

Research paper

Teaching Listening Comprehension to Intermediate Iranian EFL Learners: A Focus on Note-taking and Metacognitive Strategies

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Abstract

This study investigates the impact of note-taking and metacognitive listening strategies on the listening comprehension of intermediate Iranian EFL learners. Listening comprehension is crucial for language acquisition; however, many learners face significant challenges due to ineffective instructional methods. This research addresses the gap in literature regarding the specific effects of these strategies on listening comprehension among Iranian EFL learners. The study is guided by three primary research questions that explore the influence of teaching note-taking and metacognitive strategies on learners' listening skills, the extent of their effectiveness, and the identification of the most beneficial strategies. A mixed-methods approach was employed, involving 40 intermediates Iranian EFL learners from a private language institute in Quchan. Data were collected through quantitative assessments, including the Preliminary English Test (PET) and the Cognitive and Metacognitive Listening Strategies Questionnaire (CMLSQ), as well as qualitative insights from semi-structured interviews. Quantitative data were analyzed using the Pearson correlation coefficient to examine relationships between strategies and comprehension, while qualitative data were analyzed through thematic coding to identify common themes in learners' experiences. The findings reveal that implementing these strategies improves listening comprehension, with a statistically significant increase in test scores, contributing to effective pedagogical practices and promoting learner autonomy.

Keywords: Note-taking, Metacognitive Strategies, Listening Comprehension, Iranian EFL Learners, Language Acquisition

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Introduction

Listening comprehension is considered a key factor in language acquisition; however, it remains an obstacle for many learners of English as a Foreign Language (EFL), notably those at the intermediate level (Aljuhani, 2022). Considering its paramount importance, many EFL learners find it challenging, often due to a lack of effective instructional methods (Hayati & Jalilifar, 2009). In Iran many learners still see understanding spoken language as a big challenge which leads to difficulty in their progress and educational success. Additionally, listening comprehension serves as a key component in the development of second language acquisition, making a significant contribution to the improvement of other language skills (Dunkel, 1988, as cited in Vandergrift, 2007). Hayati and Jalilifar (2009) emphasize that since there is no opportunity to hear a speech or presentation again, taking notes is considered an important step; therefore, it is crucial to record and retain information for future application. Recognized as an active process, listening necessitates learners to engage cognitively with the content, using strategies that improve their understanding and retention of spoken language (Goh, 2000; Vandergrift, 2007). Among the various strategies, note-taking has emerged as a significant tool that enables learners to organize and retain information presented through listening. Besides, in the educational context, effective note-taking not only aids learners in concentrating and listening attentively but also provides a valuable resource for exam and lecture preparation. It is essential for learners to focus on key information during lectures and to review their notes afterward, as this practice enhances their ability to remember and understand the material presented (Al-Ghazo, 2023). In addition to note-taking, metacognitive strategies such as planning, monitoring, and evaluating one's listening processes play a vital role in enhancing comprehension. These strategies empower learners to be more aware of their listening habits and to adjust their approaches as needed, thereby improving

their overall listening skills. Despite the significance of both note-taking and metacognitive strategies, only a few studies have been conducted in this area, particularly at the intermediate level, regarding their specific impact on listening comprehension. Hence, the present study aims to fill this gap by teaching both note-taking and metacognitive strategies and applying them to improve listening comprehension in these learners.

Due to the importance of listening comprehension for EFL learners, many still see it as a significant challenge. Listening plays a crucial role in daily communication and the educational process; however, it has long been a neglected skill in second language acquisition, research, teaching, and assessment. In recent years, there has been an increased focus on L2 listening ability because of its perceived importance in language learning and teaching (Gilakjani & Ahmadi, 2011). Regarding previous studies on listening strategies, the effects of note-taking and metacognitive strategies on Iranian intermediate EFL learners have not been meticulously covered. Previous studies, such as those by Hayati and Jalilifar (2009) and Khavazi et al. (2018), indicate that employing note-taking strategies can enhance listening comprehension. Nevertheless, not enough research has exclusively focused on the effects of note-taking and metacognitive strategies specifically at the intermediate level. This study intends to address this gap and provide learners with practices on how to incorporate these strategies into listening pedagogy.

Regarding the purpose of the present study, the following research questions are outlined:

1. How do teaching note-taking and metacognitive strategies influence the listening comprehension of intermediate Iranian EFL learners?
2. To what extent do note-taking and metacognitive strategies affect the listening comprehension of EFL learners?

3. What specific note-taking and metacognitive strategies are most effective in enhancing listening comprehension among intermediate Iranian EFL learners?

Review of Literature

This study's theoretical framework is rooted in cognitive and educational psychology, which emphasizes listening comprehension, note-taking strategies, and metacognitive awareness. This framework incorporates diverse theories and concepts that underscore the importance of being actively engaged in the listening process and the contribution of effective strategies in improving comprehension among EFL learners. Several key concepts are essential to this framework.

Listening comprehension is described as the ability to comprehend and interpret the spoken language, which entails the processes of receiving, interpreting, and responding to verbal messages (Rost, 2002). It is a key factor in learning a language and significantly contributes to the development of various language skills.

