The Effect of the 5E Model on Jordanian EFL Fifth-Grade Students' Reading Comprehension Skills

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Abstract

Objectives: This study aims to examine the effect of the 5E Model on Jordanian EFL fifth-grade students' reading comprehension skills.

Methods: The study uses a quasi-experimental design based on two groups (one experimental and one control group). The outcome of the students' post-test in the chosen reading comprehension skills is the dependent variable, while the 5E instructional model is the independent variable.

Results: The results show that the 5E Model improved students' understanding of what they were reading. In light of the findings of the current study, the researchers suggest adopting the 5E Model to help students with their reading comprehension.

Conclusions: The current study set out to determine how the 5E Model affects the reading comprehension of Jordanian fifth-grade participants. To achieve this, a '5E model'-based educational program was designed and put into place for the academic year 2023–2024. Students' reading comprehension increased after the 5E Model was put into practice.

Keywords: English as a Foreign Language; Reading Comprehension; 5E Model

أثر النموذج الخماسي في مهارات الفهم القرائي لطلبة الصف الخامس الأردنيين متعلمي اللغة الإنجليزية لغة أجنبية

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ملخّص

الأهداف: تهدف هذه الدراسة إلى فحص تأثير نموذج التعلم الخماسي في مهارات الفهم القرائي لدى طلاب الصف الخامس الأردنيين متعلمي اللغة الإنجليزية لغة أجنبية.

الطريقة: استخدمت هذه الدراسة التصميم شبه التجريبي. مع مجموعتين (واحدة تجريبية وواحدة ضابطة). تحصيل الطلاب في الاختبار البعدي في مهارات الفهم القرائي المختارة هو المتغير التابع، في حين أن نموذج التعلم الخماسي هو المتغير المستقل

النتائج: أظهرت النتائج أن نموذج التعلم الخماسي أدى إلى تحسين فهم الطلاب لما كانوا يقرؤونه. ولمساعدة الطلاب في فهم القراءة، اقترحت الباحثتين استخدام نموذج التعلم الخماسي في ضوء نتائج الدراسة الحالية.

الاستنتاجات: تهدف الدراسة الحالية إلى معرفة مدى تأثير نموذج التعلم الخماسي في الفهم القرائي لدى طلبة الصف الخامس الأردنيين المشاركين في الدراسة ولتحقيق ذلك، تم تصميم برنامج تعليمي قائم على نموذج التعلم الخماسي، وتم تنفيذه في السنة الأكاديمية 2023-2024. الفهم القرائي تحسن لدى طلاب الصف الخامس الأردنيين المشاركين في الدراسة بعد وضع نموذج التعلم الخماسي موضع التنفيذ.

الكلمات الدالة: اللغة الإنجليزية كلغة أجنبية، الفهم القرائي، نموذج التعلم الخماسي.

Introduction

Reading is the process of comprehending texts (Rubin, 1975; Harmer, 2007). It enhances vocabulary and spelling, broadens learning opportunities, helps build academic language and skills, imparts an understanding of important ideas and facts, and is enjoyable (Hamdan, 1991).

Reading is seen as an essential skill for acquiring second and foreign languages (Bernhardt, 1983). In addition to teaching students the language functions and phrases, it serves as a window into the world that helps them become more fluent in English by exposing them to real-world situations, essential linguistic structures, concepts, and ideas. Additionally, it reinforces previously taught foundations by acting as a supplement to speaking and listening in communication.

Reading skill is seen as essential to academic performance since students read to learn and absorb new information. To function in daily life, one must be able to correctly read and understand written language (Grabe & Stoller, 2002; Alsheikh, 2011). Teachers as well as students of English as a foreign language (EFL) view reading comprehension as a fundamental skill that is necessary for future language development, enhanced academic performance, and academic success (Al-Damiree & Bataineh, 2016).

According to Hodges (1995), reading comprehension is the process of deriving and comprehending meaning from written materials that are either explicitly or implicitly expressed. When reading a text with comprehension, students can make use of past knowledge. Furthermore, it facilitates their comprehension of the meanings of terms, idioms, and symbols in texts that are short and long (Oakhill, Cain, & Elbro, 2014). Additionally, it helps students comprehend the text's main ideas, language constructions, and content (Wahyono, 2019).

