting instructional strategies, recognizing that not all approaches may yield uniform results across diverse learner populations.

Furthermore, the study's implications extend to curriculum design and teacher training programs. The identification of effective strategies, such as KWL, suggests that professional development initiatives should prioritize the incorporation of evidence-based practices. This ensures that educators are equipped with the knowledge and skills necessary to implement strategies that have been demonstrated to positively impact reading comprehension outcomes.

The nuanced comparison among the KWL strategy, Concept Mapping strategy, and non-guided instruction provides valuable insights for educators seeking to tailor their instructional methods to the unique needs of Malaysian ESL learners, fostering a more informed and effective approach to language instruction.

When it comes to assessing students in school, GO instruction is a highly favorable approach. It goes beyond the traditional method of measuring a student's ability to memorize and regurgitate information. By incorporating GOs into instruction, students are encouraged to actively engage with the material, analyze it, and organize it in a way that makes sense to them (Mohd Yussof et.al, 2012). This hands-on, visual learning approach is particularly helpful for ESL learners who may struggle with traditional lecture-based instruction.

Limitation of the Study

The timing of the treatment conditions was inconsistent since the two schools followed a shift system where junior and senior secondary school students attended classes at different times. The GO 1 (School A) group received experimental lessons in the morning while GO 2 (School B) group had their experimental lessons in the afternoon. One potential issue is that the timing of the experimental lessons may have affected the ability of students to concentrate and engage with the material being taught. For example, ESL learners who received treatment in the morning may have been more alert and focused than those who received it in the afternoon, particularly if they had a good night's sleep and a healthy breakfast. This could potentially lead to differences in the learning outcomes between the two groups, even if the content of the lessons was identical. Another factor that might have influenced the results is the fact that some ESL learners who received treatment in the afternoon tended to arrive late to class. This could have harmed their ability to fully engage with the material being taught and may have contributed to lower learning outcomes for this group. Additionally, ESL learners who arrive late may also miss important instructions or announcements related to the lesson, further hindering their ability to learn.

Recommendations for Future Research

In future studies or instructional implementations, it is recommended to standardize the timing of treatment conditions across all participating schools. This may involve coordinating with school administrators to align class schedules or selecting a time that is most conducive to optimal concentration and engagement for all students. To mitigate the issue of late arrivals affecting engagement, consider implementing and enforcing attendance policies. This may include communicating the importance of punctuality to both students and parents, as well as implementing consequences for consistent tardiness. This ensures that all students have equal opportunities to engage with instructional materials from the beginning of each session.

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