

Implementing the Metacognitive Pedagogical Cycle: Effects on EFL Learners' Listening Achievement, Metacognitive Awareness, Listening Self-Efficacy, and Listening Challenges

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Abstract—Learners of English as a foreign language (EFL) typically struggle with listening skills. This study investigates the effectiveness of metacognitive instruction through the pedagogical cycle approach in terms of listening achievement, metacognitive awareness, and listening self-efficacy of Saudi female EFL learners. It also identifies the listening challenges they face. The study employed a mixed-methods approach. The sample comprises 100 Saudi female EFL students: 51 in the experimental group and 49 in the control group. The experimental group received metacognitive instruction for 10 weeks over a semester through a pedagogical cycle. The quantitative data were collected from a listening test used as a pre- and posttest. Questionnaires about metacognitive awareness of strategy use and listening self-efficacy were also used to detect changes in metacognitive awareness and self-efficacy among learners before and after the intervention. The qualitative data were collected from interviews with eight participants. The results showed that the EFL learners improved their listening achievement and increased metacognitive awareness, such as directed attention, planning, and evaluation. Mental translation and person knowledge remained relatively unaffected. Furthermore, an insignificant effect was found on learners' listening self-efficacy. The qualitative data revealed six challenges faced by EFL learners: the speaker's speed and accent, unfamiliar vocabulary, long or boring listening materials, lack of concentration, and poor-quality recordings. The study suggests that EFL instructors should prioritize the implementation of metacognitive approaches to improve learners' listening performance and engagement. It also emphasizes the importance of vocabulary knowledge and recommends improving the EFL listening materials.

Index Terms—metacognitive strategies, listening comprehension, EFL listening skills, self-efficacy

I. INTRODUCTION

Learners of English as a foreign language (EFL) often struggle to acquire listening skills, which are viewed as the most challenging to improve (Goh, 2000). This negative conviction is probably reinforced by the type of listening instruction that learners have been exposed to in school and college (Graham, 2011). The traditional “listen and repeat” method has evolved into the “question and answer” comprehension approach, which focuses on completing tasks rather than developing practical listening skills. Moreover, the product-oriented approach, dominant in many higher-education EFL programs in Saudi Arabia, focuses on presenting students with audio passages and comprehension exercises, often concentrating on making corrections at the end of the listening task.

In contrast to the product-oriented approach, metacognitive instruction, which is a process-based approach, can help second-language (L2) listeners understand the complexity of listening comprehension (Goh, 2008) by developing their person, task, and strategy knowledge (Vandergrift & Goh, 2012). EFL learners need a more comprehensive, learner-centered, process-based approach to listening that directly engages them throughout the listening process (Bozorgian, 2014; Robillos, 2020; Vandergrift & Goh, 2012), such as the metacognitive pedagogical cycle. A metacognitive pedagogical cycle is a process-based approach that aims to enhance learners' comprehension of the listening process and assist them in regulating these processes (Vandergrift & Goh, 2012). It is a structured sequence of learning activities that integrates metacognitive awareness with listening input and comprehension tasks (Vandergrift & Goh, 2012). This sequence enhances learners' comprehension of the listening context and the metacognitive processes integral to the process. Furthermore, in listening comprehension, metacognitive awareness of the strategies used—which is EFL learners' ability to recognize the metacognitive strategies—is crucial for effectively regulating a particular listening task. Language learners can quickly and efficiently complete a listening task because of their metacognitive awareness, enabling them to master listening skills.

Previous studies have shown that instruction in metacognitive strategies positively affects students' metacognitive knowledge and, consequently, their metacognitive awareness of strategies used (Vandergrift, 2003; Robillos & Bustos, 2022; Chu et al., 2024). Research into factors affecting students' listening comprehension revealed that internal factors such as students' self-efficacy can affect listening achievement. Bandura (1997) defined *self-efficacy* as the belief in one's

ability to control situations and activities. Learners often exert more effort when they have confidence in their ability to achieve their goals independently, while those who believe they are incapable may need more effort. Previous studies have revealed that instruction in metacognitive listening strategies can positively affect learners' listening self-efficacy (Milliner & Dimoski, 2024; Goh, 2008; Graham & Macaro, 2008; Rahimirad & Zare-ee, 2015). Moreover, previous research in EFL listening comprehension problems has identified several difficulties students face in relation to their listening skills, including difficulty comprehending recorded conversations with poor sound quality. Learners reported the speaker's accent as a significant factor influencing listener comprehension, along with unfamiliar vocabulary. Additionally, the length and speed of the speech presented significant challenges (Bingol et al., 2014; Hamouda, 2015). The literature has revealed that more attention must be given to the impact of the metacognitive pedagogical cycle approach on EFL students' listening achievement, metacognitive awareness of strategies used, and their listening self-efficacy.

