Article

The Effects of Teacher-Centered and Student-Centered Approaches in TOEIC Reading Instruction

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Abstract: Teacher-centered instruction is prevalent in preparation courses for large-scale standardized language tests. Student-centered instruction, while known to be effective in enhancing communicative competence, has been considered ineffective and time-consuming to implement in preparation courses for large-scale standardized language tests. To investigate this assumption, a quasi-experimental study was conducted to investigate the effectiveness of two teaching approaches— teacher-centered and Jigsaw—on students' Test of English for International Communication (TOEIC) Reading Comprehension Part Seven scores. The results showed that both groups experienced significant improvements from the pre-test to the post-test in their overall performance; however, there was no statistically significant difference between them. Furthermore, students in the Jigsaw group showed statistically significant improvements in all three passage types (single, double, and triple), while students in the teacher-centered group showed insignificant improvement in one of the three passage types (single passages). These findings suggest that both teaching approaches can effectively improve students' TOEIC Reading Comprehension scores. The study adds to the body of research on teaching approaches in EFL TOEIC Reading Comprehension university classrooms. The findings suggest that teacher-centered and student-centered approaches can effectively improve students' TOEIC Reading Comprehension scores.

Keywords: cooperative learning; EFL; jigsaw; reading comprehension; student-centered; teacher-centered; TOEIC; college education

1. Introduction

English reading comprehension has become an essential area of research because of the prevalent use of large-scale English language assessments in the Republic of Korea (herein Korea) [1]. The TOEIC Listening and Reading test (TOEIC LR) is one of Korea's most popular and widely accepted English language assessments, and is used for college admissions and job applications [2–4]. More than half of the test respondents confirmed their reason for taking the TOEIC LR was for job opportunities (26.7%) or graduating from university (24.5%) [5]. Thus, studies aimed at increasing English language assessment test scores have far-reaching implications beyond the classroom.

According to the Educational Testing Service (ETS) [5], Koreans have shown higher test scores for listening (M = 374, SD = 82) than reading (M = 301, SD = 103). This signifies a considerable need for improvement in the reading comprehension section. The TOEIC Reading Comprehension test consists of three parts: Part 5, incomplete sentences; Part 6, text completion; and Part 7, reading passages. Since these three parts are combined to create a final reading comprehension score, it is unknown which part Korean test takers need to focus on primarily. However, the number of questions in Part 7 increased from 48 to 54 in 2016 [6] representing an increase of 12.5%, while a 25% decrease was noted in Part 5. TOEIC Part 7 includes three types of reading passages: single, double, and triple passages. Each set of questions requires test takers to make inferences from a growing amount of

information. This change reflects an overall shift to measuring English proficiency beyond the word level and a heavier focus on reading comprehension passages. Moreover, studies on Korean TOEIC LR test-takers suggest that enhancing reading instruction leads to greater improvements in overall TOEIC LR scores compared to listening instruction [7,8]. Thus, more studies aimed at increasing reading passage scores may positively impact the overall TOEIC LR test score.

Traditionally, Korean students attend cram schools specializing in test preparation [9]. A student documentary revealed that it is typical for these seminars to include up to 200 students in a teacher-dominated classroom and for students to retake the test more than 20 times to achieve better scores [10]. In fact, the ETS reported that 39.1% of test takers took the exam more than three times [5]. Thus, test takers' willingness to accept the costs of retaking the test and the tuition required to attend test preparation academies underscores the importance of this exam for many students. While the traditional teacher-centered approach to exam preparation has produced acceptable test scores, it does not reflect actual English proficiency [11–13]. In addition, some critics state that these tests assess a student's ability to study for the test rather than their English proficiency [14,15]. Thus, the overall effect may be temporary. To improve long-term student performance, it may be necessary to engage in various teaching approaches [16,17]. Exposing students to varied teaching approaches such as the Jigsaw approach (which is focused on standardized test taking) may help improve TOEIC Reading Comprehension and communicative competence.

This paper aims to address the following two research questions:

1. Does a teacher-centered or Jigsaw approach affect Korean university students' performance on TOEIC reading passage scores?
2. Does a teacher-centered or Jigsaw approach affect Korean university students' performance on TOEIC reading passage scores in each of the following categories: single, double, and triple passages?

