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Enhancing EFL Reading Comprehension Skills using hybrid-based Jigsaw Activities

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Abstract

The present research aimed at investigating the impact of hybrid-based jigsaw activities on EFL reading comprehension skills. The research adopted the quasi-experimental design using fifty grade 8 (second-year preparatory stage) students from AlReef School in AlAin, UAE to be the research participants. The participants were divided into two intact classes of 25 students: an experimental and a control group. The hybrid-based jigsaw activities program was used in teaching the experimental group in the first semester on the academic year 2023-2024. Two equivalent EFL reading comprehension skills tests were administered to determine the pretest and post-test performance of the two groups. The data of the research were analyzed statistically. Results of the research revealed that the proposed program based on the hybrid-based jigsaw activities was proven effective in developing students' reading comprehension skills. In conclusion, the research recommended implementing the hybrid-based jigsaw activities program inside the classroom. A number of recommendations and suggestions were presented.

Keywords: hybrid-based jigsaw activities; grade 8 (second-year preparatory stage), EFL comprehension skills.

Introduction

Language is a uniquely social phenomenon that sets humans apart from other creatures. Through language, humans preserve their past, navigate the present, and plan for a more promising future. Language is regarded as a divine gift, as illustrated in the Quran: "He (Allah) taught him (man) eloquent speech" [Al-Rahman: 4]. Today, language is widely seen as more than a collection of grammatical rules or vocabulary to memorize; it is a dynamic tool for generating meaning (Nunan, 2004). Proficiency in language enables students to understand complex ideas, engage socially, explore topics of interest, and communicate effectively.

The English language is a core component of the Emirati education curriculum and is taught as a foreign language to all students, beginning from the foundation stages and continuing through grade twelve due to its significance in daily life. As English has become the most widely spoken language globally, its teaching and learning have become increasingly essential. English encompasses four key skills: receptive skills such as listening and reading, and productive skills like speaking and writing. The primary objective of teaching these skills is to equip students to

communicate effectively with both native and non-native English speakers across various social and academic contexts.

Reading Comprehension Skill

Students must be proficient in all four language skills—listening, speaking, reading, and writing—in order to learn English. Reading is regarded as one of the most important skills that a student should acquire, mostly because one must learn how to read.

Cline, Johnstone, and King (2006) proposed three distinct definitions of reading. The first focuses on the two key skills of reading, namely decoding and meaning interpretation. The second examines decoding and comprehension as two crucial skills that students use to comprehend the text via productive processes. The third, however, makes it clear that reading is a procedure wherein the learner extracts the meaning from the text. Nunan (2003) asserts that readers and authors engage with text throughout the reading process. This illustrates how readers infer meaning from the text and rebuild it using both information from the text and information they already know.

According to Kheirzadeh & Birgani (2018), reading is a crucial skill that is essential for students to succeed in academic learning. The complex process of reading requires a combination of perceptual, psycholinguistic, and cognitive skills. Reading is also said to be the most significant skill for pupils in secondary schools, according to Lamy and Klarskov (2011).

Reading comprehension is also described by Broek and Espin (2012) as a complex interaction between automatic and intentional cognitive processes that allows the reader to form a mental image of the text.

According to Holden (2004), reading is a crucial doorway to personal growth as well as to social, economical, and communal life. It aids children in learning about people, history, languages, science, math, and all other areas included in the curriculum.

Reading is intended to be the quickest and easiest approach to raise people's educational levels, according to Hung and Tzeng (2007). Reading increases brain cell development, stimulates linguistic skills, encourages organizing skills, enhances personality and equilibrium, and gives one the capacity to handle frustration. Reading is like opening the door of understanding to mankind. Reading is also said to be the most crucial skill for pupils in secondary schools, according to Lamy and Klarskov (2011).

Hybrid-Based Jigsaw Activities

Jigsaw Strategy

Islam emphasizes cooperation and calls on people to work together to carry out the righteous activities. Fear Allah, because He is Strict in Punishment, and assist one another in righteousness and piety but do not assist one another in vice and rancor (Sura: Al-Maeda, Aya: 2). The

cooperation of the Prophet Muhammad (Peace Be Upon Him) and his companions was used in the construction of the Masjed, the trench, and other activities. Man is civilized by nature, according to Ibn Khaldun in his Introduction; it is not thought of that "the man" would be isolated from others because he must deal and cooperate with them (Al-Salkhi, 2015, p. 111).

