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Students' Perception of the Use of Arabic Language Learning Applications (Al-Kunuz and Rosetta Stone) in Online Learning in Islamic Universities

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ABSTRACT
This research aims to evaluate students' perceptions of the use of Arabic language learning applications, Al-Kunuz and Rosetta Stone, in the context of online learning in Islamic universities, especially at STAI Kuningan. The method used is a quantitative approach with a descriptive research design, involving 100 students as respondents. Data were collected through questionnaires measuring students' perceptions of the ease of use and effectiveness of the applications in improving speaking, listening, reading, and writing skills. The results showed that the Al-Kunuz app received positive ratings for improving speaking and listening skills, with average scores of 4.2 and 4.3, respectively, while the Rosetta Stone app was more effective in improving reading and writing skills, with average scores of 4.2 and 4.1. Linear regression analysis revealed a significant relationship between the use of the two apps and the improvement of students' Arabic language skills, with an R-squared value of 0.76. This indicates that 76% of the variation in Arabic language skills improvement can be explained by the use of the apps. However, several obstacles—such as unstable internet connections and the need for training in application use—hinder optimizing the use of this technology. These findings provide important insights for the development of technology-based Arabic language learning in Islamic universities, with particular attention to improving infrastructure and training for both teachers and students.

INTRODUCTION

Arabic has a very important position in Islamic education, especially in understanding the main religious texts such as the Qur'an and hadith. In Indonesia, mastery of Arabic is one of the main requirements for students at Islamic universities to be able to explore religious science comprehensively. However, Arabic teaching in Islamic universities faces various challenges, one of which is the limitations of conventional teaching methods that rely on textbooks and face-to-face teaching. Although effective at some point, these methods are often insufficient to accommodate the diversity of students' Arabic language knowledge backgrounds. Therefore, the use of technology in Arabic language learning offers the potential to overcome these limitations (Al-Fahad, 2020).

In recent years, technology has made a great contribution in the field of education, especially in language learning. Language learning apps such as *Al-Kunuz* and Rosetta Stone have been widely used in various educational institutions as tools to improve Arabic language skills. This technology provides a more flexible and interactive approach, allowing students to learn anytime and anywhere (Artificial intelligence, 2025; The Use, 2024). However, even though this technology is increasingly used, students' perceptions of the effectiveness of Arabic

language learning applications in the context of online learning in Islamic universities are still not widely researched. Most of the research focuses more on technology in general without delving into students' perceptions in the specific context of Islamic education (M. Hossain & Ahmed, 2020).

Existing research on technology-enhanced language learning has largely focused on general effectiveness or usability in broad, often Western or Middle Eastern, contexts (Zhang & Wang, 2021; Al-Khater, 2020). For instance, studies by Hossain & Ahmed (2020) and Tariq (2020) have extensively discussed the theoretical benefits and general challenges of using digital tools for Arabic. However, they have not sufficiently explored the nuanced perceptions of the end-users—the students—whose acceptance and experience are crucial determinants of successful technology adoption. Moreover, prior research frequently overlooks the unique socio-cultural and pedagogical ecosystem of Indonesian Islamic universities, where educational objectives intertwine deeply with religious values and where infrastructure limitations, such as unstable internet connectivity, are prevalent (Kabil, 2021). This lack of context-specific investigation represents a significant oversight, as the effectiveness of any educational technology is contingent upon its alignment with the users' needs and the institutional environment (Al-Khresheh et al., 2025; Coleby-Albury, 2024).

Although there is research on the use of technology in foreign language learning in general, few have examined the use of Arabic language learning applications such as *Al-Kunuz* and Rosetta Stone in online learning in Islamic universities. Existing research often only assesses the effectiveness of technology without considering the role of student perception, which, in fact, is very influential in the success of the adoption of such technology (Feng et al., 2025; Koroglu, 2025). Therefore, this study aims to fill this gap by exploring how students view the use of these applications in improving their Arabic language skills (Moussaoui, 2021).

This research offers novelty by highlighting specific Arabic language learning applications, namely *Al-Kunuz* and Rosetta Stone, which have different approaches and features in Arabic language learning. By assessing student perceptions, this study not only evaluates the effectiveness of the applications but also identifies various factors that affect their success in the context of Islamic higher education in Indonesia (Asnawi & Setyaningsih, 2020; Jamin & Mudra, 2025). In this case, student perceptions are the key to understanding whether these applications meet their needs in learning Arabic (Bahruddin & Febriani, 2020; Taufiqurrochman et al., 2020).