Understanding the academic effects of teaching approaches in TOEIC Reading Comprehension classrooms is critically important for student success. It allows educational stakeholders to gain a better insight into using alternative teaching approaches to improve TOEIC Reading Comprehension outcomes.

2. Previous Studies

2.1. Previous Studies on Jigsaw

Created in 1971 by Aronson to reduce racial conflicts in a classroom and create heterogeneous groups [18], Jigsaw is a cooperative learning approach that promotes small groups working cooperatively to complete a task or an activity. This process creates two groups—a home group and an expert group—in which each home group member reviews a subtopic to master by discussing it within their expert groups. Once mastered, the experts return to their home groups to share the findings, thus creating a home group where all subtopics can be discussed after mastery. In this way, students can stay hyper-focused on a small segment of the task and receive assistance and guidance from their expert groups, providing them with increased confidence and knowledge to participate in home group discussions.

Jigsaw as a student-centered approach has been used successfully in many schools [19] but has also seen mixed results relating to academic effects and perceptions. Recent studies in the EFL context have found Jigsaw iterations to be effective at improving reading comprehension outcomes in various grade levels and countries, with examples being Indonesian tenth-graders [20], Iranian high schoolers [21], and Saudi Arabian university students [22]. Interestingly, many newer studies implementing the Jigsaw approach were found in the Indonesian context [23,24]. The latter studies found increased critical thinking skills through essay tests, however, these effects may not transfer to standardized testing.

There were insignificant differences in academic scores in some cases, but overall, students perceived student-driven activities as beneficial to their learning [25]. The authors found that Jigsaw students felt more confident communicating, teaching, and learning about cognitive psychology. Interestingly, their beliefs in their learning abilities increased

as academic outcomes remained statistically unchanged compared to a control group. Therefore, successful outcomes of educational interventions may extend beyond academic effects, contributing to individuals' overall development and well-being. Moreover, educational interventions can encompass various strategies and programs to enhance learning outcomes and academic achievement. While the primary objective of such interventions is to improve academic performance, research has indicated that they can also have secondary benefits in other areas such as social behaviors.

Mixed academic effects have also been noted depending on the complexity of the content. Ghaith and El-Malak measured 48 Middle Eastern university applicants' reading comprehension scores using a Jigsaw method [26], which employs group scoring or competition. The scores were measured in three categories: literal, high-order, and overall reading comprehension from 50 TOEFL reading comprehension questions from 5 passages. They found a statistical difference in higher-order EFL reading comprehension scores compared to a control group from the pre-test to the post-test, which indicates that Jigsaw promoted critical thinking for more complex reading comprehension tasks. Students could explore their interpretations and learn from others by participating in group discussions. Other EFL studies indicated that Jigsaw groups statistically improved reading comprehension scores in secondary and higher learning classrooms [27–29]. More studies on the academic effects and students' perceptions of Jigsaw iterations may help determine the most appropriate Jigsaw approach to implement with exam-focused reading comprehension materials.

Jigsaw studies in Korea have primarily focused on students' perceptions rather than academic achievements. Though various instruments collected data on students' perceptions, university students generally saw the benefit of student-centered activities. Seo and Park evaluated the effects of Jigsaw on 129 Korean university students in a simulation nursing practice course that influenced learning competencies such as cognition, learning motivation, and learning behavior [30]. Cognitive competency, which measured knowledge, thinking, creativity, and problem-solving, was not statistically significant. However, there was a significant finding in learning behavior (more specifically, out-of-class learning behavior). The authors attributed this to the students' motivation to prepare in advance for their peers, thus creating a higher sense of accountability. Although the study did not find cognitive function improvements, it suggested that Korean university students experienced benefits relating to changes in learning behavior compared to a control group.

Another Korean Jigsaw study specifically addressed students' perceptions of L2 reading. Suh investigated the perceptions of Jigsaw on 48 Korean university students' performance in L2 reading activities [31]. The study collected data from two methods—interviews and attitude scale questionnaires—and found that Jigsaw could create more positive reading attitudes and promote higher reading fluency in L2 classes. Critical themes related to reading revealed that Jigsaw promoted a healthy class environment, improved reading behaviors, and promoted reading ability. In addition, students preferred individual work due to their skill levels and differences. The interview and attitude scale worked together to give a fuller picture of students' successes and hardships when implementing a new approach in a classroom environment. The Jigsaw method aligned with students' willingness to participate in group activities. The author noted that only interviews and attitude scales were collected, so it is unclear whether Jigsaw directly influenced the improvement of reading skills. Therefore, additional studies that contribute to assessing L2 reading scores after implementing Jigsaw may contribute to this body of research.

