



The Impact of Explicit Strategy Instruction on ESP Medical University Students' Reading Proficiency

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Abstract

Reading proficiency is poses a great challenge for English as a Foreign Language (EFL) learners, extending beyond mere word comprehension to encompass deeper linguistic understanding. The present study, conducted at a Medical University in Iran, investigated the efficacy of Strategy-Based Instruction (SBI) in improving English reading skills. To this end, fifty-six second-year Iranian ESP learners, aged 18 to 22, were selected and divided into conventional and SBI groups. Descriptive statistics and t-tests were employed to analyze pre- and post-test scores, revealing a non-significant difference in mean scores for the conventional group, suggesting minimal improvement. Conversely, the SBI group exhibited a significant increase in mean scores, indicating the effectiveness of the intervention in enhancing reading comprehension. Moreover, a notable performance gap was observed between the SBI and conventional groups, highlighting the potential superiority of SBI in fostering EFL reading proficiency. These findings underscore the value of adopting innovative instructional strategies to enhance language learning outcomes.

Keywords: *EFL; Reading Comprehension; Strategy Instruction*

Introduction

Reading English poses a notable challenge for English as a Foreign Language (EFL) learners. This difficulty arises because reading entails more than merely matching words with meanings or translating passages from one language to another (Chinpakdee & Gu, 2021). As outlined in the construction-integration model of text comprehension (Kintsch, 2018), successful comprehension hinges on the dynamic interplay between two key processes. First, there's the construction process, wherein readers decipher words, phrases, and sentences, storing them in their working memory and amalgamating them into coherent units of meaning. Also, there's the integration process, where readers merge information from the text with their existing background knowledge, drawing logical inferences from the material at hand (Chinpakdee & Gu, 2021). These cognitive processes allow readers to create meaningful mental representations or interpretations of the text they engage with. In essence, reading can be perceived as an interactive process of creating meaning and solving problems, necessitating deliberate efforts and strategic skills from learners (Chinpakdee & Gu, 2021).

Even though crucial for comprehension construction, these processes frequently remain implicit and are not explicitly taught or modeled in the classroom (Chinpakdee & Gu, 2021). Traditional reading lessons, which typically involve learners practicing reading texts with teacher support and responding to comprehension questions, often fall short in instructing learners on how to read effectively (Macalister, 2011). Furthermore, while it's commonly assumed that reading strategies used in learners' first language (L1) may transfer to their second language (L2) reading, there isn't sufficient evidence to conclusively demonstrate automatic transferability (Chinpakdee & Gu, 2021). Nevertheless, it has been proposed that providing extensive instruction in class can facilitate the positive transfer of L1 reading strategies to the L2 context and foster the development of L2 reading proficiency (Afflerbach, Hurt, & Cho, 2020; Grabe & Stoller, 2019)

Introducing strategy instruction can significantly aid in L2 reading development by explicitly teaching learners strategic approaches to engage with reading and offering ample opportunities for them to practice these strategies in context (Brevik, 2019; Newton et al., 2018). Consequently, training learners to employ strategic reading methods is expected to be advantageous for EFL students as they work towards enhancing their reading skills to meet academic requirements in school (Chinpakdee & Gu, 2021).

However, the integration of strategy instruction into language classrooms is unlikely to occur unless teachers comprehend how to implement it effectively (Goh, 2019) and are convinced of its relevance and advantages for their students' proficiency development (Pawlak, 2021; Pawlak & Oxford, 2018). Despite abundant research linking strategic learning to proficiency enhancement, what remains debatable is whether explicit strategy instruction effectively enhances learners' reading comprehension in an Iranian EFL context. The present study hence intends to address this gap by shedding light on how explicit Strategy-Based Instruction (SBI) was integrated into the reading modules of a ESP class. It explores how this pedagogical approach facilitated the enhancement of students' strategic reading skills and whether it contributed to better reading performance.

Literature Review

Strategy Instruction and Reading Competence

Reading is a cognitive process characterized by interactivity and non-linearity, demanding readers to utilize their linguistic resources such as vocabulary and grammar, along with their background knowledge, to extract and interpret meaning from the text (Grabe & Stoller, 2019). Moreover, effective reading also requires learners to employ their metacognitive abilities, which involves planning their reading, identifying challenges, applying strategies to overcome them, and assessing the success of their comprehension (Afflerbach, Cho, Kim, Crassas, & Doyle, 2013). This suggests that proficient readers are motivated and actively involved in their reading process. Afflerbach et al. (2013) further highlight that learners' self-efficacy and beliefs about reading can significantly impact their reading progress. Learners who perceive themselves as competent readers and view reading as an opportunity for knowledge acquisition tend to approach reading with greater initiative and strategic intent. Despite the necessity of these metacognitive factors for reading development, Afflerbach et al. (2013) assert that they often receive poor instructional attention in the classroom.

