

# ENHANCING EFL STUDENTS' LISTENING COMPREHENSION THROUGH PREPARATION FOR THE TOEFL APPLICATION: EVIDENCE FROM A PRE-TEST- POST-TEST DESIGN

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## ABSTRACT

Digital learning has increasingly been integrated into English language education due to the widespread accessibility of mobile technology. Nevertheless, the use of internet-based digital media for teaching listening skills in EFL contexts remains limited. This study aimed to examine the effectiveness of the *Preparation for the TOEFL Test* application in improving students' listening comprehension and to explore students' perceptions of its use as a mobile-assisted learning tool. This research employed a pre-experimental one-group pretest-posttest design involving 22 EFL undergraduate students. Listening comprehension was measured using a TOEFL-format listening test administered before and after a four-week intervention period. Quantitative analysis revealed a significant improvement in students' listening performance. The mean score increased from 60.23 in the pretest to 73.73 in the posttest. A paired-samples t-test confirmed that this improvement was statistically significant ( $t = -17.173$ ,  $p < 0.001$ ), indicating that the application effectively enhanced students' listening comprehension. Students' perceptions were collected through a structured questionnaire. The results showed that most students responded positively to the application. More than 70% of participants agreed or strongly agreed that the application was easy to use, accessible anytime and anywhere, and helpful in supporting independent learning. The application's structured materials and listening-focused features also increased students' motivation and engagement in listening practice. The *Preparation for the TOEFL Test* application proved to be an effective mobile-assisted learning tool for improving EFL students' listening comprehension while fostering positive learner perceptions.

Keywords: Digital Learning, EFL Listening Comprehension, Mobile-Assisted Language Learning, Student Perceptions, TOEFL Preparation

## INTRODUCTION

In the everyday life of people, listening has a significant part in communication. (Yunira, 2019) says that listening is necessary during EFL class since it conveys input to the learner. Even though, Karimova et al., (2020) states that listening is essential since it takes a substantial portion of time we spend when communicating in the language, is the source of input that can be highly valuable in general in the process of acquiring the second language,

and the development of the speaking skill in particular, and facilitates non-linear processing of the language and the ability of learners to develop holistic approach of texts. Besides, the first general skill and ability in learning a new language that the learners should acquire before practicing the other three skills is listening (Sudewi, 2021). In addition, Nabiyev and Idiyev (2022) also write that listening is also relevant in the learning of the English language since listening holds a significant role in learning since it is among the popular four skills in learning a language since it is a receptive skill that develops first in a human being. All the works on the acquisition of language skills have demonstrated that in communication, when we communicate, we acquire 45% of language competence by listening, 30% by speaking, 15% by reading and 10% by writing (Nabiyev & Idiyev, 2022).

Meanwhile, mobile-based instruction may lead to basic changes in curriculum and bring a new, different, and attractive environment into our English classrooms than the traditional and boring classroom lectures. Also, by providing instructional applications for students, we can provide them with an opportunity to have access to instructional materials and media not only at school and home, but also everywhere they feel free to practice English. A mobile device makes it easy to access the internet, exchange instant messages, and use different applications which might be help for increasing the quality of language learning (Kim, 2013). Bachore (2015) believes that the feature of accessibility of mobile phones which means that almost everyone owns a mobile phone nowadays makes it a field which is becoming very interesting for the researchers to conduct studies about it. Kormos et al., (2024) believes that the feature of accessibility of mobile phones which means that almost everyone owns a mobile phone nowadays makes it a field which is becoming very interesting for the researchers to conduct studies about it.

Listening is something that human being is involved with everywhere and every time; therefore, improving this skill also needs a tool which can be taken everywhere in any time. A lot of studies have investigated the usefulness of using mobile phones in language learning and many theories support this idea (Nabilou et al., 2021). In addition, some researches had been done to show that Mobile Assisted Language Learning (MALL) as a form of technology invention that support the students to learn English in a different technique (Inggita et al., 2019; Nafa, 2020; Sepyanda et al., 2023; Yunita & Ardi, 2022). Teaching listening using conventional media is not effective enough recently since portable media player devices, tablets and mobile phone as well as learning software or application contribute to mobile learning (Rahimi & Soleymani, 2015). This means that teachers and also lecturers should be aware in technological development and able to apply such kinds of application in learning process optimally.