2.2. Research on Teaching TOEIC Reading Comprehension in Korea

There have been limited studies directed toward TOEIC reading passages and teaching approaches in Korea. One study found cooperative learning to be a significant tool for out-of-classroom TOEIC Reading Comprehension study groups compared to independent study [32]. It highlighted the effects of peer interaction with sentence completion tasks but did not address reading passages. Moreover, since the activities took place outside the classroom, they did not address classroom approaches.

Another study collected TOEIC Reading Comprehension scores, which included TOEIC reading passages. However, no classroom instruction was implemented on reading passages since students were interested in vocabulary instruction, and there was limited classroom time to cover all parts of the TOEIC test in class [33]. The authors found that students who studied TOEIC reading passages in out-of-classroom groups significantly outperformed those who studied independently. While the study found the integration of cooperative learning in TOEIC reading passages helpful, its comprehensive approach encompasses a variety of teaching methodologies both within and beyond the classroom, failing to address factors that could specifically influence reading passages explicitly. Thus, targeting specific test components would help reveal weaknesses [7]. Therefore, it may be practical to focus on TOEIC reading passages (part seven) exclusively instead of the entire TOEIC test, for a better understanding of how in-classroom teaching approaches affect reading passage scores.

Since the effects of a teacher-centered or Jigsaw approach in a Korean university classroom on TOEIC reading passage scores have not been studied, the present study explores the effects of two teaching approaches on Korean university students' TOEIC reading passage scores. There is a lack of research investigating the specific effectiveness of teacher-centered versus Jigsaw teaching approaches in TOEIC reading passage instruction at the university level. This study furthers the body of research on specific teaching approaches for TOEIC Reading Comprehension preparation classrooms. Moreover, students' performance on different reading passage components (single, double, and triple) is also analyzed to reveal any strengths or weaknesses that may exist.

3. Materials and Methods

3.1. Context of the Study

The present study was conducted at a university in the Seoul metropolitan area. Recruitment for volunteers was conducted through a university messaging service (Kakao Work), and initially, 38 students volunteered to partake in the study. Fifteen students were absent for the first session, preventing them from participating in the study. Seventeen students remained for the entirety of the study without any schedule conflicts. To measure the TOEIC Reading Comprehension score effects of either a teacher-centered or student-centered approach, students were divided into two instructional groups based on the schedule availability of each volunteer. Volunteers included students from each grade level: freshman (2), sophomore (4), junior (7), and senior (4) from six different departments: engineering (5), bio-nanotechnology (5), social science (3), humanities (2), information technology (1), and medical science (1). Therefore, a variety of grade levels and majors are represented in this study.

3.2. Instruments

TOEIC passage mock tests from Barron's TOEIC [34] were used as materials in the study to control for the level of difficulty and item type. The TOEIC reading passage section includes 54 reading comprehension items divided into three sections: single-passage (29 items), double-passage (10 items), and triple-passage (15 items). Each session used a different mock test in the same order for the teacher-centered and Jigsaw groups. All tests are structurally scaffolded, progressing from single-passages to triple-passages. This scaffolding helped ensure that students were adequately prepared for the more challenging triple-passage test items as each session progressed.

3.3. Procedures and Class Implementation

Both the teacher-centered and Jigsaw groups met for four sessions. The first session was dedicated to the pre-test and demonstration. Sessions two and three were exclusively used to implement either teacher or student-centered activities. Finally, students completed the post-test in session four. Both groups attended all sessions for 120 min each.

The teacher-centered group utilized a teacher-centered approach—direct instruction [35]—which was adapted to meet the needs of the study (Table 1). During the first session, students were instructed to preview passages, read test questions, and reread passages to find the correct answer. A teacher-led review was conducted through didactic questioning to check for understanding at the end of each segment. Students could also communicate directly with the teacher to address their concerns. Thus, most of the instruction time was spent through lectures, individual drill practice, and teacher-to-student feedback.

Table 1. Teacher-centered instruction procedures.