The present study is an experimental study that aims to provide a deeper understanding of the effectiveness of metacognitive listening strategy instruction in the form of the metacognitive pedagogical cycle approach on Saudi female EFL learners' listening achievement, metacognitive awareness of strategies used, and their listening self-efficacy. It also aims to identify the challenges the EFL students encounter in listening comprehension courses. The study seeks to answer the following questions:

- (1) Does the metacognitive pedagogical cycle approach significantly influence Saudi female EFL learners' listening comprehension achievement?
- (2) Does the metacognitive pedagogical cycle approach significantly affect Saudi female EFL learners' metacognitive awareness?
- (3) Does the metacognitive pedagogical cycle approach significantly affect Saudi female EFL learners' listening self-efficacy?
- (4) What are the challenges faced by Saudi female EFL students in listening comprehension courses?

II. LITERATURE REVIEW

A. Metacognitive Strategies

According to O'Malley and Chamot (1990), "metacognitive strategies are higher-order executive skills that may involve the planning, monitoring, or evaluation of the success of an activity" (p. 44). They are strategies to manage, direct, regulate, and guide learning. They can be divided into five categories: problem-solving, planning and evaluation, mental translation, person knowledge, and directed attention (Vandergrift et al., 2006). Problem-solving involves deducing unclear information during the listening process (inference) (Vandergrift et al., 2006); planning and evaluation involve preparing for activities and assessing outcomes; mental translation involves developing listening proficiency (Vandergrift, 2003); person knowledge involves understanding the complexity of tasks and self-efficacy in L2 listening (Sparks & Ganschow, 2001); and directed attention involves staying focused and engaged in listening tasks (Rost, 2002). Metacognitive strategies enhance learning performance by activating thinking, developing strategic learning (Anderson, 2002), improving listening comprehension, promoting analytical skills, and enabling appropriate strategies such as prediction and evaluation.

B. Instruction Models for Metacognitive Strategies

Recent intervention studies have used explicit and implicit strategies for teaching metacognitive strategies. According to Oxford (2011), explicit strategy instruction involves naming, demonstrating, teaching, and practicing strategies and educating students about their advantages in academic and real-life listening situations such as those strategy instruction approaches used by Graham and Macaro (2008). It provides information about the nature and function of the strategy, leading to its preservation and application (Carrier, 2003). In implicit frameworks, such as the metacognitive pedagogical cycle approach, strategies are included in diverse language activities, engaging students in the listening process, raising awareness of metacognitive knowledge, improving regulatory skills, and promoting self-assessment, such as those strategy instruction approaches used by Vandergrift and Tafaghodtari (2010). This approach has been shown to enhance self-efficacy and reduce anxiety, especially for low-skilled individuals (Goh, 2008). Both models, however, emphasize the importance of strategy instruction in listening comprehension instruction.

Previous studies have shown the effectiveness of the metacognitive pedagogical cycle in improving listening achievement and awareness of strategy use (Vandergrift, 2003; Robillos & Bustos, 2022; Bozorgian et al., 2022; Chu et al., 2024). Vandergrift (2003) conducted research in France, instructing students in metacognitive strategies such as prediction, individual planning, peer discussions, and post-listening reflections. Students were more concerned with the approach's confidence-building function, the importance of collaboration, and the benefits of predictions for compelling listening. Robillos and Bustos (2022) examined the effects of metacognitive pedagogical sequence on metacognitive awareness and listening comprehension. They employed the Metacognitive Awareness Listening Questionnaire (MALQ). The study revealed that most of the MALQ elements significantly improved. Moreover, the metacognitive cycle positively influenced learners' listening comprehension skills.

Moreover, Bozorgian et al. (2022) investigated the effects of metacognitive intervention on the listening skills and metacognitive awareness of EFL learners who have poor working memory capacity. The experimental group engaged in

metacognitive intervention for 10 sessions through the pedagogical cycle approach, while the control group was engaged in a traditional approach. Both groups completed the listening component of the International English Language Testing System (IELTS) test. In addition, they completed the MALQ before and following the intervention. The experimental group showed a slight improvement in their listening skills. They also showed an increased use of directed attention, mental translation, and person knowledge. Chu et al.'s (2024) study assessed the impact of the metacognitive pedagogical cycle on EFL learners' listening skills. The study involved 62 students from two courses, divided into experimental and control groups. The experimental group outperformed the control group in listening skills and showed positive attitudes toward the approach. The study recommended incorporating metacognitive instruction into the school system.

C. *Metacognitive Strategies Instruction and Listening Comprehension*

The literature reveals that implementing metacognitive strategies and instruction generally improved listening performance in various contexts (Altuwairesh, 2013; Robillos, 2019). Altuwairesh (2013), for instance, conducted a study in Saudi Arabia that aimed to integrate metacognitive instruction and deliberate practice into EFL listening sessions. The study involved 42 female tertiary-level students and measured their listening skills and metacognitive knowledge using TOEFL tests and the MALQ. The experimental group outperformed the comparison group. The authors recommended metacognitive instruction and deliberate practice for enhanced EFL listening comprehension. Furthermore, in Thailand, Robillos (2019) examined how a group of EFL learners reacted to metacognitive awareness and instruction. The study used pre- and posttests. The results showed that learners' listening comprehension had significantly improved. They also had positive attitudes toward the use of metacognitive strategies.