Students perform reading comprehension skills tasks to gain knowledge about the characteristics of texts, such as the main ideas, causes, and effects (Peterson, 2008). These skills include skimming, scanning, predicting, inferring, figuring out meaning from figurative language, connecting ideas, drawing conclusions, evaluating texts, sequencing and making notes (Nagy, 1988; Harmer, 2001; Moreillon, 2007). Proficient readers (those who are skilled at using their reading comprehension skills) become automatic word recognizers, concentrate on meaning, make connections between new and old information by using past knowledge, and mentally picture what they are reading (Wolff & Chan, 2016).

Reading comprehension, according to Nakamoto, Lindsey, and Manis (2008), is an active mental process that necessitates particular readings of written text in order to be understood. Consequently, reading is a fruitful, dynamic, and diverse activity that requires the reader to share important information about themselves with the target written material as well as their past experiences (Elleman & Oslund, 2019).

Three levels of reading comprehension were identified by Barnett (1989): literal, inferential, and critical. At a literal level, it necessitates that the reader comprehends what is written in the text. At the second level, known as the inferential level, the reader makes an effort to understand the text by using logic, past knowledge, and interpretation to determine the significance of the information being presented. The reader progresses to the critical level, when he/she goes beyond the text and makes decisions while reading based on comparisons, opinions, and cause-and-effect correlations.

According to Anderson (2003), a reader who encounters a lot of unfamiliar vocabulary will struggle with reading comprehension. Texts that are complex and challenging could cause students to concentrate only on decoding rather than the primary ideas and objectives of the book. Word-by-word translation of the material could make reading comprehension issues worse. In order to meet the objectives of the reading classes, the type of text is essential. Boring readings, for instance, may cause students to become disinterested and distracted. In other words, a lack of interest in reading may result from boredom. Teaching reading comprehension is crucial, so several approaches and methods have evolved to improve the efficiency of teachers' lessons and meet teaching and learning objectives, such as the 5E Model.

The 5E Model is described as a teaching model that Roger Bybee examined in the 1980s. The 5E educational model involves five phases in a teaching cycle: engagement, exploration, explanation, elaboration, and evaluation. It can be applied in various subjects, including science and math. Each phase of these has a purpose, an advantage, and a function for the lesson plans created by the teacher and the students' structuralization to ensure that the necessary knowledge is understood well (Bybee, 2009).

Bybee (1997) outlines the phases of the 5E Model as the following: The first phase is engagement, which involves asking students various questions and involving them in the learning process. Furthermore, it assists the teacher in gauging students' past understanding of the necessary material (Bybee, 1997; Wilder & Shuttleworth, 2005). Second, exploration: during this phase, students will work independently and make discoveries. They gather data to make predictions. As a result, the teacher provides students ample time to complete the assignment (Carin & Bass, 2000). The third phase is explanation, where the teacher asks students to share what they have already learned as well as offer new concepts, descriptions, and recommendations (Bybee & Loucks-Horsley, 2002). Fourth, elaboration: Here, the teacher encourages his/her students to use new knowledge and make it applicable. Fifth, evaluation: In this phase, the teacher depends on observations and other tools to assess his/her students' understanding (Bybee, 1997).

Teaching reading comprehension is not regarded as adequate in Jordan since teachers largely use conventional ways, even though teachers have developed strategies and procedures to improve EFL reading comprehension (Al-Sakal, 2020). Thus, the goal of the current study is to determine whether using the 5E Model could have an impact on the reading comprehension of Jordanian EFL fifth-grade students.

Statement of the Problem

The researcher, who has been an English language teacher for six years, has noticed that many students in Jordanian schools have problems understanding written texts. Most EFL learners suffer from a general weakness in this skill since they can't appropriately understand the ideas of the texts or the meaning of unfamiliar words and expressions (Migdadi & Baniabdelrahman, 2016; Radaideh, 2020). Therefore, the goal of the current study is to find out how applying the 5E Model affects the reading comprehension of Jordanian EFL fifth-graders.