Original	Adapted
1. Preview the passage by reading the headings and subheadings	1. Preview the passage
2. Recite the subheading	[a] /
3. Ask yourself questions about what might be important to learn	2. Read the provided test questions to find key points
4. Read to find the important details	[a] /
5. Reread the subheading. Recite important details	3. Reread the passage to find the correct answer through elimination.
6. Rehearse (read each subheading, recite important details)	4. Teacher Feedback. Move to the next section.

Note: Adapted from Ref. [35]. [a] / means incorporated into the previous step.

The Jigsaw group utilized a student-centered approach—Jigsaw [36]—which was adapted to meet the needs of the study (Table 2). This adaptation was expected to help the teacher apply the Jigsaw approach to multiple-choice test materials. Students were put in a fixed home group during the first session based on their initial seating assignments, which were random. Following the establishment of home groups, students participated in a lesson where they demonstrated the procedures of Jigsaw. Students were separated from their home groups and formed expert groups, which discussed a particular multiple-answer choice answer (i.e., A, B, C, or D). Expert groups were randomly selected daily, allowing students to discuss with different students. Like the control group, each session was divided into three segments to address single, double, and triple reading passages. Thus, three home and expert group meetings took place in each session. Sessions two and three followed this pattern without any lectures. During this time, students could ask for clarification from the teacher when there were discrepancies. Therefore, most of the time was spent listening to the students' explanations of their answer choices. The researcher/instructor for the two instructional methods was a native speaker of English with six years of experience teaching at the university where the research was conducted.

3.4. Data Analysis

Both the pre-test and post-test were collected from the groups. After consent, students completed the pre-test in the first session before any teaching instruction and the post-test in the fourth session. Test scores were analyzed in several ways to find any relationships that could exist. Both tests included 54 questions in TOEIC reading passages. First, to compare students' overall performances and performances based on three different passage types within each group, a Wilcoxon signed-rank test was conducted. Then, to compare students' overall performances and performances based on three different passage types between the two different instructional methods, the Mann–Whitney U test was performed. SPSS 25 was used to conduct the statistical analyses.

To investigate the two research inquiries, the presentation of data focuses on illustrating the impacts of both a teacher-centered and a student-centered approach on TOEIC Reading Comprehension (Part Seven) scores. Initially, an overall score is presented, followed by a detailed breakdown based on passage types including single, double, and triple passages.

Table 2. Jigsaw Procedures.

Original	Adapted
1. Divide students into five- to six-person Jigsaw heterogeneous home groups based on gender, ethnicity, race, and ability	1. Fixed home group start
2. Appoint a home group leader for each group, preferably the most mature students, to lead tasks	2. Select daily expert group assignments (i.e., A, B, C, D)
3. Divide the day's lesson into five to six segments to match the number of students in each home group	[a] /
4. Assign each student to learn one segment	3. Expert group discussion
5. Give students time to become familiar with their assigned segment	[a] /
6. Form temporary expert groups by having one student from each Jigsaw home group join other students assigned to the same segment. Allow time for students to rehearse expert findings to present to their original home groups	[a] /
7. Students return to their Jigsaw home groups	4. Fixed home group discussion
8. Each student presents their expert segment to the home group and encourages questions for clarification	* Repeat step 3 and 4 for each section: single, double, triple-passage
9. Provide teacher assistance when necessary	5. Teacher facilitation (wrap-up)
10. Assess students' progress to encourage active participation	[a] /

Note: Adapted from Ref. [36]. [a] / means condensed within the previous step.

4. Results

4.1. Comparison of Students' Overall Performance

Table 3 presents the descriptive statistics for the overall pre-test and post-test scores for each group. There were no statistically significant differences between the two groups' pre-test scores based on the Mann–Whitney U test (z = −0.45, $p = 0.65$) which shows that, at the start of instruction, the two groups showed similar reading proficiency.

Table 3. Results of the descriptive statistics of overall performance.

Score Categories	Teacher-Centered (*n* = 6)		Jigsaw (*n* = 11)	
	M	**SD**	**M**	**SD**
Pre-test	29.67	7.71	32.18	8.44
Post-test	39.00	7.69	39.46	9.56

Both groups showed an increase in the mean scores between the teacher-centered and Jigsaw approaches. The mean difference for the teacher-centered group was 9.33, and the mean difference for the Jigsaw group was 7.28. Additionally, a Wilcoxon signed-ranks test for within-group comparison found significant improvements for the teacher-centered group (z = −2.201, $p = 0.028$) and highly significant improvements for the student-centered group (z = −2.763, $p = 0.006$) from the pre-test to the post-test. These findings indicate that both groups significantly improved their scores.