Sengul and Katranci (2014) describe cooperative learning as an instructional method where students collaborate in small, mixed-gender groups to achieve shared goals. In this approach, students support each other's learning, engage actively in educational activities, and develop key skills such as communication, self-confidence, critical thinking, and problem-solving.

The Effect of jigsaw-based activities on EFL reading comprehension skills

Prom (2012) evaluated the reading comprehension performance of Mattayom Suksa 1 students across four sub-skills—identifying the main idea, reading for details, making inferences, and distinguishing fact from opinion—before and after instruction using the Jigsaw II approach. Twenty-five students participated in the study, learning reading comprehension with a focus on these four sub-skills. A pre- and post-test measuring all four sub-skills was administered. Results indicated a significant improvement in the students' reading comprehension performance after employing the Jigsaw II instructional method.

Silalahi (2019) studied how the jigsaw approach was used to help eighth-grade pupils at junior high school PGRI 4 Medan in 2017–18 improve their reading skills. The participants in this research were junior high school students from PGRI 4 Medan in the VIII grade. There were four courses totaling 30 students each. 120 students total. Data was analyzed using the t-test procedure, and the results of the process of teaching reading were shown using observation sheets and interview sheets. The analysis of the findings showed that jigsaw was considerably boosting reading among junior high school PGRI 4 Medan students during the VIII neap tide.

Hybrid Learning

According to de Leng et al. (2010) (as cited in Shih, 2010), blended learning—also known as hybrid learning—is defined as “a course methodology or learning activity that combines online and traditional face-to-face instruction to create a more effective teaching and learning environment.”

Lim and Morris (2009, 283) define blended learning as “the appropriate mix and use of face-to-face instructional methods and various

learning technologies to support planned learning and foster subsequent learning outcomes.”

Hybrid learning has a significant impact on enhancing learners' EFL speaking skills. Studies by researchers such as Elsherbiney (2019) and Wang, Skehan, and Chen (2020) examined the effectiveness of hybrid learning in developing EFL learners' speaking skills across different academic levels. The findings demonstrated that hybrid learning improved learners' communication skills and fostered better social interaction.

Background of the Problem

This research's problem is that AlReef School's students have poor reading comprehension skills; for example, they always face obstacles when reading such as reading for main ideas and supporting details, reading to compare and contrast, reading for author's purpose, and reading for drawing conclusions. Thus, this research is an attempt to enhance EFL reading comprehension skills through a hybrid-based jigsaw activities program.

To gather evidence for the research problem, the researcher conducted a pilot study to assess the reading comprehension skills of eighth-grade students. The table below presents the results of this pilot study.

Table 1: Descriptive statistics for the results of the reading comprehension pilot test (N=70)

Skills	N	Minimum Score	Maximum Score	Mean	S.D	Variance	Percentage
Determine main ideas and supporting details in a text.	70	0	1	0.47	0.50	0.25	47%
Recognize and explain sequence of events.	70	0	1	0.46	0.50	0.25	46%
Use context clues to identify the meaning of words in a text.	70	0	1	0.46	0.50	0.25	46%
Infer cause-and-effect relationships in text.	70	0	1	0.49	0.50	0.25	49%
Compare and contrast to understand relationships between people, events, and ideas.	70	0	1	0.47	0.50	0.25	47%
Identify an author's purpose in a text.	70	0	1	0.49	0.50	0.25	49%
Use text details to visualize and understand characters' traits.	70	0	1	0.49	0.50	0.25	49%
Draw conclusions and make generalizations.	70	0	1	0.49	0.50	0.25	49%
Total	70	0	10	3.80	3.99	1.99	48%

Table (1) shows the statistical results of the pupils' reading comprehension test. The results indicate the pupils' poor level at reading comprehension, and that they need much improvement (total $m=3.80$). Their level was (48%).

