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Focusing on the Efficiency of Cognitive Reading Comprehension Strategies for Comprehending Different Text Types by EFL Learners of Different Proficiency Levels

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Abstract

This study was designed to examine the effects of applying different cognitive reading comprehension strategies on the comprehension of descriptive, narrative, argumentative, and expository texts among Iraqi beginner, intermediate, and advanced EFL learners to investigate whether the benefits of cognitive reading strategies are consistent across EFL learners of different English proficiency levels and various text types. Hence, 300 Iraqi EFL learners were selected through a convenience sampling procedure from undergraduate students of Thi Qar University and were equally divided into three levels of English proficiency; each level included four experimental groups according to four text types. To measure the participants' improvement after implementing the treatment, 12 reading comprehension tests were constructed and administered twice, once before the study's treatment and once after the participants' exposure to cognitive reading comprehension strategies as a post-test. The findings implied the effectiveness of cognitive reading comprehension strategies for improving the comprehension of various text types among EFL learners of different proficiency levels. Moreover, it was revealed that cognitive reading comprehension strategies were more effective for the descriptive and the narrative texts. The results also showed that the intermediate and the advanced learners benefitted more than the beginners from the cognitive reading strategies.

Keywords: *Reading Comprehension, Cognitive Reading Strategies, Text Genres, Iraqi EFL Learners*

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Introduction

According to Sua (2021) reading is the most important skill for EFL learners that results in gaining high levels of English proficiency and the appropriate application of the received information to the new contexts of learning. Cognitive hypotheses emphasize that perceptual abilities, memory and its limitations and conceptual awareness are needed to carry out a successful reading comprehension task (Akyol, 2005). However, according to research, readers' goals and strategies differ based on the text at hand and the readers' personality (Dunggo-an et al., 2025; Ozdemir, 2018). These findings have led second language scholars to discover parallels between first and second language readers' reading tasks and how cultural expectations shape what a reader comprehends.

Cognitive, meta-cognitive and socio-affective reading comprehension strategies are typically known as three distinctive strategy types employed by readers on comprehension tasks (Chamot, 2005). The basic cognitive strategies of reading comprehension are skimming and scanning, making predictions, identifying important concepts and summarizing, making inferences and questioning (Lus & Maria, 2010).

When one skims, swiftly scans through the text to absorb the main points, understand how it is structured, or gets a sense of the author's tone or purpose. When scanning, one merely attempts to discover specific information and frequently fail to do so by adhering to the passage's linearity. When a reader makes a prediction, s/he does so by using information from the text, such as titles, headings, illustrations, and diagrams, as well as their own prior knowledge and experiences. Making predictions allows readers to anticipate the expected information in the text, such as determining the purpose and the content of the text based on the title, pictures or some key words (Lus & Maria, 2010). Deleting the irrelevant information, categorizing the needed information, recognizing and applying the author's core ideas, and developing a personal idea if the author did not express it explicitly, are all manifestations of summarizing which is a cognitive reading strategy for successful readers (Al-Issa, 2020). Making inferences is establishing the conceptual coherence using both the text and the past knowledge (McNamara, 2007). While reading, learners must look for information in many places and simultaneously describe, contrast, organize, and explain concepts to make informed guesses. Learners can acquire various degrees of thinking abilities through the use of questioning. Questions, which contain direct answers in the text would help learners focus on their knowledge by identifying and remembering the presented data (Alwan, 2012).

These five strategies could be used by EFL teachers to enhance the degree and quality of comprehending different genres of pedagogical texts (i.e., descriptive, narrative, argumentative and expository texts). Description is a drawing with words that conveys a real or imaginary scene of cities, things, or places through external or internal imaging through an objective, subjective, or contemplative vision (Gurinder, 2019). Narrative involve a story in which a series of actions are narrated in a sequential manner, whether events or data from beginning to end, real or imaginary (Youssef, 2018). The narrative text has four elements of characters, the place, the time, and the narrative function (Tran, 2020) to transmit a story from one person to another, from one group to another, and from one generation to another, telling what happened regardless of whether it was oral or written, ancient or modern or even real or imaginary. Argumentative texts organize knowledge using high-level thinking skills,

which include selecting one option from a variety of options, weighing the advantages or the disadvantages, and presenting the best option based on arguments (Ozdemir, 2018). Since arguments can be maintained within various points of view, in addition to the viewpoint that is being supported, alternate viewpoints are also presented and challenged. In expository texts, writers use description, sequencing, cause and effect and problem/solution to explain things. Comparison and contrast are also used to connect two things by highlighting their similarities and differences. Employing these techniques, the writers can elaborate on new concepts and present them schematically (Hattie & Yates, 2014).