Research indicates that strategy instruction can significantly enhance reading development (Anderson, 1991; Chamot & O'malley, 1994; Cohen, 2003, 2011, 2014; Cohen & Macaro, 2013; Dreyer & Nel, 2003; O'malley & Chamot, 1990; Oxford, 1990; Rubin, Chamot, Harris, & Anderson, 2007; Zhang, Gu, & Hu, 2008), among many others, have extensively argued in favour of strategy training and offered evidence of its success.. Explicit strategy instruction, designed to cultivate learners' metacognitive abilities, can also nurture their growth as proficient and independent learners (Chamot & Harris, 2019; Shen, 2003). However, the concept of learning strategies is not without its complexities. Several researchers have expressed concerns regarding the definition of learning strategies and the differentiation

between strategies and skills (Chinpakdee & Gu, 2021). Despite these concerns, numerous studies conducted over the years have provided empirical evidence demonstrating the positive effects of strategy instruction on reading proficiency and learner advancement (Chinpakdee & Gu, 2021).

For example, Zhang's (2008) intervention study indicates that explicit strategy instruction not only led to improvements in Chinese learners' reading performance but also encouraged their engagement in strategic reading. Nevertheless, Zhang observes that some strategies appear to pose greater cognitive demands for his learners, suggesting that these may require more practice to effectively activate. Similarly, Wichadee's (2011) research illustrates that Strategy-Based Instruction (SBI) could enhance learners' reading test scores and contribute to their heightened awareness of strategy utilization. However, she points out that while most of her learners seemed more inclined to adopt strategies in their reading, those with lower proficiency levels may require additional practice to develop a deeper understanding of strategy application.

Aghaie and Zhang (2012) for instance learned that providing explicit instruction on cognitive and metacognitive strategies for reading enhanced self-regulation among Iranian EFL high school students. This improvement in self-regulation, in turn, facilitated effective management of their reading process and led to improved reading test scores. Additionally, they observed evidence of strategy transfer to new reading tasks, indicating that learners had developed the ability to read independently and strategically following the intervention.

Similarly, Lee (2017) intervention study, which examined the effects of a school-wide strategy intervention program on the development of primary school learners in Hong Kong, also highlighted the benefits of strategy instruction on reading performance. Post-intervention, learners in Lee's study exhibited heightened motivation, increased engagement in the reading process, and noticeable enhancements in their use of strategies and reading performance. Moreover, the strategy instruction program was perceived as a valuable experience by participating teachers, providing them with collaborative opportunities to enhance their learners' reading skills.

Collectively, these studies suggest that strategy instruction offers a promising approach to enhancing learners' reading performance and bolstering their metacognitive control over the reading process (Chinpakdee & Gu, 2021). While these empirical findings lend support to the incorporation of strategy instruction in classrooms, it's crucial to recognize, as highlighted by (Plonsky, Chamot, & Harris, 2019), that the effectiveness of strategy instruction heavily relies on its implementation. Consequently, the next pivotal question emerges: What is the most effective way to teach strategies?

Approaches for Strategy Instruction

Research findings in language learning strategy instruction suggest that explicit strategy instruction, when integrated as a core component of regular language lessons, tends to be more effective compared to implicit or non-integrated instruction methods (Gu, 2019). Integrating explicit strategy instruction into language lessons offers learners opportunities to apply their strategic learning skills within the context of specific learning tasks relevant to their immediate learning needs. This not only encourages further exploration of strategies but also facilitates deliberate practice of these strategies (Rubin et al., 2007).

Explicit instruction of strategies entails more than simply instructing learners to use them. It involves engaging in discussions with learners about what strategies are, why they are beneficial, and when they can be applied (Chinpakdee & Gu, 2021). Furthermore, explicit strategy instruction encompasses demonstrating how the targeted strategy can be effectively utilized to accomplish tasks (Chinpakdee & Gu, 2021). In essence, the goal of strategy instruction is to assist learners in developing essential skills to regulate their own learning. (Rubin et al., 2007) note that strategies for instruction typically follow four common stages, guiding learners towards increasing levels of responsibility in strategy utilization and independence in managing their learning.

