



SoundCloud-Based Mobile Learning and Arabic Listening Skills: A Quasi-Experimental Study in Indonesian Madrasah

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Abstract

The aim of this study is to examine the effect of Mobile Phone-Based Learning using the SoundCloud application on students' Arabic listening skills among eleventh-grade students at MAN 1 Sungai Penuh, Jambi. This study employed a quantitative approach with a quasi-experimental method using a non-equivalent control group design. Data were collected through observation, interviews, and tests. The findings revealed that students in the experimental class achieved higher posttest scores (84.75) compared to the control class (69.42), indicating a substantial improvement in listening performance. The results of the independent samples t-test showed a statistically significant difference between the two groups ($t = -10.378$, $df = 69$, $p < 0.001$), confirming the effectiveness of the treatment. Therefore, it can be concluded that the use of Mobile Phone-Based Learning through the SoundCloud application is more effective than conventional instruction in enhancing students' Arabic listening skills.

Keywords: Arabic Listening Skills, Mobile Learning, SoundCloud, Maharah Istimā', Quasi-Experimental Research, Indonesian Madrasah

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INTRODUCTION | مقدمة

The integration of digital technology in education requires continuous innovation in teaching and learning processes, including in Arabic language instruction (Sahib & Angraeny, 2025). One essential component in learning is instructional media, which works alongside objectives, materials, methods, approaches, strategies, and evaluation to achieve effective learning outcomes (Fadli & Syahputri, 2025). Instructional media refers to any tools or resources used to create an appropriate learning environment that facilitates students in acquiring knowledge, experience, and skills. In practice, instructional media plays significant roles, such as enhancing students' attention and motivation, simplifying the delivery of information, developing thinking skills, and accommodating individual differences (Rizqoh, 2024).

Instructional media can be classified into three main types: audio, visual, and audio-visual media. Audio media, in particular, is closely related to the development of listening skills as it relies on the sense of hearing. It supports listening activities by helping students focus their attention, understand meaning from context, distinguish relevant information, and recall and reproduce what they have heard (Muhammad et al., 2025). Therefore, audio media is highly relevant in language learning, especially for improving listening skills.

One of the most widely used forms of audio media today is the mobile phone. Mobile

phones are wireless communication devices that are portable, easy to use, and capable of accessing various learning applications, storing materials, and replaying audio content (At-Tamimi & Syaikh, 2021). Since its invention by Martin Cooper in 1973, mobile technology has significantly evolved and is now an integral part of technology-based learning. Mobile learning enables students to learn anytime and anywhere, enhances interaction, and promotes independent learning through quick access to digital resources (Oktaviane et al., 2024).

In this context, the use of audio platforms such as SoundCloud represents a promising alternative for instructional media. SoundCloud is an audio-sharing platform that allows users to upload, access, and interact with audio content. It provides features such as replay options, playlists, and comment sections that can support learning activities. These features can increase students' motivation, provide flexibility in accessing materials, and support individualized learning based on students' needs. (Putra et al., 2024)

The study by Muhammad Imran Rasadi found that the use of SoundCloud media has a positive effect on the teaching of speaking skills in English language learning at the State Islamic University of Walisongo Semarang (Rosadi et al., 2021). Furthermore, Daniel Goli showed that SoundCloud plays an important role as a social music platform that is not only used for distributing musical works but also functions as a collaborative learning space. Through interactions in the form of comments, discussions, and feedback among users, this platform supports both formal and informal learning processes that are both individual and collaborative in nature (Gouly, 2019).

Previous studies have indicated that the use of SoundCloud has a positive impact on language learning, particularly in listening and speaking skills (Muniroh, 2021). However, these studies have not specifically examined listening skills in the context of Arabic language learning at the senior high school level. In addition, prior research has mostly focused on online learning environments or different levels of education, indicating the need for more specific and context-based studies.

Based on the results of observations and interviews conducted at Madrasah Aliyah Negeri 1 Sungai Penuh, it was found that students' listening skills remain low. The learning process tends to rely on traditional methods, primarily using textbooks without adequate support from audio media. As a result, students face difficulties in understanding both explicit and implicit meanings, analyzing text content, and providing appropriate responses. The data indicate that the majority of students in class XI F1.A have not yet achieved the Learning Objective Achievement Criteria (KKTP) in Arabic listening skills, with an average score still below the required standard, namely 63.75.

Furthermore, students expressed the need for audio-based learning media that can be accessed through digital devices such as mobile phones. Teachers also acknowledged that the lack of instructional media, particularly in teaching listening skills, has become a major obstacle in creating interactive and effective learning environments. This condition highlights the urgent need for integrating technology-based instructional media that aligns with students' characteristics.