The present study endeavored to examine the possible effects of implementing different cognitive reading comprehension strategies on the comprehension of four pedagogical text genres for novice, intermediate, and advanced Iraqi EFL learners to see if the benefits of cognitive reading strategies are consistent across various English proficiency levels and for different text genres. Based on the research objectives the following research questions are formed:

RQ₁: Do different cognitive reading comprehension strategies improve the EFL learners reading comprehension ability significantly?

RQ₂: Are there significant differences in the reading comprehension improvement of beginner, intermediate and advanced Iraqi EFL learners who experienced cognitive reading comprehension strategies?

RQ₃: Are there significant differences in the comprehension of different text genres (i.e., descriptive, argumentative, narrative and expository) among Iraqi EFL learners who experienced cognitive reading comprehension strategies?

Literature Review

Reading comprehension is a diverse cognitive process that combines the skill of understanding, interpreting, and finding meaning in written texts (Smith & Kosslyn, 2022). Foundational to reading comprehension is the proficiency of decoding, which gives readers the ability to see words and perceive their interpretations (Corso et al., 2024; McNamara, 2007). Accurate understanding demands that readers engage with the text in a way that links new information with the prior knowledge and the experiences as well as contextual factors. This connection-making process allows readers to relate concepts that are not easy to visualize to their personal lives, and encourages both personal relevance and emotional engagement (Zhang & Seepho, 2013).

Cognitive reading strategies according to Duke and Pearson (2009) play a crucial role in the general process of developing reading comprehension. To them, cognitive processes are the approaches that enable readers to process texts in a better way, and include guessing, asking questions, and paraphrasing and are absolutely necessary for an increased levels of understanding and should be introduced with direct instruction and modeling.

Nonetheless, EFL learners typically find it difficult to understand texts of different genres, as they possess different structures, lexical items and impose different degrees of cognitive load (Grabe & Stoller, 2019). Hence, as a pedagogical aid, cognitive reading strategies can be employed to familiarize learners with different texts' organizations and contents and consequently to enhance the accurate perception of the reading passages (Creswell & Clark, 2017; Schwartz, 2025).

Zila and Septiana (2024) documented that the use of appropriate reading strategies is an art in teaching reading passages; inappropriate strategies would lead to poor comprehension and objection of the learners. Shahini et al. (2025) claimed that using reading comprehension strategies would result in fostering critical thinking among EFL learners. Al-Qahtani (2019) also found that reading strategies have a positive effect on learners' reading comprehension, lexical development and learners' academic achievement, since, reading comprehension is considered one of the upper mental skills as the reader puts his personal assumptions to be involved in the written text.

Challenges in Using Cognitive Strategies in EFL Contexts

Janzen (2003) noted that EFL learners may have difficulties to use reading cognitive strategies independently if a teacher does not guide them properly. One other major difficulty relates to the ability to rehearse some of these approaches in realistic, natural settings. Oxford (2011) also found that as EFL learners' practices in class are not real-life like, some of the cognitive strategies like inferencing and contextual guessing cannot be successfully accomplished, because these strategies usually involve exposure to a broad linguistic context that the classroom might not afford. The next problem, which has been addressed by Chamot (2005), deals with the mismatch between students' cognitive development and the levels of the strategies required. His study claimed that many EFL learners, especially the low achieving ones have difficulties in using cognitive strategies such as analysis or synthesis because of their limited vocabulary or grammar knowledge. This is especially true when the learners are supposed to guess the meanings or to anticipate the use of a particular language from a restricted input.

Cultural factors also play a significant role in shaping how learners use cognitive strategies. According to Dörnyei (2005), cultural attitudes toward autonomy and self-regulated learning can influence the extent to which students feel comfortable engaging in cognitive strategies independently. Tran (2020) also confirmed that in certain educational contexts, learners may avoid using cognitive strategies that require autonomy for fear of disrespecting the teacher's authority. This cultural barrier limits the full potential of strategies like self-monitoring and self-evaluation, which are critical for language learning progress. In the same vein, Liu and Zhou (2022) attested that learners do not possess self-regulated learning skills to enable them to apply cognitive strategies in flipped classroom context.

Another challenge relates to the complex nature of reading cognitive strategies themselves. Studies suggested that while strategy instruction can improve language proficiency, the effectiveness varies depending on factors like the learner's motivation, prior knowledge, and cultural context (e.g., Samadi et al., 2024). This inconsistency underscores the difficulty in universally applying cognitive strategies across different learners. The other big challenge deals with the unbalance of cognitive load for language learners during performing the designed educational tasks while employing cognitive strategies (Khodadady & Khaghaninejad, 2012; Souzandehfar & Abdel-Al Ibrahim, 2023). Learners frequently encounter challenges in coordinating several cognitive strategies especially during listening/reading comprehending tasks. This is made worse by the fact that cognitive strategies are not like physical skills that can be learned in a short span of time and then left to develop muscle memory. To recapitulate, reading cognitive strategies do play a major role

in improving EFL comprehension, yet their implementation may be hampered by such factors as the scarcity of real-life language use, learners' achievement level, cultural barriers towards independent learning, and the interference from L1 to L2.