Many Jordanian students struggle to understand English-language materials (Al-Janaydeh, 2021). However, they are unable to extract the main concepts and supporting thoughts from the text (Hassan, 2019). Moreover, they are unable to learn new words or expand their vocabulary (Al-Rimawi & Al Masri, 2022). Additionally, teachers are hesitant to use different approaches or techniques that are unconnected to their conventional methods (Al-Awamleh, Bajes, Majali, & Inshasi, 2021). Thus, the current study may improve the reading comprehension of EFL fifth-grade students and aid in the professional development of Jordanian EFL teachers.

Purpose of the Study

The purpose of this study is to look into the potential effect of using the 5E Model on Jordanian EFL fifth-grade students' reading comprehension.

Question of the Study

-       Are there any statistically significance differences at (α=0.05) in the Jordanian EFL fifth-grade students' mean scores on the reading comprehension post-test which could be attributed to the instructional model (5E Model vs. conventional)?

Significance of the Study

This study is crucial based on the following. Firstly, the designing   of the curriculum according to the 5E Model for reading texts in English textbooks at Jordanian schools may lead to innovations in the English learning field in general. Secondly, the 5E Model may be considered to be practical and fruitful, so English language teachers may take advantage of this model to be used in teaching other language skills such as writing. Thirdly, this study is one of few studies in Jordan, which investigates the effect of using the 5E Model on EFL fifth-grade students' reading comprehension. Fourthly, it may assist curriculum designers and decision-makers in planning and creating suitable activities and tasks that enhance students' reading comprehension. Fifthly, it may encourage the Ministry of Education (MoE) to conduct training programs for teachers to train them on how to apply the 5E Model in teaching reading comprehension in English and other classes. Sixthly, it may inspire other researchers to conduct studies, mainly in Jordan, to investigate the effect of using the 5E Model on skills rather than reading and on subjects rather than English. As a result, the 5E Model could be useful and helpful, especially for both students who suffer from weakness in reading comprehension and their teachers who look for new instructions to enhance the learning and teaching process in general.

Operational Definition of Terms

The 5E Model is known as an instructional model. It enables learners to have the ability to identify, change, express and construct the knowledge that is required. This process is achieved through self-reflection (Bybee, 1997). According to its theory, the 5E consists of five phases (*engagement, exploration, explanation, elaboration,* and *evaluation*) (Boddy, Watson, & Aubusson, 2003).

In the current study, the 5E Model is an instructional model that directs students to use their prior knowledge and encouraged them to engage with the text book content in order to explore, explain, elaborate, and evaluate the required ideas effectively.

Reading Comprehension is "a visual and cognitive process to extract meaning from writing by understanding the written text, processing information, and relating it to existing experience" (Millrood, 2011, p.117). In this study, the researcher examines fifth-grade students' capabilities to understand a text at the literal, inferential, and critical levels. It is measured by the reading comprehension post-test, based on the outcomes of units (10, 11, 12, and 14) in Action Pack 5 under the study. Reading comprehension is measured by using a reading comprehension post-test that addresses those levels of comprehension which are related to the following reading comprehension skills that were determined according to the General Guidelines and General Outcomes of Action Pack 5: scanning text for specific information, deducing the meaning of unfamiliar words , using the context to guess the meaning of the new words , making inferences of the facts and information , skimming the text for the main idea, interrupting important information, ordering the event logically and drawing conclusions from simple reading materials.

Limitations of the Study

The following considerations could restrict how broadly applicable the study's findings are:

1. School type and participants: Only fifth-grade students from Khawla Bint Alazwar, a public school, are included in the study during the first semester of the 2023–2024 academic year. As such, the findings are valid for comparable participants or circumstances.

2. Intervention period: The course of treatment will only last two months. Variations in the duration of time may provide distinct outcomes.

3. The study's textbook was Action Pack 5, which contains units 10, 11, 12, and 14 and is used in Jordanian public schools. Different textbooks with different content may yield different outcomes.

