The Effect of Note-taking Strategy on EFL Ninth-Grade Students' Listening Comprehension

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Abstract:

This study investigated the effect of a Note-taking strategy on the listening comprehension of EFL Ninth-Grade students. A quasi-experimental approach was applied on two groups. The researchers assigned two sections of grade nine students at the Mariam Bint Imran Secondary School for Girls, a public institution of the Directorate of Education in Irbid. The first section was randomly assigned as the experimental group (24 students) and the second as the control group (25 students). A pre-/post listening comprehension test was prepared to achieve the study's goal. The experimental group was taught using the Note-taking strategy, whereas the control group was taught using the standard listening strategy, as described in the Teacher's Book. According to the findings, the Note-taking strategy enhanced students' listening comprehension. Based on the findings of the study, the researchers suggested that different EFL skills and levels of students should apply the Note-taking Strategy.

Keywords: EFL Jordanian Students; listening Comprehension; Note.

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أثر استراتيجية تدوين الملاحظات في مهارات المفهوم السمعي لدى طلبة الصف التاسع متعلمي اللغة الانجليزية لغة أجنبية

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ملخص:

بحثت هذه الدراسة أثر استراتيجية تدوين الملاحظات في مهارات المفهوم السمعي لدى طلبة الصف التاسع متعلمي اللغة الإنجليزية لغة أجنبية. استخدمنا نهج شبه تجريبي مع مجموعتين. خصص الباحثان قسمين من طلاب الصف التاسع في مدرسة مريم بنت عمران الثانوية للبنات، في مديرية التربية والتعليم في اربد. الجزء الأول قسم عشوائيا للمجموعة التجريبية (24) طالبة والثاني المجموعة الضابطة (25) طالبة. تم إنشاء اختبار استيعاب الاستماع قبلي/ بعدي لتحقيق هدف الدراسة. تم تدريس المجموعة التجريبية باستخدام إستراتيجية تدوين الملاحظات، حيث تم تدريس المجموعة الضابطة باستخدام إستراتيجية الاستماع القياسية، كما هو موضح في كتاب المعلم. وفقًا للنتائج، عززت استراتيجية تدوين الملاحظات فهم الاستماع لدى الطلاب. بناءً على نتائج الدراسة، اقترح الباحثان أن مهارات ومستويات اللغة الإنجليزية كلغة أجنبية المختلفة لدى الطلاب تطبق استراتيجية تدوين الملاحظات.

الكلمات المفتاحية طلاب اللغة الانجليزية كلغة أجنبية الأردنيين؛ المفهوم السمعي؛ استراتيجية تدوين؛ الملاحظات.

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Introduction

When students have a connection to the classroom, education is at its best.   Students who move to high school for the first time frequently need to learn new listening abilities and skills. Like note-taking and employing notes as a cognitive learning strategy (Hismanoglu, 2000).

Swanson (1997 Identified four main skills required to acquire English are listening, reading, speaking, and writing. The most crucial linguistic ability is listening. Rost (1994) asserts that hearing is the only way we can comprehend and take in all that is said. It gives students input, making it crucial when learning a language. Without the ability to observe, communication and interaction are impossible.

This study focuses on listening, which is significant because it appears early in the learning of natural languages and is almost always employed (Flowerdew & Miller, 2005).   Human beings communicate with one another for 80% of their waking hours, with listening accounting for at least 45% of those interactions, according to Lawson (2007). Thus, hearing is given precedence over other abilities like reading, speaking, and writing.

Listening to understandable information is one of the things that can support the acquisition of the language (Krashen, 1989). In actuality, language acquisition happens effortlessly through listening. Additionally, it plays a big part in helping students comprehend language better (Rost, 1994).

For many reasons, listening comprehension is important. First, a new language student should listen to language input when they are just starting out, just like infants do when they are learning their mother tongue (Buck, 2001). Second, listening is a crucial ability among all of the language abilities because it is fundamental to people's everyday communication. The first skill that must be taught and acquired is this one (Rivers & Temperley, 1978). Last but not least, listening exercises help to stimulate a student's interest in novel aspects of using language, that is lexicon, language usage and conversational style (Woottipong, 2014). Particularly listening comprehension fosters an environment that is favorable to effective language learning and the growth of language abilities (Krashen, 1989). As a result, the capacity of students to learn a language is primarily determined by their listening comprehension (Krashen, 1984).

Oxford (1990) claims reading, writing, and speaking all grow later than listening. Because it is used as a way of learning at all levels of education, it has a huge impact on students' lives. In addition, it is a requirement for the majority of real-world tasks, such as speaking on the

phone or in person talks, watching the news, and paying attention to a recorded dialogue in class (Lindsay & Knight, 2006).

Because receiving language input is necessary for learning a language, listening comprehension is important when learning a foreign language (Hogan, 2014). As a source of language input that allows students to interact in communication and serves as the concrete foundation for language proficiency, it is the basis of communicative competence (Renukadevi, 2014). It is important for language teaching because it can give students input and is crucial for learners' language development (Rost, 2007).