Comprehending Different Text Genres

Understanding various text types is among the foundational concepts in reading comprehension for academic and non-academic purposes. Expository, argumentative, narrative, and descriptive texts are four different types of text that differ in terms of structure, language requirements and intended communicative functions, which may in their turn affect the comprehension process. Harzallah et al. (2008) and Sigh (2006) have focused on the factors that affect comprehension across these text types and concluded that each genre seem to pose different cognitive requirements and understanding is influenced by factors such as prior knowledge, readers' approaches and the text characteristics.

According to Harzallah et al. (2008), the learners had lots of difficulties when reading the descriptive texts because of the use of many adjectives, metaphors, and similes. Such elements may pose a great deal of difficulty in understanding to EFL learners especially if they are not so conversant with the use of figures of speech. Sigh (2006) also discovered was that individuals who are able to activate their sensory memory during the processing of descriptive texts had a superior understanding of the text. Crossley et al., (2012) in their study, identified that texts with descriptive modifiers enhance the understanding of the text as such words offer more precise suggestion of mental images. Van Dijk et al. (2015) confirmed that while working with descriptions, the readers with higher level of skill may construct more detailed mental images than the less skilled readers. However, too many mental images may be regarded as interference since they draw the learners' attention away from the content and may result in light processing of the information presented (Hemmati et al. 2018; Mayer et al., 2020).

Although narratives may appear more comprehensible than other texts, current research indicated that narrative comprehension is not a simple process and can be problematic for EFL learners. Harzallah et al. (2008) stated that though the learners find the narratives more interesting and easily comprehensible they still had some problems in understanding the texts if the texts contain cultural references, complex lexical items, idiomatic expressions and historical allusions. Sigh (2006) discovered that the readers' affective attachment could play a role in understanding a text and recalling the enclosed information. Argumentative texts are meant to persuade a given viewpoint or give reasons why the author supports one side of the given issue. Self-generated arguments are usually associated with critical thinking and the evaluation of various arguments as such texts are particularly difficult for many readers. Harzallah et al. (2008) claimed that for understanding argumentative texts, the learners have to determine what author's opinion is, what counterarguments exist and what kind of arguments are strong and weak. They claimed that EFL learners would face a lot of difficulties in argumentative text because they lacked knowledge on the rhetorical features that are used in an argumentation including counter argumentation and objection.

Expository texts are the most frequently met texts in educational and professional contexts which are generally written to instruct or explain something. Harzallah et al. (2008) documented that the readers' difficulties mainly stem from the text's structure and inability to

activate the prior knowledge of the domain. Sigh (2006) also believed that expository texts place heavy demands on a reader's ability to integrate new information with existing knowledge and learners with more extensive background knowledge in a subject would perform better in reading comprehension tasks compared to those with limited knowledge.

Reading Comprehension Studies in Iraqi EFL Context

The Iraqi EFL context presents unique challenges for learners, as the education system has faced numerous disruptions due to political instability, outdated curricula, and limited resources. Al-Hilali (2016) has pointed out that most schools and universities in Iraq continue to employ traditional, teacher-led approaches to language teaching, which afford little practice for meaningful language use. Mahmood (2024) claimed that the lack of the effective reading comprehension strategies has affected the learners' language acquisition and Allehyani (2025) also claimed that the majority of EFL teachers in Iraq are not prepared to teach reading passages for higher levels, which necessitates metacognitive awareness, lexical proficiency and strategic teaching practices.

Among the few studies done on strategic reading comprehension instruction in Iraqi context, Kareem (2016) conducted a study on the impact of summarization as a cognitive strategy in teaching reading comprehension and found that when students summarize the main points of what they have read, they are able to recall the material and comprehend it far more effectively. Further, Al-Shujairi (2015) attested the positive effect of using contextual clues as a strategy to enhance the comprehension of the texts among Iraqi students. Similarly, Abbas (2012) conducted a study to establish the effects of multimedia reading software on the comprehension of Iraqi university students and documented that students who employed the software had better learning gains in reading. In the same way, Al-Kalefawi and Al-Amrani (2021) examined the effectiveness of online reading sites in improving comprehension skills and found that learners who used quizzes and discussion forums to practice interactive reading on the internet were more successful to improve their reading comprehension skills. Nevertheless, as Al-Tamimi (2019) mentioned, it is essential to have more comprehensive studies regarding reading comprehension and its improved instructional approaches considering the scarcity of theory and evidence-based pedagogical practices.