Several previous studies have examined the role of mobile technology in enhancing English listening skills among EFL learners. Behbahani and Rashidi (2024) found that mobile-based learning significantly reduced listening anxiety while improving learners' listening comprehension, mainly due to its flexibility and learner-centered nature. (Wu et al., 2025) reported that mobile listening applications positively affected Iranian intermediate EFL learners' listening accuracy and confidence, enabling more frequent and autonomous practice. Saleh (2025) demonstrated that Mobile-Assisted Language Learning (MALL) increased students' engagement in listening activities through the use of authentic materials

and self-paced exercises. However, these studies primarily focused on general listening applications and classroom-based interventions rather than applications specifically designed for standardized English proficiency test preparation such as TOEFL.

Despite the growing body of research on MALL and listening comprehension, several research gaps remain evident. First, limited attention has been given to the use of TOEFL-oriented mobile applications that explicitly target listening skills within a test-preparation context. Second, previous studies rarely integrate explicit quantitative effectiveness measures with students' perception analysis within a single pre-experimental framework. Third, empirical evidence focusing on EFL undergraduate students in Indonesian higher education remains relatively scarce. Addressing these gaps, the novelty of the present study lies in its examination of the Preparation for the TOEFL Test application as a mobile-assisted learning tool that simultaneously evaluates listening improvement through quantitative pretest-posttest analysis and explores students' perceptions toward its use. This study thus contributes to the literature by bridging mobile learning, TOEFL preparation, and listening skill development in an EFL university context.

This research explores the relationship between an appropriate way to help the EFL learners in improving their listening skills. Improving listening skills has been always a great challenge for English teachers and learners. Therefore, this study will try to examine the effects of using Preparation for the TOEFL Test application on improving listening skills of students with low anxiety. The study aims at investigating how effective Preparation for the TOEFL Test application in improving students' listening comprehension and at finding out students' perception toward Preparation for the TOEFL Test application. Last but not least, the research questions of this study can be formulated as follows:

- How effective is the Preparation for the TOEFL Test application to improve students' listening comprehension?
- How is the students' perception toward Preparation for the TOEFL Test application?

## LITERATURE REVIEW

### *Mobile-Assisted Language Learning (MALL) Frameworks*

Mobile-Assisted Language Learning (MALL) refers to a pedagogical approach that integrates mobile devices into language learning to promote flexibility, accessibility, and learner-centered instruction. MALL frameworks emphasize portability, ubiquitous access, personalization, and autonomous learning, allowing learners to engage with language materials beyond the constraints of formal classroom settings. In EFL contexts, MALL facilitates increased exposure to authentic language input and repeated practice, which are essential for developing receptive language skills (Wang & Shih, 2015). Previous studies have shown that MALL enhances learner engagement, motivation, and self-regulation by enabling learners to control the pace, time, and place of their learning. Therefore, MALL provides a relevant theoretical framework for integrating mobile applications into English listening instruction and test preparation contexts.

### *Listening Comprehension Theories*

Listening comprehension is considered a foundational receptive skill in second language acquisition and involves complex cognitive processes such as sound recognition, lexical access, syntactic parsing, and meaning construction. According to input-based theories, learners require sustained exposure to comprehensible and meaningful input to develop listening proficiency effectively. In addition, bottom-up and top-down processing models explain that listening comprehension results from the interaction between linguistic knowledge and background knowledge (Duke & Cartwright, 2021). Technology-enhanced listening environments support these processes by offering authentic audio materials, structured tasks, and opportunities for repeated practice. Consequently, mobile-based listening applications play a significant role in strengthening listening comprehension by facilitating input processing, reducing listening anxiety, and supporting autonomous learning.

### ***Technology Acceptance Model (TAM)***

The Technology Acceptance Model (TAM) is a widely used theoretical framework for explaining users' acceptance and use of technology in educational settings. TAM posits that *perceived usefulness* and *perceived ease of use* are the primary determinants influencing users' attitudes, behavioral intentions, and actual technology usage. In the context of technology-enhanced language learning, TAM provides insights into why learners adopt or resist mobile learning applications (Muthahar, 2019). When learners perceive an application as easy to use and beneficial for improving their learning performance, their motivation and sustained engagement increase. Thus, TAM is highly relevant for analyzing EFL students' perceptions of mobile-assisted learning applications, particularly in TOEFL preparation and listening skill development.