Smith (1982) identifies four ability levels: literal, interpretive, critical, and creative. These stages correspond to the Bloom-described categories of cognitive behaviors. Thinking is the shape that understanding takes. Understanding is connected to "knowledge" on a literal level, "comprehension" and "application" on an interpretive level, "analysis" and "evaluation" on a critical level, and "synthesis" on a creative level.

Note-taking is crucial in college classes since it helps students retain information and is a crucial learning tool (Bohay, Blakely, Tamplin, & Radvansky, 2011). An essential concept in formal educational settings is note taking (Williams & Eggert, 2002). It is important to take notes when learning. College and university lecturers sometimes undersell the value of taking notes during lectures.

 Several Note-taking approaches, in addition to increasing academic performance, may increase class participation. For example, taking notes more quickly may encourage class participation (Carstens, Watson, & Williams, 2015). Nonetheless, taking notes is more thorough information processing, which may lead to better cognitive involvement with the subject (Morton, 2013).

Note-taking during class has various advantages that assist students understand the material being taught and achieve the course's objectives more easily (Kiewra, 1991). Students benefit from taking notes since they aid in memory retention and help them retain the most important information. (Kiewra & Fletcher, 1984).

Note-taking has instructions: When taking notes, it's crucial to pay attention to the speaking, reading, and writing rates. Writing is more quickly accomplished than speaking, and speaking is more quickly accomplished than comprehending. Even if spoken words can be understood word by word, writing may be difficult (Oğuz,1999). Some

students can find it difficult to take notes in class productively. Instead of getting upset with students, teachers should encourage them to take notes and learn intriguing things about a subject (Hayati, & Jalilifar, 2009 & Kulhavy 1987; Murphy, 1996; Jacobs, 2014).

Even though taking notes during an exam can be more difficult, several studies have indicated that doing so can be beneficial (Kim, 2019a, Kim, 2019b). Taking notes makes it simple to recall facts during an exam and aids in retaining key concepts from classes.

According to Kim (2014), Some students acknowledged the significance of putting note-taking strategies into practice after receiving training. They could practice and develop more effective note-taking strategies after completing note-taking courses.

Every week there are four to five classes devoted to teaching English as a foreign language in Jordan. Reading, writing, listening, and speaking are the four language skills that need to be developed. Al-Bzour & Smadi (2017) asserts that the student's performance in oral skills is constrained and insufficient. Speaking abilities are a problem for many EFL students in different ways. For instance, according to Yasin (2018), students prefer utilizing Arabic over English. Although teacher-centered learning is regarded as the most effective method of knowledge transmission, traditional teaching methods are regrettably still commonly employed in Jordan (Al-Shara'h, Abu Nabaah, & Khzouz, 2011).

Statement of the Problem

The researcher has noticed that most students have trouble answering listening comprehension questions correctly based on the researcher's experience teaching English as a foreign language. The fact that EFL teachers are adopting traditional techniques and approaches to teach listening comprehension may be the cause of this challenge. In order to do this, the use of taking notes to help students with listening comprehension issues was taken into consideration.

According to Ferris and Tagg (1996), the most common concerns that international students mention are having problems with listening comprehension and a lack of note-taking abilities. Another problem they commonly bring up is how rapidly the information that listeners are exposed to disappears. Many languages learners remark that while they are speaking, they can follow along with relative ease, but they find it difficult to recall it later. This significant issue requires additional consideration in studies on retention. One solution to the issue is to introduce kids to a

range of post-listening responsibilities, such taking notes.

Purpose of the Study

The purpose of this study is to ascertain how Jordanian EFL ninth grade students' listening comprehension is impacted by their Note-taking strategy.

Questions of the study:

This study attempted to answer this question:

Are there any statistically significant differences in the means of listening comprehension scores between the experimental and control groups of students as a result of the teaching approach (Note-taking vs. traditional methods)?

Significance of the study

The significance of this investigation stems from how Note-taking strategies may affect students' ability to comprehend what is being stated to them. As a foreign language teacher, the researcher looks for the best and most interesting way to help English language learners improve their listening comprehension through note-taking, which may be a useful strategy for helping students get better at listening. The results of this study may potentially stimulate future investigation into the potential effect of the Note-taking strategy on other English language proficiency levels, particularly in Jordan.

Operational Definitions of Terms

In the current study, the following terms are defined as follows:

– **Listening comprehension**: Is a difficult and interactive process in which listeners participate in dynamically building and constructing meaning (Rost, 2011). Many methods of comprehending spoken language are referred to as listening comprehension. Understanding speech sounds, specific word meanings, and sentence structure are a few examples of these (Gilakjani & Sabouri, 2016). In this study, the whole student score on the post-test serves as a proxy for listening comprehension.