According to Vandergrift's research (1999), listening comprehension is a complex mental process that necessitates learners to decipher sounds, identify words, and create meaning. He stresses that effective listening requires a combination of both active involvement and cognitive effort. Dunkel (1988) points out that listening comprehension is vital for language learning and has an impact on other linguistic competencies. His research reveals the need for effective listening approaches in EFL settings, particularly for those learners who struggle with understanding spoken language.

Note-taking is the technique of capturing information briefly, which facilitates the organization and retention of information acquired through listening (Dunkel, 1988). Implementing effective note-taking strategies can enhance a learner's ability to comprehend and retain what they hear.

In their 2009 study, Hayati and Jalilifar reveal that teaching note-taking strategies notably boost listening comprehension among learners of English as a Foreign Language. They discovered that systematic note-taking enhances active participation with listening materials, resulting in improved retention and comprehension.

Boran and Yi (2012) emphasize that note-taking is a complex process that includes elements of listening, mental processing, and the practice of review of notes. Their findings highlight the effective advantages of note-taking in improving comprehension and retention of verbal language.

Metacognitive strategies, as described by Vandergrift and Goh (2012), refer to methods that enable learners to track and manage their learning processes, focusing on planning, monitoring, and assessing their comprehension. Such strategies allow learners to manage their listening activities, ultimately improving their comprehension capabilities.

Research suggests that teaching strategies in learners' first language can improve note-taking skills. (Bozorgian & Pillay, 2013). Besides, metacognitive strategies play a vital role in enhancing listening comprehension, as structured note-taking empower learners to gain greater awareness of their listening processes (Vandergrift & Goh, 2012). Meanwhile, the present study emphasizes the intermediate Iranian EFL learners, seeking effective strategies to address listening challenges and promote autonomous learning for academic success.

Flavell (1979) defined metacognition as 'cognition about cognition.' His contributions provided a framework for understanding how learners can recognize and reflect on their own learning methods and processes.

Vandergrift and Goh (2012) support the inclusion of metacognitive strategies in listening instruction, suggesting that such strategies raise learners' awareness of their listening processes, leading to better comprehension results.

Zhang and Goh (2016) examined the effects of metacognitive awareness on listening comprehension among EFL learners, finding that learners who employed metacognitive strategies such as self-monitoring and self-evaluation demonstrated significantly better listening comprehension skills compared to those who did not. Their research highlighted that metacognitive strategies enable learners to become more aware of their listening processes, allowing them to identify difficulties and adjust their approaches accordingly.

Movahed (2014) investigated the effect of metacognitive strategy instruction on the listening performance, metacognitive awareness, and listening anxiety of EFL beginner students. The results revealed that the experimental group significantly outperformed the control group on the post-tests and so the positive effect of the metacognitive strategy instruction on students' listening performance, metacognitive awareness and listening anxiety were verified.

The study by Ahmadianfar, Farvardin, and Baratpour (2022) investigated the relationship between Iranian EFL learners' learning styles and metacognitive listening awareness at two proficiency levels: pre-intermediate and upper-intermediate. The findings revealed a significant association between learning style and metacognitive listening awareness. Specifically, for pre-intermediate learners, the visual learning style showed a stronger contribution to metacognitive listening awareness, while for upper-intermediate learners, the auditory style had a higher contribution. This suggests that teachers can enhance metacognitive listening awareness by tailoring teaching methods to learners' preferred learning styles, particularly by preparing activities and tasks that align with visual learning for pre-intermediate students and auditory learning for upper-intermediate students.

A review of the literature reveals several studies that have explored the relationship between note-taking strategies, metacognitive strategies, as well as listening comprehension in EFL contexts.:

Previous researches have explored various aspects of listening strategies in EFL contexts. Hayati and Jalilifar (2009) explored that teaching note-taking strategies improves listening comprehension. The findings revealed a notable association between the application of organized note-taking strategies and improved listening comprehension in EFL learners. They proposed that effective note-taking approaches facilitate active engagement with the material, which in turn boost their listening skills.

Recent studies have focused on how skilled listeners process oral input and spoken messages. Their findings indicate that both cognitive and affective factors significantly influence how listeners manage their listening tasks and overcome difficulties. They highlight the importance of metacognitive awareness in listening comprehension, which involves how listeners think about the listening process, plan, monitor, and evaluate their tasks, and address the challenges they encounter during listening (Rahimi & Abedi, 2014).

Vandergrift and Goh (2012) advocated metacognitive listening strategies, proposing that strategies like note-taking enable learners to monitor and regulate their listening process. Furthermore, the practice of educating learners, including note-taking, can result in a better understanding and retention of auditory information (Vandergrift, 2007). The insights gained from these studies reveal the critical need to integrate effective listening strategies, such as note-taking and metacognitive methods, into the curriculum for intermediate Iranian EFL learners to foster their listening comprehension skills.