D. *Metacognitive Strategies Instruction and Metacognitive Awareness*

Metacognitive awareness is a crucial cognitive dimension that improves learners' success in learning and autonomy (Winne & Hadwin, 1998). It involves understanding one's cognitive processes and strategies. Language learners with greater metacognitive knowledge tend to learn more effectively (Winne & Hadwin, 1998). Strategic language learners have awareness of their cognitive processes and learning methods, understand task requirements, and implement strategies that align with their abilities (Chamot, 2004). To apply metacognitive strategies effectively, learners must possess self-awareness of their learning inclinations and exercise control over their learning process (Conner, 2006; White & Frederiksen, 1998).

Previous research in Saudi Arabia has mainly focused on identifying and measuring metacognitive awareness and EFL learners' strategies (Altuwairesh, 2016; Al-Khreshah & Alruwail, 2023). A study by Altuwairesh (2016) examined the metacognitive listening strategies of 82 Saudi female EFL students using the MALQ. The results showed that problem-solving and focused attention strategies were more frequently used, while mental translation and person knowledge strategies were the least used. Al-Khreshah and Alruwail (2023) conducted a study to explore the use of metacognitive listening comprehension strategies among Saudi EFL students. The study found that problem-solving and mental translation were the most frequently used strategies. Gender differences were insignificant except for problem-solving, where females showed greater use. The study underscores the need for gender-sensitive pedagogical approaches in EFL instruction and provides a deeper understanding of common metacognitive strategies among Saudi EFL students.

Although previous studies in the Saudi context were successful in identifying metacognitive strategies used by EFL learners and measuring awareness of metacognitive strategies, the literature review revealed that little attention had been given to the instruction of metacognitive strategies in the form of the metacognitive pedagogical cycle and its effects on students' listening comprehension performance, metacognitive awareness of strategy use, and self-efficacy.

E. *Metacognitive Strategies Instruction and Listening Self-Efficacy*

Self-efficacy is an affective variable influencing individuals' actions and dedication to task performance. Empirical evidence has shown that self-efficacy beliefs affect language performance and learning characteristics and can be altered by teaching methods (e.g., Graham & Macaro, 2008; Mills et al., 2006). Low self-efficacy is crucial in L2 listening, as it is less physically observable and controllable (Graham, 2011). According to Vandergrift (2003), metacognitive listening strategies are essential for successful listening comprehension, and their use is significantly associated with one's listening self-efficacy (Vandergrift, 2002, 2005).

Research has also shown that teaching metacognitive listening strategies can improve students' listening self-efficacy. A study by Milliner and Dimoski (2024) found no improvement in low-level listening comprehension but a slight increase in confidence. Rahimirad and Zare-ee's (2015) study found that metacognitive strategy instruction significantly improved EFL students' listening self-efficacy, enhancing listening comprehension, increasing confidence, and improving listening self-efficacy. Both studies suggest that metacognitive strategies can effectively improve students' listening abilities.

Previous studies have demonstrated the effectiveness of both explicit and implicit metacognitive strategy instruction on EFL learners' listening skills and listening self-efficacy. Furthermore, they reported that the degree of self-efficacy among learners may be crucial in producing positive language learning outcomes. However, more research is necessary to clarify the connection between teaching metacognitive listening strategies and listening self-efficacy.

F. *Listening Comprehension Challenges for Students of English as a Foreign Language (EFL)*

Many language learners find listening a difficult language skill and frequently become frustrated by it (Goh, 2000). However, literature reveals obstacles that might be the reason EFL learners struggle in listening comprehension courses. Flowerdew and Miller (1996) categorized the barriers to listening into external and internal factors. An example of an external factor is the quality of recorded materials. In certain cases, the recorded materials lack quality (Bingol et al., 2014). Other obstacles are the length and pace of the speech. Bingol et al. (2014) asserted that students' proficiency levels might significantly influence their comprehension of lengthy audio recordings. Learners will not retain all material in their memory after listening to the audio. Consequently, brief listening passages are advised for learners, since they mitigate fatigue (Underwood, 1989).

Habte-Gabr (2006) categorizes internal factors into learners' anxiety, background knowledge, language proficiency, and listening processing strategies. Furthermore, unfamiliar terminology significantly reduces students' listening proficiency, particularly in an academic situation. In the academic listening setting, such as in TOEFL and IELTS tests, learners must be cognizant of encountering lengthy spoken texts, foreign vocabulary, rapid speech, and diverse accents (Rahimirad & Moini, 2015).