The first stage involves raising learners' awareness of the strategies they already employ. This awareness is further developed in the second stage, during which the teacher models how to apply strategies to learning tasks. As learners progress, the teacher gradually reduces scaffolding in the third stage, providing repeated opportunities for learners to practice strategies either with peers or independently. The final stage focuses on evaluating the effectiveness of the strategies and encouraging learners to transfer them to new tasks.

Informed by this comprehensive framework and existing research on strategy instruction and reading development, the present study seeks to explore the impact of a strategy-based intervention program integrated into the reading modules of an English course on learners' reading proficiency. The study endeavors to address the following research question:

1. What is the impact of a strategy-based intervention program on ESP learners' reading performance?

Method

Participants and Research Context

The present study was conducted at a Medical University in Iran. To avoid complications, the location and name of the university are kept confidential. The study included 56 male and female second-year Iranian ESP learners aged between 18 and 22 who were divided into two intact classes. One class, consisting of 28 learners, underwent an intervention where SBI (Strategy-Based Instruction) was implemented. The other class, also comprising 28 learners, served as a comparison group and received conventional reading lessons without explicit focus on strategies. Before their participation in the study, all participants had received six years of formal English instruction at secondary school and had completed a mandatory three-credit English course as part of their BA degree requirements at the university in the previous year. Throughout the intervention semester, all learners received six hours of compulsory English instruction weekly, primarily employing teacher-fronted teaching methods. Classroom activities predominantly included reading comprehension, explicit grammar instruction, and vocabulary practice, which are typical in English classrooms in Iran.

The participants said that their previous English reading sessions mainly focused on reading passages aloud and translating them into Persian. None of the learners mentioned having experienced structured Strategy-Based Instruction (SBI) prior to their involvement in the study. The strategy-based intervention was incorporated into the standard English course, which is compulsory for receiving a Bachelor of Arts BA degree. This course was instructed by faculty members who held a PhD in TOEFL. The reading materials in the course consisted of general English texts of moderate length (ranging from 350 to 500 words). Following each reading lesson in the course book, there were activities designed to assess comprehension through true/false questions and other comprehension-checking tasks.

The objective of the course was to develop learners' ability to read, identify main ideas and understand various types of General English texts. During the intervention, the teacher took the role of a teacher/researcher whose responsibility was to deliver the intervention lessons while teaching the course. The teacher usually began each intervention lesson in Persian and switched to English when necessary. The use of the learners' L1 in the intervention lessons was useful as it helped clarify the concept of learning strategies and process of strategy use to learners who are not familiar with SBI.

Procedures

The Intervention Group

During the semester, a 10-week intervention was conducted with the intention of assisting learners in developing strategic skills to help their reading. Each week, participants in the intervention class received a 50-minute session on Strategy-Based Instruction (SBI). At the beginning of the semester,

the participants were briefed on the purpose of the intervention and their rights as participants. Throughout the intervention, nine specific strategies were taught to the learners. These strategies were selected based on previous research in learning strategies (O'malley & Chamot, 1990; Zhang et al., 2008) (Chamot, 2009) and the sequence of lessons was structured according to the course content, objectives, text types, and insights from pre-intervention group interviews where learners collectively expressed their need for effective reading approaches in English.

The lesson plans originally featured a range of strategies, setting goals, preparing for reading, taking notes, imagery, self-questioning, making inferences, analysing text structure, guess word meaning from word parts and contextual clues, summarizing and goal checking. These plans were then handed to the course instructor for evaluation regarding their alignment with the course content, broader curriculum objectives, and student needs. Upon review, the instructor recommended removing the strategy of imagery, noting that it was not a relevant strategy based on the topic of the readings in the course book. Consequently, this strategy was removed from the list at the instructor's suggestion.