– **Note-taking**: Is a term that is significant in formal educational settings (Williams & Eggert, 2002). When learning, Note-taking is very crucial. Many teachers at the schools' levels fail to emphasize the significance of Note-taking during classes (Grabe & Christopherson, 2005). In this study, writing down information you have learnt from another source is the act of taking notes. Fundamentally, taking notes should not be only

the act of writing anything down; rather, it should be described as the act of capturing knowledge that you will remember and find useful in the future.

Limitations of the Study

The following limitations confine the results of the present study:

1. Only the ninth-grade female participants in the study from the Mariam Bint Imran for Girls in Irbid Directorate of Education during the second semester of the academic year 2022–2023. The results of this investigation can therefore be extended to comparable samples or contexts.

2. The experiment was only conducted for eight weeks. Different length of time could produce various outcomes.

3. Action Pack 9 (specifically modules 5 and 6), a textbook utilized in Jordanian public schools, served as the textbook of this study. A different textbook with different material can produce different outcomes.

4. The study deals with the literal, inferential, and critical levels of listening comprehension; it does not address any additional listening comprehension levels.

Review of the Related Literature

Ipek (2018) traced how first-year English language teaching (ELT) students felt their ability to listen and take notes had improved. 61 first-year ELT students were the study's participants. A questionnaire was used to gather the information. The findings demonstrated that when students wrote down essential terms, identified and recognized basic ideas, and employed symbols and abbreviations, they made the most progress.

Alexandria, Madelynn, and Maranda (2020) examined the impact of taking notes in college classes. The participants were 18 undergraduates. A keyboard, stylus, or longhand techniques were used and in each mini-lecture, students completed specific tests and those tests indicated their level of interest. The results demonstrated the advantages of taking notes longhand and with a stylus. Giving students the option to take notes however they choose is essential.

Almaagbh (2020) investigated how note-taking strategies affected the academic performance of Jordanian university students studying English as a foreign language (EFL). 384 students from four Jordanian public universities—the University of Jordan, Jordan University of Science and Technology, Hashemite University, and Al-Balqa Applied University—

participated in the study. Surveys were used to get the data. The outcomes demonstrated that note-taking technique had an impact on EFL learners' academic achievement.

Salame and Thompson (2020) explained how using a certain learning method when taking notes might help students do better in class. 160 New York students participated in a survey that was conducted and gathered. The survey questionnaire, which was used to gather the study's data, contained open-ended and Likert-type questions about the benefits of keeping strategic notes. The findings demonstrated that taking notes improved students' overall grade point averages, their understanding of the subject, and their capacity to retain information.

Alpaslan, Baran, Büşra, and Karabulut (2021) figured out how effectively children with learning problems could take notes using the Cluster Use Enter Summarize Compare Check method. Three students who struggled with learning were the study's participants. This study tried to find out whether taking strategic notes helped middle school students with learning problems perform better on exams by using one of the single subject designs to gather data. The findings demonstrated that the Cluster Use Enter Summarize Compare Check technique is successful in helping students with impairments take better notes and perform better on exams. After mastering the technique, students continued to take better notes across courses and shown the same improvement after one, three, and five weeks.

Aslanoğlu (2021) examined the thresholds used to categorize Turkish listening comprehension success (successful/unsuccessful) in the logistic regression model. The participants were 286 students at 5th grade. Data were collected through the Relational Screening Model. The results showed that variables like gender, reading ability, time given for in-class and extracurricular activities, note-taking during listening, listening assignments, and the quantity of books each student owns were significantly beneficial.

Lam (2021) helped determine how the note-taking strategy of EFL students affected their listening comprehension in a classroom context. 60 students from two listening classes took part in the study. Pretest-posttest was employed by the researcher to assess participant responses between groups and gauge the extent of change brought about by interventions or treatments. The results revealed that taking notes helps students understand

what they are hearing. The understanding levels of the students who took notes while listening to lectures are greater.

Schneider and Sparfeldt (2021) looked into the value of taking notes. The participants were split into two groups: experimental and control, for the purpose of gathering data. While the control group watched a tutorial unrelated to the subject, the experimental group watched a video instruction on it. The researchers used an open question remains regarding the mechanisms involved in the study. According to the results, the first group performed better on number series than the second group did, and it also had more items with supplied notes.

Wetcho (2021) explored the potential for integrating cooperation into the process of taking socioemotional notes and the predictive implications that self-evaluation to set objectives and goals has on self-reflection. The participants were from undergraduate students 117, working as pre-service teachers, and studying at two institutes. Data were collected through questionnaire. The results demonstrated their ability to create a collaborative socioemotional note-taking exercise.

Gur (2021) explored how success and its persistence are affected by generative and verbatim note-taking. The participants were 116 education faculty students. Pre-posttest test was used to gather data. According to the findings, using a pen and paper and the generative technique to take notes has better benefits on success and perseverance than using a keyboard or verbatim notes.