Method

Participants

Considering the objectives of the study, a total of 300 beginners, intermediate and advanced Iraqi EFL learners, as the initial pool of participants were selected through convenience sampling selection procedure from the undergraduate students of different faculties at Thi-Qar University. They were from both genders with the age range of 18 to 22 years and spoke Arabic as their first language and had started learning English as the foreign language from 8 to 12 years at school and university. The English proficiency of the participants was attested via McMillan Placement Test (2001) before the study's commencement. According to the test's results and the test's rubrics, the participants were categorized into three groups of beginner, intermediate and advanced EFL learners; each group then was divided into four experimental groups according to different text types (descriptive, narrative, argumentative and expository) and received the study's treatment (cognitive reading comprehension

strategies) during the course of the study. Consequently, 12 experimental groups were available for the researcher to test the efficiency of cognitive reading comprehension strategies across different proficiency levels and for different text types. It is worth mentioning that the participants' consent was gained before the study's commencement.

Materials and Instruments

McMillan placement test (MPT)

MPT is a quick diagnostic, universally-accepted placement test which allocates the participants to their appropriate levels of proficiency. This test designates the different proficiency levels ranging from beginner to advance. It includes 60 vocabulary, grammar and reading comprehension test items in multiple-choice format. Based on the test's guidelines, the participants with a score range of 0 to 15 are considered to be beginners, the score range of 25 to 45 is regarded to be intermediate, and those with higher scores than 45 are judged to be advanced EFL learners. The reliability of the test is reported as 0.89 by Wang et al. (2021).

Reading comprehension pre/post-tests

In order to measure the improvement of the participants after the study's treatment, the researcher prepared 12 reading comprehension tests, one test for each text (descriptive, narrative, argumentative, and interpretive) and for each language proficiency levels (advanced, intermediate, beginner) which administered twice, once before the treatment commencement and once after exposing the participants to cognitive reading comprehension strategies as the post-test. For constructing the tests, appropriate texts of different genres considering the proficiency of the participants of each group, were chosen from the graded passages provided "<http://www.Agendaweb.org>" a technical website designed for reading comprehension assessment of different proficiency levels. Each test consisted of 4 texts and accordingly 20 multiple-choice test items (5 items for each text) with the time limit of 20 minutes. The tests were conducted in the university while the participants were made aware of the time limit and the scoring criteria. In addition to the genre and suitability of the texts for each proficiency level, the texts were checked for the comprising words and length (300-350 words). Test items were supposed to assess the general and detailed comprehension of the texts more than referencing, inferencing and sequencing issues. The pilot study was conducted by 4 to 7 participants for each group and some items were revised accordingly. The reliability of the constructed test was attested by Cronbach's Alpha analysis where the reliability indices of the constructed tests were estimated to be between 0.83 to 0.91 percentages.

Practicing cognitive reading comprehension strategies

One-hundred and twenty instructional texts were selected and equally divided into four types of descriptive, narrative, argumentative and explanatory (30 texts for each genre). Then the texts were classified based on the participants' level of English proficiency into three classes to be used during the instruction phase of the study. The texts were selected from some specialized websites for reading comprehension (e.g., <http://www.agendaweb.org> and <http://www.test-english.com/reading>) and then were presented to a group of experts in

English language teaching to ensure that the content was appropriate to the participants' proficiency levels and their ability to interact with the educational material efficiently and effectively. After the selection of the instructional texts, they were taught in the treatment phase employing cognitive reading comprehension strategies. Below the detailed description of cognitive reading comprehension strategies practiced during the study's treatment are presented.

Table 1
Cognitive Reading Comprehension Strategies

Strategy	Goal	Steps	Examples
Predicting	Predicting the content of the text before reading it	-Read the title and pictures -Guess the topic of the text based on background knowledge.	Before reading the story, guess what will happen based on the title
Questioning	Ask questions to understand the text more deeply	-Formulate questions about the text while reading. - Find answers while reading.	What does the word "adventure" mean here? And why does the character insist on taking risks?
Summarizing	Focus on main ideas	- Read paragraphs carefully. - Write a summary of the most important points.	Write a summary of the events of a chapter in a novel
Connecting	Relating information to other texts or personal experiences	-Compare the text with what was previously read. -Find connections to life experiences	Connecting the story of a child facing school difficulties to personal experiences
Rereading	Improve understanding by rereading the text	-Reread difficult texts -Focus on details that were not understood in the first reading	
Identifying Keywords	Focus on important words to understand the text	-The main points in each paragraph. -Use these words to form an idea about the text	Define words like "achievement", "creativity" to understand an essay about innovation
Assuming Hypotheses	Make inferences based on understanding the text	-Analyze the content of the text and deduce messages. -Compare assumptions with realities	Assuming why a character acts before reading

