THE USE OF GRAPHIC ORGANIZERS IN TEACHING EFL READING SKILLS

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Annotation: This study explores the effectiveness of using graphic organizers (GOs) in teaching English as a Foreign Language (EFL) reading skills. Graphic organizers help learners visually structure information, identify key ideas, and improve text comprehension. Grounded in schema theory and dual coding theory, this research highlights how visual tools enhance knowledge retention and comprehension. Using a mixed-methods approach, the study collected data through pre- and post-tests, classroom observations, and student feedback. The findings indicate that the use of graphic organizers significantly improves students' ability to understand texts, identify main ideas, and make inferences. Additionally, students demonstrated increased motivation and engagement in reading activities. This study confirms that graphic organizers serve as an effective instructional strategy for EFL learners and should be integrated into reading lessons.

Key words: graphic organizers, reading comprehension, EFL learners, schema theory, dual coding theory, text analysis, teaching strategies, visual learning.

Introduction: Reading is a fundamental skill in language learning, serving as a key component for academic success and overall language proficiency (Grabe & Stoller, 2019). In the context of English as a Foreign Language (EFL), reading comprehension poses significant challenges due to limited vocabulary, unfamiliar text structures, and cultural differences (Nation, 2020). Therefore, effective instructional strategies are necessary to enhance students' ability to process and understand texts. One such approach is the use of graphic organizers (GOs)—visual tools that aid in structuring information, identifying relationships, and promoting deeper comprehension (Alvermann & Eakle, 2020). The theoretical foundation of this study is rooted in schema theory (Anderson & Pearson, 1984) and dual coding theory (Paivio, 1990). Schema theory posits that readers comprehend texts by activating prior knowledge and making connections with new information, while dual coding theory suggests that learning is more effective when verbal and visual information are processed together. Graphic organizers facilitate both processes by visually representing key ideas, thereby improving text comprehension and recall (Meyer & Ray, 2017).

Despite the growing body of evidence supporting the use of graphic organizers, their application in EFL reading instruction remains underexplored in many educational contexts (Marzano, 2021). This study aims to bridge this gap by investigating the impact of graphic organizers on EFL learners' reading comprehension. Specifically, it examines whether these tools help students identify key ideas, make inferences, and retain information more effectively.

Methodology: Research Design and Approach: This study employs a mixed-methods research design, integrating quantitative and qualitative approaches to investigate the effectiveness of graphic organizers in enhancing EFL reading comprehension. The quasi-

experimental design was chosen to compare students' reading performance before and after using graphic organizers, while qualitative data provided insights into students' perceptions and learning experiences.

The study is grounded in schema theory (Anderson & Pearson, 1984), which posits that comprehension is enhanced when learners connect new information to prior knowledge. Additionally, dual coding theory (Paivio, 1990) supports the use of graphic organizers, highlighting that combining visual and verbal representations strengthens learning. Research by Grabe and Stoller (2019) and Marzano (2021) further underscores the role of structured reading strategies in improving comprehension, particularly among EFL learners.

Participants and Sampling: The study was conducted at a university in Uzbekistan, involving intermediate-level EFL learners. Participants were selected using a purposive sampling method to meet the following criteria:

• CEFR Level B1-B2: Students had intermediate English proficiency, ensuring a comparable baseline level of reading comprehension.

• Limited Prior Experience with Graphic Organizers: To measure the direct impact of the intervention.

• Willingness to Participate: Students voluntarily agreed to take part in the study and provided informed consent.

Participants were divided into two groups:

• Experimental Group: Received reading instruction incorporating graphic organizers.

• Control Group: Followed traditional reading instruction without graphic organizers.

Instructional Procedure: The intervention lasted six weeks, with both groups receiving equal reading instruction in terms of duration and reading materials, differing only in teaching methodology.

Experimental Group (Graphic Organizer-Based Instruction):

• Week 1: Introduction to different types of graphic organizers (e.g., Venn diagrams, concept maps, flowcharts).