Statement of the Problem

Based on the literature review, pilot study results, and the researcher's experience as an EFL teacher, the research problem can be articulated as follows: preparatory stage students at AlReef School in Al Ain, UAE, experience difficulties with reading comprehension skills. Specifically, they struggle to identify the main idea, discern the author's purpose, use context clues, and recognize cause-and-effect relationships within comprehension passages.

Questions of the Research:

This research attempts to answer the following questions:

- 1- What are the reading comprehension skills necessary for preparatory year school pupils?
- 2- What is the effectiveness of hybrid-based jigsaw activities in enhancing reading comprehension of preparatory stage pupils?

Purpose of the Research:

The present research aims at:

- Determining the effectiveness of hybrid-based jigsaw activities in enhancing the reading comprehension skills of preparatory stage pupils.

Significance of the Research:

It is hoped that the present research will contribute to:

- 1- Developing a teacher guide for EFL educators on how to teach reading comprehension skills through the use of hybrid-based jigsaw activities.
- 2- Providing EFL curriculum designers with a new approach to teaching reading comprehension.
- 3- Opening opportunities for further research on the effectiveness of hybrid-based jigsaw activities in improving other English language skills.

Delimitations of the Research:

This research is delimited to:

- 1- A sample of preparatory stage pupils of AlAreef School in AlAin-UAE. One class that consists of 25 pupils from the eighth-grade preparatory stage pupils who study in a hybrid way (online and face to face) will be the experimental group, and another class that consists of 25 pupils from the eighth-grade preparatory stage pupils

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- who study in a traditional way (face to face only) will be the control group.
- 2- The first semester of the academic year 2023-2024 as the duration of the application of hybrid-based jigsaw activities.
 - 3- Some EFL reading comprehension skills required from the preparatory stage pupils, such as determining main ideas and supporting details in a text, recognizing and explaining sequence of events, using context clues to identify the meaning of words in a text, inferring cause-and-effect relationships in text, comparing and contrasting to understand relationships between people, events, and ideas, identify an author's purpose in a text, using text details to visualize and understand characters' traits and drawing conclusions and making generalizations.
 - 4- Some hybrid-based jigsaw activities appropriate for improving pupils' EFL reading comprehension skills (determining main ideas and supporting details in a text, recognizing and explaining sequence of events, using context clues to identify the meaning of words in a text, inferring cause-and-effect relationships in text, comparing and contrasting to understand relationships between people, events, and ideas, identify an author's purpose in a text, using text details to visualize and understand characters' traits and drawing conclusions and making generalizations).
 - 5- Selected reading lessons from the pupils' course book (Study-Sync).

Hypotheses of the Research:

The research attempts to verify the following hypotheses:

- 1- There is a statistically significant difference at the $\leq .05$ level between the mean score of the experimental group and that of the control group on the post administration of the reading comprehension skills test in favor of the experimental group.
- 2- There is a statistically significant difference at the $\leq .05$ level between the mean score of experimental group on the pre and post administration of the reading comprehension skills test in favor of the post administration.

Method of the Research:

Participants:

The participants of this research are two classes (50 students) of eighth grade preparatory stage students of AlReef School in AlAin-UAE.

Instruments:

The following instruments will be designed and used in this research:

- A reading comprehension skills test (pre-post).

Design:

The present research adopts the quasi-experimental design using two groups; experimental and control. The experimental group students will be taught using hybrid-based jigsaw activities, whereas the control group students will be taught using the traditional way.

Figure 1

The Design of the Research (by the Researcher)