Data Collection and Analysis Procedures

After the participants' English proficiency attestation and their classification into 12 groups, the reading comprehension pre-tests were conducted for the participants; the participants' performance on this test was a criterion to investigate the efficiency of cognitive strategies when compared to their performance on the post-test. The instruction of the selected reading passages was initiated via cognitive reading comprehension strategies employment. This phase lasted for an academic semester in College of Education/Thi Qar University. At the end of the instruction phase, the participants took the same reading comprehension tests. The comparison of their performance on the pre and the post-tests made it possible to comment on the efficiency of cognitive reading comprehension strategies. Moreover, the extent of their efficacy for different comprehending different text types and different proficiency levels were

determinable. The obtained data were fed into the SPSS (Statistical Package for the Social Sciences) to conduct the required comparative analyses. In addition to descriptive statistics, inferential statistical analyses were used to identify significant differences and analyze the hypotheses related to the effect of cognitive reading strategies on the comprehension of texts of different types. Through multiple comparisons, the potential effects of cognitive reading strategies on the comprehension of different types of texts were identified.

Results

To evaluate the performance of the participants on the pre- and the post reading comprehension tests, their scores on the two tests were compared to see if there was a statistically significant difference.

Table 2

Comparing the Performance of the Participants on Different Types of Texts on the Pre- and the Post-Test

	Sum of Squares	Df	Mean square	F	Sig.
Between Groups	527.183	3	175.728	2.955	0.033
Within Groups	17604.874	296	59.476		
Total	18132.170	299	235.204		

Table 2 suggests that the comprehension of all the participants (advanced, intermediate, and beginners) for different text types was improved on the post-test statistically. This piece of finding answers the first research question and prompts the more accurate analysis of the comprehension of the participants of three proficiency levels for different text types. In order to investigate the possible role of English proficiency level in the comprehension betterment of different text genres under the influence of cognitive reading comprehension strategies, the performance of advanced, intermediate and beginner EFL learners on the pre and the post-tests was compared respectively as follows.

Table 3

Mean Comparison of Texts Pairs for the Advanced Participants

		(I-J)	Std. Error	Sig.
Descriptive	Narrative	1.960	0.067	0.067
	Argumentative	2.560	0.017	*0.017
	Expository	12.840	0.057	*0.009
Narrative	Descriptive	-1.960	1.057	0.067
	Argumentative	0.600	2.057	*0.042
	Expository	0.880	1.057	*0.047
Argumentative	Descriptive	-2.560	1.057	*0.017
	Narrative	-0.600	1.339	*0.042
	Expository	0.280	1.227	0.792
Expository	Descriptive	-2.840	1.117	*0.009
	Narrative	-0.880	1.057	0.407
	Argumentative	-0.280	1.750	*0.017

As shown in Table 3, there was a statistically significant difference in the performance of the advanced participants on the pre and the post-tests. This difference was most noticeable for the comprehension of the descriptive texts followed by the narrative texts and

the explanatory texts and finally the argumentative texts. Based on the results, the employment of the cognitive reading comprehension strategies was most useful for descriptive and narrative texts and least effective for the argumentative and expository ones for the advanced English learners. Based on the findings the effects of reading cognitive strategies were remarkable for advanced learners. In the following, the performance of intermediate learners on the pre and the post reading comprehension tests is presented.

Table 4*Mean Comparison of Texts Pairs for the Intermediate Participants*

		(I-J)	Std. Error	Sig.
Descriptive	Narrative	1.158	0.067	0.336
	Argumentative	3.560	1.234	*0.002
	Expository	2.200	1.057	0.061
Narrative	Descriptive	-1.120	1.567	0.367
	Argumentative	2.640	1.577	*0.022
	Expository	1.080	1.345	0.336
Argumentative	Descriptive	-3.760	1.757	*0.026
	Narrative	-2.640	1.090	*0.032
	Expository	-1.650	1.234	0.192
Expository	Descriptive	-2.240	1.897	0.112
	Narrative	-1.080	1.257	0.345
	Argumentative	1.560	1.543	0.453

The results indicated that the difference between narrative and descriptive was not statistically significant and there was a statistically significant difference between the perception of narrative and argumentative texts. Although there was a difference between the comprehension of narrative and expository texts, this difference was not considered statistically significant. There was no statistically significant difference between descriptive and argumentative texts' understanding. There was also no statistically significant difference between the understanding of descriptive and expository texts. The same was also observed between the comprehension of argumentative and interpretive texts. Unlike descriptive and narrative texts argumentative and expository texts showed relatively less difference suggesting that these texts may require more complex or less obvious reading skills. Overall, it seems that employing cognitive reading comprehension strategies was most effective for comprehension of descriptive texts as intermediate EFL learners were concerned. In the following the comprehension of different text types on the part of the beginners on the comprehension tests is presented.