• Weeks 2-5: Integration of graphic organizers into reading comprehension tasks:

• Before Reading: Activating background knowledge through brainstorming maps.

• During Reading: Using mind maps and flowcharts to organize main ideas, supporting details, and connections.

• After Reading: Summarizing key concepts using cause-effect charts and hierarchical diagrams.

• Week 6: Final reading comprehension test and student reflections.

Control Group (Traditional Instruction):

• Pre-reading: Vocabulary explanation and guided discussion.

• During Reading: Silent reading followed by comprehension questions.

• Post-reading: Writing summaries or completing textbook-based exercises.

Data Collection Instruments: Quantitative Data Collection

1. Pre-test and Post-test Reading Assessments: Administered to both groups before and after the intervention. Based on standardized reading comprehension tests (Cambridge English Reading Test framework). Assessed on: Main idea identification. Recognition of supporting details. Inference-making ability. Logical sequencing of information

2. Likert-Scale Survey on Reading Confidence and Strategy Use: A 5-point Likert scale questionnaire measured students' self-reported confidence and use of reading strategies before and after the study.

Data Analysis: Quantitative Data Analysis:

•Descriptive Statistics: Mean scores and standard deviations were calculated to compare pre-test and post-test results.

•Inferential Statistics: A t-test was conducted to determine the significance of differences in reading performance between the experimental and control groups.

Qualitative Data Analysis

Thematic Analysis (Braun & Clarke, 2006): Survey responses, interview transcripts, and classroom observations were coded for recurring themes. Patterns related to engagement, reading comprehension strategies, and student perceptions were identified.

Ethical Considerations: The study adhered to ethical research principles, ensuring:

• Informed Consent: Participants were fully briefed on the study's purpose and voluntarily participated.

• Confidentiality: Personal information was anonymized, and data were used solely for research purposes.

• Academic Integrity: Data collection and analysis followed objective and transparent procedures.

Limitations and Future Research: Despite its contributions, the study has certain limitations:

• Short Duration: A six-week intervention may not capture long-term effects on reading proficiency.

• Limited Sample Size: The study was conducted in a single institution, limiting the generalizability of the findings.

• Context-Specific Results: Findings may vary across different learning environments and educational contexts.

Future research should explore the long-term impact of graphic organizers on reading skills, assess their effectiveness across different proficiency levels, and examine the integration of digital tools to enhance visual learning strategies in EFL contexts.

Results and Discussion: Effects of Graphic Organizers on Reading Comprehension: The findings indicate a significant improvement in the reading comprehension skills of students who used graphic organizers compared to those who received traditional instruction. The experimental group demonstrated higher gains in their post-test scores, particularly in areas related to main idea identification, inference-making, and logical sequencing of information. This aligns with previous research by Grabe and Stoller (2019) and Marzano (2021), which emphasizes the role of structured reading strategies in enhancing comprehension. The improvement in the experimental group can be attributed to visual structuring of information, which helped learners organize complex texts more effectively. According to Paivio's (1990) Dual Coding Theory, the combination of verbal and visual inputs strengthens information retention and understanding. This supports findings from Kim and Clariana (2015), who reported that graphic organizers facilitate better text processing in EFL learners.

In contrast, the control group, which relied solely on traditional reading strategies, showed only marginal improvement. Their reading development was slower, particularly in tasks requiring critical thinking and synthesis of information, reinforcing the idea that conventional methods may not be as effective in fostering deep reading comprehension.

Student Engagement and Motivation: Qualitative data from classroom observations, student interviews, and teacher reflections suggest that students in the experimental group were more engaged and motivated compared to those in the control group. Many students reported that graphic organizers:

• Helped them visualize connections between ideas, making comprehension easier.

• Reduced cognitive overload, allowing them to focus on key information.

• Made reading more interactive and enjoyable, increasing their confidence in dealing with complex texts.