In Saudi Arabia, Hamouda (2015) examined the listening challenges faced by first-year English major students at Qassim University. The study involved 60 students and collected data via surveys and interviews. The results indicated that accent, pronunciation, speech rate, limited vocabulary, varying speaker accents, lack of attention, anxiety, and poor recording quality were the primary listening issues faced by EFL Saudi learners.

III. METHODOLOGY

A. Research Design

This study used a mixed-methods approach that integrated quantitative and qualitative components (Creswell, 2008). Quantitative data were employed to determine whether metacognitive strategy instruction with a pedagogical cycle affected students' listening comprehension performance, metacognitive listening awareness, and self-efficacy. Qualitative data were employed to identify the challenges faced by Saudi female EFL learners in listening comprehension courses.

B. Participants and Setting

This study employed a convenience sampling method to gather data, focusing on four distinct classes enrolled in a listening comprehension course at a Saudi university. One hundred Saudi female students studying English as a foreign Language (EFL) participated in the research. Among these participants, 51 were assigned to the experimental group, while 49 constituted the control group. All participants were enrolled in a Level 1 listening comprehension course, which is part of the curriculum offered by the English Language and Literature Department at the university. The research was conducted during the first semester of the academic year 2024–2025. The age of the participants ranged from 18 to 21 years, which is typical for students at this educational level.

C. Instruments

(a). Listening Practice Test

The IELTS listening practice test (Scovell et al., 2004) was administered to assess the participants' listening comprehension skills before and after the intervention. The test consists of four sections. Each section comprises 10 items. The first section involves listening to a recorded dialogue and writing a word or number for each answer. The second section consists of choosing three correct answers from six options. The last two sections involve choosing the correct letters, A, B, or C. The third section requires students to listen to a recorded dialogue, complete a table, and write up to two words or numbers for all items. The fourth section involves choosing the correct letter from a checkbox of nine options. The final section requires students to complete a timeline and write up to three words for each answer.

(b). Listening Self-Efficacy Questionnaire

The first questionnaire used in the study was adopted from Rahimi and Abedini's (2009) study. It was developed to assess self-efficacy in listening comprehension. The questionnaire includes 20 items rated on a 5-point Likert scale. In the current study, the questionnaire was administered at the beginning of the study and at the end. Students were instructed to read each statement and indicate the extent to which they agreed with it.

(c). Metacognitive Awareness Listening Questionnaire

The MALQ, developed by Vandergrift et al. (2006), was the second questionnaire employed in this study. It consists of 21 items, rated on a 6-point Likert scale (*strongly agree* = 6, *agree* = 5, *partly agree* = 4, *slightly disagree* = 3, *disagree* = 2, *strongly disagree* = 1). It consists of five subscales: problem-solving, planning and assessment, mental translation, personal knowledge, and focused attention. The questionnaire was used to assess the students' metacognitive awareness before and after the intervention.

(d). Semi-Structured Interviews

Semi-structured interviews were conducted in person with eight participants one week after completing the posttest. The interviews were conducted to collect qualitative data about the challenges faced by EFL students in listening

comprehension courses and how they try to tackle them. The participants were selected randomly. The semi-structured nature of the interviews allowed the researcher to incorporate rapid follow-up questions for more flexibility. The interview format was neither excessively structured nor overly permissive. This format facilitated the elicitation of substantial participant data (Patton & Burns 1999; as referenced in Zohrabi, 2013). After extensive research, the researcher developed semi-structured interview questions based on findings derived from previously conducted studies such as those of Ani (2018), Hamouda (2013), Bingol (2014), and Ikhsan and Ismail (2022), which investigated the challenges faced by EFL learners in listening comprehension courses. In the current study, the participants were asked about their significant problems in listening comprehension courses. They were also urged to contemplate their experiences of the listening comprehension course and recall the challenges they faced in any given context. Moreover, they were encouraged to provide specific examples or elaborate on their comments. With the participants' consent, each interview was recorded and transcribed. A typical interview lasts approximately 25 minutes.

(e). *Validity and Reliability of the Instruments*

The reliability and validity of the instruments employed in this study are crucial for verifying the accuracy and consistency of the results. The Guttman split-half coefficients were used to assess the reliability of the instruments used in the pre- and posttest (see Table 1). The Guttman split-half coefficient for self-efficacy was determined to be 0.630, signifying an adequate degree of reliability. The Guttman split-half coefficient for the metacognitive awareness measure was determined to be 0.660, indicating a satisfactory level of reliability. Furthermore, the two surveys were assessed for content validity by three professors of applied linguistics in the Department of English Language and Literature at a university in Saudi Arabia to ensure that the items align with the areas of self-efficacy and metacognitive awareness.