Review of Related Literature

Trimastuti (2012) looked into whether the 5E Model is more successful than the grammar-translation method, whether teaching strategies and locus of control interact when teaching reading, and whether students who have a high locus of control have better reading skills than those who have a low one. Seventy-two students participated in the study. Data were gathered using a reading proficiency exam and a questionnaire. The results showed that there is an interaction between teaching methods and students' locus of control when teaching reading; students with a high locus of control have better reading skills than those with a low locus of control; and the 5E Model is more effective than the grammar-translation method.

Ramadhan (2018) investigated the effect of using the 5E Model on teaching reading comprehension. 68 eighth-grade students from Medan, Indonesia participated in the study. The researcher used a pre- and post-test together with a descriptive text. The outcomes showed that using the 5E Model had a significant effect on students' reading comprehension skills.

Jogan (2019) examined the impact of utilizing lesson plans as a tool to teach reading texts in English while including the 5E Model. The study participants were ninth graders. Only one instrumental case study methodology was used. To assist students in paying attention in class, teachers might prepare 5E lesson plans. The results showed that teaching English was positively impacted by the lesson plans built around the 5E Model.

Naguib (2019) investigated using the 5E Model to improve the students' English grammar at a public school in Egypt. The model was applied by 10 perspective teachers in 5 secondary stage classes to teach English grammar. Data were

collected through a qualitative assessment questionnaire. The results showed that the phases of the 5E Model caused significant development in the students' learning of grammar.

Castrillon Alvarez (2020) examined the effects of implementing the inquiry-based 5E Model on improving ninth-grade students' interest and progress in English language learning in Colombia. Pre-service teaching, a teaching log, class discussions, and student surveys were all used to collect data. The results showed that the 5E Model enhanced the speaking and listening abilities of the students.

Secer and Yucel-Toy (2020) looked at how the 5E Model affected writing skills. 204 students in the twelfth grade at a private school in Bursa participated in the study. Achievement assessments, teacher evaluations, peer reviews, and observation were the methods used to gather data. The results indicated that the students' essay writing achievement was positively impacted by the 5E Model.

Jummiah, Hutasuhut and Rahmadana (2021) explored the feasibility of booklet teaching materials based on the 5E Model to increase the learning outcomes for university students in Malaysia. For the 2020–2021 academic year, 87 students from SMK BM Panca Budi 2 Medan participated in the study. The findings demonstrated that applying the 5E, or learning cycle model, was a more inventive approach than the traditional one.

Almaghareez (2022) examined the use of the 5E Model in the instruction of grammar to ninety Jordanian EFL students. Data were gathered using grammatical pre- and post-tests. The results showed a significant improvement in the experimental group's grammar learning.

Lam, Hew and Jia (2022) examined how to propose an innovative theory-driven instructional model, namely the flipped 5E Model, for teaching problem-solving writing to secondary-school students. The participants of the study involved two classes of 16- to 17-year old students for two consecutive years. Data were collected through a pre-/post-test. The results indicated that the flipped 5E model was more effective than the non-flipped version for improving students' performance in problem- solution writing. This application of the flipped 5E model in a two-year real-world school environment has demonstrated its capacity for overcoming traditional classroom constraints.

Al-Dollat (2022) investigated the effect of using the 5E Model of instruction on Jordanian EFL tenth-grade students' grammar learning and their attitudes towards it. Seventy students in the tenth grade took part in the study. An attitude questionnaire and a grammar pre- and post-test were used to gather data. The results showed that the 5E Model is responsible for the notable variations in mean scores between the pre- and post-test. Positive attitudes regarding the use of the 5E Model were also found in the study.

Concluding Remarks

The idea that the 5E model has an impact on reading comprehension instruction was corroborated by a review of related literature. Students were motivated to learn more efficiently by it. The researcher stated that, to the best of her knowledge, no research had been done in Jordan on this topic. The literature review helped to pave the way and lay the foundation for the researcher's objectives for this study.

Other researchers studying this topic might find it helpful in terms of its theoretical significance. In light of the constant and quick changes in teaching and learning, the dearth of research in Jordan may be a hindrance to the development of teacher preparation programs and the English curriculum. The current study may be significant because it examines students' levels of literal, inferential, and critical reading comprehension.