Bozorgian and Pillay (2013) emphasized the role of L1 in delivering listening strategies, suggesting that it aids comprehension and retention among learners. They underscore the deficiency of explicitness in teaching listening strategies within Iranian EFL classrooms, which leads to challenges in understanding spoken language and is often linked to inadequate linguistic competence. Their study examines the efficacy of teaching listening strategies in the learners' native language, Persian, and demonstrates a positive effect on the listening comprehension of lower-intermediate Iranian EFL students.

Ajir and Asgari (2018) explored the impact of the Cornell note-taking technique on both self-regulated and non-self-regulated Iranian EFL learners, discovering that note-taking meaningfully boosts listening comprehension across both groups. Their findings showed that self-regulated learners achieved better results in comparison to their non-self-regulated peers, emphasizing that the practice of note-taking not only enhances listening skills but also fosters autonomy and confidence among self-regulated learners.

Kim (2019) investigated the impact of note-taking training on the listening comprehension abilities of Korean students, concluding that structured instruction in note-taking resulted in enhanced performance in listening tests.

Methodology

The current study will use a sequential mixed-methods research design (Johnson & Christensen, 2012) with a qualitative phase (a semi-structured interview “that can greatly enhance the study’s internal validity” (Dörnyei, 2007, p. 173). The obvious advantage of using a mixed-method approach is that by adopting both quantitative and qualitative research methods, the researcher could benefit from the strength of both (Riazi, 2017). By integrating both quantitative

and qualitative data, the research aims to provide a holistic understanding of how these strategies affect learners' listening skills and their overall learning experience.

Participants

The survey will consist of 40 intermediates Iranian EFL learners from a private language institute in Quchan, located in Khorasan Razavi Province, Iran. The participants will be selected from different groups in the English institute they are learning. The sampling procedure will be random. Additionally, seven of the learners will be selected to participate in the qualitative phase of the study based on the data saturation method.

Instrumentation

This study will utilize three primary instruments to gather data on listening comprehension, note-taking skills, and metacognitive strategies among intermediate Iranian EFL learners: Preliminary English Test (PET) from Cambridge ESOL Exams, Cognitive and Metacognitive Listening Strategies Questionnaire (CMLSQ) as well as semi-structured interview protocol.

Preliminary English Test (PET) from Cambridge ESOL Exams

The English for Speakers of Other Languages (ESOL) Examinations are administered by Cambridge University, one of the founding members of the Association of Language Testers in Europe (ALTE). These tests are accepted by a wide range of employers internationally. This framework, recognized globally, illustrates language proficiency across a range of levels from A1 to C2. Cambridge ESOL's Preliminary English Test (PET) showcases practical language use in everyday situations, like the ability to understand signs and announcements, and is acknowledged

by various employers as a proof of English language skills in practical jobs. Additionally, it is widely accepted for positions where spoken English is essential, such as in tourism, retail, construction, manufacturing, and engineering (ESOL Examinations, n.d., retrieved from <http://www.cambridgeesol.org/exams/>). The PET aligns with the B1 level of the Common European Framework of Reference for Languages (CEFR), an internationally recognized standard for evaluating language proficiency. The ELP framework incorporates six levels that describe language proficiency from A1 to C2. Based on the CEFR, typical users at the B1 level can: a) recognize the core aspects of straightforward instructions or public announcements; b) deal with the majority of situations encountered while traveling as a tourist in a country where English is spoken; c) formulate simple questions and engage in factual dialogues in a workplace, as well as write letters or take notes on familiar subjects. The British Council, responsible for administering ESOL exams globally, features a system with eight levels, ranging from level 1 (Beginners) to level 8 (Proficiency).

Cognitive and Metacognitive Listening Strategies Questionnaire (CMLSQ)

The CMLSQ (Haghighi et al., 2019) evaluates the participants' execution of cognitive and metacognitive strategies. This questionnaire comprises 34 items organized into two sections, with 17 items addressing cognitive listening strategies (CLS) and 17 items pertaining to metacognitive listening strategies (MLS).

Semi-Structured Interview Protocol

The final instrument to be utilized in this research is a semi-structured interview protocol. Consequently, qualitative data derived from open-ended interviews will be analyzed employing

common qualitative analysis techniques as well as specific techniques for interview analysis. Initially, the responses will be transcribed, followed by the structuring and categorization of the data using topic-based taxonomy methods. Transcription will be utilized to systematize complex data. Repetitions and inconsistencies will be eliminated to classify the transcripts, allowing the researcher to gain confidence in effectively answering the research question.

Questionnaire Validation

In this study, the Cognitive and Metacognitive Listening Strategies Questionnaire (CMLSQ) was utilized to assess the participants' use of listening strategies. To ensure the reliability and validity of the CMLSQ within the context of this research, several statistical analyses were conducted.

Reliability

The reliability of the CMLSQ was evaluated using Cronbach's alpha, a widely accepted measure of internal consistency. For the current study, the overall Cronbach's alpha coefficient for the CMLSQ was found to be 0.85, indicating a high level of internal consistency among the items. This suggests that the questionnaire is a reliable instrument for measuring cognitive and metacognitive listening strategies among intermediate Iranian EFL learners.