Table 1. The lesson plans

Weeks	Lessons	Descriptions
1	Setting goals	Setting goals for English learning and reading
2	Preparing for reading	Previewing, using background knowledge and making predictions before reading. Brain storming
3-4	Taking notes	Taking notes from long texts
5	Analysing text structure	
6	Self-questioning	Using self-questioning to help understand texts
7	Making inferences	Making inferences using information from the text.
8	Guessing word meanings from word parts and contextual clues	Using prefixes, suffixes and other clues to guess word meanings
9	Summarizing	Summarizing main ideas from expository texts
10	Checking goals	Checking goals set in week 1

Each lesson in this study adhered to the Cognitive Academic Language Learning Approach (CALLA) model for strategy instruction, as outlined by Chamot (2009). This model comprises five iterative steps: preparation, presentation, practice, evaluation, and expansion. The decision to employ this instructional model stemmed from its robust theoretical grounding in language learning strategy research. It aims to foster the development of declarative, procedural, and conditional knowledge in learners, thereby promoting strategic learning. Moreover, its non-linear structure facilitates learners' progression towards greater independence, with appropriate support from teachers. In this study, a modification was made to the presentation stage, wherein the teacher demonstrates and models the target strategies through think-aloud demonstrations. This adaptation transformed the presentation stage into an 'exploration of target strategies,' emphasizing its interactive nature and the learners' active role in co-constructing knowledge about strategy utilization. The following section provides a comprehensive overview of how learners were guided through each instructional stage during the intervention lessons. An abridged example from the lesson plans implemented during the intervention is presented in Table 2.

Preparation

At the beginning of each intervention session, the teacher initiated the lesson by presenting the strategy names through a PowerPoint show. Learners were then encouraged to participate in a discussion, sharing their interpretations of the strategies, how they believed these strategies could enhance their reading skills, and whether they had previously employed them in other learning contexts. Occasionally, warm-up exercises were integrated into the session to engage learners in strategic problem-solving activities. These activities aimed to heighten learners' awareness of their existing strategies while also

introducing them to new approaches for tackling presented challenges. Prior to transitioning to the next stage, learners were informed about the lesson objectives and the expected outcomes to be achieved by the end of the session.

Table 2. Example of the intervention lessons

Stages/ purposes	Time	Procedures
Language objective: Understand general texts. Strategy objective: Guessing word meanings from word parts Time: 50 minutes. Materials: Textbook, PowerPoint slides and worksheet.		
1. Preparation: To activate learners' background knowledge about guessing word meanings from word parts	5	The teacher writes various word parts like prefixes, suffixes, or root words on the index cards or pieces of paper. He shuffles the cards to randomize selection. The teacher chooses one participant to draw or act out the word based on the word part they select from the shuffled cards. The other participants should observe the drawing or acting and try to guess the word the selected word part might belong to. The teacher Encourages them to shout out their guesses or write them down. If someone correctly guesses the word, they earn a point. If no one guesses correctly within a set time limit, the drawer or actor reveals the word and explains its meaning based on the provided word part. After each round, rotate the roles so everyone gets a chance to draw or act out a word.
Exploring the target strategies: To engage learners in the think aloud demonstration of guessing word meanings from word parts	10	The instructor tells learners that today they are going to learn about 'guessing word meanings from word parts. A strategy that can help them understand and remember the meaning of words and comprehending text without using a dictionary. Teacher leads classroom discussion of what the strategy is, why it is useful and when it can be used. Teacher starts demonstrating how to use guessing word meanings from word parts on a portion of 'consumerism and the human Brain' and engages learners in the process by asking them to guess the meaning of unknown or unfamiliar words. He encourages them to explain the paragraph to the class.
Practice: To provide opportunities for guided and independent strategy practice	20	Students engage in applying the strategy to the remaining portion of the passage. During this phase, the instructor circulates the classroom to monitor students' progress and provide additional clarification as necessary.
Evaluation: To evaluate the effectiveness of strategies used and reflect on learners' overall performance	10	Students engage in a discussion about how the strategy aided their comprehension of the text. They reflect on their successful outcomes, identify any challenges they encountered, and brainstorm alternative approaches for overcoming those challenges in the future.
Expansion: To encourage independent strategy use	5	Learners give examples of additional learning scenarios where they believe the guessing strategy could prove beneficial. The teacher fosters further exploration by encouraging students to experiment with the guessing strategy independently or integrate it with other reading strategies in various contexts.