Table 4 presents the Mann–Whitney U significance and compares the teacher-centered and Jigsaw groups post-tests. The results showed that, despite the increase in students' overall performance between the pre-test and the post-test within each group, when the two groups' post-test scores were compared, there was no statistically significant difference.

Table 4. Post-test Mann–Whitney U for between-group comparison.

	Z	***p***
Post-test	−0.252	0.801

4.2. Comparison of Scores Based on Passage Type

Table 5 shows the descriptive statistics for each passage type depending on the instructional approach. The results show that each group's mean scores improved from the pre-test to the post-test in all measured score categories.

Table 5. Descriptive statistics by passage type.

Score Categories		Teacher-Centered (n = 6)		Jigsaw (n = 11)	
		M	SD	M	SD
Single passage	Pre-test	18.333	4.227	19.273	4.563
	Post-test	21.333	4.412	22.364	5.005
	Mean Difference	3.000		3.091	
Double Passage	Pre-test	4.167	1.169	5.000	1.414
	Post-test	7.333	1.966	7.455	1.916
	Mean Difference	3.167		2.455	
Triple passage	Pre-test	7.167	3.971	7.909	3.833
	Post-test	10.333	1.633	9.727	2.970
	Mean Difference	3.167		1.818	

Note: Number of questions for each score category: single (29), double (10), and triple (15).

A Wilcoxon matched-pairs signed-rank test displays the significance of each passage type within each group (see Table 6). The teacher-centered group significantly improved in the double ($z = -2.214$, $p = 0.027$) and triple passage ($z = -2.014$, $p = 0.044$) type. However, there were no statistically significant differences in the single passage ($z = -1.572$, $p = 0.116$). The Jigsaw group statistically significantly improved scores in all three passage types.

Table 6. Wilcoxon matched-pairs signed-rank test results by passage type.

Pre- and Post-test Comparison	Teacher-Centered (n = 6)		Jigsaw (n = 11)	
	Z	p	Z	p
Single passage	−1.572 [a]	0.116	−2.144 [a]	0.032
Double passage	−2.214 [a]	0.027	−2.689 [a]	0.007
Triple passage	−2.014 [a]	0.044	−2.059 [a]	0.040

[a] Based on negative ranks.

Table 7 presents the Mann–Whitney U test significance and compares the teacher-centered and Jigsaw groups for each passage type. The findings were statistically insignificant when compared. Therefore, the two teaching approaches implemented did not significantly affect any passage type measured in this study.

Table 7. Mann–Whitney U for between-group comparison by passage type.

Score Categories	Z	p
Single Pre-test	−0.611	0.541
Single Post-test	−0.504	0.614
Double Pre-test	−1.195	0.232
Double Post-test	−0.153	0.879
Triple Pre-test	−0.403	0.687
Triple Post-test	−0.508	0.611

5. Discussion and Conclusions

The present study investigated the impact of two instructional approaches—teacher-centered and student-centered—on TOEIC Reading Comprehension scores, with a specific

emphasis on part seven. Initially, the study calculated the overall effects of each teaching approach on scores and subsequently conducted a detailed examination of the influence on each passage type, including single, double, and triple passages.

Students in both the teacher-centered and Jigsaw approaches significantly improved their TOEIC reading passage scores from the pre-test to the post-test. However, there was no significant difference in the improvement between the groups. Thus, both teaching approaches can be effective in improving TOEIC reading passage scores, and neither teaching approach outperformed the other.

The teacher-centered approach led to significant improvements in double and triple passages, but not single passages. This suggests that teacher-centered learning may be less effective in enhancing reading comprehension when the demand for inferential reasoning is lower. The student-centered approach, Jigsaw, led to significant improvements in all three passage types. This suggests that student-centered learning may be effective in all parts of the TOEIC reading passages (part seven). When the group performances were compared, there was no significant difference in the improvement in any of the three passage types. Thus, both teaching approaches can be effective in improving TOEIC reading passages in each score category, and neither teaching approach outperformed the other. However, implementing student-centered learning is more likely to have a positive effect throughout all score categories.