Based on these problems, the use of mobile-based learning through SoundCloud is considered a relevant solution. This media enables more engaging, flexible, and interactive learning experiences, while supporting the achievement of listening skill objectives. Therefore, this study aims to examine the effect of mobile-based learning using SoundCloud on students' listening skills among eleventh-grade students at Madrasah Aliyah Negeri 1 Sungai Penuh.

This study employed a quantitative approach using an experimental method conducted in a field setting. The research design applied was a quasi-experimental design, specifically a non-equivalent control group design (Prisuna et al., 2024).

The implementation procedures were as follows (Sanjaya, 2013):

1. A pre-test (T1) was administered, and the mean score was calculated to determine students' initial performance before the treatment.
2. The treatment (X) was applied, consisting of the use of Mobile-Based Learning media through SoundCloud .
3. A post-test (T2) was conducted, and the mean score was calculated to determine students' performance after the treatment.
4. The mean scores of the pre-test and post-test were compared to identify the difference in outcomes resulting from the treatment.
5. Statistical analysis was performed to determine the significance of the observed differences.

Table 1. *Pretest-Posttest Control Group Design*

Pre-test	Treatment	Post-test
To	X	T1
To	-	T1

Notes:

T0 : Pre-test results of the experimental and control groups.

T1 : Post-test results of the experimental and control groups.

X : Treatment, namely the use of Mobile-Based Learning media through SoundCloud .

Research Population and Sample

The population of this study consisted of eleventh-grade students at Madrasah Aliyah Negeri 1 Sungai Penuh, Jambi. The sampling technique used in this study was purposive sampling, based on specific considerations. The sample included two classes of the eleventh grade: the experimental class (XI F1.A) and the control class (XI F1.B). The experimental class consisted of 36 students, while the control class consisted of 35 students.

The reason for selecting these two classes was that their academic performance levels were relatively similar and categorized as below average. Therefore, the researcher aimed to improve their listening skills through the use of mobile learning media based on SoundCloud.

Data Collection Techniques

Data collection techniques refer to the logical and systematic procedures undertaken by the researcher to obtain data relevant to the study. The procedures applied in this research are as follows:

1. Collecting data related to the research problem, namely the use of Mobile-Based Learning media through SoundCloud , by conducting interviews and observations with the Arabic language teacher.
2. Collecting data on students' listening skills at the eleventh-grade level through testing, namely a pre-test and a post-test.

3. Collecting documentation data as evidence that the study was conducted using Mobile-Based Learning media through SoundCloud .

Data Analysis Technique

The data analysis method used in this study was quantitative analysis. The analysis of test data was conducted to determine the results of eleventh-grade students' listening skills before and after the use of Mobile-Based Learning media through SoundCloud in improving their listening ability. After the pretest and posttest scores were classified, the researcher used SPSS version 27 to perform normality testing, homogeneity testing, and a t-test, specifically the paired samples t-test and independent samples t-test. (Nuryadi et al., 2017).

RESULT | نتائج

The researcher first administered a pretest to both the experimental and control classes. The material used in the test was "travel." The scoring criteria and the pretest results of the experimental class are presented as follows:

Table 2. Assessment criteria for teaching Arabic in the eleventh grade

No	Score Range	Category
1	95-100	Excellent
2	87-94	Very Good
3	81-86	Good
4	75-80	Fair
5	10-74	Poor

Pretest Results in the Experimental Class

The pretest results in the experimental class are presented in Table 3 below.

Table 3. Pretest Results of Listening Skills in the Experimental Class

No	Student Name	Score	Category
1	Student 1	50	Poor
2	Student 2	55	Poor
3	Student 3	57	Poor
4	Student 4	62	Poor
5	Student 5	50	Poor
6	Student 6	59	Poor
7	Student 7	64	Poor
8	Student 8	64	Poor
9	Student 9	52	Poor
10	Student 10	60	Poor
11	Student 11	59	Poor
12	Student 12	64	Poor
13	Student 13	66	Poor
14	Student 14	52	Poor
15	Student 15	80	Fair
16	Student 16	57	Poor
17	Student 17	65	Poor
18	Student 18	61	Poor
19	Student 19	52	Poor
20	Student 20	66	Poor
21	Student 21	59	Poor
22	Student 22	41	Poor
23	Student 23	69	Poor
24	Student 24	82	Good

25	Student 25	62	Poor
26	Student 26	59	Poor
27	Student 27	66	Poor
28	Student 28	50	Poor
29	Student 29	59	Poor
30	Student 30	78	Fair
31	Student 31	52	Poor
32	Student 32	59	Poor
33	Student 33	64	Poor
34	Student 34	64	Fair
35	Student 35	52	Poor
36	Student 36	69	Poor
Total Score		2180	
Mean Score		60.55	

Based on Table 3, the total score of the pretest in the experimental class was 2180, with a mean score of 60.55, which falls into the “poor” category and is still considered low. The highest score was 82, while the lowest score was 41. Out of 36 students, 33 students did not meet the minimum mastery criterion, while only 3 students achieved it. These results indicate that students’ listening skills are still low.