This study differs from others in that it looks at how the 5E Model affects female students' reading comprehension. It may therefore be beneficial for the creation of curriculum and pedagogical implications that help EFL students stay motivated and engaged throughout reading comprehension sessions. By providing empirical data that could assist EFL teachers in utilizing the 5E Model to teach students reading comprehension, this study seeks to fill the gap in the related literature.

Methodology

Design and Variables of the Study

With two groups (one experimental and one control), this study used a quasi-experimental design. The outcomes of the students' post-test in the chosen reading comprehension skills are the dependent variables, while the 5E instructional model is the independent variable.

Participants of the Study

During the second semester of the academic year 2023/2024, EFL fifth-grade students from a chosen school (Khawla Bnt Alazwar) at the Ajloun/Kufrnejeh Directorate of Education made up the study's participants. The researcher lived close to this school, therefore it was a deliberate choice. The researcher deliberately chose these two sections of fifth grade because no other class in the school had two sections. Each of the two groups (the experimental and control) had twenty participants, and equivalence was verified through pretesting. The experimental group received instruction in Action Pack 5 reading texts utilizing the 5E Model, while the control group received instruction in accordance with the teacher's book's requirements.

Instrument of the Study

The impact of applying the 5E Model on the reading comprehension of Jordanian EFL fifth-grade participants was investigated through the use of a pre- and post-test. The following is the instrument's description:

The Reading Comprehension Pre-/Post-test

Based on a review of relevant prior research, the researcher created a pre/post reading comprehension test. The three fundamental reading comprehension levels (literal, inferential, and critical) were the focus of the pre- and post-test. Multiple-choice, true/false, and completion questions created by the researcher in line with the reading text used in the fifth-grade units used in Jordanian public schools were used to measure each of these levels. The reading comprehension test was developed using the teaching and learning resources found in the teacher's book as a guide. In order to confirm the effectiveness of this instructional model, the test was designed to represent the students' reading comprehension levels both individually and in groups, both before and after applying the 5E Model.

The purpose of the reading comprehension post-test was to see whether the 5E Model may have contributed to any significant differences between the fifth-grade students in the experimental and control groups.

Validity of the Reading Comprehension Test

The jury assessed the reading comprehension test's validity. The jury was cordially invited to review the test and judge the substance and language for appropriateness. After the test was evaluated, the jury gave the researcher comments and suggestions. Their recommendations and complaints (such as replacing unclear questions with clearer ones) were taken into account when the test's questions were changed. In compliance with the jury's recommendations, the researcher implemented the modifications.

Reliability of the Reading Comprehension Test

A pilot study was carried out to confirm the reliability of the reading comprehension pre- and post-test in order to confirm the test's reliability. They were taken out of the study's sample. The time between the test and the retest was two weeks. Table 1 illustrates the results:

Table 1: Test-Retest of Reading Comprehension Test

Reading Comprehension Test	Test-Retest Reliability	Sig.
Pre -test	0.91	0.000
Post -test	0.89	0.000

Table 1 shows that the reliability coefficient for reading comprehension on pre and posttests is 0.089 and 0.91 respectively, this values is considered appropriate for the purposes of this study.

The 5E Model -Based Instructional Program

To achieve the goals of the study, the researcher designed the 5E instructional program to assist participants in developing their reading comprehension abilities. The researcher also made changes to the reading assignments in units 10, 11, 12, and 14 so that the experimental group participants may apply the 5E Model in their reading comprehension classes.

Objectives of the Instructional Program

The curriculum is designed to provide EFL students in the fifth-grade with a substantial opportunity to enhance their reading comprehension skills using the 5E instructional model. The educational program aims to achieve the following objectives: Students' reading comprehension in the fifth grade will be improved on the literal, inferential, and critical levels. Their reading comprehension skills will also be strengthened, and they will be assisted in understanding the components of written texts. Students will also become more aware of the benefits of applying reading comprehension skills, especially those that are being studied, and will have the opportunity to analyze texts using the 5E Model. Finally, students will be evaluated on their mastery of the skills they are studying.