Reading comprehension studies measuring the effects between a teacher-centered group and student-centered approaches have found similar results with significant within-group findings but insignificant between-group comparisons, which may be more likely if both groups show significantly positive effects [37,38]. Another study found that using student-centered and cooperative learning approaches significantly affects students reading passage (TOEIC part seven) scores, but the study was outside of a classroom environment [32]. Thus, the complexity of study factors could influence the findings.

Shin and Seong found that Korean university students improved their scores by a mean of 45 points after participating in a TOEIC class implementing various teaching approaches [33]. The present study saw similar results but was shorter in duration and scope. Moreover, the present study concentrated on two teaching approaches and the effects within each component of the TOEIC reading passages (part seven) test. This could help identify specific areas of weakness [7] which could be targeted to enhance overall reading scores.

A more detailed analysis of the learning processes involved in the implementation of the teacher-centered and student-centered approach in the present study helps understand how learners engage with each instructional approach. In the teacher-centered approach (Table 1), students participated in drill practice using direct communication with a native English-speaking teacher. Although their overall score improved, their improvement on single-passage questions was insignificant. In contrast, in the student-centered approach (Table 2), students displayed significant results with single-passage type questions. These findings suggest that communication with multiple peers could enhance reading comprehension for single-passage questions more than solely relying on a teacher's interpretation. Moreover, collaborative communication with peers in a classroom setting may have a more pronounced impact on all three question types observed.

The dynamics of a student-centered classroom encouraged an environment with potential multifaceted benefits. In the present study, students were likely to contribute more explicit or succinct explanations during discussions, allowing for a diverse range of perspectives and insights. Moreover, the opportunity for students to communicate in their mother tongue might have facilitated clearer articulation of complex ideas, enabling a deeper understanding of the subject matter. Additionally, feedback challenging the discussion topics could have stimulated critical thinking among students, encouraging them to evaluate their viewpoints. These forms of peer interactions within the student-centered approach not only promoted a collaborative learning atmosphere but could have

also played a role in contributing to the development of essential cognitive skills such as critical thinking. This observation aligns with findings from prior Jigsaw studies [23,24,26].

The contextualization of the teacher-centered and student-centered approaches within the university face-to-face classroom setting offers valuable insights into the implementation of explicit teaching strategies for TOEIC Reading Comprehension. The improvements in overall scores not only underscore the efficacy of incorporating these approaches but also provide a solid foundation for advocating increased exposure to TOEIC Reading Comprehension practice for university students. This exposure is pivotal for honing the specific skills required for standardized language tests and enhancing students' familiarity and proficiency in tackling diverse question types.

Importantly, the inability of students in this study to choose their preferred teaching approach becomes a noteworthy aspect. Rather than a limitation, this lack of choice could be viewed as advantageous in catering to diverse learning preferences among students. The absence of a significant performance difference between the two teaching approaches suggests that both can be effective, allowing educators the flexibility to adapt their methods based on the unique needs and comfort levels of individual students. This flexibility is crucial considering that some students may find themselves less comfortable in a group discussion setting. By accommodating various learning preferences, educators can create a more inclusive and supportive learning environment. Consequently, this contextualized approach not only provides practical insights into explicit teaching approaches but also emphasizes the importance of flexibility and inclusivity in the implementation of these approaches within a university context.

This study makes a substantial contribution to the existing body of literature by delving into the effectiveness of both teacher-centered and student-centered approaches in enhancing TOEIC Reading Comprehension scores within the dynamic setting of a university classroom. These findings serve as a call, emphasizing the paramount importance of adopting diverse teaching approaches that resonate with the preferences and needs of both educators and students alike. While previous studies have explored the benefits of cooperative or student-centered learning, many reading comprehension studies have been concentrated at the primary and secondary levels of education as opposed to the university level [39–41]. Thus, more reading comprehension studies at the university level may help understand the transferability of findings to higher education [42].

Notably, the study goes beyond conventional within-group comparisons and ventures into unexplored territory by scrutinizing the nuanced effects of these teaching approaches across distinct types of reading passages featured in the TOEIC Reading Comprehension test. This comprehensive exploration of passage types represents a pioneering effort as, to the best of the authors' knowledge and after exhaustive searches, such a meticulous analysis is yet to be extensively documented in the existing literature.