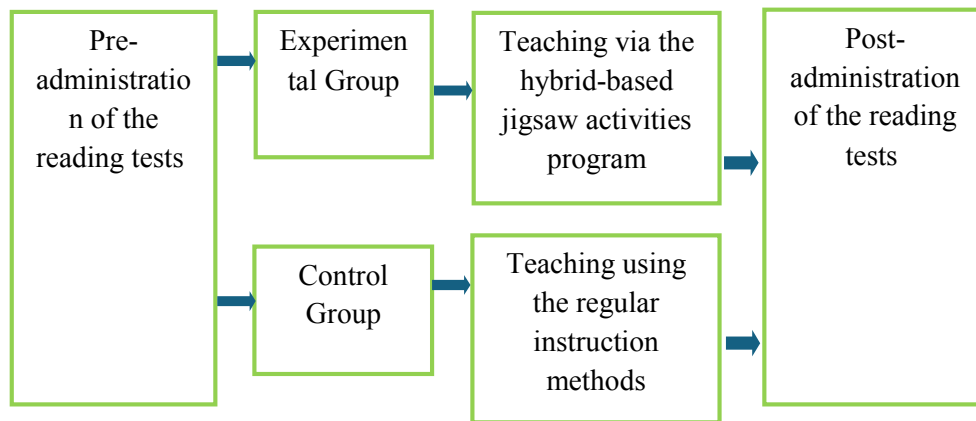


Figure (1): Hybrid-Based Jigsaw activities Experimental Design

Definition of Terms:**Jigsaw Method:**

The jigsaw technique is a cooperative learning method that fosters effective learning by enhancing learner motivation, interdependence, and social and linguistic communication skills (Zuo, 2011; Sarobol, 2012).

Jigsaw is a cooperative learning method that actively involves each participant in the activity, engaging them with the material (Tekbiyik, 2015; Zuo, 2011).

Jigsaw is a cooperative learning technique that encourages students to take a more active role and be responsible for one another's understanding of the material, maximizing their collective achievement (Slavin, 2005; Sahin, 2010).

For this research, the researcher defines jigsaw as a method in which each member of a group is assigned a different part of the material. Students with the same material from different groups will then form an “expert group” to discuss and collaborate until they all fully understand the content. Afterward, students return to their “home group” to teach the material to their peers.

Hybrid Learning

de Leng et al. (2010) (as cited in Shih, 2010) define blended learning—also known as hybrid learning—as “a course methodology or learning activity that combines online and traditional face-to-face instruction to create a more effective teaching and learning environment.”

Lim and Morris (2009, 283) define blended learning as “the appropriate mix and use of face-to-face instructional methods and various learning technologies to support planned learning and foster subsequent learning outcomes.”

According to Garnham and Kaleta (2002), hybrid courses are those in which a portion of the learning activities is moved online, reducing but not eliminating the time traditionally spent in the classroom.

The researcher defines hybrid-based jigsaw activities as a set of tasks in which students work collaboratively in groups both inside and outside the classroom, using the internet, to improve their speaking fluency and reading proficiency.

Reading comprehension

Van den Broek & Espin, (2012) defined reading comprehension as “a complex interaction among automatic and strategic cognitive processes that enables the reader to create a mental representation of the text” (p.318).

Alderson (2000: 28) defines reading as “an enjoyable, intense, private activity in which the readers get much pleasure and can totally absorb the reading.” According to Pang (2003:14) comprehension is “the process of making sense of words, sentences and connected text.”

For this research, the researcher defines reading comprehension as the ability to connect between the words in a text, to understand the ideas and the relationships between ideas conveyed in a text. For example, students can read a story, then fill in a graphic organizer to compare and contrast between the characters of the story.

Results and statistical analysis:

The research findings are analyzed in relation to the statistical results of each instrument. After presenting the statistical analysis for each, a discussion of the respective outcomes is included, followed by a discussion of the overall findings.

Establishing the Homogeneity of the Groups

The homogeneity of the experimental and the control groups was measured, and results are introduced in table (2):

Comparing the performance of the two groups on the Reading Comprehension skills Test

Reading comprehension Skills	Groups	N.of cases	Means	S.D	Df	t.Value	Sig.
Determine main ideas and details	Control	25	0.68	0.476	48	0.957	0.344 Not Sig.
	Experimental	25	0.80	0.408			
Recognize and explain sequence of events	Control	25	0.64	0.490		0.849	0.400 Not Sig.
	Experimental	25	0.52	0.510			
Use context clues to identify the meaning of words	Control	25	1.24	0.523		0.491	0.626 Not Sig.
	Experimental	25	1.16	0.624			
Cause-and-effect relationships	Control	25	0.68	0.476		0.303	0.763 Not Sig.
	Experimental	25	0.72	0.458			
Compare and contrast	Control	25	0.76	0.523		0.777	0.441 Not Sig.
	Experimental	25	0.64	0.569			
Identify the author's purpose	Control	25	0.64	0.490		0.915	0.365 Not Sig.
	Experimental	25	0.76	0.436			
Visualize and understand characters' traits	Control	25	0.60	0.500		0.281	0.780 Not Sig.
	Experimental	25	0.56	0.507			
Draw conclusions and make generalizations	Control	25	0.64	0.490		0.915	0.365 Not Sig.
	Experimental	25	0.76	0.436			
Total	Control	25	5.88	1.787		0.086	0.932 Not Sig.
	Experimental	25	5.92	1.498			