## **METHODS**

### ***Design***

The pre-experimental method methodology was utilized in the design of this research. Because the researcher wanted to determine whether or not the Preparation for the TOEFL Test app was beneficial in improving the listening comprehension of students. For this investigation, the researchers utilized a "One Group Pretest-Posttest Design" to conduct pre-experimental research. (Ishtiaq, 2019) describes a design known as the one-group pretest-posttest as a method that involves administering therapy for a certain amount of time and then measuring the results of the treatment using tests both before and after it has been carried out. The researcher administered a pre-treatment test and a post-treatment test to the participants after they had received treatment (J. Creswell, 2017).

### ***Participants***

The participants were 22 undergraduate students from the English Education Program at Universitas Muhammadiyah Purworejo. A purposive sampling technique was applied by using the criteria below:

- Active enrolment in listening courses,
- Regular use of mobile technology for academic purposes,

- Willingness to participate in both the pre-test and post-test stages.

### ***Context and Procedure***

This study was conducted within the academic setting of Universitas Muhammadiyah Purworejo, where listening comprehension is identified as a core skill but often underdeveloped in traditional instruction. The research procedure followed these stages (J. W. Creswell & Creswell, 2018):

- Student instructed to search and install Preparation for the TOEFL Test application in Google Playstore;
- Pre-test administration using a TOEFL-format listening comprehension test ;
- Brief orientation session on application usage and expectations;
- Self-practice performed over a four-week period and monitored through daily tracking of application engagement metrics, such as login frequency and duration of use.
- Administration of post-tests designed to evaluate gain in the capacity to listen
- Administration of questionnaires aimed at exploring students' attitudes and impressions for the purpose of perception analysis

The goal of the application was to facilitate autonomous practice and self-learning activities outside the classroom. Student practices were controlled through monitoring logging activities and login duration on the application. All of these practices were kept in the framework of the application.

### ***Data Collection***

Data in this research were collected by using two instruments, namely

#### *TOEFL-format Listening Comprehension Test*

The study used pre- and post-tests to measure listening improvement. The test consisted of 50 multiple-choice questions, consistent with TOEFL ITP standards, as it utilized items from the TOEFL Listening Comprehension (Paper-Based Test) for both the pre-test and the post-test.

#### *Structured Perception Questionnaire*

The application was developed within the framework of the Technology Acceptance Model (TAM), as this approach provided the basis for its design (Kartika et al., 2024). The questionnaire included 10 items evaluating:

- Perceived usefulness
- Ease of use
- Motivation
- Anxiety reduction

**Data Analysis**

When examining the data that has been gathered, researchers make use of various approaches for data analysis. The pretest was used to obtain the data used since the pretest was conducted before treatment and the posttest after treatment. To analyze data to be used in this study, the researcher used IBM SPSS 28. Moreover, this experiment employed close-ended questionnaire to the perception of students on the Preparation for the TOEFL Test mobile application during the teaching learning process of acquiring English listening skills. It was an online questionnaire form that was distributed to 22 English Education Department Universitas Muhammadiyah Purworejo students at the end of the post-test (J. W. Creswell & Creswell, 2023).

**RESULTS**

***The Effectiveness of Preparing for the TOEFL Test Descriptive Statistics***

Data were collected using pre-test and post-test to determine listening skill before and after using *Preparation for the TOEFL Test* app as a method. There were 22 students who took pre-test and post-test. Student results of pretest and post-test are presented below:

*Table 1. Students score of pre-test*

	Frequency	Percent	Valid percent	Cumulative percent
Valid	51	1	4.5	4.5
	52	2	9.1	13.6
	54	2	9.1	22.7
	55	1	4.5	27.3
	56	1	4.5	31.8
	57	1	4.5	36.4
	58	2	9.1	45.5
	59	1	4.5	50.0
	60	2	9.1	59.1
	62	2	9.1	68.2
	63	2	9.1	77.3
	67	1	4.5	81.8
	68	1	4.5	86.4
	70	1	4.5	90.9
	71	1	4.5	95.5
	73	1	4.5	100.0
Total	22	100.0	100.0	

The pre-test results indicate that students’ listening comprehension levels prior to the intervention were generally moderate to low, with scores concentrated in the lower and middle ranges. The overall distribution shows considerable variability, reflecting differences in students’ initial listening proficiency and prior exposure to TOEFL-style listening tasks. A

large proportion of students scored at or below the mid-range level, suggesting that many participants had not yet developed sufficient listening strategies or familiarity with academic listening materials before the treatment.