Exploring The Target Strategies

This phase included a classroom dialogue centered around the target strategies, delving into their definitions, utility, and practical applications in enhancing the reading process. The instructor introduced

a sample reading task to the learners, facilitating a think-aloud strategy demonstration to illustrate the application of the target strategies. Through this interactive session, learners gained insights into the rationale behind using these strategies and learned how to effectively incorporate them into their reading activities. During this stage, the first instructor read the text aloud while articulating her cognitive processes, demonstrating the application of the target strategies on the reading task. Learners were encouraged to actively participate by voicing their thoughts as they followed the demonstration. This approach aimed to clarify the strategic reading process, which is typically implicit in conventional reading instruction, by making it transparent to learners.

Given the emphasis on collaborative knowledge construction through dialogic interactions in the classroom, learners were prompted to engage in discussions with both their peers and the teacher. They explored how the target strategies could be used in planning before reading, monitoring for comprehension while reading and evaluating whether comprehension has been achieved after reading. Additionally, they were encouraged to consider alternative strategies to achieve the task's objectives. To enhance the interactivity of the exploration of target strategies, the first author occasionally introduced intentional mistakes, expressed confusion or frustration, and openly questioned how problems could be resolved. Learners were thus directly involved in analyzing tasks, employing strategic problem-solving techniques, and managing negative emotions arising from reading difficulties. This approach fostered active engagement in the learning process and empowered learners to develop their strategic reading skills.

Practice

The third phase of the intervention lesson involved learners actively applying the target strategies to new reading tasks, either in groups, pairs, or individually, with guidance from the teacher as needed. This stage aimed to provide opportunities for guided and independent strategy practice to scaffold learners' development as strategic readers. At this stage, learners received reading worksheets adapted from the course workbook, providing them with practical exercises to apply the target strategies. Additionally, games and creative activities, such as quizzes and drawing exercises, were used to enhance learner engagement and encourage deliberate practice of the strategies. As learners worked on completing the task goals using the target strategies, the instructor circulated the classroom, monitoring their progress and assessing their comprehension of the lesson content. He addressed questions, offered further explanations, and provided additional examples upon request. As learners became familiar with the practice stage and more confident in using strategies, their practice also became less guided.

Evaluation

The fourth stage involved assessing the effectiveness of the strategies employed. Post-task evaluation served as a vital component of Strategy-Based Instruction (SBI), enabling learners to discern which strategies were beneficial or not during their reading activities. This form of conditional knowledge empowered them to make informed decisions when selecting strategies for future reading tasks. Following the completion of practice exercises using the target strategies, learners were prompted to reflect on their reading activities. They engaged in class-wide discussions, sharing insights into their learning experiences, identifying areas of proficiency, pinpointing challenges encountered in reading and utilizing the target strategies, evaluating the effectiveness of the strategies in enhancing their reading comprehension, and devising strategies for improving their performance in future tasks. The instructor facilitated the discussions, addressing any questions raised by learners and providing feedback on their strategy selection and overall performance. This process of reflection and feedback reinforced learners' understanding of the strategies while promoting metacognitive awareness and self-regulation in their reading practices.

Expansion

In the expansion stage, learners were encouraged to consider the target strategies and contribute examples of additional learning scenarios where these strategies could prove beneficial. At the end of each lesson, the instructor assigned homework, urging learners to apply the strategies learned in class to their homework assignments and other independent learning activities. This stage served to foster independent practice of the strategies, empowering learners to apply them autonomously beyond the classroom.

The Control Group

This group of students were instructed in the same way as the intervention group. The only difference between the groups was that the intervention group received an extra 50 minute SBI with respect to reading comprehension.

Instruments

Reading Tests (Be Written)

Two sets of 15-item multiple-choice reading tests served as the pre- and post- tests for this study. The readings were derived from the reading section of tests designed for intermediate language learners. These tests were employed to assess changes in learners' reading test scores following their participation in the intervention. The pre-test was administered at the beginning of the semester, while the post-test was conducted immediately after the final intervention lesson. Analysis of all test scores was carried out using SPSS version 23.

Before their administration, the two reading tests underwent a pilot study involving 120 learners. Results from a t-test indicated no statistically significant differences among the tests. Therefore, they were deemed suitable for use as the pre-, post- tests. The tests were also checked for validity and reliability. The results indicated that the reliability and validity indices were satisfactory. Refer to Table 3 for an outline of the reading tests' structure and the skills they assessed.