In this study, the Shapiro–Wilk test was employed because the sample size in each group was less than 50. To facilitate the analysis, the following criteria were used:

1. If the significance value (Sig.) > 0.05, the data are normally distributed.
2. If the significance value (Sig.) ≤ 0.05, the data are not normally distributed.

Table 4. Normality test results of the pretest

Nilai	Kelas	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
	eksperimen	,125	36	,166	,952	36	,124
	kontrol	,093	35	,200 [*]	,958	35	,201

Based on the results of the Shapiro–Wilk test, all significance values (Sig.) in each group are greater than 0.05, namely 0.124 for the experimental class and 0.201 for the control class. Therefore, it can be concluded that all data in this study are normally distributed.

In this study, the homogeneity test was conducted using Levene’s test to examine the equality of variances across groups. This test can be based on several approaches, such as the mean, median, and trimmed mean. To facilitate the analysis, the following criteria were used:

1. If the significance value (Sig.) > 0.05, the data are homogeneous.
2. If the significance value (Sig.) ≤ 0.05, the data are not homogeneous.

Table 5. Homogeneity test results of the pretest

Nilai		Levene Statistic		df2	Sig.
		Statistic	df1		
	Based on Mean	2,518	1	69	,117
	Based on Median	2,435	1	69	,123
	Based on Median and with adjusted df	2,435	1	54,243	,124
	Based on trimmed mean	2,506	1	69	,118

Based on the previous table, all significance values (Sig.) obtained from various methods are greater than 0.05, namely 0.117 for both the experimental and control classes. This indicates that there is no statistically significant difference in variance between the two groups. In other words, the data from both groups have homogeneous variances.

After the implementation of Mobile-Based Learning media through SoundCloud in teaching students' listening skills, the researcher administered a posttest to both the experimental and control classes. The posttest results of the experimental class are presented as follows:

Posttest Results in the Experimental Class

The posttest results of the experimental class are presented in Table 6 below.

Table 6. Posttest Results of Listening Skills in the Experimental Class

No	Student Name	Score	Category
1	Student 1	83	Good
2	Student 2	92	Very Good
3	Student 3	76	Fair
4	Student 4	85	Good
5	Student 5	83	Good
6	Student 6	80	Fair
7	Student 7	83	Good
8	Student 8	72	Poor
9	Student 9	92	Very Good
10	Student 10	85	Good
11	Student 11	78	Fair
12	Student 12	83	Good
13	Student 13	90	Very Good
14	Student 14	81	Good
15	Student 15	96	Excellent
16	Student 16	83	Good
17	Student 17	85	Good
18	Student 18	72	Poor
19	Student 19	85	Good
20	Student 20	92	Very Good
21	Student 21	80	Fair
22	Student 22	92	Very Good
23	Student 23	88	Very Good
24	Student 24	96	Excellent
25	Student 25	85.5	Good
26	Student 26	81	Good
27	Student 27	72	Poor
28	Student 28	83	Good
29	Student 29	85	Good
30	Student 30	96	Excellent
31	Student 31	85	Good
32	Student 32	89.5	Very Good
33	Student 33	83	Good
34	Student 34	80	Fair
35	Student 35	87	Very Good
36	Student 36	92	Very Good
Total Score		3051	
Mean Score		84.75	

Based on Table 6, the total posttest score in the experimental class was 3051, with a mean

score of 84.75, which falls into the “good” category. The highest score was 96, while the lowest score was 72. Out of 36 students, 33 students achieved the minimum mastery criterion, while only 3 students did not. These results indicate that students’ listening skills improved to a good level after the treatment.

The researcher used SPSS version 27 to test the hypothesis. The decision criteria were as follows:

1. If the significance value (Sig.) > 0.05, H₀ is accepted and H_a is rejected.
2. If the significance value (Sig.) ≤ 0.05, H₀ is rejected and H_a is accepted.