This pattern demonstrates that students entered the study with uneven preparedness, which reinforces the need for targeted instructional support in listening comprehension. Rather than focusing on isolated score frequencies, the distribution as a whole highlights a baseline condition characterized by limited listening confidence and inconsistent performance. These findings provide a clear justification for the implementation of a mobile-assisted TOEFL preparation intervention, as students required structured input, repeated exposure, and guided practice to strengthen their listening skills before meaningful improvement could occur.

*Table 2. Students score of post-tests*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	62	1	4.5	4.5	4.5
	64	1	4.5	4.5	9.1
	65	1	4.5	4.5	13.6
	66	1	4.5	4.5	18.2
	69	1	4.5	4.5	22.7
	70	2	9.1	9.1	31.8
	71	1	4.5	4.5	36.4
	72	1	4.5	4.5	40.9
	73	2	9.1	9.1	50.0
	75	1	4.5	4.5	54.5
	77	3	13.6	13.6	68.2
	78	2	9.1	9.1	77.3
	79	2	9.1	9.1	86.4
	81	1	4.5	4.5	90.9
	82	1	4.5	4.5	95.5
	84	1	4.5	4.5	100.0
Total		22	100.0	100.0	

The post-test results demonstrate a clear shift toward higher listening comprehension levels following the intervention. Students' scores were more concentrated in the upper range compared to the pre-test, indicating an overall improvement in performance. The distribution suggests that a substantial number of students achieved scores above the mid-range level, reflecting enhanced familiarity with TOEFL-style listening tasks and improved listening strategies.

This upward shift in score distribution highlights the positive learning impact of the *Preparation for the TOEFL Test* application. The increased concentration of scores in the higher range suggests that students were better able to process spoken input, manage listening tasks more effectively, and apply test-taking strategies after using the application.

Overall, the post-test results confirm that the intervention not only improved average performance but also contributed to more consistent listening outcomes across participants, supporting the effectiveness of mobile-assisted learning in TOEFL-oriented listening instruction.

### ***Normality Test***

The One-Sample Kolmogorov-Smirnov (K-S) test is used to determine whether sample data comes from a normal distribution. The following is an explanation of the results of the K-S test based on the data provided:

*Table 3. Normality test results*

One-Sample Kolmogorov-Smirnov Test		
N		Unstandardized Residual 22
Normal Parameters <sup>a,b</sup>	Mean	.0000000
	Std. Deviation	3.42157459
	Absolute	.155
Most Extreme Differences	Positive	.155
	Negative	-.118
Test Statistic		.155
Asymp. Sig. (2-tailed)		.182 <sup>c</sup>
a. Test distribution is Normal.		
b. Calculated from data.		
c. Lilliefors Significance Correction.		

The normality test using the Kolmogorov–Smirnov procedure indicated that the data were normally distributed, as the significance value exceeded the standard alpha level of 0.05. This result confirms that the distribution of residuals did not significantly deviate from normality, thereby fulfilling a key assumption for parametric statistical analysis. The confirmation of normal distribution supports the appropriateness of using a paired-samples t-test to examine differences between pre-test and post-test scores, ensuring that the observed improvement in listening comprehension reflects genuine treatment effects rather than violations of statistical assumptions.

### ***Homogeneity Test***

Test of Homogeneity of Variances, used in statistics to determine whether the variances of several data groups are the same. This test is often the first step before performing an analysis of variance (ANOVA). Here is an explanation of each part of the data.

Table 4. Test of homogeneity of variances

Results	Levene Statistic	df1	df2	Sig.
Based on Mean	.007	1	42	.933
Based on Median	.002	1	42	.966
Based on Median and with adjusted df	.002	1	40.870	.966
Based on trimmed mean	.002	1	42	.960

The homogeneity of variance test confirmed that the pre-test and post-test scores met the assumption of equal variances. The results indicate that there was no statistically significant difference in variance between the two sets of scores, as all significance values exceeded the conventional threshold of 0.05. This finding suggests that the variability of students' listening scores remained consistent across measurement points, ensuring the reliability of subsequent inferential analysis. Meeting this assumption strengthens the validity of the paired-samples t-test results, as the observed improvement in listening comprehension can be attributed to the intervention rather than to unequal score dispersion between pre-test and post-test conditions.