The urgency of this research lies in the importance of adapting Arabic teaching methods to rapid technological developments. In today's digital era, where the use of technology-based applications is becoming an integral part of daily life, it is imperative for Islamic universities to integrate technology in their learning more systematically and effectively. This not only increases learning accessibility for students but also allows for more personalized learning according to the speed and learning style of each student (Al-Khater, 2020). Therefore, understanding students' perceptions of these applications is very relevant to optimizing the application of technology in Arabic language teaching in Islamic universities.

In addition, the use of technology in learning Arabic also faces various challenges, such as inequality of access to technology in some regions and lack of training for teachers and students on how to make optimal use of technology. However, a better understanding of

students' perceptions of these applications can help overcome these barriers and improve the effectiveness of online Arabic learning (Tariq, 2020; Kabil, 2021).

At STAI Kuningan, the use of technology in learning Arabic is increasingly the main focus, considering the importance of Arabic in Islamic religious education at the institution (Hamdy & Huda, 2023; Umam et al., 2024). Since the implementation of the online learning system, STAI Kuningan has tried to utilize educational applications to improve students' Arabic language skills (Auliya et al., 2025; Habib, 2025). However, although applications such as *Al-Kunuz* and Rosetta Stone have been introduced in the learning process, students' perceptions of these applications have not been widely researched. This research focuses on examining the perceptions of STAI Kuningan students towards the use of these applications in the context of Arabic language education, as well as providing useful input for the further development of learning technology on this campus (Abdurrahman et al., 2025; Ma et al., 2025).

This study aims to critically investigate the perceptions of students at STAI Kuningan regarding the use of two distinct Arabic language learning applications, *Al-Kunuz* and Rosetta Stone, in their online learning environment. By examining their experiences, ease of use, and perceived effectiveness on different language skills, this research seeks to provide empirical evidence on how these tools are received in practice. It is hoped that this research can make a significant contribution to the development of technology-based Arabic language learning. The findings of this study can be used to design more appropriate policies for integrating Arabic language learning applications in Islamic universities, as well as provide deeper insights into the challenges and opportunities in the application of technology in Arabic language learning.

METHOD

This study employed a quantitative approach, focusing on the collection and analysis of numerical data to explore students' perceptions of the use of *Al-Kunuz* and Rosetta Stone Arabic learning applications in online learning. The quantitative approach was chosen because it enabled researchers to test relationships between variables statistically (Creswell, 2014). The design was a descriptive research design, aimed at systematically and objectively describing existing phenomena without manipulating variables (Sekaran & Bougie, 2020). Data were collected through a survey and processed to determine students' perceptions of these applications in learning Arabic.

The population comprised all active students at STAI Kuningan registered in the Arabic language study program. The sample was drawn using simple random sampling, in which each population member had an equal chance of selection (Creswell, 2014). It consisted of 100 students who met the criteria as active users of the *Al-Kunuz* and Rosetta Stone applications in online Arabic language learning. This sample size was calculated using the Slovin formula to ensure a representative number with an acceptable margin of error.

The Slovin formula is as follows:

n=N/(1=N*e*)

Where:

n = number of samples, N = number of population,

e = margin of error (usually 0.05 or 5%).

Based on this formula, the number of samples used in this study was 100 students, which were then randomly drawn from the existing population.

The instrument used in this study is a questionnaire designed to measure students' perception of Arabic learning applications. The questionnaire consists of two main parts: the first part contains demographic questions that collect data on the student's background, while the second part contains statements measured using a 5-point Likert scale. The Likert scale is used to measure the level of approval or disapproval of respondents to various statements regarding the ease of use, effectiveness, and benefits of the *Al-Kunuz* and Rosetta Stone learning applications (Sekaran & Bougie, 2016). The use of this scale allows for more specific measurements of students' perceptions, which are then analyzed to get a clear picture of their perceptions.

Data was collected through the distribution of online questionnaires to 100 students at STAI Kuningan. The questionnaire was distributed using an online learning platform commonly used by students to ensure that all respondents could access and fill out the questionnaire. Respondents were given two weeks to complete the questionnaire. Once the questionnaire is collected, the data will be screened to ensure its completeness and validity before further analysis. In addition to questionnaires, several students were also interviewed in depth to explore their experiences and perceptions in more detail regarding the use of Arabic language learning applications.

The data collected from the questionnaire will be analyzed using descriptive statistical analysis techniques. Descriptive statistics are used to describe the patterns and distribution of data based on frequency, percentage, mean, and standard deviation (Creswell & Creswell, 2021). In addition, to analyze the relationship between the use of Arabic language learning apps and the improvement of students' language skills, a simple linear regression analysis will be used. Linear regression analysis was used to identify the influence of independent variables (technology use) on dependent variables (students' Arabic language skills) (Sekaran & Bougie, 2020). The linear regression model used is as follows:

$Y=a+bX+e$

Where:

Y = Arabic language skills (dependent variable),

X = the amount of time spent using the app (independent variable),

a = constant,

b = regression coefficient,

ϵ\epsilon = error term.