Concluding Remark

Regarding the theoretical significance of this study, it may be of value to other researchers investigating this topic. Taking into consideration the continually rapid change in teaching and learning, the dearth of research in Jordan may constitute an obstacle to the improvement of English curricula and teachers' training programs. The investigation of the effect of note-taking strategy on the listening comprehension of female ninth-grade students at a public school makes this study distinct from earlier ones.

Numerous research was conducted to determine how the note-taking strategy affected EFL students (e.g., Ipek, 2018; Alexandria, Madelynn, & Maranda, 2020; Almaagbh, 2020; Salame &Thomson, 2020; Alpaslan et al., 2021; Aslanoglu, 2021; Lam, 2021; Schneider & Sparfeldt, 2021; Wetcho, 2021; and Gur, 2021). There hasn't been many research on Arab English learners, though. No studies on how the Note-taking strategy influences students' listening comprehension have been conducted in

Jordan.

Comparable results were found in the prior study, which examined the effect of Note-taking on students' listening comprehension (Lam, 2021). The current study included ninth-graders from Jordan, whereas the previous study (Lam, 2021) involved university students from Vietnam.

Methodology

Design and Variables of the Study

The current investigation made use of the quasi-experimental design. The independent variable was the Note-taking strategy. The dependent variable was the students' listening comprehension scores on the post-test.

Participants of the Study

49 female EFL ninth-graders were randomly selected for the current study; they were all female. They attended the public Mariam Bint Imran secondary school for females, which is part of the Irbid Directorate of Education. The study was conducted during the second semester of the scholastic year 2022-2023.

The experimental group, consisted of (24) students, and the control group, consisted of (25) students. To ensure equity, pre-tests were administered to the students in both groups. The experimental group was given reading assignments from the Action Pack 9 textbook while being instructed in Note-taking strategies. Although taking-note was not stated there, the lesson plan for the control group was drawn from the Teacher's Book of Action Pack 9.

Research Instruments

To achieve the goals of the study, a listening comprehension pre-/post-test was developed.

Based on a review of similar prior information, the researcher developed a pre/post listening comprehension test. The literal, inferential, and critical levels of listening comprehension were the main focus of the pre- and post-test. Each of these levels was assessed using a unique set of questions that the researcher created in accordance with the ninth-grade modules used in Jordanian public schools and the listening material. The listening comprehension exam was developed using the learning and teaching resources found in the teacher's book. The purpose of the test was to gauge how well each student understood the information they had heard both individually and collectively before to and after applying. The effectiveness of this instructional strategy was evaluated by comparing the Note-taking strategies utilized by the experimental and control groups.

In order to assess the students' listening comprehension at three levels (literal, inferential, and critical), three listening questions were included in the pre- and post-test. 20 questions in total, divided into three levels, were asked. The first level, which accounted for 40% of the total questions, measured literal level and had 8 questions. 8 questions, or 40% of all the questions, made up the second level, which assessed inferential level. 4 questions, or 20% of all the questions, made up the third level, which assessed the critical level.

Test Validity and Reliability

Content Validity

The same survey that authorized a course on note-taking strategies also examined the content validity of the listening comprehension test. The jury was instructed to assess the test's substance, grammatical propriety, and item relevance to the level it is measuring. The jury advised the researcher to replace questions that were not clear with ones that were. The researcher changed the study in accordance with the jury's recommendations.

Reliability and construct validity of the listening comprehension Test

To ascertain the internal consistency (construct validity) of the listening comprehension test, a group of 21 students participated in a pilot study. The Pearson Correlation Coefficient between the item score and the total test scores, as well as the adjusted item-total correlation between the item score and the total test scores for the item's level, could then be determined. The results showed that the correlation coefficients are higher than the cutoff value (0.35) between the item score and the total of the item's level and the full test. Additionally, the recovered item-total adjusted correlation between the item score and the total score is higher than the cutoff value (0.40) and was found to exist. These results demonstrate that the validity (internal consistency) of the test is adequate (Bryman & Cramer, 1997).

Additionally, the listening comprehension test-retest reliability and Cronbach's alpha were calculated. The results showed that the literal, inferential, critical, and overall Cronbach's Alpha Coefficients were, respectively,.88,.74,.81, and.82. Furthermore, the test-retest reliability coefficient for literal, inferential, critical, and the overall were .77, .81, .79, and .87, respectively. As such, the test is reliable and applicable to measure the listening comprehension performance (Cronbach, 1951).

Note-taking Strategy-Based-Instructional Program

In order to give the participants in the experimental group the opportunity to employ the note-taking strategy in listening comprehension classes, the listening activities in the targeted modules (5 and 6) were rewritten. The instructional program was developed to assist Jordanian EFL ninth-graders. This program lasted for eight weeks. It started on March 6 and ended on April 28 of 2023. The listening comprehension activities in modules 5 and module 6 of Action Pack 9 have been updated to include note-taking strategies. The listening comprehension activities for each subject were broken up into two 45-minute sessions that were held twice a week for eight weeks.

