

The impact of using mobile applications to learn Arabic vocabulary among non-native secondary students

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Abstract

This paper investigates the challenges faced by non-native secondary students to learn Arabic vocabulary as well as the preferred methods they prefer to use in learning Arabic vocabulary. A sample of 86 non-native students from Baseerah international school from grade 7 to grade 9 participated in this study. The sample answered a questionnaire that contains three sections, the first section is about the participants' demographic data, the second section investigates the preferred learning style for Arabic vocabulary, and the third and last section investigates the preferred application content for learning Arabic vocabulary. The result of the study was clearly shown that students consider that one of the challenges is using the traditional way in learning Arabic vocab, on other hand they preferred to learn through using mobile Apps, the findings also shown that they believe that learning through mobile apps that include videos, pictures, and sound can help them to learn the Arabic vocabulary easier than the classic learning method. Besides, they can use games and fun tasks for revising the vocabulary which motivates them to learn and helps them to overcome the exams stress and feel confidence with their capabilities.

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190 The impact of using mobile applications to learn Arabic vocabulary among non-native secondary students

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Today, the world is witnessing rapid development in various fields, especially technology. Technology in its various forms has become an essential factor in the field of education, especially after the Covid-19 pandemic, when the use of mobile applications has become a necessity in the field of education, as it provides students with opportunities to communicate and share educational content and develop self-learning ability. This rapid development in technology requires more attention to the use of mobile applications in the educational process.

The study of (Hall et al. 2012) confirmed the importance of using mobile applications in the educational process in which its results showed that the students who used mobile phones in the learning process were very satisfied, because their applications increased their desires and interests in learning, thus, Hall recommended the use of mobile applications in the learning process because of its impact on developing the motivation of learning among students, because motivation in learning process has a strong effect on raising the level of attention and concentration, which contribute to the improvement of students' level in learning and performance. The motivation to learn is the driving force of the students, as it provides them with energy and vitality, and it is one of the essential learning conditions, along with training, and it is also one of the important objectives of any educational system, because it leads students to take part in learning activities in life, and increases energy, effort, initiative, perseverance, and information processing. (Balawi & Abu Sulaiman, 2015), (Faraj, 2007).

Research problem

Considering the importance of acquiring vocabulary as it is - naturally - essential in building the Arabic sentence, it is important to use the best means to help non-Arabic speaking students to develop their Arabic language vocabulary, but most schools that teach Arabic to non-Arabic speakers use ready-made methods, that are prepared in advance in a traditional way, as they are based on books only, and don't meet the needs of learners, and don't match the development of the society that they belong to, or that they live in, which reduces the

**The impact of using mobile applications to learn Arabic vocabulary 191
among non-native secondary students**

level motivation to learning the Arabic language. And since technology, especially mobile applications, has been used in various fields of education, it has enabled students to learn other subjects, and to excel in them (Aal Salem, 2020), unlike what happened in learning the Arabic language, where the reliance on traditional methods in teaching the Arabic language led to students' repulsion, and it also led to the decline of their language skills (Al-Sileety, 2018).

Motivation to learn is one of the important issues that teachers face nowadays, it is one of the most important conditions for learning, therefore, the weak motivation of students to learn represents a real problem in any school stage (Ghabari, 2008). And it is more obvious when the student is exposed to studying a foreign language, and it has been observed that high school students who are not native speakers of Arabic face difficulty in learning Arabic as a foreign language through the traditional methods of learning, and this contributes to weakness in their ability to learn the Arabic language.

The researchers noticed a lack in previous studies about the effectiveness of mobile software applications in raising motivation among foreign students in learning the Arabic language vocabulary, so the researchers seek to study this problem among grade seven to nine students, in order to develop their motivation, and highlights the need for non-traditional means to stimulate learning motivation among students, which can increase their enthusiasm for learning, and learn about new methods as well as the preferred methods in education, and since technology has its power in the education process, some schools have allowed the use of mobile devices (mobile phones and iPads) in the classrooms, and this study aims to explore the impact of mobile applications in the development of students' motivation to learn Arabic vocabulary.