As Table 5 illustrates there were statistically significant differences between the comprehensions of descriptive compared to argumentative and interpretive texts. The results also indicated that the participants showed noticeable differences in their comprehension performance between the narrative texts compared to the argumentative and the expository texts. The results also indicated that the participants showed statistically significant differences between the understanding of argumentative and the narrative texts. Overall, based on the findings, it can be claimed that cognitive reading comprehension strategies were efficient for the participants of all English proficiency levels to varying degrees.

Table 5
Mean Comparison of Texts Pairs for the Beginners

		(I-J)	Std. Error	Sig.
Descriptive	Narrative	0.080	1.176	0.946
	Argumentative	3.480	1.114	*0.00
	Expository	3.280	1.658	*0.011
Narrative	Descriptive	-0.020	1.234	0.967
	Argumentative	3.400	1.781	*0.012
	Expository	3.081	1.925	*0.036
Argumentative	Descriptive	3.480	1.114	*0.02
	Narrative	-3.400	1.781	*0.012
	Expository	-1.650	1.234	0.192
Expository	Descriptive	-3.280	1.658	*0.011
	Narrative	-3.081	1.925	*0.036
	Argumentative	1.650	1.234	0.192

Regarding the third research question, the efficiency of the cognitive reading comprehension strategies for the perception of different text types was focused for the EFL learners of different proficiency levels. Table 6 and 7 depicts the performance of the participants and their significant difference for comprehending descriptive texts.

Table 6
Mean Comparison of Participants of Different Proficiency Levels for Descriptive Texts

	Sum of Squares	Df	Mean square	F	Sig.
Between Groups	3307.947	2	17.728	121.973	0.000
Within Groups	982.874	72	593.476		
Total	4290.667	74	1667.20		

Table 7
Mean Comparisons for Comprehending Descriptive Texts

		(I-J)	Std. Error	Sig.
Advanced	Intermediate	3.040	1.044	*0.005
	Beginner	15.360	1.045	*0.000
Intermediate	Advanced	3.040	1.454	*0.005
	Beginner	12.320	1.012	*0.000
Beginner	Advanced	-15.360	1.054	*0.000
	Intermediate	12.320	1,084	*0.000

As shown in Tables 6 and 7 the difference was statistically significant for comprehending the descriptive texts among the participants. This improvement was more remarkable for the intermediate learners. In the following, the difference for comprehending the narrative texts by the participants is presented.

As shown in Table 8, there was a statistically significant difference regarding the participants' comprehension of the narrative texts in the post-tests, with the intermediate group having the highest mean difference followed by the advanced learners and finally the beginners. A pair-wise Tukey test was used to compare the comprehension of different proficiency levels for comprehending narratives texts on the pre and the post-tests.

Table 8*Mean Comparison of Participants for Comprehending Narrative Texts*

	Sum of Squares	Df	Mean square	F	Sig.
Between Groups	2614.907	2	1307.453	163.973	0.000
Within Groups	1170.800	72	16.251		
Total	3784.987	74	1323.704		

Table 9*Mean Comparisons for Comprehending Narrative Texts*

		(I-J)	Std. Error	Sig.
Advanced	Intermediate	-2.140	1.144	0.058
	Beginner	13.480	1.245	*0.000
Intermediate	Advanced	-2.200	1.454	0.058
	Beginner	11.280	1.210	*0.000
Beginner	Advanced	-13.480	1.254	*0.000
	Intermediate	-11.280	1.564	*0.000

As Table 9 shows the intermediate and advanced EFL learners outperformed remarkably than the beginners for comprehending the narrative texts. Their mean differences were statistically significant; intermediate and advanced learners performed approximately similar on the narrative comprehension tasks, however, intermediate learner were more successful and more responsive to the cognitive reading strategies in comparison with the other two proficiency levels. In the following, the performance of the EFL learners for argumentative texts is elaborated.

Table 10*Mean Comparison of Participants of Different Proficiency Levels for Argumentative Texts*

	Sum of Squares	Df	Mean square	F	Sig.
Between Groups	2614.907	2	1783.240	98.189	0.000
Within Groups	1170.800	72	18.260		
Total	3784.987	74	7470.004		

There was a statistically significant difference in the participants' performance regarding the comprehension of argumentative texts in the post-tests, with the intermediate group having the highest mean difference, followed by the advanced group, and finally the beginner group. The intermediate EFL learners had the best performance and the beginners had the least improvement. A pair-wise Tukey test was used to compare the performance of different proficiency levels for comprehending argumentative texts on the pre and the post-tests.