Furthermore, the implementation of the student-centered Jigsaw approach presents an intriguing departure from the traditional application, which typically involves dividing reading passages. In this study, the innovative adaptation of Jigsaw involves the division of answer choices, presenting a unique approach in the area of norm-referenced test preparation materials. This novel method not only challenges established norms but also provides educators with a valuable alternative strategy, expanding the pedagogical landscape and offering a fresh perspective on student engagement and performance enhancement.

The theoretical significance of this research extends beyond a mere exploration of teaching approaches. It lies in a call to understand the strengths and weaknesses of various factors that may affect outcomes [7]. This insight, particularly regarding the more pronounced effects of student-centered learning on scores across different passage types, advances our understanding of the multifaceted factors influencing reading comprehension outcomes. In doing so, this study not only enriches but also enhances existing theories on language instruction, particularly within the challenging context of standardized language tests in university classrooms. Thus, providing more research on the efficacy of specific approaches in specific contexts provides additional guidance to teachers [40,43], especially

those in TOEIC Reading Comprehension classrooms. The theoretical framework established by this research offers a substantial foundation for future investigations into effective language teaching methodologies, facilitating ongoing advancements in pedagogical theory and practice.

The results of these studies support the benefits of various approaches in TOEIC Reading Comprehension classrooms, which aligns with the present study. However, future studies could explore other teaching approaches, use different classroom materials, conduct more extensive studies with more participants, or have a longer duration in different contexts and situations. This quasi-experimental quantitative study provided data highlighting the effects of two different teaching approaches on TOEIC Reading Comprehension scores. The present study may be one of the only studies that contributed to evaluating specific teacher-centered and student-centered approaches while utilizing TOEIC Reading Comprehension tests as exclusive materials in a university classroom in South Korea. However, there were limitations regarding the sample size and language barrier. The sample size ($n = 17$) was determined by volunteer sampling and feedback regarding student scheduling that permitted perfect attendance in the study. It also fits the practical classroom accommodation limits at the facility being used and a typical non-lecture style university classroom. This sizing may mimic what educators typically experience in student-centered classroom environments. Other EFL reading comprehension studies have explored similar sample sizes of under 30 students [37–40,44–47] and treatment groups of less than 11 [48,49]. In addition, the subjects selected were from one South Korean university. Therefore, the generalizability of the present study may not apply to other class sizes, countries, subjects, or universities. Future studies that can compare instructional methods in a more controlled teaching environment with more participants could yield more generalizable results.

Furthermore, the duration of a similar class could be lengthened. The current study only met four times, however, other inferential reading instruction studies lasting between five to ten hours have produced positive reading outcomes [50]. Thus, a more prolonged study may not be required to examine the instructional methods influencing learning outcomes.

The present study underscores the significance of investigating the impact of two key instructional approaches—teacher-centered and student-centered—on TOEIC Reading Comprehension scores. By concentrating on the effectiveness of these methods, particularly within a university classroom setting, this research contributes valuable insights into language instruction practices. However, it is crucial to acknowledge that language improvement is a multifaceted process influenced by various factors beyond teaching methodologies. Motivation, cultural influences, and individual learning styles are integral components contributing to the overall language acquisition process. While this study focuses on instructional approaches, it recognizes the need for future research to delve into nuanced aspects and explore a broader spectrum of elements influencing language enhancement. Potential areas for exploration in subsequent studies could include a comparative analysis of teaching materials to discern their impact on the efficacy of teacher-centered and student-centered methods. Additionally, future investigations could extend the duration of studies to examine the long-term effects of these approaches and consider adaptations of student-centered methods to gauge their influence on comprehension and overall TOEIC Reading Comprehension scores. Moreover, a more detailed exploration of how different teaching approaches affect varied passage types within the TOEIC Reading Comprehension test could yield valuable insights. Comparative studies across multiple university settings could further enhance the generalizability of findings. Lastly, integrating TOEIC Reading Comprehension practice seamlessly into existing university courses is an area that warrants exploration, shedding light on the feasibility and effectiveness of incorporating standardized test preparation within established curricula. By addressing these avenues, future studies can provide a more nuanced understanding of language learning processes and contribute to the continual advancement of language instruction practices.

The present study suggests that Korean university students participating in TOEIC Reading Comprehension classes could experience significant test score improvements in teacher-centered and student-centered classrooms. Although the study findings did not show statistical differences between the two methods, the results suggest that instructors teaching students to prepare for large-scale standardized language tests can consider student-centered instructional methods as an option to help students achieve higher scores and gain lasting language competence.

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