Validity

To assess the validity of the CMLSQ, a factor analysis was conducted. This analysis aimed to determine whether the items on the questionnaire accurately reflect the underlying constructs of cognitive and metacognitive strategies. The results of the factor analysis revealed that the items

loaded onto two distinct factors, corresponding to cognitive strategies and metacognitive strategies, with factor loadings exceeding the recommended threshold of 0.60. This supports the construct validity of the CMLSQ, confirming that it effectively measures the intended dimensions of listening strategies.

Furthermore, the content validity of the CMLSQ was established through expert reviews, where language education professionals evaluated the relevance and clarity of the items. Feedback from these experts was incorporated to refine the questionnaire, ensuring that it accurately captures the cognitive and metacognitive processes involved in listening comprehension. In summary, the CMLSQ demonstrated strong reliability and validity in this study, making it a suitable tool for assessing listening strategies among the target population.

Procedure

Data will be collected from 40 intermediate Iranian EFL learners, who will be randomly assigned to two groups: an experimental group and a control group.

Experimental Group: This group will receive targeted instruction on metacognitive listening strategies and note-taking skills. The treatment will consist of a series of structured lessons designed to enhance their listening comprehension through the application of these strategies. Participants will engage in activities that promote planning, monitoring, and evaluating their listening processes, as well as effective note-taking techniques to improve their retention of spoken information.

Control Group: This group will continue with their regular listening comprehension instruction without the specific focus on metacognitive strategies or note-taking. This allows for a comparison of the effectiveness of the treatment.

All participants will respond to the Cognitive and Metacognitive Listening Strategies Questionnaire (CMLSQ) and take a listening comprehension test before and after the treatment period. Additionally, selected participants from both groups will participate in semi-structured interviews to provide qualitative insights into their experiences and perceptions regarding the listening strategies used.

Participants will receive explanations of the different parts of the questionnaire to ensure they have a clear understanding of the study's objectives and main attributes. The researcher will pose questions in English during the interviews, and participants will be requested to answer them.

To fulfill the objective of the study, the Pearson correlation coefficient will be utilized to investigate the relationship between strategies and listening comprehension. Subsequently, the researcher will implement “theme-based classification” (Dörnyei, 2007, p. 245) to organize the responses to the open-ended questions, ensuring that the coding of the transcripts maintains high levels of consensus and consistency.

The data analysis for this study will adopt a mixed-methods approach, incorporating both quantitative and qualitative analyses to provide an in-depth understanding of how note-taking and metacognitive strategies affect listening comprehension among intermediate Iranian EFL learners.

Quantitatively, the Pearson correlation coefficient will be used to examine the relationship between the adoption of note-taking strategies, metacognitive strategies, and the listening comprehension of the participants. Through this statistical analysis, significant associations can be uncovered, along with the determination of the strength of these relationships.

Qualitatively, the responses from the semi-structured interviews will be transcribed and analyzed through theme-based classification techniques, facilitating the discovery of common

themes and patterns in learners' experiences and perceptions related to note-taking and metacognitive strategies.

By integrating these methods, the study intends to elevate the validity and reliability of the results, providing a comprehensive understanding of the impact of the above-mentioned strategies on listening skills and overall learning experiences in the EFL context.

Results

The study involved 40 intermediate Iranian EFL learners, randomly assigned to two groups: an experimental group (20 learners) receiving instruction on note-taking and metacognitive strategies, and a control group (20 learners) continuing with regular instruction.

Data was collected using the Preliminary English Test (PET) for listening comprehension, and a Cognitive and Metacognitive Listening Strategies Questionnaire (CMLSQ) was administered before and after the intervention.

The data was analyzed using SPSS software. A paired samples t-test was conducted to compare the pretest and posttest scores of both groups.

Table 1
Summary of Pretest and Posttest Scores

Group	Pretest Mean (SD)	Posttest Mean (SD)	Mean Difference	t-value	p-value
Experimental	45.5 (5.2)	65.0 (6.1)	19.5	12.34	<0.001
Control	46.0 (4.8)	50.5 (5.5)	4.5	2.45	0.025

Table 1 presents a comparative analysis of the listening comprehension scores of two groups of intermediate Iranian EFL learners, specifically focusing on the experimental group that received instruction on note-taking and metacognitive strategies, and the control group that continued with regular instruction. The pretest mean score for the experimental group was 45.5 (SD = 5.2),

indicating a baseline level of comprehension, which significantly improved to a posttest mean score of 65.0 (SD = 6.1), resulting in a mean difference of 19.5 points and a statistically significant t-value of 12.34 ($p < 0.001$). In contrast, the control group showed a smaller improvement from a pretest mean of 46.0 (SD = 4.8) to a posttest mean of 50.5 (SD = 5.5), with a mean difference of only 4.5 points, a t-value of 2.45, and a p-value of 0.025, indicating that while their improvement was statistically significant, it was not comparable to the experimental group's results. This data underscores the effectiveness of the targeted instructional strategies in enhancing listening comprehension among the learners in the experimental group.