### Paired Samples Statistics

In paired sample statistical analysis, we have two groups of data being compared, namely pretest and post-test. The following is a description of the statistics obtained:

Table 5. Paired samples statistics

Pair 1	Mean	N	Std. Deviation	Std. Error Mean
Pre-test	60.23	22	6.429	1.371
Post-test	73.73	22	6.104	1.301

In the pretest group, the mean value (Mean) was 60.23 with a sample size (N) of 22. The standard deviation (Std. Deviation) of this group was 6.429, indicating how the data were spread out from the mean. Meanwhile, the standard error of the mean (Std. Error Mean) was 1.371, illustrating the level of uncertainty in the estimate of the mean. For the post-test group, the mean value increased to 73.73, also with a sample size of 22. The standard deviation for this group was 6.104, slightly lower than the pretest group, indicating that the posttest data may be more consistent or less variable. The standard error of the mean for this group was 1.301.

Table 6. Paired samples correlations

Pair 1	N	Correlation	Sig.
pretest & post-test	22	.828	.000

In this study, paired samples correlations analysis was performed to determine the correlation between scores of pretest and post-test. The amount of samples analysed was 22 (N = 22). The outcomes of the analysis revealed the existence of a very strong relationship

between the pretest and post-test scores, and the correlation was 0.828. The value of the significance (Sig.) is 0.000 and it implies that this relationship is highly significant. In this way, it can be concluded that the results between pretest and post-test are considerably connected to the data under analysis.

The mean difference between the pretest and post-test scores is -13.500. This negative value suggests that the post-test scores were generally higher than the pretest scores. The standard deviation of the differences is 3.687, which indicates the variability of the paired differences around the mean difference. The standard error of the mean difference is 0.786, providing an estimate of how much the sample mean difference might vary from the true population mean difference. The confidence interval of the difference of 95 percent is set to be between -15.135 to -11.865. This does not imply the zero value, again supporting the fact that the pretest and post-test scores vary significantly. t-Value and Degrees of Freedom (df): The t-test has a value of -17.173 and a degree of freedom of 21, which implies the amount of independent comparisons in the test. The p-value is .000 which is less than the traditional alpha value of 0.05. The outcome of this finding means that there is a statistically significant difference between the pretest and post-test scores.

### ***The Students Perception toward Preparation for the TOEFL Test Application***

The perception of student with high anxiety level toward *Preparation for the TOEFL Test App* is presented in Table 1 below

*Table 7. The students' perception toward preparation for the TOEFL test app*

Statement	SD	D	N	A	SA
<i>Preparation for the TOEFL Test application can be accessed anywhere and anytime</i>	0 (0%)	1 (8%)	1 (8%)	6 (46%)	5 (38%)
<i>Preparation for the TOEFL Test application is able to improve students' English listening skill.</i>	0 (0%)	0 (0%)	2 (15%)	4 (31%)	7 (54%)
<i>Preparation for the TOEFL Test is easy to understand and to operate.</i>	1 (8%)	1 (8%)	0 (0%)	8 (61%)	3 (23%)
<i>Preparation for the TOEFL Test is able to create students' English listening habit</i>	0 (0%)	2 (15%)	0 (0%)	4 (31%)	7 (54%)
<i>The Preparation for the TOEFL Test involves exciting elements that captivate students to improve their listening skills.</i>	0 (0%)	1 (8%)	0 (0%)	8 (61%)	4 (31%)
<i>Preparation for the TOEFL Test makes learning listening more enjoyable and relaxed.</i>	0 (0%)	1 (8%)	0 (0%)	10 (76%)	2 (16%)
<i>Preparation for the TOEFL Test is an intriguing application.</i>	0 (0%)	2 (16%)	1 (8%)	8 (61 %)	2 (16%)

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<i>Preparation for the TOEFL Test</i> aids students in enhancing their listening skills more efficiently.	1 (8%)	0 (0%)	2 (18%)	7 (54%)	3 (23%)
<i>Preparation for the TOEFL Test</i> engages students in a dynamic way, enhancing their listening skills and keeping them interested in the learning process.	0 (0%)	2 (18%)	0 (0%)	2 (15%)	9 (67%)
<i>Preparation for the TOEFL Test</i> enhances students' motivation in acquiring listening skills.	0 (0%)	1 (8%)	0 (0%)	2 (15%)	10 (77%)

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*Statement 1: Preparation for the TOEFL Test application can be accessed anywhere and anytime*

Table 1 indicated that 5 students (38%) selected strongly agree, 6 (46%) selected agree, and 1 (8%) stayed neutral regarding the accessibility of Preparation for the TOEFL Test application at any time and from anywhere. Another student had a disagreeing perception, accounting for 8%.