As Table 11 shows the differences among the advanced, intermediate and the beginner learners were all statistically significant. This means that cognitive reading comprehension strategies were remarkably efficient for the participants of all proficiency levels. However, intermediate EFL learners outperformed the other two proficiency levels for comprehending the argumentative texts like the other genres. The analysis of the performance of the EFL learners for expository texts is presented below.

Table 11*Mean Comparisons for Comprehending Argumentative Texts*

		(I-J)	Std. Error	Sig.
Advanced	Intermediate	4.240	1.225	*0.001
	Beginner	16.280	1.305	*0.000
Intermediate	Advanced	-4.240	1.400	*0.001
	Beginner	12.040	1.125	*0.000
Beginner	Advanced	-16.280	1.540	*0.000
	Intermediate	-12.040	1.345	*0.000

Table 12*Mean Comparison of Participants of Different Proficiency Levels for Expository Texts*

	Sum of Squares	Df	Mean square	F	Sig.
Between Groups	3528.000	2	1764.000	110.704	0.000
Within Groups	1148.280	72	15.934		
Total	4675.280	74	1779.934		

A statistically significant difference for comprehending the expository texts was observed, with the intermediate group having the highest mean difference, followed by the advanced group, and finally the beginner group. A pair-wise Tukey test was used to compare the comprehension of different proficiency levels for comprehending expository texts on the pre and the post-tests.

Table 13*Mean Comparisons for Comprehending Expository Texts*

		(I-J)	Std. Error	Sig.
Advanced	Intermediate	2.400	1.490	*0.037
	Beginner	15.600	1.350	*0.000
Intermediate	Advanced	-2.400	1.444	*0.037
	Beginner	13.200	1.234	*0.000
Beginner	Advanced	-15.600	1.545	*0.000
	Intermediate	-13.200	1.879	*0.000

Table 13 shows the differences among the participants of different proficiency levels for comprehending the expository texts were statistically meaningful. Like the other text types, intermediates outperformed the advanced and beginner EFL learners under the influence of the cognitive reading comprehension strategies.

Overall, the analysis of the participants' performance on the reading comprehension post-tests revealed that cognitive reading comprehension strategies were successful in improving their comprehension of different text types. Moreover, it was found that these strategies were most efficient for the comprehending the descriptive and the narrative texts than the argumentative and expository texts. This may be because descriptive and narrative texts are more capable of attracting attention and stimulating interaction, which leads to a greater improvement in participants' understanding. Furthermore, it was documented that the intermediate participants benefitted most from these strategies compared to the beginners and the advanced learners.

As shown in the table, advanced EFL learners had a more pleasant experience than the beginners and even the intermediates, however, statistically the reports of the advanced and intermediates were very close and meaningfully different from the beginners. Advanced learners' identification of the main ideas of the texts were superior than the other two groups; nearly all the intermediate learners claimed that they had a deeper understanding by the application of cognitive reading strategies and all the learners certified a more confident reading by employing cognitive strategies. Although for the beginners these strategies did not contribute to a quicker reading and understanding of the texts based on the opinions.

Discussion

The results implied that cognitive reading comprehension strategies were efficient for the betterment of comprehending various text types by EFL learners of different proficiency levels. This aligns with Pertiwi and Iftanti (2024) who claimed that by using cognitive reading comprehension strategies EFL learners can visualize information, absorb information in a predictable way, make connections between the text and prior knowledge and evaluate their own understanding. Strategy-based reading comprehension practices would fundamentally affect cognitive development by fostering critical thinking, problem-solving, memory retention and even neural connectivity (Busari et al., 2025).

Cognitive reading strategies facilitate comprehension by improving students' ability to actively engage with text, connect it to their prior knowledge, and monitor their perception. These strategies turn passive reading into an active and purposeful learning process (Corso et al., 2024). Moreover, the informed usage of reading strategies would construct a scaffolding for contextualizing the newly presented information in the existing mental schemata; this facilitates meaningful learning in the short-run and cognitive development in the long-run (Xiaomei, 2025).

The findings were also consistent with the findings of Smith and Kosslyn (2022) who argued that using strategies for comprehending descriptive and narrative texts helps EFL learners develop their comprehension skills. This may be because descriptive and narrative texts contain more engaging content for participants, making the process of understanding and absorption easier. Narrative texts tend to engage the reader through storytelling and logical sequencing, enhancing the coherence of ideas and stimulating deeper understanding (Anderson, 2022; Boukes & Lamarre, 2021; Eysenck & Keane, 2020).