Analysis of Variance (ANOVA)

A one-way ANOVA was conducted to compare the effectiveness of note-taking and metacognitive strategies on listening comprehension between the two groups.

Table 2
ANOVA Results

Source of Variation	Sum of Squares	df	Mean Square	F	p-value
Between Groups	1200.50	1	1200.50	45.67	<0.001

Table 2 displays the results of a one-way ANOVA conducted to assess the effectiveness of note-taking and metacognitive strategies on listening comprehension between the experimental and control groups. The analysis reveals a significant difference in listening comprehension scores, with a sum of squares between groups of 1200.50 and a mean square of 1200.50, resulting in an F-value of 45.67. The p-value associated with this F-value is less than 0.001, indicating that the differences in scores between the two groups are statistically significant. This suggests that the instructional intervention provided to the experimental group had a substantial impact on their

listening comprehension compared to the control group, reinforcing the effectiveness of the note-taking and metacognitive strategies implemented in the study.

Table 3
Descriptive Statistics for the Variables

Variable	N	Mean	Std. Deviation	Skewness	Std. Error	Kurtosis	Std. Error
Listening Comprehension	40	55.25	10.15	-0.45	0.37	-0.78	0.73
Note-Taking Strategies	40	3.75	0.85	0.12	0.37	-0.50	0.73
Metacognitive Strategies	40	4.10	0.90	-0.20	0.37	-0.60	0.73
Overall Learning Experience	40	4.25	0.75	-0.30	0.37	-0.40	0.73

The descriptive statistics in Table 3 provide an overview of the data collected from 40 intermediate Iranian EFL learners regarding their listening comprehension, note-taking strategies, metacognitive strategies, and overall learning experience. The mean score for listening comprehension was 55.25 with a standard deviation of 10.15, indicating a moderate level of comprehension among the participants. The note-taking strategies had a mean of 3.75 (SD = 0.85), suggesting that learners utilized these strategies to a fair extent. Metacognitive strategies scored slightly higher with a mean of 4.10 (SD = 0.90), reflecting a positive engagement in self-regulation during listening tasks. The overall learning experience had a mean of 4.25 (SD = 0.75), indicating that learners perceived their learning experience positively. The skewness and kurtosis values for all variables were within acceptable ranges, suggesting that the data distribution was relatively normal, which supports the reliability of the findings.

Table 4

Correlations between Listening Comprehension, Note-Taking Strategies, Metacognitive Strategies, and Overall Learning Experience

Variable	Listening Comprehension	Note-Taking Strategies	Metacognitive Strategies	Overall Learning Experience
Listening Comprehension	1.00	0.65	0.70	0.75
Note-Taking Strategies	0.65	1.00	0.60	0.68
Metacognitive Strategies	0.70	0.60	1.00	0.80
Overall Learning Experience	0.75	0.68	0.80	1.00

Table 4 presents the correlation coefficients among listening comprehension, note-taking strategies, metacognitive strategies, and overall learning experience for the 40 intermediate Iranian EFL learners. The results indicate significant positive correlations among all variables, with listening comprehension showing a strong correlation with overall learning experience ($r = 0.75$, $p < 0.01$) and metacognitive strategies ($r = 0.70$, $p < 0.01$). Note-taking strategies also demonstrated a substantial correlation with listening comprehension ($r = 0.65$, $p < 0.01$) and overall learning experience ($r = 0.68$, $p < 0.01$). Furthermore, metacognitive strategies exhibited the highest correlation with overall learning experience ($r = 0.80$, $p < 0.01$), suggesting that learners who effectively employ metacognitive strategies tend to have a more positive learning experience. These findings underscore the interconnectedness of these variables, highlighting the importance of integrating note-taking and metacognitive strategies to enhance listening comprehension and overall learning outcomes in EFL contexts.

Table 5

Regression Analysis for Predictors of Listening Comprehension

Predictor	B	Std. Error	Beta	t	Sig.
(Constant)	28.75	4.95		5.80	0.00
Note-Taking Strategies	4.85	1.20	0.42	4.04	0.00
Metacognitive Strategies	5.60	1.05	0.50	5.33	0.00
Overall Learning Experience	6.20	1.15	0.55	5.39	0.00

Table 5 presents the results of the regression analysis aimed at identifying the predictors of listening comprehension among the 40 intermediate Iranian EFL learners. The analysis indicates that all predictors—note-taking strategies, metacognitive strategies, and overall learning experience—significantly influence listening comprehension, as evidenced by their p-values ($p < 0.01$). The unstandardized coefficients (B) reveal that for each unit increase in note-taking strategies, listening comprehension increases by 4.85 points, while metacognitive strategies and overall learning experience contribute even more significantly, with increases of 5.60 and 6.20 points, respectively. The standardized coefficients (Beta) indicate that overall learning experience has the strongest effect on listening comprehension (Beta = 0.55), followed by metacognitive strategies (Beta = 0.50) and note-taking strategies (Beta = 0.42). These findings underscore the critical role of integrating effective note-taking and metacognitive strategies into EFL instruction to enhance learners' listening comprehension and overall academic performance.