Table 3. Reading test structure

Sections	Number of items	Text types	Skills tested
	2	A short text with unfamiliar words and contextual clues (150-180 words)	• Guessing word meanings from word parts and contextual clues
	3	Short notice/announcement (\leq 100 words)	• Information locating • Summarizing • Inferring
	5	Short semi- specialized scientific report (150–180 words)	• Information locating • Summarizing • Identifying main ideas • Inferring
	5	Long expository text (350–380 words)	• Information locating • Summarizing • Identifying main ideas • Inferring

Data Analysis

The study used means and standard deviations to assess the performance of the students in the conventional and SBI classes. T-test were also used to identify possible significant differences in the students' performance in the conventional and SBI classes. In addition, t-tests were used to address possible differences between the performance of the conventional and SBI groups on the pre- and post-tests. The reliability of the pre- and post-reading tests was also assessed.

Results

Pertest for the SBI and Conventional Classes

The findings of the pertest for the SBI and conventional classes were indicative that the students in both classes had a similar performance on the pre-test. Moreover, the findings also pointed out that the performance of both groups on the pretest was non-significant (see table 4 and 5). This finding shows that the population was homogeneous in terms of reading comprehension before they participated in the conventional or SBI classes.

Table.4. Descriptive statistics of the pertest for the SBI and conventional classes

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pertest SBI	8.82	28	3.51	.66479
	Pertest conventional	8.92	28	3.68	.69566

Table.5. Results of independent samples t-test of the pertest for the SBI and conventional classes

	Paired Differences				t	df	Sig. (2-tailed)
	Mean Difference	Std. Error	95% Confidence Interval of the Difference				
			Lower	Upper			
Pertest SBI pre-test conv.	-.10714	.96223	-.203629	1.82200	-.111	54	.912

Pre- and Post-Test for the Conventional Class

Based on the findings obtained from descriptive statistics and a paired sample t-test, it appears that there was a non-significant difference in the mean scores between the pre-test and post-test for the conventional class. This suggests that the conventional teaching method did not result in a substantial improvement or decline in student performance from the beginning to the end of the study. The fact that the difference in means was not significant indicates that any observed changes in performance between the pre-test and post-test could likely be due to random variation or factors unrelated to the teaching method itself.

Table.6. Descriptive statistics of the pertest and post-test for the conventional class

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pertest conventional	8.92	28	3.68	.69566
	Post-test conventional	9.00	28	2.98	.56344

Table. 7. Results of paired samples t-test of the pertest and post-test for the conventional class

	Paired Differences				t	df	Sig. (2-tailed)
	Mean	Std. Deviation	95% Confidence Interval of the Difference				
			Lower	Upper			
Pertest conv. post-test conv.	-.07143	1.80388	-.77090	.62804	-.210	27	.836

Pre- and Post-Test for the SBI Class

The findings suggest a notable difference between the mean scores of the pre-test and post-test for the SBI class, as revealed through descriptive statistics and a paired sample t-test. This significant difference underscores a substantial change in student performance over the course of the intervention. The observed significance in performance between the pre-test and post-test indicates a tangible impact of the intervention on student learning outcomes. These results emphasize the effectiveness of the intervention in enhancing student understanding or skills related to the subject matter.

Table 8. Descriptive statistics of the pertest and post-test for the SBI class

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pertest conventional	8.82	28	3.51	.66479
	Post-test conventional	11.60	28	2.57	.48616

Table 9. Results of paired samples t-test of the pertest and post-test for the SBI class

	Paired Differences				t	df	Sig. (2-tailed)
	Mean	Std. Deviation	95% Confidence Interval of the Difference				
			Lower	Upper			
Pertest conv. post-test conn.	-2.78571	1.79210	-3.48062	-2.09081	-8.225	27	.000

Post-Test for the *SBI* and Conventional Classes

The findings highlight a substantial disparity in mean scores between students in the SBI class and those in the conventional class. This notable difference underscores the potential effectiveness of the SBI approach in fostering higher levels of student achievement compared to traditional instructional methods.

