

## **The Effect of Rhetorical Organization of Expository Texts on Iraqi EFL Students' Reading Comprehension Performance**

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### **Abstract**

Understanding a written text involves more than just decoding vocabulary and syntax; it requires recognizing how ideas are logically sequenced and organized at the discourse level. This broader structural framework—commonly referred to as rhetorical organization or discourse structure—plays a critical role in facilitating comprehension, particularly for learners of English as a Foreign Language (EFL). For these learners, the ability to identify and follow rhetorical patterns significantly influences how well they process and retain information from a text. This relationship between rhetorical structure and comprehension becomes even more significant in EFL contexts. EFL learners often struggle with texts not because of unfamiliar words or complex grammar alone, but because they fail to recognize how the information is organized (Carrell, 1985; Grabe & Jiang, 2013). Studies such as Almutairi (2018) and Upton & Lee-Thompson (2001) emphasize that EFL readers' difficulties in comprehension are frequently tied to discourse-level features, including coherence, cohesion, and rhetorical sequencing. Inadequate awareness of text organization can lead to fragmented understanding, reduced recall, and lower academic performance. Rhetorical organization is vital but underexplored factor in EFL reading comprehension. A deeper understanding of how discourse-level features shape comprehension is needed and this study is a step in this direction.

Keywords: (structural framework, rhetorical organization, discourse).

## أثر التركيب البلاغي للنصوص الاستعراضية على استيعاب طلبة الكليات العراقية متعلمي اللغة الإنجليزية لغة اجنبية

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### المخلص

لا يقتصر فهم النص المكتوب على فك رموز المفردات والقواعد النحوية فحسب، بل يتطلب أيضًا إدراك كيفية تسلسل الأفكار وتنظيمها منطقيًا على مستوى الخطاب. ويلعب هذا الإطار الهيكلي الأوسع - المعروف عادةً بالتنظيم البلاغي أو بنية الخطاب - دورًا حاسمًا في تسهيل الفهم، لا سيما لمتعلمي اللغة الإنجليزية كلغة أجنبية فبالنسبة لهؤلاء المتعلمين، تؤثر قدرتهم على تحديد الأنماط البلاغية ومتابعتها بشكل كبير على مدى قدرتهم على معالجة المعلومات من النص وحفظها. وتزداد أهمية هذه العلاقة بين البنية البلاغية والفهم في سياقات اللغة الإنجليزية كلغة أجنبية. فغالبًا ما يواجه متعلمو اللغة الإنجليزية كلغة أجنبية صعوبة في فهم النصوص، ليس بسبب الكلمات غير المألوفة أو القواعد النحوية المعقدة فحسب، بل لأنهم يفشلون في إدراك كيفية تنظيم المعلومات (كاريل، ١٩٨٥؛ جرابي وجيانغ، ٢٠١٣). تؤكد دراسات مثل دراسة المطيري (٢٠١٨) وأبتون ولي-ثومسون (٢٠٠١) على أن صعوبات الفهم لدى قراء اللغة الإنجليزية كلغة أجنبية ترتبط غالبًا بخصائص الخطاب، بما في ذلك التماسك والترابط والتسلسل البلاغي. ويمكن أن يؤدي ضعف الوعي بتنظيم النص إلى تشتت الفهم، وضعف التذكر، وانخفاض الأداء الأكاديمي. يُعد التنظيم البلاغي عاملاً حيويًا، ولكنه لم يُستكشف بعد في فهم القراءة لدى قراء اللغة الإنجليزية كلغة أجنبية. ويلزم فهم أعمق لكيفية تأثير خصائص الخطاب على الفهم، وهذه الدراسة خطوة في هذا الاتجاه.