(Saeed & Karim, 2017) related the difficulty of learning the Arabic language among non-Arabic speakers to the stagnation of teaching methods and the lack of variety in teaching methods. (Al-Heelah, 2003) pointed out the importance of using modern educational strategies to keep up with the latest trends, and to motivate students, so that it fits their abilities, increases their desire to learn, and enable them to acquire concepts and skills, thus achieving the objectives in the shortest possible time, with the least effort, and the most effective.

192 **The impact of using mobile applications to learn Arabic vocabulary among non-native secondary students**

(Hamoud, Abdulkarim, & Ghafil, 2011) confirms the fact that the actual application, the use of modern technical means, and the involvement of students in the process of learning should make the learning process meaningful to students in all language skills including learning vocabulary and grammar, in addition, when teachers use sensible tools, and teaching methods that motivate the students, they encourage them to access the information easily, understand it and apply it, so that teachers would be more helpful in the learning process, while students will be actively involved in it.

The means of modern technology including its various applications and programs attracts the attention of the students and influence them, and many studies have indicated the improvement of the students' absorbance of concepts and gaining skills during their interaction with what they watch and hear from the technology based educational programs (Alfar, 2002). (Hosseini, 2008) reported that the use of electronic learning in teaching helps in raising student achievement, deepening concepts, improving skills, and creating the possibility of exchanging information and experiences between teachers and students.

Therefore, it was necessary to search for new teaching methods that match the scientific and technological development that has entered all areas of life, including educational institutions. The effective teacher is the one who uses variety of teaching methods, and does not rely on one method, to achieve the learning objectives that are centred around the learner, as the more the method used raises students' motivation and develops their thinking skills, the more effective and impactful it is for the learner (Al Ghul, 2009).

Research objectives

1. Investigating the challenges faced by non-native secondary students (grade 7-9) in learning Arabic vocabulary.
2. Identifying the preferred methods to learn Arabic vocabulary from non-native secondary students' perspective.
3. Investigation non-native students' perspective about using the modern technology in learning Arabic vocabular.

Research questions

The impact of using mobile applications to learn Arabic vocabulary among non-native secondary students 193

1. What are the challenges faced by non-native secondary students (grade 7-9) in learning Arabic vocabulary?
2. What are the preferred methods to learn Arabic vocabulary from non-native secondary students' perspective?
3. What's the perspective of non-native students' about using the modern technology in learning Arabic vocabulary?

Importance of study

The introduction of modern technologies in the learning process is likely to contribute to the development of the educational process and to improve it, and to give students higher thinking skills, to develop their ability to think and create, to give the curriculum effectiveness and impact, and to add vitality to the study material, making it valuable and closer to application through positive participation and good interaction between both teacher and learner, which produces students who are able to adapt properly, and move forward with scientific and technological development, and are suitable for the market (Al-Haila, 2006).

This study aims to contribute to efforts to develop the language skills of non-native secondary students, and draw the attention of curriculum designers to educational programs based on smartphone applications to develop language skills in general, and vocabulary skills in particular, as well as allowing Arabic language teachers to view educational programs based on smartphone applications to develop language skills and development of language vocabulary, in addition to providing educational research with scientific additions to programs based on smart phone applications.

Procedural definitions

1. Vocabulary: The vocabulary of a language is the amount of the words that a person knows in the language, whether he uses them or not.
2. Mobile applications: They are small computer programs that are used on a smart phone or tablet to help in completing tasks.
3. Secondary students: They are the students (non-native speakers) who study Arabic as a foreign language, grades (7-9).

Theoretical framework

The teaching and learning of the Arabic language have been using the traditional method for a very long time. However, in this era of Information and Communication Technology (ICT), there is a rise among educators to use technology in teaching. Hence, there are a lot of educators adapting electronic learning platforms, mobile applications, and gamification, etc., to teach their students in a classroom. The term learning platforms refers to “A type of software that enables teachers to create and deliver courses online. It can also be used for education and training, e-learning or digital learning in companies.”. (Al-Rashidi, 2019). It is expected that learning through learning platforms will show significant improvements in students’ performance.