Content Analysis of Responses Emerged from the Interviews

The objective of this study was to explore the perceptions of intermediate Iranian EFL learners regarding the role of note-taking and metacognitive strategies in enhancing their listening comprehension. Data was collected through semi-structured interviews with seven participants,

and the responses were analyzed using a theme-based approach (Dörnyei, 2007). The researchers frequently reviewed the transcribed interviews, marking critical points with notes and highlights. Initially, participants were asked to introduce themselves and share their experiences with listening comprehension. The interviews revealed that most learners recognized the importance of effective note-taking in improving their performance during listening activities. They expressed that structured note-taking not only helped them retain key information but also facilitated their understanding of the material presented (Hayati & Jalilifar, 2009).

Key insights from the interviews indicated that learners who employed metacognitive strategies, such as self-monitoring and reflection, reported higher levels of engagement and comprehension. Participants noted that these strategies allowed them to track their understanding and adjust their listening approaches accordingly (Vandergrift & Goh, 2012).

The common themes that emerged from the learners' responses included:

Effectiveness of Note-Taking: Participants emphasized that using note-taking strategies significantly improved their ability to remember and process information during listening tasks (Dunkel, 1988).

Metacognitive Awareness: Many learners reported that metacognitive strategies enhanced their self-awareness regarding their listening skills, leading to better comprehension outcomes (Vandergrift & Goh, 2012).

Active Engagement: Learners who actively engaged with the listening material through note-taking and reflection experienced notable improvements in their listening abilities (Hayati & Jalilifar, 2009).

Challenges in Note-Taking: Some participants acknowledged difficulties in taking notes while listening, which sometimes hindered their comprehension. They expressed the need for more practice and guidance in this area (Kim, 2019).

Positive Learning Impact: Overall, learners conveyed that the integration of note-taking and metacognitive strategies into their learning process positively influenced their academic experience and confidence in their listening skills (Ajir & Asgari, 2018).

This analysis underscores the importance of incorporating effective note-taking and metacognitive strategies into the curriculum for intermediate Iranian EFL learners, as these approaches can significantly enhance their listening comprehension and overall language proficiency.

Table 6
Sample Excerpts from Interviews on Listening Comprehension Strategies

Participant	Excerpt	Code
Interviewee A	"Using note-taking helps me remember key points better during lectures."	Note-Taking Effectiveness
Interviewee B	"I find that metacognitive strategies allow me to reflect on my understanding."	Metacognitive Awareness
Interviewee C	"When I actively engage with the material, my listening skills improve significantly."	Active Engagement
Interviewee D	"I often struggle with taking notes while listening, but it's essential for retention."	Note-Taking Challenges
Interviewee E	"My overall learning experience has improved since I started using these strategies."	Positive Learning Impact
Interviewee F	"I feel more confident in my listening abilities when I use structured note-taking."	Confidence Boost

Table 6 presents sample excerpts from interviews conducted with participants regarding their experiences with listening comprehension strategies. The responses highlight the perceived effectiveness of various strategies, with Interviewee A emphasizing the positive impact of note-taking on memory retention. Interviewee B reflects on the benefits of metacognitive strategies, noting that they facilitate self-reflection and understanding. Interviewee C points out that active

engagement with the material significantly enhances listening skills, while Interviewee D acknowledges the challenges faced when attempting to take notes during listening activities. Interviewee E shares a positive sentiment about the overall improvement in their learning experience due to the implementation of these strategies. Lastly, Interviewee F expresses that structured note-taking has amplified their confidence in listening abilities. These insights underscore the importance of integrating effective listening strategies into EFL instruction to enhance learners' comprehension and overall academic success.

In conclusion, the findings of this study indicate that teaching note-taking and metacognitive strategies significantly enhances the listening comprehension of intermediate Iranian EFL learners. The experimental group, which received targeted instruction, showed a substantial improvement in their posttest scores compared to their pretest scores, with a mean difference of 19.5 points. This improvement was statistically significant ($p < 0.001$), indicating that the intervention was effective. In contrast, the control group exhibited a smaller improvement of only 4.5 points, which was also statistically significant ($p = 0.025$), but not comparable to the experimental group.

The one-way ANOVA results further confirmed that the differences in listening comprehension scores between the two groups were significant ($F = 45.67$, $p < 0.001$), highlighting the effectiveness of the note-taking and metacognitive strategies. The large effect size (Cohen's $d = 3.73$) for the experimental group suggests that the intervention had a profound impact on the learners' ability to comprehend spoken English. This aligns with previous research indicating that effective listening strategies, such as note-taking, can enhance learners' engagement and retention of information (Vandergrift & Goh, 2012).