The results of the hypothesis test comparing the pretest and posttest scores of the experimental class after the implementation of Mobile-Based Learning media through SoundCloud in teaching Arabic listening skills are presented as follows:

Table 7. Hypothesis test results

Paired Samples Statistics									
		Mean	N	Std. Deviation	Std. Error Mean				
Pair 1	PretestEksperimen	60.5556	36	8.63695	1.43949				
	PosttestEksperimen	84.7500	36	6.40591	1.06765				

Paired Samples Test									
		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	PretestEksperimen - PosttestEksperimen	-24.19444	10.76521	1.79420	-27.83687	-20.55202	-13.485	35	<.001

The analysis was conducted using a paired samples t-test at a significance level of 0.05. Based on the results obtained using SPSS version 27, the mean pretest score was 60.55, while the mean posttest score was 84.75. The mean difference was -24.19, with a calculated t-value of -13.485 and a significance value (Sig. 2-tailed) of 0.00. Since the significance value is less than 0.05, it can be concluded that the null hypothesis (H₀) is rejected and the alternative hypothesis (H_a) is accepted.

Therefore, it can be concluded that there is a statistically significant difference between the pretest and posttest results in the experimental class. These findings indicate that the use of Mobile-Based Learning media through SoundCloud in teaching listening skills has a positive effect on improving students’ Arabic listening abilities.

The analysis using an independent samples t-test was also conducted to compare the learning outcomes between the experimental and control classes. The results indicate that there is a significant difference between the two groups, with the mean score of the experimental class being higher than that of the control class after the treatment was implemented. Therefore, these findings strengthen the previous results, showing that the use of Mobile-Based Learning media through SoundCloud is more effective than conventional instruction in improving students’ Arabic listening skills.

Independent Samples Test										
Levene's Test for Equality of Variances				t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Nilai	Equal variances assumed	.003	.958	-10.378	69	<.001	-15.321	1.476	-18.267	-12.376
	Equal variances not assumed			-10.387	68.923	<.001	-15.321	1.475	-18.264	-12.379

Based on the results of the independent samples t-test, the significance value of Levene's test was 0.958 (> 0.05), indicating that the assumption of homogeneity of variances was met and the analysis was conducted using the equal variances assumed row. The t-test results showed a t-value of -10.378 with 69 degrees of freedom (df) and a significance value (Sig. 2-tailed) of < 0.001 , indicating a statistically significant difference between the experimental and control classes. The mean difference of -15.321 indicates that the experimental class outperformed the control class by approximately 15 points, with a 95% confidence interval ranging from -18.267 to -12.376, which does not cross zero. Therefore, it can be concluded that the use of Mobile-Based Learning media through SoundCloud is more effective than conventional instruction in improving students' Arabic listening skills.

DISCUSSION

مناقشة

As stated by Muhammad Kamil Al-Naqah, the implementation of listening skills in classroom settings often does not receive adequate attention. Students are typically required to listen to explanations, repeat what the teacher says, and then proceed to exercises and answer questions. Rarely are they given opportunities to listen to language in natural and continuous communicative contexts that allow them to connect prior learning experiences with new situations (Al-Naqah, 1985). Based on this, it can be concluded that the low achievement in students' listening skills is due to the lack of emphasis on teaching listening as an independent skill in the classroom. As a result, students' listening abilities remain low, which is reflected in their academic performance and learning outcomes, as observed in this study.

The results of the study indicate that the use of Mobile-Based Learning media through SoundCloud has a positive and significant effect on the listening skills of eleventh-grade students at Madrasah Aliyah Negeri 1 Sungai Penuh, Jambi. These findings are consistent with the study conducted by Abdul Hamid, Putri Wanti, and Windhi Kristi, which confirmed that the use of mobile devices has a statistically significant effect on improving students' listening skills (Hamid & Chrysty, 2024). Furthermore, the study reveals that the diversity of audio features, flexibility of learning time, and immediate feedback provided by mobile-based learning applications contribute to enhancing comprehension, strengthening learning motivation, and promoting learner autonomy in listening skill development.

Cognitively, the use of mobile-based audio media activates dual coding and auditory processing more optimally, in which linguistic information is processed through the auditory channel in a repetitive and contextualized manner. This is in line with the Cognitive Theory of Multimedia Learning proposed by Richard E. Mayer, which states that learning becomes more effective when information is presented through relevant sensory channels without overloading working memory (Mayer, 2024). In this context, features such as replay, audio segmentation, and playback speed control on the SoundCloud platform enable students to manage their cognitive load independently, thereby enhancing listening comprehension.