TABLE 1
INSTRUMENT RELIABILITY

Instrument	<i>n</i>	Guttman split-half coefficient
Self-efficacy	40	.630
Metacognitive awareness	42	.660

D. *Intervention and Procedure*

The metacognitive pedagogical cycle used in this study is a method for applying metacognitive instruction in L2 listening, focusing on process-based lessons that develop learners' awareness of one-way listening processes (Vandergrift & Goh, 2012). In the current study, the participants were taking a listening comprehension course. In each unit presented to them by the instructor, they were engaged in key metacognitive processes such as planning, comprehension monitoring, problem-solving, and evaluation. To assist them in the regulation of these processes, they were directed to engage in listening exercises over a series of stages, including pre-listening (planning/predicting), first listen (first verification stage and planning with a peer for the second listen), second listen (second verification stage with text reconstruction or another comprehension activity), third listen (final verification stage with or without a transcript), and the reflection and goal-setting stage (Vandergrift & Goh, 2012, pp. 109–10).

In the first verification stage, the researcher introduced the listening materials for the first time, encouraging the students to assess their previous predictions while listening and providing additional information based on their understanding. This stage aims to enable learners to observe the performance of others, as well as reflect on their previous assumptions and their understanding of the listening exercise. Additionally, it provides them with the ability to identify the critical information that requires their focused concentration in the subsequent phase.

The second verification stage is the point at which the learners are introduced to a particular metacognitive strategy. The participants participated in a second listening of the audio file, during which they monitored their comprehension and took notes of any information that was overlooked during the previous stage. Subsequently, they reported their performances to their peers and conducted mutual assessments of their listening skills.

In the final verification stage, the participants were provided with the opportunity to engage in purposeful listening to retrieve any missed information or acquire the necessary details for task completion. In the last stage, the participants engaged in reflection on their performance and their strategic approaches that they employed when engaging in listening tasks.

E. *Data Analysis*

Descriptive analysis with the Statistical Package for the Social Sciences (SPSS) version 27 was used to analyze the data gathered from the participants' IELTS listening test scores, MALQ, and listening self-efficacy questionnaires. A paired sample t-test was conducted to compare the pre-and post-intervention scores within the experimental group, while an independent t-test was used to assess differences between the experimental and control groups. The test scores were analyzed before and after the intervention was received by the experimental group. Moreover, the data gathered from the questionnaires were analyzed to determine whether there was any difference in students' metacognitive awareness and listening self-efficacy before and after the intervention.

Concerning the qualitative data, they were analyzed using thematic analysis. As an initial step, each section of the interviews that pertained to a challenge was assigned a label and coded. The automatic categorization of the labels resulted

from the coding process, with each category comprising data from all interviews on the same topic. As the final stage of the analysis, the data were interpreted under each category.

IV. RESULTS AND DISCUSSION

A. Effect of the Metacognitive Pedagogical Cycle Approach on EFL Learners' Listening Comprehension Achievement

The independent sample t-test indicates no significant difference in the pretest scores of learners' listening comprehension between the experimental and control groups (see Table 2). The experimental group ($n = 51$) achieved a mean pretest score of 22.06 with a standard deviation of 6.98, while the control group ($n = 49$) achieved mean scores of 22.12 with a standard deviation of 6.62. Levene's test for equality of variances produced an F-value of 0.065 and a significance level of 0.799, confirming that the assumption of equal variances holds, as the p-value exceeds 0.05. Additionally, the t-test resulted in a t-value of -0.047 and a p-value of 0.481, which is significantly higher than the conventional alpha level of 0.05. These findings suggest no statistically significant difference in pretest scores between the experimental and control groups, allowing for subsequent interventions to be evaluated without the influence of initial differences in listening comprehension ability.

TABLE 2
INDEPENDENT SAMPLE T-TEST FOR PRETEST SCORES ON EFL LEARNERS' LISTENING COMPREHENSION ACHIEVEMENT TEST

Group	n	M	SD	Levene's test for equality of variances		t-test for equality of means		
				F	Sig	t	df	One-sided p-value
Experimental	51	22.06	6.98	.065	.799	-.047	98	.481
Control	49	22.12	6.62					

The paired sample statistics and t-test provide significant insights into the impact of the metacognitive pedagogical cycle approach on EFL learners' listening comprehension. The results presented in Table 3 show that the metacognitive pedagogical cycle approach improved learners' listening comprehension achievement in the posttest. The mean score for the pretest was 22.06, while the mean score for the posttest increased to 25.73. This rise indicates a notable improvement in listening comprehension following the intervention. The reduction in standard deviation from 6.98 in the pretest to 6.71 in the posttest implies that the results demonstrated consistency across participants following the implementation of this approach.