Results presented in Table 2 indicate that none of the calculated t-values reached statistical significance. This suggests that there is no statistically significant difference between the experimental and control groups in terms of each sub-skills or overall reading comprehension skills. Consequently, there are no variances between the two groups (the experimental and the control).

Results of the Statistical Treatment

To examine the impact of the "Hybrid-based Jigsaw Activities Program" on the target students' performance in reading comprehension skills tests, the research hypotheses were tested. The subsequent section addresses the testing of each hypothesis individually.

Testing the Hypotheses

Testing the first hypothesis

This hypothesis stated that: “There is a statistically significant difference at the $\leq .05$ level between the mean score of the experimental group and that of the control group on the post administration of the reading comprehension skills test in favor of the experimental group.”

In order to test this hypothesis, a t- test was used as shown in table 3.

Table 3
Comparing the Reading performance of the control and the experimental groups on the post Test

Skills	The group	N.of cases	Means	S.D	df	t.Value	Sig.
<i>Determine main ideas and details</i>	Control	25	0.88	0.332	48	5.615	0.01
	Experimental	25	1.56	0.507			Sig.
<i>Recognize and explain sequence of events</i>	Control	25	0.80	0.408		7.495	0.01
	Experimental	25	1.72	0.458			Sig.
<i>Use context clues to identify the meaning of words</i>	Control	25	1.40	0.500		13.870	0.01
	Experimental	25	3.24	0.436			Sig.
<i>Cause-and-effect relationships</i>	Control	25	1.08	0.572		8.190	0.01
	Experimental	25	2.28	0.458			Sig.
<i>Compare and contrast</i>	Control	25	1.16	0.554		8.527	0.01
	Experimental	25	2.44	0.507			Sig.
<i>Identify the author's purpose</i>	Control	25	0.80	0.408		11.352	0.01
	Experimental	25	1.92	0.277			Sig.
<i>Visualize and understand characters' traits</i>	Control	25	0.84	0.374		6.085	0.01
	Experimental	25	1.60	0.500			Sig.
<i>Draw conclusions and make generalizations</i>	Control	25	0.80	0.408		5.840	0.01
	Experimental	25	1.56	0.507			Sig.
<i>Total Score of Test</i>	Control	25	7.76	1.763		20.560	0.01
	Experimental	25	16.32	1.108			Sig.

The results in table 3 illustrated that there are statistically significant differences between the mean scores of the experimental group and the control group in all sub skills and the total score of the post administration of the reading comprehension skills test in favor of the experimental group. All t- values were significant at (0.01) and degree of freedom was 48. These results confirm the validity of the first hypothesis and were accepted. The researcher attributes these results to the effect of using the hybrid-based jigsaw activities program.

Testing the second hypothesis

This hypothesis stated that: *“There is a statistically significant difference at the $\leq .05$ level between the mean score of experimental group on the pre and post administration of the reading comprehension skills test in favor of the post administration.”*

In order to test this hypothesis, a t-test was used. Table 4 indicates the results.

Table 4
Comparing the Experimental group Reading Performance on the
pre and the post administration of the EFL Reading
Comprehension test