Theory of Planned Behavior (TPB)

According to the theory of Planned Behavior (TPB): learning motivation indicates a change in attitudes. Motivation is often of two types: internal motivation and external motivation. Intrinsic motivation is ingrained in the student. Students who are intrinsically motivated are actively engaged in learning unique things of interest, satisfying their inner needs, or achieving their personal goals. Therefore, students with internal motivation tend to use strategies that need more struggle, and allow them to process information more, while students with external motivation tend to show less struggle and effort needed to obtain the greatest number of returns (Afzal et. al, 2010).

According to (Block et al. 2013) the early stages and entrances to learning can be affected by external motives, and when they are independent, external motives become unnecessary and turn into self-learning, in addition to that both internal and external motives complement each other, on the one hand other; Learning also requires some external motivation; Learning motivation is a mediator between motivation and communication. Through this theory, the researcher benefits in developing mobile applications as an external influence that contributes to the development of chemistry learning motivation among first-grade secondary students in Saudi schools in Kuala Lumpur, which is also reflected in the development of their internal learning motivation through mobile applications.

Cognitive theory

(Hunt, 1965) concluded that the cognitive theory is about behavior itself; the theory sees behavioral activity as a means by which a person reaches to a certain independent end, as the responses issued in order to obtain reinforcers or stimuli refer to external motivation determined by factors independent of the behaviorist himself, which indicates the inevitability of behavior and its control by influences that may lie outside the scope of the individual's will. In fact, cognitive explanations recognize the hypothesis that as long as Man is a rational creature; he has a free will that enables him to make conscious decisions according to what he aspires to, so these explanations are closely related to internal qualities such as intent, intent, and expectation on the basis that the mental activity of the individual is provided with internal motives inherent in him, and indicates that his behavioral activity is an end in itself and not It is a means, and it usually results from the processing of information and sensory perceptions available to the individual in the arousal situation in which he is, and thus he is characterized by a high degree of self-control (Vander Zanden 1980).

The theory of Motivation

The concept of motivation: Achieving the planned goal requires the individual to exert more effort, activity, and perseverance, so if the student's goal is to excel in his studies among his colleagues, or to go beyond the limits of his school; He must make effort, perseverance, study diligently and diligently, and continue to perform learning activities continuously throughout his academic life. To accomplish these activities, it is called "motivation" in psychology. According to Sha et al. (2011, Sha et al.); Motives are considered internal physical and psychological states that provoke behavior in certain continuous circumstances until it ends in a specific goal. Motivation and communication between students may change based on their learning style, and here you can specify the learning style that achieves their motivation.

Research methodology

This study is a quantitative study that uses a survey design method by using a questionnaire as a data collection instrument. It

196 The impact of using mobile applications to learn Arabic vocabulary among non-native secondary students

was conducted at Baseerah international school in Kuala Lumpur, Malaysia.

This part of the paper will discuss the methodology of the study, and will talk about the study sample, the study instrument, and the type of statistical analysis used to analyse the data.

Study sample

The researchers used a purposive sampling method to choose students of grades 7, 8, and 9, aged (13–16) years old who study Arabic language as a foreign language at Baseerah international school to be the sample of the study.

The total number of the participants was 86 students (52 males, and 37 female).

Study instrument

The researchers developed and used a questionnaire consisting of 3 sections, (A – B – C). section A talks about the demographic data of the participants, which include the grade of study (7, 8, or 9), the age (which range between 13 – 16), the nationality, the gender, and level of Arabic proficiency.

While section B talks about the students' level of preference towards several methods to learn Arabic vocabulary, and this section consists of 10 close-ended items.

Section C of the questionnaire talks about students' level of preference towards the content that should be included in several technologies means to learn Arabic language vocabulary, and this section consists of 16 closed-ended items. Section C is followed by an open question where the participants may add any feedback or suggestions.

The participants respond to the items in both sections B and C by using Likert scale from 1 to 5, that consists of 5 types of responses which describe the participant's level of agreement, in which the number 1 refers to "strongly disagree" while the number 5 refers to "strongly agree".