The Instructional Material

The listening activities from modules 5 and 6 of the Action Pack 9 Student and Activity Books are the basis for the lesson plan. The researcher altered these workouts in accordance with the Note-taking strategy to impart listening to the experimental group participants.

Procedures of Designing the Instructional Program

The following steps were taken in order to implement the existing program:

1. Finding the activities in Action Pack 9 with listening in the targeted modules.
2. Finding the activities that can use Note-taking strategy.
3. Assigning these activities to Note-taking strategy.
4. Defining the steps that will be taken in each class.
5. Setting the right time for each activity.
6. Before introducing the targeted Note-taking strategy, the control and experimental groups were given a listening pre-test.
7. Teaching the experimental group on the targeted Note-taking strategy.
8. Instructing students in the specific progressively taking notes during listening exercises in the chosen modules.
9. A post-test was used to evaluate students' listening comprehension skills after the program had been put into place.
10. After employing the note-taking strategy to teach the students in the experimental group, an attitude survey was performed to examine how the students felt about it.

Validity of the Instructional Program

To verify the educational program's validity, the researcher submitted

it to a panel of ten experts in English curriculum and instruction. Six instructors, three professors, and an English language supervisor were among them. The jurors were requested to assess the software and provide the researcher with any feedback or comments regarding the program that was distributed. One of these recommendations was to present a hands-on session on how to instruct listening comprehension using Note-taking. The researcher followed their advice and implemented the alterations.

Results

The researcher used the subsequent techniques to respond to the study question:

1. The pre- and post-test results in the three basic areas of listening comprehension—literal, inferential, and critical—for the two groups were averaged, along with their standard deviations. According to Table 1.

Table 1: Means and Standard Deviations of the Overall Three Listening Comprehension Levels

Group	Pre-test		Post-test	
	Mean	S.D	Mean	S.D
Experimental	8.29	2.56	15.21	2.23
Control	8.08	3.21	11.12	2.35
Total	**8.18**	**2.88**	**13.12**	**3.07**

In the overall three listening comprehension levels as determined by the listening comprehension performance test, Table 1 demonstrates that the mean score of the experimental group (Mean=15.21) is greater than the mean score of the control group (Mean=11.12).

A one-way analysis of covariance (ANCOVA) was carried out to examine the statistically significant effect of the teaching strategy (Note-taking vs. conventional instruction) on the overall three listening comprehension levels after adjusting for the effect of the pre-test scores, as shown in Table 2.

Table 2: Results of One-Way ANCOVA for the Effect of Teaching Strategy on the Overall Three Listening Comprehension Levels

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Pre-test (Covariate)	.081	1	.081	.015	.902	.000
Teaching strategy	204.688	1	204.688	38.195	.000	.454
Error	246.517	46	5.359			
Total	8889.000	49				
Corrected Total	451.265	48				

Table 2 demonstrates a statistically significant difference between the two groups in the overall three levels of listening comprehension after adjusting for the effect of the experimental group's pre-test results. The teaching strategy explained 45.4% of the variance in the overall performance across the three listening comprehension levels, according to the partial eta squared value of (.454).

Furthermore, the means, standard errors, and standard deviations of the two groups in the overall three listening comprehension levels before and after controlling the overall pre-test scores. Table 3 illustrates the results.

Table 3: Adjusted and Unadjusted Means of the Overall Three Listening Comprehension Levels

	Adjusted Mean	
Group	Mean	Std. Error
Experimental	15.21	.47
Control	11.12	.46

After adjusting for variations in pre-test results, Table 3 demonstrates discrepancies between the two groups' performance on the overall three listening comprehension levels. As a result, the experimental group's performance across the three listening comprehension levels was improved by the note-taking strategy.

2. As indicated in Table 4, the means and standard deviations of the pre- and post-test scores for each of the three listening comprehension levels were calculated.

Table 4: Means and Standard Deviations of the Pre-Test and Post-Test Per-Level

Listening Sub-Skills	Group	Pre-test		Post-test	
		Mean	S.D	Mean	S.D
Literal	Experimental	3.13	1.39	6.17	1.55
	Control	2.80	1.63	4.56	1.23
Inferential	Experimental	3.50	1.35	6.00	1.56
	Control	3.36	1.70	4.56	1.58
Critical	Experimental	1.67	.70	3.04	.91
	Control	1.92	.70	2.00	.71

In the three levels of listening comprehension performance (literal, inferential, and critical) as determined by the listening comprehension exam, Table 4 demonstrates that the post-test scores of the experimental groups are higher than the mean scores of the control group.

After adjusting for the effects of pre-test results, a one-way multivariate analysis of covariance (one-way MANCOVA) using a multivariate test (Hoteling's Trace) was conducted to examine the effect of

the teaching strategy (Note-taking vs. conventional) on the linear combination of the three listening comprehension levels performance as shown in Table 5.