The Instructional Material

The instructional materials used in this study were based on the reading comprehension tasks included in units 10, 11, 12, and 14 of the Student's Book and the Activity Book of Action Pack 5. The researcher redesigned these tasks using the 5E Model, which was used to teach reading comprehension to the participants in the experimental group.

Validity of the Instructional Program

The program was presented by the researcher to a panel of eleven English curriculum and teaching professionals in order to confirm its validity. The jury was asked to evaluate the accessible program and provide the researcher with any feedback or recommendations. The researcher followed instructions and made the suggested modifications.

Teaching Methods for the Two Study Groups

Teaching the Experimental Group (Using the 5E Model):

The experimental group was taught reading comprehension using the 5E Model through the following procedures:

- The teacher introduced the 5E Model to the participants, and demonstrated its use after administering the reading comprehension pre-test.
- The teacher followed the 5E Model in each of the reading comprehension lessons gradually before, while and after reading by following the five phases of the model: engagement, exploration, explanation, elaboration and evaluation.
- The teacher asked variety of questions that tested their reading comprehension skills.
- The students were asked to work in pairs asking and answering reading questions.
- The students' prior knowledge activated in each class.
- The teacher presented activities that allowed the students to explore the new topics, ask questions about them, and wait for the teacher to guide them.
- The students were asked to write the answers on a sheet of paper and raise it so the teacher can check their answers.
- The students explained and illustrated the content and talked about the main ideas.
- The students ordered the events and elaborated in a class discussion.
- The students were evaluated and assessed in different ways through the process of learning and reflected on what they have already learned through reading comprehension lessons.

Teaching Procedures for the Control Group

The control group was taught reading comprehension per the procedures outlined in the teacher book of Action Pack 5, as follows:

- In order to read and respond to the questions, students followed the conventional method for reading comprehension. With the use of the Teacher's Book of Action Pack 5, the control group was instructed.
- The teacher engaged students in conversation and introduced new vocabulary. To aid students in understanding the key concepts, the teacher probed deeply regarding the images in the courses.
- It's also an option for students to read the content aloud. While reading, students should respond to the teacher's written

questions on the board.

- In order to answer the questions, the teacher also separated the class into groups or pairs.
- When the lesson was over, the teacher provided feedback.

Results

The research question is: *Are there any statistically significance differences at (α = 0.05) in the Jordanian EFL fifth-grade students' mean scores on the reading comprehension post-test which could be attributed to the instructional Model (5E Model vs. conventional)?*

In order to answer this question, ANCOVA test was used, to implement ANCOVA test, multiple assumptions needed to be checked including linearity. In fact, there is a linear relationship between the outcome (post test results) and the covariate (pretest results). The researcher conducted a test of normality and the Table below shows significant value of normality in Kolmogorov-Smirnov normality test.

Table 2: Normality Test for Pre and Post Reading Comprehension Tests

	Experimental		Control	
	Kolmogorov-Smirnov Z	Asymp. Sig. (2-tailed)	Kolmogorov-Smirnov Z	Asymp. Sig. (2-tailed)
Pre Test	.755	.618	.752	.624
Post Test	.574	.897	.703	.706

a Test distribution is Normal.

A final assumption which needed to be checked before conducting ANCOVA was the assumption of homogeneity of variance. Hartley F max equation was used to calculate the value of homogeneity (Gravetter & Wallnau, 2008). The researcher calculated the variances of the means of both groups results in the pre-/post-test through the following equation: F max = Larger Variance/Smaller Variance. If the resulting ratio is close to 1, then the data shows homogeneity of variance (Glenn, 2016). Based on the variance in the Table below, the ratio is 1.15, which is close to 1, hence the assumption of homogeneity has not been violated.

Table 3: Homogeneity Test Pre and Post reading comprehension Tests

	N	Minimum	Maximum	Mean	Std. Deviation	Variance
Pre test	40	6	17	10.58	3.289	10.815
Post test	40	11	24	17.27	3.537	12.512

As the assumptions of ANCOVA were met, the researcher conducted the test and concluded the following results.

Means and standard deviations and estimated marginal means of the Jordanian EFL fifth-grade students' mean scores on the reading comprehension post-test due to the teaching model (5E Model vs. conventional instruction) are shown in Table 4 below.