Skills	Application	N.of cases	Means	S.D	df	t.Value	Sig.
<i>Determine main ideas and details</i>	pre – test	25	0.80	0.408	24	5.729	0.01 Sig.
	post – test	25	1.56	0.507			
<i>Recognize and explain sequence of events</i>	pre – test	25	0.52	0.510		7.856	0.01 Sig.
	post – test	25	1.72	0.458			
<i>Use context clues to identify the meaning of words</i>	pre – test	25	1.16	0.624		14.807	0.01 Sig.
	post – test	25	3.24	0.436			
<i>Cause-and-effect relationships</i>	pre – test	25	0.72	0.458		15.396	0.01 Sig.
	post – test	25	2.28	0.458			
<i>Compare and contrast</i>	pre – test	25	0.64	0.569		12.728	0.01 Sig.
	post – test	25	2.44	0.507			
<i>Identify the author's purpose</i>	pre – test	25	0.76	0.436		10.474	0.01 Sig.
	post – test	25	1.92	0.277			
<i>Visualize and understand characters' traits</i>	pre – test	25	0.56	0.507		6.186	0.01 Sig.
	post – test	25	1.60	0.500			
<i>Draw conclusions and make generalizations</i>	pre – test	25	0.76	0.436		5.237	0.01 Sig.
	post – test	25	1.56	0.507			
<i>Total Score of Test</i>	pre – test	25	5.92	1.498		28.482	0.01 Sig.
	post – test	25	16.32	1.108			

The results in table 4 illustrate that there are statistically significant differences between the mean scores of the experimental group in the pre-post administration of the reading comprehension skills test in its sub-skills and the total score of the test favoring the post administration. All t- values were significant at the (0.01) level and degree of freedom = 24. These results confirm the validity of the second hypothesis. The researcher attributes these results to the effect of using the hybrid-based jigsaw activities program.

The Effect Size of Suggested Program:

In order to determine the effect size of the hybrid-based jigsaw activities program concerning the difference between the experimental group's pre- and post- administrations of the reading comprehension skills test, eta square (η^2) was calculated after estimating the t-value.

Table 5 illustrates the value of (η^2) and (ES).

Table 5
Values of (η^2) and the Effect Size of the Treatment on Improving the reading comprehension Test of the Experimental Group

Skills	η^2	Effect size
<i>Determine main ideas and details</i>	0.578	High
<i>Recognize and explain sequence of events</i>	0.72	High
<i>Use context clues to identify the meaning of words</i>	0.901	High
<i>Cause-and-effect relationships</i>	0.908	High
<i>Compare and contrast</i>	0.871	High
<i>Identify the author's purpose</i>	0.82	High
<i>Visualize and understand characters' traits</i>	0.615	High
<i>Draw conclusions and make generalizations</i>	0.533	High
Total Score of Test	0.971	High

Table 5 illustrated the effect size of the hybrid-based jigsaw activities program on the academic achievement of the experimental group students in the sub-skills of the reading comprehension test and its overall score. η^2 values of the total score and the sub-skills ranged between (0.533 – 0.971). This shows that 97.1% of the variance in experimental group students' performance in reading comprehension can be attributed to the independent variable (the hybrid-based jigsaw activities). This is a high percentage which reflects a high variance.

Discussion of Results:

Results revealed a statistically significant difference between the two groups in the investigated variables, favoring the experimental group. This indicated an improvement in the experimental group's reading comprehension skills in the post-tests. This improvement is attributed to the experimental treatment using the suggested program based on hybrid-based jigsaw activities.

The results can be attributed to the jigsaw-based activities incorporated into the suggested program, which encouraged and motivated participants to engage and communicate while focusing on specific skills, particularly reading comprehension. These activities engaged the participants reading comprehension, encouraged self-expression, provided real communication opportunities, and helped them practice authentic English. Teaching EFL reading comprehension to eighth graders using a

new way of teaching (hybrid-based jigsaw activities) enhanced their reading comprehension skills.

Using hybrid-based jigsaw activities in teaching made students excited and encouraged, as the learning method matched their tech-oriented interests. They learned in a hybrid, stress-free environment, feeling enthusiastic about working in groups and collaborating on tasks in the hybrid-based jigsaw activities program. They enjoyed working on their designated text portions, analyzing, and sharing their thoughts and summaries with peers.

During the training program sessions, participants were free to make and correct mistakes without the pressure of negative remarks, fostering their participation. They engaged in pair and group discussions actively, contributing as valuable discussion members. They organized, suggested, summarized, explained, discussed, and evaluated during activities. They put significant effort into reading correctly with less hesitation. The sessions were fun and smooth, and they gradually took part in discussions, assessments, evaluations, and suggesting more activities. Initially, their pre-test performance was not acceptable, but it improved significantly after the training program.