In this case, regression analysis will show how much influence the use of the app has on the improvement of students' Arabic skills, taking into account the R-squared value to measure the proportion of variation that the model can explain.

To ensure the quality of the research instruments, a validity and reliability test was carried out on the questionnaire. Validity was tested using construct validity, where each item in the questionnaire was measured to the extent that it could represent the construct to be measured, namely students' perception of the Arabic language learning application (Sekaran & Bougie, 2016). The reliability test was performed by calculating Cronbach's Alpha value, which is used to measure the internal consistency of the research instrument. A Cronbach's Alpha value greater than 0.7 indicates that the instrument has good reliability.

RESULTS AND DISCUSSION

The results of this study include students' perceptions of Al-Kunuz and Rosetta Stone Arabic learning applications in the context of online learning at STAI Kuningan. The data collected from the questionnaire was analyzed to see the relationship between app use and students' improvement in Arabic language skills.

Respondent Demographics

The following is the demographic data of respondents who filled out the questionnaire in this study. The following table presents information regarding gender, age, and experience of using the Al-Kunuz and Rosetta Stone applications:

Table 1. Respondent Demographics

Gender Categories	Frequency (n)	Percentage (%)
Male	55	55%
Woman	45	45%
Age		
18-20 Years	40	40%
21-23 Years	50	50%
24-26 Years	10	10%
App Experience		
< 6 Months	30	30%
6-12 Months	40	40%
> 12 Months	30	30%

Source: Processed data, 2024

Table 1 shows the distribution of respondents by gender, age, and app usage categories. Most of the respondents were male (55%) and the majority were aged 21-23 (50%). The majority of the experience of using the Al-Kunuz and Rosetta Stone applications was in the range of 6-12 months (40%), which indicates that the respondents had sufficient experience in using the applications in learning Arabic.

Students' Perception of the Al-Kunuz Application

The results of the analysis showed that the majority of students (80%) felt that the Al-Kunuz app was very helpful in improving their speaking and listening skills. Students find that this app offers a variety of interactive exercises that are very useful, especially in understanding everyday conversations in Arabic.

Table 2. Al-Kunuz average score

Statement	Average Score
The Al-Kunuz *app* is easy to use	**4.2**
Al-Kunuz *app* improves speaking skills	**4.1**

Al-Kunuz *app* improves listening ability	**4.3**

Source: Processed data, 2024

Table 2 shows that the Al-Kunuz app is considered easy to use (4.2), and makes a significant contribution to the improvement of speaking (4.1) and listening (4.3) skills. This shows that most students find this app effective in improving their practical Arabic language skills.

Students' Perceptions of the Rosetta Stone Application

The Rosetta Stone app has also received a positive response from students, with 75% of respondents finding it helpful in improving Arabic reading and writing skills. However, there was a slight difference in the app's assessment compared to Al-Kunuz, where some students (30%) found it difficult to have a less user-friendly interface at the beginning of the app.

Table 3. Rosetta Stone average score

Statement	Average Score
Rosetta Stone app is easy to use	**3.9**
Rosetta Stone app improves reading ability	**4.2**
Rosetta Stone app improves writing skills	**4.1**

Source: Processed data, 2024

Table 3 shows that the Rosetta Stone app is slightly more difficult to use (3.9) compared to Al-Kunuz, but still makes a good contribution in improving Arabic reading (4.2) and writing (4.1) skills.

The Relationship between App Use and Arabic Language Skills Improvement

The results of linear regression analysis showed a significant relationship between the use of the Al-Kunuz and Rosetta Stone applications and the improvement of students' speaking, listening, reading, and writing skills. Based on the results of linear regression, the regression coefficient for Al-Kunuz is 0.58 and for Rosetta Stone is 0.45, indicating that the use of both applications contributes significantly to the improvement of students' Arabic language skills.

The R-squared value for the regression model that includes both applications is 0.76, which suggests that 76% of the variation in students' Arabic language skills improvement can be explained using these applications.

Obstacles Students Face in Using the Application

Although these applications are well received by students, there are several obstacles faced with their use. Some college students (40%) report difficulty accessing the app due to unstable internet connection issues. In addition, 25% of college students also revealed that they need more training to maximize the use of the app, especially in understanding the advanced features offered by the Rosetta Stone app.

Qualitative Analysis of the Interview

In in-depth interviews, some students revealed that they felt that the Al-Kunuz app was more effective in improving speaking skills because of the interactive feature that allowed them to practice speaking directly with the system. In contrast, the Rosetta Stone app is considered more effective in improving reading and writing skills, although students admit that it has a more rigid curriculum compared to other apps.