TABLE 3
PAIRED SAMPLE STATISTICS OF LEARNERS' ACHIEVEMENT SCORES IN THE LISTENING COMPREHENSION TEST

Subcategory	Test	n	M	SD	Std. error mean
Achievement test scores	Pre	51	22.06	6.98	.978
	Post	51	25.73	6.71	.940

The paired sample t-test revealed that the metacognitive pedagogical cycle approach has a statistically significant effect on EFL learners' listening comprehension, with a t-value of -6.054 and a significant p-value of 0.001 (see Table 4). The results indicate that the disparity between pretest and posttest scores demonstrates a considerable impact of the metacognitive approach used during the intervention.

TABLE 4
PAIRED SAMPLE T-TEST OF LEARNERS' ACHIEVEMENT SCORES IN THE LISTENING COMPREHENSION TEST

Pair	Paired differences					Significance		
	M	SD	Std. error mean	95% confidence interval of the difference		t	df	Sig (2-tailed)
				Lower	Upper			
Pretest-posttest	-3.667	4.325	.606	-4.883	-2.450	-6.054	50	<.001

The finding that the metacognitive pedagogical cycle approach affected the EFL students' listening comprehension performance positively aligns with previous studies that demonstrated similar positive results (e.g., Vandergrift, 2003; Robillos & Bustos, 2022; Chu et al., 2024).

B. Effect of the Metacognitive Pedagogical Cycle Approach on EFL Learners' Metacognitive Awareness

The results of the paired sample t-test on the effect of the metacognitive pedagogical cycle approach on EFL learners' metacognitive awareness reveal significant improvements in specific aspects of metacognitive awareness (see Tables 5 and 6). Notably, directed attention decreased from a mean of 4.66 to 3.42, indicating enhanced awareness in managing attention during tasks ($t = 10.245$, $p < 0.001$). This implies that learners have developed certain strategies for engaging with listening materials. Moreover, planning and evaluation showed an increase from a mean of 4.51 to 4.87 ($t = -2.529$, $p = 0.015$), suggesting that learners became skillful in planning and evaluating their listening comprehension. However, some aspects of metacognitive awareness did not exhibit significant changes, with mean scores remaining relatively stable. These aspects were mental translation and person knowledge. In general, the metacognitive pedagogical cycle approach

effectively promotes a higher level of metacognitive awareness among learners, as evidenced by the fact that the total mean score for metacognitive awareness increased from 4.16 to 4.34 ($t = -2.631, p = 0.011$). This result suggests that the metacognitive pedagogical cycle approach fosters greater metacognitive awareness among learners. This finding is consistent with previous studies that reported a positive influence of the metacognitive pedagogical cycle on EFL learners' metacognitive awareness (e.g., Vandergrift, 2003; Robillos & Bustos, 2022; Chu et al., 2024).

TABLE 5
 PAIRED SAMPLE STATISTICS OF LEARNERS' METACOGNITIVE AWARENESS

Subcategory	Test	<i>n</i>	<i>M</i>	<i>SD</i>	Std. error mean
1. Directed attention	Pre	51	4.66	.774	1.083
	Post	51	3.42	.532	.074
2. Mental translation	Pre	51	2.83	.946	.132
	Post	51	2.89	1.059	.148
3. Person knowledge	Pre	51	2.81	.880	.123
	Post	51	2.92	.865	.121
4. Planning and evaluation	Pre	51	4.51	1.025	.143
	Post	51	4.87	.677	.094
5. Problem solving	Pre	51	4.87	.788	.110
	Post	51	5.03	.617	.086
Total	Pre	51	4.16	.555	.077
	Post	51	4.34	.391	.054

TABLE 6
 PAIRED SAMPLE T-TEST OF LEARNERS' METACOGNITIVE AWARENESS

Pair	Paired differences					Significance		
	<i>M</i>	<i>SD</i>	Std. error mean	95% confidence interval of the difference		<i>t</i>	df	Sig (2-tailed)
				Lower	Upper			
Directed attention	1.240	.864	.121	-.997	1.483	10.245	50	<.001
Mental translation	-.058	.793	.111	-.282	.164	-.529	50	.599
Person knowledge	-.104	.912	.127	-.361	.152	-.818	50	.419
Planning and evaluation	-.364	1.029	.144	-.654	-.075	-2.529	50	.015
Problem solving	-.153	.647	.090	-.335	.028	-1.693	50	.097
Total	-.178	.484	.067	-.314	-.042	-2.631	50	.011

C. Effect of the Metacognitive Pedagogical Cycle Approach on Learners' Listening Self-Efficacy

The results of the effect of the metacognitive pedagogical cycle approach on learners' listening self-efficacy reveal insignificant differences between pretest and posttest scores. Table 7 shows the minimal change in the mean score of learners' self-efficacy. The mean score for the pretest was 3.39 ($SD = 0.378$), while the posttest mean score slightly increased to 3.40 ($SD = 0.261$).