The questionnaire was developed in English language as the sample consists of non-Arabic speaker students.

The impact of using mobile applications to learn Arabic vocabulary among non-native secondary students 197

The questionnaire validity

The researchers presented the preliminary copy of the questionnaire to group of arbitrators to give their feedback about the appropriateness of the vocabulary of each item and its linguistic formulation before distributing the questionnaire to the participants.

The arbitrators commented on some items and suggested amendment should be made before the questionnaire distribution.

The questionnaire reliability

The researchers applied the questionnaire to a pilot sample of 20 students, and the reliability of the questionnaire was calculated using the Cronbach alpha method. And to ensure the reliability of the questionnaire, it was repeated on the same sample one week later, and the difference between the two results was small, which means a high level of reliability of the questionnaire.

Study Findings

To analysis the study findings SPSS (version 26) were run, using descriptive data and frequency. The first section will display demographic information. Followed by instrument reliability and then the descriptive data.

Demographic Data

As presents in Table .4 .1, most of the participants are males (50) with 58.1% and the females are 30 with 41.9%. Referring to the students' age, ten participants were less than 13, whereas only 7 of age 15 year. The ages of 13, 14 and 16 and above each were more than 20 participants.

Almost half of the participants are in Grade 9 (41) with 47.7%, followed by Grade 8 which are 26 participants with 30.2%, and the least are studying in Grade 7 (19) with 22.1%. Regarding Language proficiency, very weak and excellent were found to be the least number of participants with 5 (5.8%) and 7 (8.1%) respectively. The highest number of participants were among the students with good Language proficiency (33) with a38.4%.

198 The impact of using mobile applications to learn Arabic vo-cabulary among non-native secondary students

	Items	Frequency	Percentage (%)
Gender	Male	50	58.1
	Female	36	41.9
Age	Less than 13	10	11.6
	13	20	23.3
	14	25	29.1
	15	7	8.1
	16 and above	23	26.7
Grade	Grade 7	19	22.1
	Grade 8	26	30.2
	Grade 9	41	47.7
Language proficiency	Very weak	5	5.8
	Weak	23	26.7
	Good	33	38.4
	Very Good	18	20.9
	Excellent	7	8.1
Total		86	100%

Demographic Data

Reliability

Cronbach Alpha was utilized to find the questionnaires' internal consistency. According to Brace, Kemp, Snelgar (2012) and Rattray and Jones (2007), the Cronbach's alpha coefficient must be more than 0.5, where the good Cronbach's alpha should be more than 0.7. For this study, the Cronbach Alpha (coefficient alpha) test was run, and the results across the total questionnaire section indicated Cronbach's alpha coefficient values of more than 0.854.

Whereas Cronbach's alpha coefficient values for the first section were found to be 0.866. and the second section was 0.920. These results show that the items and components have significantly high internal consistency. These results are displayed in Table (4.2).

**The impact of using mobile applications to learn Arabic vocabulary 199
among non-native secondary students**

	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
The total items	.854	.864	26
First section	.863	.866	10
Second section	.919	.920	16

Table 4.2: Study Reliability

Study Findings

The Mean (M) and Standard Deviation (SD) test were conducted to find out the most preferable style of learning Arabic vocabulary for grades 7 to 9, for non-native students who are studying in international schools in Kuala Lumpur. As presents in Table 4.3, question three that focusing on “learning vocabulary by Showing models (e.g., describing pictures)” was the most preferable method with M= 3.88 and SD = 1.078. On the other hand, question seven “Learning vocab by using derivation (e.g., root words / word source).