الكلمات المفتاحية: (الإطار الهيكلي، بالتنظيم البلاغي، الخطاب)

Understanding a written text involves more than just decoding vocabulary and syntax; it requires recognizing how ideas are logically sequenced and organized at the discourse level. This broader structural framework—commonly referred to as *rhetorical organization* or *discourse structure*—plays a critical role in facilitating comprehension, particularly for

learners of English as a Foreign Language (EFL). For these learners, the ability to identify and follow rhetorical patterns significantly influences how well they process and retain information from a text.

This relationship between rhetorical structure and comprehension becomes even more significant in EFL contexts. EFL learners often struggle with texts not because of unfamiliar words or complex grammar alone, but because they fail to recognize how the information is organized (Carrell, 1985; Grabe & Jiang, 2013). Studies such as Almutairi (2018) and Upton & Lee-Thompson (2001) emphasize that EFL readers' difficulties in comprehension are frequently tied to discourse-level features, including coherence, cohesion, and rhetorical sequencing. Inadequate awareness of text organization can lead to fragmented understanding, reduced recall, and lower academic performance. Rhetorical organization is vital but underexplored factor in EFL reading comprehension. A deeper understanding of how discourse-level features shape comprehension is needed and this study is a step in this direction.

Previous studies

### **1. Carrell (1984) – Rhetorical Organization and ESL Readers**

Carrell's classic study investigated how rhetorical organization, including the problem-solution (PS) pattern, affects ESL readers' comprehension. She constructed experimental texts that were equivalent in vocabulary and syntactic difficulty but differed in rhetorical organization

(e.g., comparison, causation, problem–solution). Carrell found that learners' recall protocols and comprehension scores varied significantly depending on the text structure, with problem–solution texts generally yielding clearer recall and more accurate main-idea reporting.

This finding highlights two important points for EFL contexts: first, comprehension difficulties often originate from discourse-level organization rather than sentence-level features; and second, readers with less exposure to academic expository genres may not spontaneously recognize organizational cues. For Iraqi EFL learners, Carrell's study suggests that teaching students to notice and exploit the rhetorical structure of problem–solution texts could directly enhance comprehension outcomes.

## **2. Foo (1989) – Problem–Solution vs. Collection Structures in L2 Reading**

Foo's study (ERIC ED354741) compared EFL learners' comprehension of texts written in a problem–solution pattern with texts written in a collection/description pattern. Using controlled materials and recall protocols, Foo demonstrated that students understood and remembered problem–solution texts more effectively than descriptive texts. One key contribution of this study was showing that the logical progression of problem–solution texts (situation → problem → response → result) provided a scaffold for L2 readers to build a mental representation of the text. In contrast, descriptive texts without a clear problem–resolution thread

led to fragmented recall. For Iraqi EFL students, who often struggle with expository reading, Foo's findings imply that PS texts may be inherently more accessible—and thus a strategic choice for both teaching materials and assessment tasks. Moreover, the study underscores the importance of making the stages of the PS pattern explicit (through connectors like *the problem is, therefore, as a result*), since students who recognized the structure recalled significantly more.

### **3. Hoey's Problem–Solution Model (2001) in EFL Research**

Although Hoey's work was originally theoretical and corpus-based, his Problem–Solution pattern model (Situation → Problem → Response → Evaluation/Result) has been widely applied in EFL reading research and pedagogy. Studies building on Hoey's (2001) framework show that EFL students often fail to identify the full chain of PS moves, especially the evaluation/result stage, which weakens their comprehension of author stance and text purpose. Research also shows that when students are trained to map text segments onto the PS pattern, they can more accurately summarize and answer comprehension questions. For Iraqi EFL contexts, Hoey's model is particularly useful because many academic and journalistic English texts adopt the PS pattern. Explicit instruction in recognizing this structure helps students move beyond surface-level word recognition toward deeper discourse processing. By teaching Iraqi EFL learners to expect a PS progression, instructors can reduce the cognitive load of reading and help learners allocate attention more strategically (e.g., actively searching for the problem statement and the proposed solution).