Table 5: Results of Multivariate Test (Hoteling's' Trace) for the Effect of Teaching Strategy on the three Listening Comprehension

Effect	Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Teaching Strategy	1.090	15.264	3.000	42.000	.000	.522

Table 5 demonstrates that the major effect of the teaching strategy was significant. This suggests that there are differences between the two groups' student performances in a linear combination of the three listening comprehension levels. The partial eta square value of.522 shows that the teaching strategy may be contributed to 52.2% of the variance in the linear combination of the three listening comprehension levels. A follow-up univariate analysis (Tests of between-subject effects) was carried out since the impact of the teaching strategy is substantial as shown in Table 6.

Table 6: The Effect of the Teaching Strategy on Listening Comprehension (Per-level) after Controlling the Effect of Pre-Test Scores

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Covariate-Literal	Literal	1.406	1	1.406	.749	.392	.017
Covariate-Inferential	Inferential	4.922	1	4.922	2.620	.113	.056
Covariate-Critical	Critical	.262	1	.262	.396	.533	.009
Teaching Strategy	Literal	27.232	1	27.232	14.500	.000	.248
	Inferential	23.938	1	23.938	10.918	.002	.199
	Critical	12.674	1	12.674	19.112	.000	.303
Error	Literal	82.638	44	1.878			
	Inferential	96.470	44	2.193			
	Critical	29.177	44	.663			
Corrected Total	Literal	123.102	48				
	Inferential	141.551	48				
	Critical	44.245	48				

In the three listening comprehension levels, Table 6 demonstrates that there were statistically significant differences between the two groups in favor of the experimental group. The teaching strategy showed 24.4%, 19.9%, and 30.3% of the variance in the literal, inferential, and critical, respectively, according to the partial eta squared values of.240,.199, and.303. As a result, the critical level had the greatest effect size of the teaching technique, followed by the literal level.

In addition, before and after correcting for the pre-test results, the means, standard errors, and standard deviations of the two groups in each of the three listening comprehension levels were determined, as shown in Table 7.

Table 7: Adjusted and Unadjusted Means of the Three Listening Comprehension Levels

Dependent Variable	Group	Unadjusted mean		Adjusted mean	
		Mean	S.D	Mean	S.E
Literal	Experimental	6.17	1.55	6.13	.283
	Control	4.56	1.23	4.60	.278
Inferential	Experimental	6.00	1.56	6.00	.306
	Control	4.56	1.58	4.56	.300
Critical	Experimental	3.04	.91	3.04	.168
	Control	2.00	.71	2.00	.165

Table 7 demonstrates that after controlling for variations in pre-test results, there are disparities between the two groups on the three listening comprehension levels. As a result, using the note-taking strategy helped students perform better on literal, inferential, and critical tasks.

Discussion

The responses to this query demonstrated that there were statistically significant differences between the experimental and control groups' mean scores on the listening comprehension post-test at (α = 0.05). On the listening comprehension post-test as a whole and on each of the three levels of listening comprehension (literal, inferential, and critical), students in the experimental group outperformed those in the control group. At all three levels, the Note-taking strategy improved listening comprehension.

There are a number of reasons why the experimental group, if they had employed the Note-taking strategy, would have performed better on the listening comprehension post-test in terms of both their overall skills and each level of listening comprehension. One of these elements could be attributed to the design of the educational program based on Note-taking strategy.

Over the course of 16 classes, it was carefully designed and delivered to focus on listening comprehension skills. In each and every lesson, the teacher provided her students with a detailed set of instructions. For example, in each listening lesson, the teacher focused the students' attention on developing listening comprehension skills (giving meaning to words, identifying specific facts, details, or information stated in the audio text, responding to questions before, during and after listening, guessing

on the new vocabulary meaning, predicating the answers of the questions based on background knowledge, synthesizing information on a topic after listening to a discussion, making simple inferences when listening, communicating through oral language, understanding, and recognizing the importance of figurative language when listening, and encouraging the listeners to express opinion and developed information) that outlined how to carry out the objectives of the lesson as well as how to finish the assigned work.

Another aspect that might have assisted students in improving their listening comprehension is the focus that Note-taking strategy placed on group work (i.e., collaboration). In order to complete given tasks, Note-taking strategy improved their collaboration by highlighting individual differences. In most cases, students were instructed to complete their assignments either alone or in groups. For instance, as part of Note-taking strategy, each student had to pinpoint certain ideas and details from the audio text before responding to questions that were posed before, during, and after listening. Instead of only listening to the teacher instruction, Note-taking strategy encouraged students' participation in the learning process.

Conclusion

The purpose of the current study was to investigate how ninth-grade EFL students' listening comprehension was affected by using Note-taking strategy. For the academic year 2022–2023, a note-taking strategy-based instructional program was developed and implemented to achieve this goal. Particularly, the researcher came to the following conclusions:

1. Note-taking is a strategy that helps students improve their performance in EFL listening environments.
2. The effectiveness of Note-taking strategy-based instructional program is attributed to its interactive nature which increased students' curiosity and engagement.
3. Giving students cooperative learning strategies like Note-taking strategy may help them use them more confidently and without as much shyness or hesitancy.
4. The students' enhanced performance on the post-test compared to their performance on the pre-test shows that the Note-taking strategy was successful in increasing the teaching/learning process and enhancing the instructional content of the Ministry of Education textbook.