In addition, from a self-regulated learning perspective, mobile learning provides flexibility in terms of time and place, encouraging students to regulate their own learning strategies. Research by Barry Zimmerman shows that control over the learning process significantly contributes to improved learning outcomes. In this study, students were not merely passive recipients of information as in conventional methods, but actively controlled the frequency, duration, and intensity of their exposure to listening materials (Boroughani et al., 2023).

From a socio-cultural perspective, this effectiveness can also be explained through the

theory of social constructivism proposed by Lev Vygotsky, particularly the concept of the Zone of Proximal Development (ZPD). Media such as SoundCloud provide access to more authentic and varied language input, allowing students to learn in contexts closer to real language use. This enriches linguistic input and enables scaffolding to occur both independently and through guided interaction with the teacher. Research published in the journal *Computer Assisted Language Learning* by Robert Godwin-Jones also indicates that mobile-assisted language learning increases exposure to the target language in more natural and communicative contexts (Godwin-jones, 2017).

Furthermore, motivational aspects also play an important role. The use of mobile-based applications tends to enhance intrinsic motivation as it aligns with students' digital habits. A study by Glenn Stockwell in the *Calico Journal* found that the use of mobile devices in language learning increases engagement and practice frequency, which directly impacts the improvement of receptive skills such as listening (Stockwell, 2013).

Thus, the advantage of mobile learning through SoundCloud lies not only in the medium itself, but also in its ability to activate cognitive processes (cognitive load management and auditory processing), metacognitive processes (self-regulated learning), and socio-cultural processes (authentic language exposure and meaning construction). This combination is not optimally found in conventional methods, which tend to be one-directional and limited to classroom contexts.

In the posttest, the experimental class that used Mobile-Based Learning media through SoundCloud in teaching listening skills achieved a highest score of 96, a lowest score of 72, and a mean score of 84.75, which falls into the "good" category. The researcher found that 33 students met the minimum mastery criterion, while 3 students did not. This indicates that the number of students who achieved mastery increased to 33 in the posttest.

The posttest results of the control class, which did not use Mobile-Based Learning media through SoundCloud in teaching listening skills, showed a highest score of 81, a lowest score of 58, and a mean score of 69.42, which falls into the "poor" category. The researcher found that only 8 students met the minimum mastery criterion, while 27 students remained in the "poor" category. Furthermore, the posttest results in the control class were lower than the pretest results, as the scores of 27 students decreased. This suggests that without the use of supportive instructional media, the improvement of students' listening skills tends to be less optimal.

The posttest results also show that the mean score of students in the experimental class increased considerably compared to the pretest results. In addition, the number of students who exceeded the minimum mastery criterion also increased. This indicates that the use of Mobile-Based Learning media through SoundCloud is effective in improving students' listening skills. These findings are consistent with the study conducted by Ulfah Muniroh, which demonstrated that SoundCloud-based learning media can enhance students' listening abilities (Muniroh, 2021).

Based on the results of hypothesis testing using SPSS version 27, the significance value (Sig. 2-tailed) was 0.00, which is lower than 0.05. Therefore, the null hypothesis (H_0) is rejected and the alternative hypothesis (H_a) is accepted. This indicates that the use of Mobile-Based Learning media through SoundCloud has a significant effect on the listening skills of eleventh-grade students at Madrasah Aliyah Negeri 1 Sungai Penuh, Jambi.

Based on the data presented, the posttest results in the experimental class showed an increase, whereas those in the control class tended to decline. The posttest scores in the control

class remained below the minimum mastery criterion, while the experimental class achieved higher results compared to the control class.

Thus, it can be concluded that the use of Mobile-Based Learning media through SoundCloud contributes to the improvement of students' listening achievement. The findings also indicate that the posttest scores of the experimental class were higher than the pretest scores of the control class.

CONCLUSSION | خاتمة

After analyzing the results of the study on the effect of Mobile-Based Learning media through SoundCloud on the listening skills of eleventh-grade students at Madrasah Aliyah Negeri 1 Sungai Penuh, Jambi, the researcher draws the following conclusion: The use of Mobile-Based Learning media through SoundCloud has been proven effective in improving students' listening skills. This is indicated by the difference in learning outcomes before and after the implementation of the media. The mean posttest score in the experimental class reached 84.75 (good category), while the control class obtained 69.42 (poor category). The results of the hypothesis test using the paired samples t-test showed a significance value (Sig. 2-tailed) of 0.00 (< 0.05), indicating that the null hypothesis (H_0) is rejected and the alternative hypothesis (H_a) is accepted. Therefore, the use of SoundCloud has a statistically significant effect on improving students' listening skills.

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