### **Methodology overview**

This experimental study was conducted with a sample of twenty Iraqi undergraduate students at the Department of English, College of Arts,

University of Baghdad. The participants were randomly assigned to a control group and an experimental group. The control group read an expository passage organized according to the conventional order of “Situation–Problem–Solution–Evaluation” pattern, while the experimental group received a reordered version of the same text, structured as “Solution–Evaluation–Situation–Problem”. This manipulation was intended to test whether deviations from expected rhetorical organization would affect comprehension.

### **Data Analysis Procedures**

The data collected from the students' recall responses were analyzed quantitatively using Meyer's (1975) model of idea units, which provides a systematic method for segmenting and categorizing the content of recall protocols. According to this model, an *idea unit* refers to a distinct and meaningful proposition or piece of information that can be independently identified and evaluated. This approach is particularly useful in analyzing expository texts, as it focuses on the conceptual structure of information rather than surface-level features.

Each student's written recall was reviewed and segmented into idea units. The total number of accurately recalled idea units was calculated for each participant. Only the idea units that were relevant, meaningful, and matched the original text content were counted. Paraphrased units were

accepted as long as the essential meaning was preserved. Irrelevant or distorted information was excluded from the final count.

To assess the effect of rhetorical organization, the mean number of idea units recalled by each group was computed. A comparison was then made between the control group (exposed to the conventional SPSE structure) and the experimental group (exposed to the reordered SESP structure).

Statistical analysis was carried out using descriptive statistics (mean, median, standard deviation) to summarize group performance, followed by inferential analysis using a two-sample t-test to determine whether the difference in recall performance between the two groups was statistically significant. A significance level of  $p < 0.05$  was adopted to test the null hypothesis, which stated that there is no significant difference in recall performance between students reading conventionally and unconventionally organized texts.

The statistical analysis aims to answer the main research question: Does the rhetorical organization of an expository text affect the quantity of information EFL students are able to comprehend and recall? The results obtained from this analysis served as the basis for interpreting the cognitive impact of rhetorical structure on reading comprehension in an EFL context.

Figure (1) The **descriptive statistics** for **Group A** (Control group – conventional rhetorical pattern):

Statistic	Idea Units Recalled	Quantity Score
<b>Mean</b>	69.60	38.88
<b>Median</b>	69.50	38.83
<b>Standard Deviation</b>	8.19	4.58
<b>Minimum</b>	55.00	30.73
<b>Maximum</b>	<b>80.00</b>	<b>44.69</b>

Figure (2) The **descriptive statistics** for **Group B** (Experimental group – reordered rhetorical pattern):

Statistic	Idea Units Recalled	Quantity Score
<b>Mean</b>	51.10	28.55
<b>Median</b>	55.50	31.01
<b>Standard Deviation</b>	8.53	4.77
<b>Minimum</b>	39.00	21.79
<b>Maximum</b>	61.00	34.08

Figure (3) Summary Comparison (Group A vs. Group B)

Group	Mean Recalled Units	Mean Quantity Score
<b>Group A (Conventional)</b>	69.60	38.88
<b>Group B (Reordered)</b>	51.10	28.55

Figure (4) the two-way analysis of variance (ANOVA)

Measure	F-value	p-value	Significance
Idea Units Recalled	24.50	0.0001	Highly significant
Quantity Score	24.40	0.0001	Highly significant

The results of the two-way analysis of variance (ANOVA) revealed statistically significant differences between the two groups (Conventional vs. Reordered rhetorical patterns) in terms of both idea units recalled and quantity score. Specifically, for the Idea Units Recalled, the F-value was 24.50 with a p-value of 0.0001, indicating a highly significant difference in favour of the control group (Conventional pattern). Likewise, the Quantity Score also showed a significant difference, with an F-value of 24.40 and a p-value of 0.0001, again favoring the control group.

These findings suggest that the conventional rhetorical organization facilitates better recall and more elaborated responses among EFL learners compared to the reordered rhetorical structure. The significant improvement in both the number and quality of idea units supports the view that the way information is organized rhetorically has a direct impact on comprehension performance. It may be inferred that the familiar and coherent structure of the conventional pattern enhances cognitive processing, leading to better retention and expression of ideas.