TABLE 7
 PAIRED SAMPLE STATISTICS OF LEARNERS' LISTENING SELF-EFFICACY

Test	<i>N</i>	<i>M</i>	<i>SD</i>	Std. error mean
Pre	51	3.39	.378	.052
Post	51	3.40	.261	.036

The paired sample t-test revealed a mean difference of -0.008 ($t = -0.186, p = 0.853$), indicating that the metacognitive pedagogical cycle approach had no statistically significant influence on learners' self-efficacy (see Table 8). The data indicated that the metacognitive pedagogical cycle approach did not enhance learners' perceptions of their listening skills. This indicates that further approaches may be required to enhance learners' self-efficacy in listening tasks. This finding, however, is inconsistent with previous studies that reported significant positive effects of metacognitive instruction on EFL learners' listening self-efficacy (e.g., Goh, 2008; Rahimirad & Zare-ee, 2015; Milliner & Dimoski, 2024).

TABLE 8
 PAIRED SAMPLE T-TEST OF LEARNERS' LISTENING SELF-EFFICACY

Pair	Paired differences					Significance		
	<i>M</i>	<i>SD</i>	Std. error mean	95% confidence interval of the difference		<i>t</i>	Df	Sig (2-tailed)
				Lower	Upper			
Pre-post self-efficacy	-.008	.337	.047	-.103	.086	-.186	50	.853

D. Common Challenges Faced by EFL Students in Listening Comprehension

The findings of this part are supported by data with excerpts of students' responses from the interviews. Table 9 provides information on the common challenges faced by EFL learners in listening comprehension courses and the corresponding frequencies and rankings.

The data showed that the most common challenge EFL students encounter is related to the native speaker's speed in the audio files they listen to. This challenge was reported by five students, representing 26.31% of the total challenges. One of the participants (P2) said, "I have a problem with the speed. They usually speak too fast." Another participant (P3) also said that "the speed of the speaker sometimes is fast and sometimes I can't write the answers as fast and keep track of what they are saying." One participant (P4) suggested that the native speakers slow down: "It would be easier if the speaker slows down after each idea." P3 said, "Sometimes it's too fast, and I can't write and listen simultaneously." Another participant (P6) added, "Sometimes, it's too fast; I can't catch the idea." This finding supports the results of Hamouda (2015), who reported that the speech rate of speakers caused challenges for Saudi students in EFL listening comprehension.

The second most common challenge reported by the students is related to the difficulty of the content of the listening materials, as reported by four students, representing 21.05% of the total challenges. They revealed that they face difficulties in understanding new and unfamiliar words in the listening comprehension tasks. This problem, however, led to another challenge: failure to complete the listening tasks in listening comprehension courses. For instance, one of the participants (P6) said, "Sometimes I don't get the point of the question. There are words that I don't understand, so I can't answer the main question." Another participant (P2) added, "It is really hard to understand what I'm listening for when the vocabulary is new to me." The students try to tackle this problem by looking up the word in a dictionary or guessing the meaning from the context. One participant revealed that she would learn new words in her free time to help increase her vocabulary knowledge. Another participant (P8) said, "I would usually look up certain words and listen carefully to the listening material and try to understand it from the context." Another participant (P7) revealed that she would try to spell the words and then look them up later: "I try to write it down, but first I try to guess the meaning from the context." One of the participants (P5) reported, "I try to listen to the whole sentence to figure out the meaning of the new word." This finding aligns with previous results by Hamouda (2015), who found that limited vocabulary knowledge was challenging for Saudi students in EFL listening comprehension.

The third most common problem the EFL students reported is the length of the listening material, as they indicated that long audio files cause them to lose concentration. This problem was reported by three students, representing 15.78% of the total challenges. One participant (P2) indicated that one of the reasons she sometimes loses concentration is that the topic is boring: "Maybe sometimes when the topic is boring, and I am not interested in it, but I get my attention back when I remember that I am in the classroom." P6 said, "I lose focus sometimes if the listening activity is long and boring." P5 said, "I lose focus when the audio is too long, or the vocabulary is hard." This finding aligns with the study of Bingol et al. (2014), which showed that external factors, including long and tedious audio files, can influence EFL students' comprehension of listening materials.

The fourth most common problem revealed by the EFL students is a problem caused by failure to concentrate while listening to English audio files. This problem is mainly caused by students' attempts to understand new words while listening. Thinking about the meaning of new words while listening leads students to lose focus. This challenge was reported by three students, representing 15.78% of the total difficulties. One participant (P1) said, "Sometimes I do lose my focus, and maybe it is because of some words that I don't understand, but I try to understand them and write them down." Another participant (P8) reported a similar situation: "I don't lose focus unless there is a word I don't understand ... I lose focus when the audio is too long, or the vocabulary is hard." Moreover, a third participant (P7) confirmed this problem: "Sometimes, I do lose my focus, and maybe it's because of some words that I don't understand, and I usually try to write them down." This finding aligns with previous results by Hamouda (2015), who found that lack of attention caused a difficulty for Saudi students in EFL listening comprehension.