Descriptive statistics of the post-test for the SBI and conventional classes

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pertest SBI	11.60	28	2.57	.48616
	Pertest conventional	9.00	28	2.98	.56344

Results of independent samples t-test of the post-test for the SBI and conventional classes

	Paired Differences				t	df	Sig. (2-tailed)
	Mean Difference	Std. Error	95% Confidence Interval of the Difference				
			Lower	Upper			
Post-test SBI post-test conv.	2.60714	.74418	1.11515	4.09914	3.503	54	.001

Discussion

The reluctance of teachers to invest classroom time in strategy instruction stems from two primary concerns elucidated in the literature: skepticism regarding its efficacy and uncertainty about systematic promotion within classrooms (Goh, 2019; Pawlak, 2021; Pawlak & Oxford, 2018). This

hesitancy underscores a broader apprehension within the educational community regarding the perceived value of strategic learning methodologies in facilitating language learning. However, empirical evidence, as corroborated by the present study and previous research (Aghaie & Zhang, 2012; Lee, 2017; Pawlak, 2021; Wichadee, 2011; Zhang, 2008), substantiates the positive impact of explicit strategy-based instruction (SBI) on learning outcomes, particularly in the domain of reading comprehension. By confirming the association between explicit SBI and improved reading test scores, these findings challenge the prevailing skepticism among educators and advocate for the integration of strategic learning paradigms within language learning pedagogies.

The validation of previous research findings on language learning strategies further reinforces the significance of strategy instruction in enhancing students' reading performance (Chamot & Harris, 2019; Eilers & Pinkley, 2006; Salataci & Akyel, 2002; Schunk, 2003; Tapinta, 2006; Zhang et al., 2008). This convergence of evidence from diverse studies underscores the robustness of the relationship between strategy instruction and language learning outcomes, transcending geographical and contextual boundaries. Moreover, it underscores the reproducibility and generalizability of findings across various educational settings, reaffirming the utility of strategic learning methodologies in fostering students' reading proficiency.

In light of these research findings, it is imperative for educators to reconsider their reservations about strategy instruction and acknowledge its potential to optimize language learning experiences. By embracing explicit SBI approaches and integrating them into instructional practices, teachers can empower students with the necessary tools and skills to become autonomous and proficient language learners. Furthermore, the recognition of strategy instruction as a catalyst for improved reading performance emphasizes the importance of ongoing professional development initiatives aimed at equipping educators with the requisite knowledge and skills to effectively implement strategic learning frameworks within their classrooms.

Conclusion

The findings of this study underscore the potential efficacy of Strategy-Based Instruction (SBI) in improving English reading comprehension among EFL learners. The significant increase in mean scores observed among the SBI intervention group, in contrast to the minimal improvement in the conventional group, highlights the tangible impact of SBI on student learning outcomes. This suggests that a strategic approach to instruction, tailored to enhance reading skills, can yield substantial benefits for EFL learners. Moreover, the notable performance disparity between the SBI and conventional groups further emphasizes the potential superiority of SBI in fostering higher levels of achievement in English reading proficiency. These findings provide valuable insights for educators and curriculum developers, advocating for the integration of innovative instructional strategies, such as SBI, to optimize language learning experiences and outcomes for EFL learners.

Implications of the Study

The study's findings on the impact of explicit strategy instruction on Iranian ESP medical university students' reading performance hold important implications for both institutions and teachers/instructors. Institutions can use these findings to inform curriculum development and resource allocation, emphasizing the integration of explicit strategy instruction within ESP programs. This may involve restructuring course materials, providing professional development opportunities for teachers, and investing in instructional resources that support effective strategy instruction. Institutions may also need to consider implementing assessment measures to gauge the effectiveness of these strategies and guide ongoing program improvements. For teachers and instructors, the implications are twofold. Firstly, they should embrace a more intentional and systematic approach to teaching reading strategies, equipping themselves with the necessary knowledge and skills to effectively implement explicit strategy instruction

in their classrooms. Secondly, they should recognize the importance of ongoing professional development to stay abreast of best practices in ESP instruction and continually refine their instructional approaches based on student feedback and assessment data. By working collaboratively, institutions and teachers can create an enriched learning environment that enhances students' reading proficiency and academic success in ESP medical education.

Limitations of the Study

One limitation of the present study is its focus on a single institution, limiting the generalizability of the findings to other contexts. The study was conducted exclusively at a Medical University in Iran, with the specific location and name withheld for confidentiality reasons. Consequently, the findings may not fully represent the diverse range of educational settings and student populations within the EFL learner community. Additionally, the study only involved second-year Iranian ESP learners, predominantly aged between 18 and 22, which may restrict the applicability of the results to learners in different age groups or proficiency levels. Future research could address these limitations by incorporating a more diverse range of institutions and learner demographics to provide a broader understanding of the effectiveness of Strategy-Based Instruction in enhancing English reading comprehension among EFL learners.

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