In conclusion, taking notes is a practice that helps students enhance

their performance in EFL listening situations. The Note-taking strategy-based instructional program's effectiveness is due to its participatory aspect, which raised students' curiosity and involvement, it also provides cooperative learning tools to students, such as note-taking strategies, may help them apply them more confidently and without as much shyness or uncertainty. In addition, the students' improved performance on the post-test compared to the pre-test indicates that the note-taking technique was effective in improving the teaching/learning process and improving the instructional content of the Ministry of Education textbook.

Recommendations

Following are a number of recommendations made for EFL instructors, EFL supervisors, the Ministry of Education, authors of EFL textbooks, and researchers based on the findings of the current study:

1. To increase students' performance in listening comprehension courses and help them overcome challenges, EFL teachers are advised to employ Note-taking strategy-based instructional programs.
2. It is advised that EFL supervisors educate their instructors on the value of Note-taking strategy-based instruction and give them tasks to incorporate into listening comprehension courses.
3. It is advised that the Ministry of Education may instruct teachers on how to use Program for teaching Note-taking strategies via training sessions and workshops
4. Note-taking strategy-based instructional program activities should be implemented while building the English language curriculum, especially for the ninth grade. They must also alter the instructional materials to better suit the wants and interests of the students.
5. The researcher proposed conducting additional research on the effect of Note-taking strategy on listening comprehension abilities (literal, inferential, and critical). Future studies on other linguistic abilities, such as reading and speaking, should take listening comprehension into account, the researcher advised.

References

Al Bzour, W., & Smadi, O. (2017). The Role of EFL Teachers in the Jordanian Schools. *Journal of Al-Quds Open University for Educational & Psychological Research & Studies, 6*(19), 26-43.

Alexandria, D., Madelynn, M., & Maranda, M. (2020). Make a Note of It: Comparison in Longhand, Keyboard, and Stylus Note-Taking Techniques. *Learning Assistance Review*, *26*(2), 1-21.

Almaagbh, F. (2020). The   Impact of Strategic Notetaking on EFL Learners' Academic Performance in Jordan. *International Journal of Higher Education*, *9*(1), 249-255.

Alpaslan, M., Baran, A., Büşra, L., & Karabulut, K. (2021). Teaching Note-Taking Skills to Students with Learning Disabilities: CUES+ CC Strategy. *Education Quarterly Reviews*, *4*.

Al-Shara'h, N. Abu Nabaah, A; & Khzouz, A. (2011). Jordanian EFL Teachers' Perceptions of Communicative Language Evaluation. *Dirasat Educational Sciences, 37* (7), 2470-2482.

Aslanoğlu, E. (2021). Effective variables that predict 5th grade Turkish students' success in listening comprehension of Turkish language: Turkish students' success in listening comprehension of Turkish language. *International Journal of Curriculum and Instruction*, *13*(3), 3478-3494.

Bohay, M., Blakely, P., Tamplin, K., & Radvansky, A. (2011). Note taking, review, memory, and comprehension. *The American journal of psychology, 124*(1), 63-73.

Bryman, A., & Cramer, D. (1997). *Quantitative data analysis with SPSS for Windows: A guide for social scientists*. Routledge.

Buck, G. (2001). *Assessing listening*. Cambridge University Press.

Carstens, A., Watson, L., & Williams, L. (2015). Unstructured laptop uses in a highly structured entry-level college course. *Scholarship of Teaching and Learning in Psychology, 1*(2), 137.

Cronbach, J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika, 16*(3), 297-334.

Ferris, D., & Tagg, T. (1996). Academic listening/speaking tasks for ESL students: Problems, suggestions, and implications. *TESOL quarterly, 30*(2), 297-320.

Flowerdew, J., & Miller, L. (2005). *Second language listening: Theory and practice*. Cambridge university press.

Gilakjani, P., & Sabouri, B. (2016). Learners' Listening Comprehension Difficulties in English Language Learning: A Literature Review. *English language teaching, 9*(6), 123-133.

Grabe, M., & Christopherson, K. (2005). Evaluating the advantages and disadvantages of providing lecture notes: The role of internet technology as a delivery system and research tool. *The internet and higher education, 8*(4), 291-298.

Gür, T. (2021). The Effect of Verbatim and Generative Notes Taken by Hand and Keyboard at University Level on Success and Persistence. *Education Quarterly Reviews*, *4*(3).

Hayati, M., & Jalilifar, A. (2009). The impact of note-taking strategies on listening comprehension of EFL learners. *English Language Teaching, 2*(1), 101-111.