These findings align with Ellis and Howard (2017), who found that students using graphic organizers were more actively involved in their learning process, leading to improved retention and engagement. Moreover, Alvermann and Eakle (2020) argue that visual learning tools help EFL students develop metacognitive strategies, which enhance their ability to monitor and adjust their reading processes. On the other hand, students in the control group often relied on rote memorization and struggled with text analysis. Many expressed frustration with text-heavy reading activities, indicating a need for more interactive and visually structured learning materials.

Challenges in Implementing Graphic Organizers: Despite the positive outcomes, some students in the experimental group faced initial difficulties in using graphic organizers effectively. Common challenges included:

• Unfamiliarity with different graphic organizer types and how to use them for various reading tasks.

• Over-reliance on visual representation, leading to less focus on textual details in some cases.

• Time constraints, as structuring information visually required additional effort during early stages of learning.

These challenges align with Fisher and Frey (2018), who emphasize that effective integration of graphic organizers requires explicit instruction and guided practice. As a solution, gradual scaffolding should be applied, where students are introduced to simpler graphic organizers before moving on to more complex ones.

Pedagogical Implications: The findings suggest several important implications for EFL reading instruction:

• Teachers should incorporate graphic organizers systematically into reading lessons to enhance comprehension, particularly for complex texts.

• Explicit instruction on how to use graphic organizers effectively is crucial, as some students may struggle with their initial application.

• A combination of visual and textual learning approaches is necessary to avoid over-reliance on either modality.

• Digital graphic organizers could be explored as an alternative, making reading instruction more interactive and accessible.

Comparison with Previous Studies: The results of this study reinforce findings from previous research:

• Grabe and Stoller (2019) found that structured reading strategies improve comprehension, particularly among EFL learners.

• Kim and Clariana (2015) demonstrated that dual coding through visual representation enhances information processing.

• Ellis and Howard (2017) highlighted the motivational benefits of interactive reading strategies.

Overall, the study supports the growing body of evidence that graphic organizers enhance reading comprehension, engagement, and strategic learning among EFL students. Summary of Findings: Graphic organizers significantly improved reading comprehension in areas such as main idea identification, inference-making, and text organization. Students in the experimental group showed higher engagement and motivation, indicating that visual learning tools make reading more interactive and enjoyable. Challenges in implementing graphic organizers were noted, including initial unfamiliarity and time constraints, highlighting the need for explicit instruction and gradual scaffolding. Findings align with previous research, reinforcing the effectiveness of structured visual aids in EFL reading instruction. These insights provide practical guidance for educators seeking to integrate graphic organizers into EFL reading lessons, ultimately fostering more effective and engaging reading comprehension strategies.

Conclusion: This study highlights the effectiveness of graphic organizers in enhancing EFL reading skills, particularly in improving comprehension, engagement, and strategic learning. The findings reveal that students who used graphic organizers performed significantly better in identifying main ideas, making inferences, and organizing information compared to those who followed traditional reading instruction. Additionally, graphic organizers increased student motivation and participation, making reading activities more interactive and engaging.

However, some students initially faced challenges in using graphic organizers, such as unfamiliarity and time constraints, emphasizing the need for explicit instruction and scaffolding. Despite these challenges, the study reinforces the importance of visual learning strategies in EFL education and suggests that integrating graphic organizers into reading instruction can enhance comprehension and make learning more effective. Future research should explore long-term impacts, digital graphic organizers, and their application across different proficiency levels to maximize their potential in EFL classrooms.

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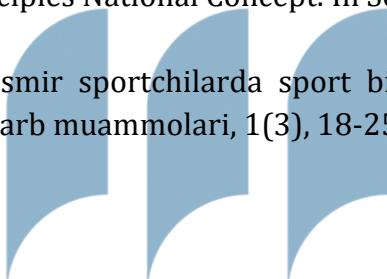
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