Comprehending argumentative texts require critical thinking and deep analysis; this makes them more difficult to learn and requiring more complex analytical and reflective skills, such as evaluating and refuting arguments (Shahini et al., 2025). According to Van Eemeren et al. (2023), teaching argumentative texts requires the integration of critical thinking strategies to enhance learners' ability to handle different perspectives logically and systematically. In the same vein, Clinton-Lisell et al. (2021) claimed that expository and argumentative texts impose greater challenges to the learners' cognition; these texts require more logical inferences, in-depth analysis and analytical structuring, such as presenting arguments, reasons, evidence, and explanations, which require an advanced level of intellectual and linguistic skills. This can be the reason for the smaller improvement of participants' comprehension of argumentative and expository texts compared to the descriptive and the narrative ones.

The performance difference between advanced, intermediate, and beginner EFL learners can be related to the efficiency of comprehending skills and the extension of the prior knowledge (Schwartz, 2025). The findings of the study implied that learners with more developed comprehension skills and richer background knowledge might benefit more from the application of reading strategies. This aligns with what some researchers have reported regarding the impact of prior experience on the effectiveness of learning and development. For example, Samadi et al. (2023) suggested that students with strong prior knowledge in a specific field are able to process new information faster and link it to familiar concepts, which enhances understanding and retention. Tran (2020) also showed that students who lack sufficient background knowledge in a new subject face difficulties understanding advanced texts without references or additional support.

In line with the superiority of intermediate/advanced EFL learners in benefitting from the cognitive reading strategies, Clinton-Lisell et al. (2021) showed that learners of this level can acquire new skills relatively easily due to their mental flexibility compared to beginners. They suggested that intermediate learners have sufficient abilities to understand new concepts, but they may face challenges in applying these concepts widely, which could explain the smaller impact of the educational program on their performance compared to the advanced group. In contrast, beginners at this level face significant challenges in interacting with complex texts, such as argumentative texts that require advanced linguistic and cognitive skills. Dix (2005) proposed that beginners need some form of continuous and intensive educational support, such as exercises specifically designed to meet their linguistic needs to overcome the obstacles they face in understanding complex texts. On the other hand, Johnson and Lee (2023) found that intermediate/advanced learners showed significant improvement when dealing with expository texts due to their grown and developed cognition, as this type of text provides appropriate challenges to stimulate critical thinking and develop deep understanding. Beginners, meanwhile, still require additional interventions or more adaptive teaching methods to achieve greater improvements. Similarly, a study by Wang et al. (2021) documented the challenges faced by beginner English learners when dealing with expository texts on their own and claimed that employing expository texts for the reading tasks in elementary stages can be detrimental.

Generally, as Smith et al. (2021) claimed, the extent of making advantages from the reading strategies is highly dependent on the extension of the background knowledge. Smith et al. (2021) indicated that background knowledge impacts differentially on proficient and poor readers. Beginners due to their lower background knowledge cannot be good strategy-users; they become totally engaged in the linguistic aspects of the text (i.e., meanings of the words and grammatical structures) while more advanced readers would be able to compensate for their relatively weak reading skills in the context of a high degree of background knowledge.

Conclusion

This study documented the effectiveness of employing cognitive reading comprehension strategies on comprehending various text types and for learners of different English proficiency levels. These strategies were found to be more beneficial for perceiving the descriptive and narrative texts particularly for the intermediate and advanced EFL learners.

Findings suggest that, as an instructional necessity, cognitive reading strategies such as prediction, questioning, summarizing, re-reading, connecting, hypotheses-making etc. should be accommodated in the reading comprehension curricula to be exercised continuously for the comprehension tasks. The description of these strategies and motivating the learners for using them in the pre-reading stage, teachers' performance as a model during the reading stage and focusing on the benefits of the strategies post-reading stage is recommended for the reading classes of all proficiency levels in EFL context.

Furthermore, EFL teachers are recommended to employ descriptive and narrative reading passages for the beginners' comprehension tasks and utilize argumentative and expository texts for advanced learners unless the required schematic knowledge and critical and analytical thinking skills are practiced and developed in class.

While planning and conducting the study, similar to other studies, there were some limitations (e.g., limited sample of participants with diverse cultural, social and motivational background and short period of treatment's administration) that may negatively impact the data collection and analysis procedures and may make the findings cautiously generalizable to other contexts. Moreover, the age of the EFL learners and their genders were not within the scope of this study which can be investigated in future enquiries to see if they make any difference in the efficiency of the reading strategies. Among different types of reading strategies (i.e., cognitive, meta-cognitive and socio-affective), only the impacts of cognitive strategies were investigated in this study; similar research can experiment the possible effects of the other two types of strategies in EFL or ESL contexts. Furthermore, the efficiency of cognitive strategies can be scrutinized for other language skills to see if they are equally beneficial.

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