Hismanoglu, M. (2000). Language learning strategies in foreign language learning and teaching. *The Internet TESL Journal, 6*(8), 12-12.

Hogan, T., Adlof, M., & Alonzo, N. (2014). On the importance of listening comprehension. *International journal of speech-language pathology, 16*(3), 199-207.

Ipek, H. (2018). Perceptions of ELT students on their listening and note taking skills. *International Online Journal of Education and Teaching (IOJET), 5*(1), 206-217. http://iojet.org/index.php/IOJET/article/view/281/226

Jacobs, H. (2014). *Active literacy across the curriculum: Strategies for reading, writing, speaking, and listening*. Routledge.

Kiewra, A., & Fletcher, J. (1984). The relationship between levels of note-taking and achievement. Human Learning: *Journal of Practical Research & Applications*.

Kiewra, A., DuBois, F., Christian, D., McShane, A., Meyerhoffer, M., & Roskelley, D. (1991). Note-taking functions and techniques. *Journal of educational psychology, 83*(2), 240.

Kim, J. (2014). Korean EFL students' perceptions on note-taking strategy and its training in academic English listening tests. *20*, 95-118.

Kim, J. (2019a). The Effects of Note-Taking Strategy Training on Students' Notes during Academic English Listening Tests. *English Teaching, 74*(1), 25-48.

Kim, J. (2019b). Mobile-assisted language learning: A Duolingo case study. *Recall, 31*(3), 293-311.

Krashen, S. (1989). We acquire vocabulary and spelling by reading: Additional evidence for the input hypothesis. *The modern language journal, 73*(4), 440-464.

Krashen, S., Terrell, T., Ehrman, M., & Herzog, M. (1984). A theoretical basis for teaching the receptive skills. *Foreign Language Annals, 17*(4), 261.

Kulhavy, W. (1987). Notetaking by junior high students. *The Journal of Educational Research, 80*(6), 359-362.

Lam, T. (2021). The Influence of Note-Taking Technique on EFL Learners' Listening Comprehension in A Higher Education Context. *International Journals of Sciences and High Technologies*, *25*(2), 38-44.

Lawson, K., & PhD, C. (2007). *The Important of Listening*.

Lindsay, C., & Knight, P. (2006). Learning and teaching English: A course for teachers. New York: *Oxford University Press, 3*(11).

Morton, T. (2013). *Hyperobjects: Philosophy and Ecology after the End of the World*. U of Minnesota Press.

Murphy, M. (1996). Integrating listening and reading instruction in EAP programs. *English for Specific Purposes, 15*(2), 105-120.

Oguz, T. (1999). Observations on the Rim Current structure, CIW formation and transport in the western Black Sea. Deep Sea Research Part I: *Oceanographic Research Papers, 46*(10), 1733-1753.

Oxford, R. (1990). *Language learning strategies: What every teacher should know*. Boston, MA: Heinle & Heinle.

Renukadevi, D. (2014). The role of listening in language acquisition; the challenges & strategies in teaching listening. *International journal of education and information studies*, 4(1), 59-63.

Rivers, M., & Temperley, S. (1978). *A Practical Guide to the Teaching of English as a Second or Foreign Language*. Oxford University Press, 200 Madison Ave., New York, NY 10016.

Rost, M. (1994). *Introducing listening*. Penguin.

Rost, M. (2007). Commentary: *I'm only trying to help: A role for interventions in teaching listening*.

Rost, M. (2011). Teaching and Researching: Listening (ed.). *Harlow: Pearson Education*.

Salame, I., & Thompson, A. (2020). Students' Views on Strategic Note-Taking and Its Impact on Performance, Achievement, and Learning. *International Journal of Instruction, 13*(2), 1-16.

Schneider, B., & Sparfeldt, R. (2021). How to get better: Taking notes mediates the effect of a video tutorial on number series. *Journal of Intelligence, 9*(4), 55.

Serin, H. (2018). A Comparison of Teacher-Centered and Student-Centered Approaches in Educational Settings. *International Journal of Social Sciences & Educational Studies, 5*(1), 164-167.

Smith, J. M. (1982). *Evolution and the Theory of Games*. Cambridge university press.

Swanson, H. (1997). *Who's Listening in the Classroom? A Research Paradigm*.

Wetcho, S. (2021). Fostering Pre-Service Teachers' Reflection in Self-Regulatory Process through Socio-Emotional Collaborative Note-Taking in the CSL Environment. *Contemporary Educational Technology, 13*(4).

Williams, L., & Eggert, C. (2002). Notetaking in college classes: Student patterns and instructional strategies. *The Journal of General Education*, 173-199.

Woottipong, K. (2014). Effect of using video materials in the teaching of listening skills for university students. *International Journal of Linguistics, 6*(4), 200.

Yassin, B. (2018). *Factors that Negatively Affect the Speaking Skills of Students of English as a Foreign Language in Private Jordanian Schools*. PhD Thesis, Middle East University.