*Statement 2: Preparation for the TOEFL Test application is able to improve students' English listening skill*

The data presented in Table 1 shows that 7 students (54%) selected strongly agree, 4 students (31%) opted for agree, and 2 students (15%) remained neutral about the effectiveness of Preparation for the TOEFL Test in improving students' English listening skills.

*Statement 3: Preparation for the TOEFL Test is easy to understand and to operate*

According to the results in Table 1, 3 students (23%) selected strongly agree, 8 students (61%) selected agree, and 1 student (8%) selected disagree on how easy it is to comprehend and use the Preparation for the TOEFL Test application. Another student, who made up 8% of the sample, held a strongly disagreeing perspective.

*Statement 4: Preparation for the TOEFL Test is able to create students' English listening habit*

The findings presented in Table 1 indicate that 7 students (54%) expressed strong agreement, 4 students (31%) indicated agreement, and 2 students (16%) disagreed regarding the impact the Preparation for the TOEFL test in creating students' English listening habits.

*Statement 5: The Preparation for the TOEFL Test involves exciting elements that captivate students to improve their listening skills*

The findings presented in Table 1 indicate that 7 students (54%) expressed strong agreement, 4 students (31%) indicated agreement, and 2 students (16%) disagreed

regarding the elements of The Preparation for the TOEFL Test that captivate students to improve their listening skills.

*Statement 6: Preparation for the TOEFL Test makes learning listening more enjoyable and relaxed.*

The data shown in Table 1 reveal that 7 students (54%) demonstrated strong agreement, 4 students (31%) showed agreement, and 2 students (16%) disagreed concerning the elements of The Preparation for the TOEFL Test that captivate students in improving their listening skills.

*Statement 7: Preparation for the TOEFL Test is an intriguing application.*

Table 1 shows that 2 students (16%) selected strongly agree, 8 (61%) selected agree, and 1 (8%) remained neutral about the view that Preparation for the TOEFL Test is an intriguing application. Two other students held a disagreeing viewpoint, representing 16%.

*Statement 8: Preparation for the TOEFL Test aids students in enhancing their listening skills more efficiently.*

The accessibility of the Preparation for the TOEFL Test application can more effectively improve students' listening skills, as indicated by Table 1. Three students (23%) selected strongly agree, seven (54%) selected agree, and two (16%) remained neutral. Another student held a disagree perspective, which accounted for 8% of the total.

*Statement 9: Preparation for the TOEFL Test engages students in a dynamic way, enhancing their listening skills and keeping them interested in the learning process.*

Table 1 indicates that 9 students (67%) strongly agreed, 2 students (16%) agreed, and 2 students (16%) disagreed regarding the effectiveness of the Preparation for the TOEFL Test in engaging students dynamically, enhancing their listening skills, as well as keeping their interest in the learning process.

*Statement 10: Preparation for the TOEFL Test enhances students' motivation in acquiring listening skills.*

Table 1 reveals that 10 students (76%) expressed strong agreement, 2 (16%) indicated agreement, and 1 (8%) indicated disagreement concerning the assertion that preparation for the TOEFL Test can significantly enhance students' motivation to improve listening skill

## **DISCUSSION**

### ***The Effectiveness of Preparation for the TOEFL Test application to Improve Listening Comprehension of Students with Low Anxiety Level.***

The goal of this study is to know the effectiveness of TOEFL Learning English app on the listening skill of students with high anxiety. To reveal how this application helps learners learn listening effectively. On the posttest, listening skill of students increased. Many students got scores above the average.

The normalization was confirmed by a mean of 0.000000 and a standard deviation of

3.42157459. The text discusses the interpretation of p-values and Levene's test results to determine the homogeneity of variances between groups with p-value above 0.05 suggests no significant difference in variance between groups. In a study, analyzing pretest and post-test scores, the pretest group had a mean score of 60.23 with a standard deviation of 6.429, while the post-test group's mean increased to 73.73 with a slightly lower standard deviation of 6.104. Both groups had a sample size of 22. The analysis revealed a strong correlation of 0.828 between the pretest and post-test scores, with a significance value of 0.000, indicating a statistically significant relationship. The mean difference between the scores was -13.500, signifying higher post-test scores. The standard deviation of the differences was 3.687, and the standard error of the mean difference was 0.786. The 95% confidence interval for the difference ranged from -15.135 to -11.865, not including zero, thus confirming a significant difference. The t-value of -17.173 with 21 degrees of freedom and a p-value of .000 further supported the conclusion of a statistically significant difference between pretest and post-test scores.