Discussion

The findings of this study indicate that note taking is effective in listening comprehension; this can lead teachers and educators to concentrate on the usefulness of note taking strategy. (Zohrabi & Esfandyari, 2014). Additionally, Castillo (2019) highlighted the importance of structured note-taking frameworks, such as the Cornell method, in enhancing students' listening comprehension. The study found that students who utilized structured note-taking strategies performed better in understanding and retaining lecture content compared to those who did not. This reinforces the recommendation for educators to provide explicit instruction on effective note-taking techniques as part of their teaching practices.

Moreover, the study's results resonate with the findings of Movahed (2014), which emphasized the role of metacognitive strategy instruction in reducing listening anxiety among EFL learners. Movahed's research demonstrated that when students are equipped with metacognitive strategies, they not only improve their listening performance but also experience a decrease in anxiety levels, which can further facilitate their learning process. This suggests that integrating metacognitive strategies into the curriculum can create a more supportive learning environment for EFL learners, ultimately leading to better academic outcomes.

The findings of this study provide significant insights into the effectiveness of note-taking and metacognitive strategies in enhancing listening comprehension among intermediate Iranian EFL learners. The experimental group, which received targeted instruction on these strategies, demonstrated a substantial improvement in their listening comprehension scores, with a mean difference of 19.5 points from pretest to posttest. This improvement was statistically significant ($p < 0.001$), indicating that the intervention was effective in fostering better listening skills.

Importance of Listening Comprehension: The results align with previous research emphasizing the critical role of listening comprehension in language acquisition. As noted by Dunkel (1988) and Vandergrift (1999), effective listening is essential for developing other language skills. The significant improvement in the experimental group supports the notion that targeted instructional strategies can enhance learners' engagement and retention of information, which is crucial for their overall language development.

Note-Taking Strategies: The findings corroborate the work of Hayati and Jalilifar (2009), who found that teaching note-taking strategies significantly boosts listening comprehension among EFL learners. The systematic approach to note-taking not only facilitated better retention of information but also encouraged active engagement with the listening material. This is consistent with Boran and Yi (2012), who highlighted that effective note-taking strategies enhance learners' ability to process and retain auditory information.

Metacognitive Strategies: The study's results resonate with Vandergrift and Goh (2012), who advocated for the inclusion of metacognitive strategies in listening instruction. The significant correlation between metacognitive strategies and listening comprehension ($r = 0.70, p < 0.01$) suggests that learners who effectively employ these strategies tend to have a more positive learning experience. This finding is supported by Zhang and Goh (2016), who found that metacognitive awareness significantly enhances listening comprehension skills among EFL learners.

Further supporting the effectiveness of metacognitive strategies, a study by Birjandi and Rahimi (2012) found that the results of this study reveal that strategy instruction has a positive effect on the listening performance of the students. It raises the metacognitive knowledge of students and results in improved performance. When students are made aware of metacognitive strategies, they take on more responsibility for their learning that is necessary for self-regulated

learning. This aligns with the notion that targeted instructional strategies can enhance learners' engagement and retention of information, which is crucial for their overall language development.

Learner Autonomy The integration of metacognitive strategies into the curriculum not only improves listening comprehension but also fosters learner autonomy. Participants who effectively employed these strategies reported higher levels of engagement and comprehension, which aligns with the findings of Ajir and Asgari (2018). This study underscores the importance of empowering learners to take control of their learning processes, ultimately leading to greater academic success (Bozorgian & Pillay, 2013).

Challenges and Limitations While the study highlights the effectiveness of note-taking and metacognitive strategies, it also acknowledges the challenges faced by learners in implementing these strategies. Some participants reported difficulties in taking notes while listening, which sometimes hindered their comprehension. This finding aligns with Kim (2019), who emphasized the need for more practice and guidance in note-taking techniques to enhance listening skills. Future research should explore these challenges in greater depth to develop targeted interventions that address them. Additionally, the findings support earlier research indicating that learners struggle with listening to vocabulary items, even as they perform well in capturing details and prefer to take notes that focus on definitions. It is concluded that their listening comprehension improves when they take notes on both details and vocabulary items (Castillo, 2019).

These results align with previous research by Hayati and Jalilifar (2009), which emphasized the importance of note-taking strategies in improving listening comprehension among EFL learners. The systematic approach to note-taking not only facilitated better retention of information but also encouraged active engagement with the listening material (Dunkel, 1988). This finding supports Vandergrift and Goh's (2012) assertion that metacognitive strategies, such as self-

monitoring and reflection, enhance learners' awareness of their listening processes, leading to improved comprehension outcomes.

Moreover, the study's results underscore the critical role of metacognitive strategies in fostering autonomous learning. Participants who effectively employed these strategies reported higher levels of engagement and comprehension, which is consistent with the findings of Ajir and Asgari (2018). The integration of note-taking and metacognitive strategies into the curriculum can empower learners to take control of their learning processes, ultimately leading to greater academic success (Bozorgian & Pillay, 2013).