Poor-quality recordings, either due to loud voices or noisy backgrounds, are another problem that two participants reported, representing 10.52% of the total challenges. They said that this problem causes concentration loss when listening to English recordings in listening comprehension courses. One participant (P4) attributed the loss of focus to the loudness of the audio files: "The audio is sometimes too loud, which makes it hard to focus." P8 added, "When the audio is low quality or unclear, I have difficulty comprehending what they say." This finding aligns with the studies conducted by Bingol et al. (2014) and Hamouda (2015), which revealed that EFL students' understanding of listening materials can be affected by external factors such as the quality of audio files.

The final problem that the EFL learners reported facing in listening is problems related to the speaker's accent. Some participants said that they needed help with specific accents, such as British accents. This problem was reported by two students, representing 10.52% of the total challenges. For instance, one participant (P2) said, "British accents are hard for me. Sometimes I don't understand them." P5 said, "When the teacher plays British accent audio files, I find them hard to understand." This finding is consistent with Hamouda's (2015) results, which showed that the varying speaker accents and pronunciation caused challenges for Saudi students in EFL listening comprehension.

TABLE 9
COMMON CHALLENGES FACED BY EFL LEARNERS' IN LISTENING COMPREHENSION

Challenge	<i>n</i>	%	Rank
The speed of the speaker	5	26.31%	1
New and unfamiliar vocabulary	4	21.05%	2
Long or boring audio files	3	15.78%	3
Thinking about the meaning of new words	3	15.78%	3
Poor-quality recordings	2	10.52%	4
Accent of the speaker	2	10.52%	4
Total	19	100%	

E. Pedagogical Implications

The results have several important pedagogical implications for EFL education. Firstly, instructors should prioritize the implementation of metacognitive approaches in their listening comprehension instruction to improve learner engagement and understanding. Secondly, the significant improvements in some aspects of learners' metacognitive awareness, directed attention, and planning and evaluation indicate that focused instruction in these areas is effective. Thus, educators should integrate activities that foster goal-setting and reflective assessment after listening tasks. However, the insignificant effect on listening self-efficacy highlights the need for further interventions to empower learners and enhance their confidence in their listening abilities.

The findings may also serve as a lens to assist instructors in enhancing their perspectives on language learning, particularly listening skills, from the perspective of the learners. This lens could provide them with a deeper understanding of the advantages of teaching EFL listening through metacognitive strategy instruction, thereby assisting them in enhancing the listening comprehension skills and metacognitive listening awareness of their students.

Moreover, this study investigated the listening challenges EFL students face in listening comprehension courses. The problems were attributed to the listening content, speaker speed, accent, and issues caused by failure to concentrate. Some of these challenges were caused by insufficient vocabulary knowledge. Students, however, can infer and comprehend the meaning of listening exercises if they are familiar with the core vocabulary of the topic. Thus, listening tasks must therefore be organized from fundamental to increasingly sophisticated as learners progress in English. Moreover, vocabulary should be given enough attention in listening comprehension courses to help students overcome this problem.

Furthermore, if the speech is rapid, it may be challenging for students to comprehend L2 language. Listening comprehension issues may arise because of listeners' inability to regulate the speaker's speed in this case. In addition, learners usually experience less fatigue in brief listening sections and can more easily understand the content. Moreover, motivation is crucial for students' listening comprehension, as even slight interruptions can hinder their understanding. Finding the content of a listening text engaging can make comprehension more straightforward. Still, despite their enthusiasm, students can find listening tedious if high concentration is required to comprehend the information because the topic is boring, or the listening materials are long.

V. CONCLUSION

This study examined the impact of the metacognitive pedagogical cycle approach on Saudi female EFL students' listening comprehension performance, metacognitive awareness, and listening self-efficacy. The approach significantly improved listening comprehension and metacognitive awareness, particularly in directed attention planning and evaluation. However, it did not significantly improve listening self-efficacy, suggesting the need for supplementary strategies to enhance learners' self-perception of their listening abilities. The study also reported several challenges EFL students face in listening comprehension courses, such as the difficulty of the content of the listening materials and problems caused by failure to concentrate due to thinking about new words while listening. Moreover, the study reported challenges related to unfamiliar vocabulary, accents, and speakers' speed.

This study has certain limitations, however, that should be addressed in future research. It was limited to Saudi female EFL students, and so future research could include male EFL learners and explore gender differences in the effects of implementing the pedagogical cycle approach on their listening achievement, metacognitive awareness, and listening self-efficacy. Furthermore, the link between the impact of the approach and listening self-efficacy could be further explored in future studies by using triangulation methods such as observations or interviews to allow for more clarification of the results. Moreover, the study focused on EFL students' challenges in listening courses. Future studies could include teachers' perspectives to help understand the factors contributing to students' difficulties in listening comprehension courses.

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