The findings of the two-way ANOVA analysis demonstrated statistically significant differences between the control group (Conventional rhetorical pattern) and the experimental group (Reordered rhetorical pattern) across both measured variables: idea units recalled and quantity score. For Idea Units Recalled, the ANOVA yielded an F-value of 24.50 and a p-value of 0.0001, indicating a highly significant difference in favor of the

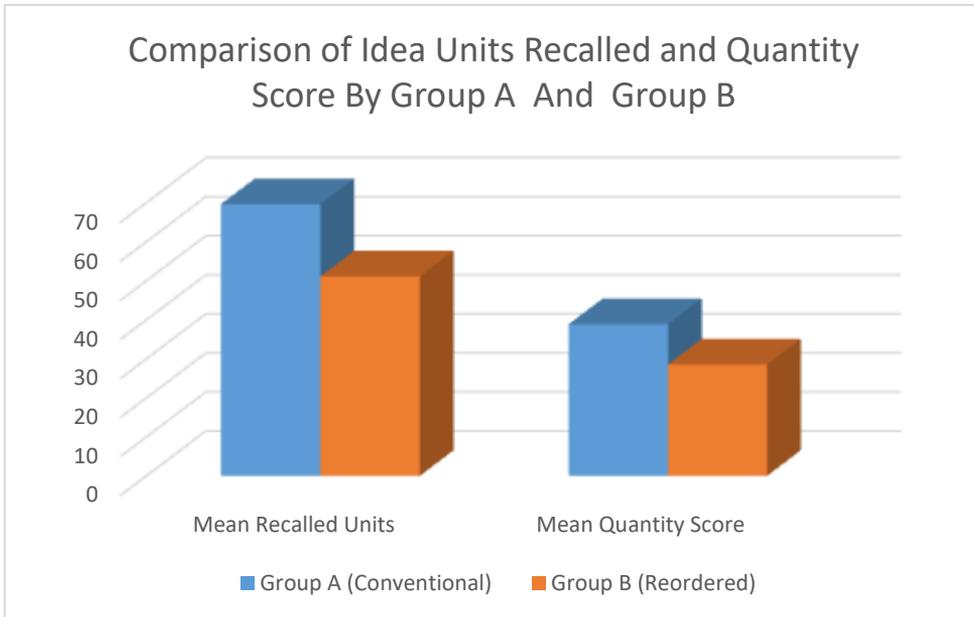
conventional rhetorical structure. Similarly, for Quantity Score, the analysis produced an F-value of 24.40 and a p-value of 0.0001, again suggesting a highly significant advantage for the conventional pattern.

These results underscore the positive influence of coherent and familiar rhetorical organization on students' reading comprehension and written recall performance. Learners exposed to the conventional rhetorical structure recalled more idea units and expressed their understanding more elaborately compared to those who read the reordered version. This implies that a well-organized rhetorical pattern may enhance cognitive processing by providing clearer textual cues and reducing the cognitive load during comprehension and recall.

Furthermore, the **Pearson correlation coefficient** between idea units recalled and quantity score was found to be  $r = 1.00$ , signifying an almost perfect positive correlation. This strong association confirms that as students recalled more idea units, the quality and elaboration of their responses also improved proportionally. It reflects a high level of internal consistency between the two measurement dimensions and reinforces the reliability of the scoring scheme employed in this study.

The following bar chart comparing the mean Idea Units Recalled and Quantity Scores between Group A (Conventional) and Group B (Reordered). It visually supports the statistical results: Group A outperformed Group B

across both measures. Let me know if you'd like a second chart showing standard deviation or individual data points.



These findings highlight the critical role of rhetorical structure in shaping EFL learners' comprehension and production outcomes, and they suggest that instructional materials and texts should be designed with careful attention to rhetorical coherence to maximize learner performance.

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