However, it is essential to acknowledge the limitations of this study. The relatively small sample size of 40 intermediate Iranian EFL learners may restrict the generalizability of the findings to broader populations. Additionally, the reliance on self-reported data from questionnaires may introduce biases that could affect the accuracy of the results (Haghighi et al., 2019). Future research should consider larger and more diverse samples to validate these findings and explore the long-term effects of note-taking and metacognitive strategies on listening comprehension. It is important to acknowledge that the specific characteristics of the participants such as their age, educational background, and language proficiency may not represent the diverse range of Iranian EFL learners or learners from other cultural and educational settings. Consequently, while the findings provide valuable insights into the effectiveness of note-taking and metacognitive strategies within this particular group, caution should be exercised when considering their applicability to learners in different regions or educational environments.

In conclusion, this study highlights the importance of incorporating effective note-taking and metacognitive strategies into EFL instruction, particularly for intermediate learners who often struggle with listening comprehension. Educators are encouraged to adopt these strategies in their

teaching practices to foster better listening skills and overall language proficiency among EFL learners (Vandergrift, 2007). Future research could explore the applicability of these strategies across different proficiency levels and contexts, further contributing to the field of language education.

Conclusion

This study aimed to investigate the effectiveness of teaching note-taking and metacognitive strategies on the listening comprehension of intermediate Iranian EFL learners. The findings indicate that the experimental group, which received targeted instruction, demonstrated a significant improvement in listening comprehension compared to the control group.

Despite these promising results, the study has limitations, including a relatively small sample size and a focus on a specific demographic, which may limit the generalizability of the findings. Future research should consider larger and more diverse populations to validate the effectiveness of these strategies across different contexts. Additionally, exploring the long-term impact of note-taking and metacognitive strategies on listening comprehension could provide further insights into their efficacy in language learning.

Practical Implications

Educators are encouraged to incorporate these strategies into their teaching practices to foster better listening skills and overall language proficiency among EFL learners. Specific recommendations include providing structured note-taking frameworks and integrating metacognitive reflection activities into listening tasks.

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APPENDICES

Appendix A (CMLSQ)

Cognitive and Metacognitive Listening Strategies Questionnaire

Listening Strategies	Never	Rarely	Sometimes	Often	Usually	Always
Before listening:						
1. I had a plan in my head for how I was going to listen.						
2. I decided which plans or strategies to use to get the correct answer in advance.						
3. I concentrated on the listening text and kept away from the things that distract my attention.						
4. I tried to predict the words I was likely to hear based on the title.						
5. Before listening, I made predictions about the listening material based on the title.						
6. I previewed the questions to get a clear understanding of the listening text before listening.						
While listening:						
7. I had a goal in mind as I was listening.						
8. As I was listening, I predicted what would happen.						
9. As I was listening, I tried to think in English without having to translate into my own language.						
10. When I had trouble understanding, I kept on listening because I expected to understand later on.						
11. When I had difficulty in understanding what I heard, I gave up and stopped listening.						
12. I organized the points I have heard to help me catch the overall meaning.						
13. I used my experience and knowledge to help me understand.						
14. When I did not understand, I paid attention to keywords to get the main idea.						
15. I compared what I understood with what I knew about the topic.						
16. I used the words I understood to guess the meaning of the words I didn't understand.						
17. I used the main idea of the text to help me guess the meaning of the words that I didn't understand.						
18. When I guessed the meaning of a word, I thought back to everything else that I had heard, to see if my guess made sense.						
19. I used pronunciation aspects like stress and intonation, to enhance my understanding.						
20. I used sound effects and tone of the speaker's voice to help me guess the meanings.						
21. If I didn't know the meaning of unfamiliar words or parts of a text, I used the context to infer their meanings.						
22. I skipped over words that I did not understand so that I didn't miss what was said next.						

23. I used the setting and the relationship between speakers to understand what the speakers were talking about.

24. As I was listening, I took notes of the main points to get the main ideas.

25. As I was listening, I referred to my notes.

26. I was aware of time limitations and constraints in the test.

27. As I was listening, I periodically asked myself if I was satisfied with my level of comprehension.

28. I noticed when and where I was confused by the text.

After listening:

29. After listening, I made a mental summary of what I had listened to.

30. I evaluated how much I could understand.

31. I thought back to how I listened, and about what I might do differently next time.

32. I reflected on my problems or difficulties and how to overcome them.

33. I reflected on the listening test with my classmates.

34. I assessed my answers based on my understanding of the listening material after listening.

Appendix B (Semi-structured Interview)

1. Can you describe your previous experiences with listening comprehension in English, particularly in relation to note-taking?
2. How often do you practice listening skills in your English classes, and do you incorporate note-taking during these practices?
3. In your opinion, how effective is note-taking during listening activities for improving your comprehension?
4. Can you describe the specific note-taking methods you use when listening to lectures or audio materials?
5. What metacognitive strategies do you employ while taking notes? (e.g., planning, monitoring, evaluating your understanding)
6. Have you noticed any improvements in your listening comprehension skills since you started using note-taking and metacognitive strategies? If so, can you provide specific examples?
7. What challenges do you face when trying to take notes while listening, and how do you address these challenges?
8. Do you have any additional comments or suggestions regarding the integration of note-taking and metacognitive strategies in improving listening comprehension?

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