The experimental group demonstrated a high level of EFL reading comprehension skills. In contrast, the control group, which was taught using traditional methods, showed some progress, but it was not comparable to the improvement achieved through the hybrid-based jigsaw activities program.

Finally, the results showed that students who participated in the program developed their EFL reading comprehension skills. Their ability to use modern technology in education (e.g; hybrid-based jigsaw activities program) also increased. English sessions with the researcher using the hybrid-based jigsaw activities program were favorable for the students. Some students even sought out similar hybrid-based activities in their free time to further improve their reading in English.

Results of the present research go in line with the results of Silalahi (2019) which studied how the jigsaw approach was used to help eighth-grade pupils improve their reading skills. Additionally, the results of the current research supported the results of Meng (2010) which conducted study on English reading jigsaw cooperative learning.

Conclusions

With reference to the research results, the following points were concluded:

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- Students were curious about the hybrid-based jigsaw program and the reading topics. They appreciated the program's organization, which matched their interests in collaboration and piqued their curiosity. Many began participating actively in discussions and questions, especially in front of their peers.
 - Students had access to the StudySync platform inside and outside the class, allowing them to log in from computers, laptops, mobiles, or iPads to review, restudy, or complete tasks.
 - Teaching in a communicative context improved students' reading comprehension skills.
 - Students in the experimental group were enthusiastic about exploring all the program's features and participated actively.
 - Pair and group work promoted collaborative learning and motivated students.
 - They also enjoyed PowerPoints, Word files, graphic organizers, and other activities that taught various reading comprehension skills.
 - Engaging and enjoyable activities in the hybrid-based jigsaw program motivated students to learn and facilitated easier language acquisition.
 - Students felt encouraged when receiving feedback and rewards from the teacher.
 - The enjoyable learning environment of the hybrid-based jigsaw activities highly motivated students. They were happy to collaborate, exchange ideas, and search online for information to enhance their reading comprehension, which was a new experience for them.

Recommendations of the Research:

Some recommendations for teachers, students, course designers and EFL researchers were suggested based on the results and the conclusion of the current research as follows:

For EFL Teachers:

- EFL educators should receive training in terms of technological approaches, particularly hybrid activities, to enable them to effectively support students in honing their language skills, especially in reading comprehension.
- EFL instructors should incorporate the jigsaw strategy more frequently within their classrooms as a means to facilitate English language practice and establish a collaborative learning environment.

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- The adoption of new teaching technologies for EFL skills, such as hybrid activities, should be a focal point for educators to encourage more positive attitudes towards learning among students.
 - EFL teachers should actively promote learner engagement in interactive tasks and activities. It is advisable to provide training for teachers on the instruction of reading comprehension skills both during their pre-service education and as part of ongoing professional development initiatives.
 - Teachers should prioritize the integration of technology within the classroom setting to enhance EFL skills.

For EFL Course designers:

- Course designers should incorporate hybrid-based jigsaw activities into EFL curriculum design, especially for preparatory school-level courses.
- Course designers should actively seek out and utilize innovative techniques, methods, and strategies aimed at enhancing reading comprehension skills.
- Incorporating technology, particularly hybrid-based activities, should be a priority for course designers, given its demonstrated effectiveness in improving EFL outcomes.

For EFL Researchers:

- EFL researchers can apply the insights of this research to implement hybrid-based jigsaw activities in various English language teaching contexts and to enhance different aspects of students' attitudes.
- EFL researchers should explore diverse trends in technology and innovative teaching methods to effectively boost students' language skills.

Suggestions for Further Research:

The following points are recommended for consideration in further research:

- A follow-up study on this research should be conducted to investigate whether hybrid-based jigsaw activities yield similar influence on other language skills, such as listening and writing.
- Expanding the implementation of hybrid-based jigsaw activities to different educational stages, including primary and secondary levels, would be beneficial.
- Replicating the experimental approach with larger sample sizes can provide more robust insights and conclusions.

Future research could be conducted to assess the impact of hybrid-based jigsaw activities in EFL contexts on various aspects such as self-efficacy, foreign language anxiety, language aptitude, and various attitude aspects.

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