Based on the results obtained, most students gave a positive assessment of the Al-Kunuz application, especially in the aspects of speaking and listening. A high score on the statement that measures the ease of use and effectiveness of the app in improving speaking and listening skills indicates that students find the app to provide an interactive and enjoyable learning experience. This is in line with research conducted by Pancarani (2017), which shows that technology-based language learning applications such as Al-Kunuz can help students improve their speaking and listening skills in a more flexible and structured way.

Al-Busaidi (2021) also highlighted that interactive applications are very useful for students in learning Arabic, especially in practicing speaking skills that require repeated practice. The conversational practice feature offered by Al-Kunuz allows students to practice speaking in more realistic situations, which can improve their communication skills in Arabic. Thus, these apps have been shown to be effective in improving speaking and listening skills, as also found in research by Zhang & Wang (2021), which states that learning technology can facilitate students in developing their language skills.

Perception of Rosetta Stone Applications

The Rosetta Stone app received quite positive ratings, despite some challenges reported by students. Although the app helps improve reading and writing skills, some college students complain about the app's less user-friendly interface. A lower score on the statement regarding ease of use (3.9) indicates that students find the app a bit more difficult to access compared to Al-Kunuz. This can be linked to research by Tariq (2020), who noted that although apps like Rosetta Stone have a highly structured and useful curriculum, constraints on the user interface can hinder the learning experience.

However, as explained by S. Hossain & Ahmed (2022), apps like Rosetta Stone remain effective in helping students improve their reading and writing skills. This is reflected in the results of the study which showed high scores in the aspects of reading (4.2) and writing (4.1). The app offers text- and visual-based learning methods that are very helpful in developing Arabic reading and writing skills independently.

The Effect of App Use on Improving Arabic Language Skills

The results of linear regression analysis showed a significant relationship between the use of the Al-Kunuz and Rosetta Stone applications and the improvement of students' speaking, listening, reading, and writing skills. This is consistent with previous research conducted by Pancarani (2017), which found that technology-based applications play an important role in improving students' language skills, especially in Arabic language learning. Al-Khater (2020) also noted that language learning technology can speed up the learning process, as students can access the material at any time according to their needs.

The regression analysis conducted in this study showed that the use of the application contributed significantly to the improvement of students' Arabic language skills, with an R-squared value of 0.76. This means that 76% of the variation in Arabic language skills improvement can be explained by the use of the app. These findings reinforce the argument that the integration of technology in Arabic language learning can improve learning effectiveness and student outcomes, as also suggested by Zhang & Wang (2021), who emphasize the importance of technology integration in language education.

Obstacles Faced by Students

While these apps show significant effectiveness, there are some obstacles faced by students, especially when it comes to accessibility and training in using the app. The problem of unstable internet connections is one of the main obstacles faced by students in accessing applications to the fullest. Al-Nasser (2022) noted that the digital divide is still a major challenge in education in many developing countries, including Indonesia. This is in line with the findings in this study, where 40% of college students reported difficulties in accessing applications due to unstable internet connections.

In addition, 25% of college students stated the need for additional training to optimize the use of the app, especially in understanding advanced features. This suggests that while these applications are effective, without adequate training support, students may struggle to maximize their potential. This is also expressed by Kabil (2021), who emphasizes that training for teachers and students on the use of technology is very important so that applications can be used optimally.

Implications for Arabic Language Education in Islamic Colleges

The findings in this study provide important insights for the teaching of Arabic in Islamic universities. The integration of Arabic learning apps such as Al-Kunuz and Rosetta Stone can significantly improve students' Arabic language skills, especially in the aspects of speaking, listening, reading, and writing. Therefore, it is important for educational institutions to focus more on the use of technology in learning Arabic, by ensuring students receive adequate training to maximize these applications.

With obstacles such as access to technology and training needs, Islamic universities need to consider measures that can overcome these barriers, such as improving internet infrastructure on campus and providing training modules for students and faculty on the use of Arabic language learning applications.

CONCLUSION

This study assessed the effectiveness of the *Al-Kunuz* and Rosetta Stone Arabic language learning applications in improving students' skills in online learning at STAI Kuningan. Both applications positively contributed to improvements in speaking, listening, reading, and writing skills, with *Al-Kunuz* scoring higher in speaking and listening, and Rosetta Stone excelling in reading and writing. Linear regression analysis revealed a significant relationship between app use and language skill improvement, explaining 76% of the variance. However, challenges such as unstable internet connections limited full utilization of the applications. The findings suggest that technology integration can enhance Arabic learning effectiveness, but future research

should explore strategies to overcome infrastructural barriers and provide training to maximize the benefits of these applications.

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