Table 4: Means, Standard Deviations and Estimated Marginal Means of the Jordanian EFL Fifth-Grade Students' Mean Scores on the Reading Comprehension Post- Test Due to the Teaching Model (5E Model vs. Conventional Instruction)

Group	Mean	Std. Deviation	Estimated Marginal Means	Std. Error	N
Experimental	18.85	3.558	18.835	.557	20
Control	15.70	2.793	15.715	.557	20
Total	17.27	3.537	17.275	.394	40

A one-way ANCOVA was performed to determine whether there are statistically significant differences in the means of the post-reading comprehension test scores attributed to the teaching model (5E Model vs. conventional instruction). The results are displayed in Table 4. Table 5 displays a slight variance in the means of the test scores.

Table 5: One Way ANOCVA Results of Post Reading Comprehension Test Scores Related to Teaching Model

Source	Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Pre-test (covariate)	159.177	1	159.177	25.654	.000	.409
Group	97.293	1	97.293	15.681	.000	.298
Error	229.573	37	6.205			
Corrected Total	487.975	39				

Table 5 shows there are statistically significant differences at (α= 0.05) in the post reading comprehension test scores due to the teaching model (F= 15.681, P= 0.000) in favor of experimental group (5E Model).

Discussion

The experimental group was found to have a statistically significant difference in the post-reading comprehension test results (α= 0.05). This illustrates that utilizing the 5E as a teaching model enhanced the experimental group's students' comprehension at all three levels (literal, inferential, and critical).

The 5E Model has contributed to the students' increased reading comprehension for a variety of reasons. The way a 5E Model-based educational program is structured could be one of the reasons because this type of instruction requires the teacher to carefully establish and approve an order to meet learning objectives. The reading assignments were thoughtfully designed by the researchers; they were brief and well-structured to generate better conversation starters, the themes were chosen from the students' curriculum, and the timing was suitable.

Another reason that could have contributed to the students' increased reading comprehension is the cooperative learning environment. The integration of individual variety into the 5E Model improved students' capacity to work together to finish assignments. Because of this, the program was created with exercises that could be completed individually or in groups to assist students in becoming more engaged with the text they read. Due to the participatory aspect of the 5E Model, students were able to participate more actively in their education as opposed to only listening to their teachers talk.

The 5E Model instructional program that was being run also caught student's attention. For instance, students made an effort to understand the tasks that made up the lesson plan. Thanks to this model, the students were able to participate actively in the learning process. They were seen to participate in the debates, and their level of engagement was noticeably higher than in previous semesters. Students' enhanced participation in the learning process led directly to their improved grasp of the core concepts as well as their deeper understanding of the subject matter.

Conclusions and Recommendations

The current study set out to find out how the 5E Model affected the reading comprehension of Jordanian fifth-grade participants. To achieve this, a 5E Model-based educational program was created and put into place for the 2023–2034 academic year. Students' reading comprehension increased after the 5E Model was put into practice. The findings were displayed as follows:

- The implementation of the 5E Model improved reading comprehension. The five phases of the 5E Model (engagement, exploration, explanation, elaboration, and evaluation) were put into practice for the students.
- The program also improved their literal, inferential, and critical levels and increased student engagement in the classroom.
- Students' performance on the post-test improved when reading comprehension was taught using the 5E Model, demonstrating the program's effectiveness. Based on the results of the present investigation, the subsequent suggestions are proposed;

- The Ministry of Education should take into account the benefits of using the phases of the 5E Model to teach reading comprehension and train EFL teachers on how to use and activate these phases in their teaching so that they can be put into practice and change the routine of traditional teaching methods;
- EFL teachers should use the 5E Model, which enables their students to comprehend a text effectively and participate in the teaching and learning process;
- EFL textbook designers ought to incorporate the 5E Model stages into both the teacher's and the student's textbooks with clarity, offering a diverse range of instructional activities that center around various reading comprehension levels;
- More research should be done to determine how the 5E Model affects various language skills and students' perceptions of it, as well as to replicate the findings of this study.

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