This research finding is consistent with Biju et al. (2024). Based on their study, it is established that Spotify Application could be used in teaching and learning listening skill among students in the eighth grade of SMP Pangudi Luhur Sukaraja. Moreover, according to Mulyadi et al.(2021), students improve the learning of the English listening skill by using the Duolingo application. The research is in line with the research conducted by Ahada and Setiawan (2024). They found the use of the Mobile Listen English DailyPractice App improves students' comprehensive understanding of listening skills and could be more widely integrated into English language teaching to enhance students' listening skills. In addition, a research conducted by Jawad (2024) revealed the similar result. He found mobile learning can have a significant effect on improving listening and speaking skills.

### ***Students' Perception Toward Preparation for the TOEFL Test Application to Improve Their Listening Skills***

The other aim of the study is to unveil the perception of the students towards Preparation of the TOEFL Test application to enhance the skills in listening. The application of mobile application in learning English has brought about high-level feedback through students. Difficulties in their listening exercise can be addressed more effectively by use of mobile application in learning because they can learn at any location and at any time. Most students of Universitas Muhammadiyah Purworejo did not learn English via any application in their cell phone before the pilot study. They just used the cell phone to communicate and interact with the social media. Having already done the pilot study and presented the applications they should use to improve their English, students gained enthusiasm, motivation, and interest to learn how to listen.

From a theoretical standpoint, students' positive perceptions toward the *Preparation for the TOEFL Test* application can be interpreted through the framework of the Technology Acceptance Model (TAM), which emphasizes perceived usefulness and perceived ease of use as key determinants of technology adoption. This finding is line with Jaelani and Rahmah (2019) . They found most of the students perceive that the use of m-learning can improve their English skills and enable them to independent learning. In addition, the similar result

was also found in the research conducted by Novarita and Srikandi (2021). They revealed that majority of university students agreed that mobile technology was useful and easy to use for learning English. The high levels of agreement regarding accessibility, enjoyment, and motivational impact indicate that students viewed the application as both functional and user-friendly, which in turn fostered sustained engagement in listening practice.

Furthermore, the flexibility of mobile-assisted learning aligns with principles of self-regulated learning, allowing students to control the pace, frequency, and intensity of their listening activities. This autonomy appears to have reduced cognitive overload and test-related anxiety, particularly for students who previously relied solely on conventional classroom instruction. By integrating TOEFL-oriented materials with a mobile learning environment, the application not only addressed learners' practical needs but also supported affective and motivational dimensions of language learning. Consequently, the positive perceptions reported in this study provide theoretical support for the role of mobile applications as effective tools in enhancing learner acceptance, engagement, and readiness for standardized English proficiency assessments.

## CONCLUSION

A total of 22 students completed the post-test, with scores ranging from 62 to 84 and the highest frequency observed at a score of 77, indicating a generally consistent distribution without extreme outliers. In comparison, the pre-test scores showed greater variability, reflecting differing levels of preparedness prior to the instructional intervention. The homogeneity test confirmed that score variances were statistically consistent ( $p > 0.05$ ), validating the reliability of subsequent inferential analysis. The paired-samples test demonstrated a statistically significant improvement from pre-test to post-test, supported by the negative mean difference, the 95% confidence interval excluding zero, and a highly significant p-value. These findings provide robust empirical evidence that the *Preparation for the TOEFL Test* application contributes meaningfully to improving EFL students' listening comprehension.

Beyond statistical significance, this study offers important pedagogical and practical implications. The results highlight the potential of mobile-assisted learning to function as an effective supplement to conventional listening instruction, particularly in TOEFL-oriented contexts. The observed improvement suggests that structured, test-focused mobile applications can enhance students' readiness for standardized English proficiency assessments while promoting learner autonomy. For educators, this implies that integrating mobile applications into listening instruction may help address varied proficiency levels and reduce reliance on time-limited classroom practice. At an institutional level, the findings support the inclusion of mobile-based TOEFL preparation as part of English language programs to foster flexible, self-directed learning and improve overall listening outcomes.

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