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
QA1	86	1	5	3.16	1.094
QA2	86	1	5	2.90	1.052
QA3	86	1	5	3.88	1.078
QA4	86	1	5	3.34	1.154
QA5	86	1	5	2.91	1.194
QA6	86	1	5	3.62	1.294
QA7	86	1	5	2.86	1.266
QA8	86	1	5	3.62	1.294
QA9	86	1	5	2.97	1.287
QA10	86	1	5	2.93	1.272
Valid N (listwise)	86				

Mean and Standard Deviation for Preferable Learning Style

200 The impact of using mobile applications to learn Arabic vo-cabulary among non-native secondary students

	N	Minimum	Maximum	Mean	Std. Deviation
QB1	86	1	5	4.33	.804
QB2	86	1	5	3.83	.935
QB3	86	1	5	3.76	1.028
QB4	86	1	5	4.06	.950
QB5	86	1	5	3.79	1.139
QB6	86	1	5	3.90	.983
QB7	86	1	5	4.08	.910
QB8	86	1	5	4.01	.988
QB9	86	1	5	3.91	.966
QB10	86	1	5	3.69	1.161
QB11	86	1	5	3.97	1.034
QB12	86	1	5	4.01	.901
QB13	86	1	5	3.81	.964
QB14	86	1	5	3.95	.969
QB15	86	1	5	3.90	1.018
QB16	86	1	5	3.78	1.067
Valid N (listwise)	86				

Mean and Standard Deviation for Preferable Learning Method

Regarding the preferable method of learning Arabic vocabulary for grades 7 to 9, for non-native students who are studying in international schools in Kuala Lumpur. Five methods of learning Arabic vocabulary were found to be the most preferable methods by using the Mobile Applications. Whereas students considered that using the mobile Apps to learn by presenting in multiple ways such as pictures, sound, definition, was the most preferable method of learning Arabic vocabulary with $M = 4.33$ and $SD = 0.804$. The other four preferable methods are:

1. Using a mobile app to test my Arabic vocabulary knowledge could be more fun & less stressful ($M = 4.06$ and $SD = 0.95$).

**The impact of using mobile applications to learn Arabic vocabulary 201
among non-native secondary students**

2. Mobile apps give me confidence knowing I have my resources at hand and can access it at any time (M = 4.08 and SD =0. 91).
3. Picking up activities (such as games, videos.... etc.) and doing them on my own time could help me to learn vocabulary better (M = 4.01 and SD =0. 988).
4. Using the mobile apps could be easier than browsing the web (M = 4.01 and SD =0. 901).

Therefore, students believed that using mobile Apps is more fun and makes them less stressful. Besides, they feel more confidence about their vocabulary knowledge. Moreover, they considered that using mobile Apps helped them to manage their time because they will be able to study on their own time. As the study material is always available for them. At the same time, they can pick up the preferable activities for study such as games, videos... etc. Chi-square was utilized to find the association between the preferable style and preferable method. According to the students they prefer the synonyms style with the mobile Apps because it provides them with more visual examples. Five learning styles were found to be the most preferable in learning Arabic vocabulary, which are QA1- synonyms QA2- antonyms, QA5- direct pairing, QA8- translation and QA10- repeat reading. In terms of learning by using mobile Apps, student believed that it enhance their preferable learning styles because it helps them to: QB2- enhance my communication performance, QB3- access additional information easier, QB5- provide them with more visual examples, QB6- it provided them with game/tests that helps them to build confidence and overcome stress in class evaluation tests, QB8- they can pick up the activities and doing them on my own time, QB10 they can participate in non-threatening situations during the testing (with apps), and QB14- they could quickly access their study materials and notes. Referring to the result of Pearson Chi-square many significant associations were found between different learning styles and the mobile Apps methods, as shown in Table 4.5.

202 The impact of using mobile applications to learn Arabic vo-cabulary among non-native secondary students

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square			
QA 1& QB2	30.592 ^a	16	.015
QA1 & QB5	28.369 ^a	16	.029
QA1 & QB6	29.235 ^a	16	.022
QA1 & QB10	30.733 ^a	16	.015
QA1 & QB14	30.380 ^a	16	.016
QA 2& QB1	46.477 ^a	16	<.001
QA2 & QB8	34.827 ^a	16	.004
QA2 & QB14	32.026 ^a	16	.010
QA5 & QB3	37.818 ^a	16	.002
QA5 & QB5	36.332 ^a	16	.003
Q5 2& QB6	28.125 ^a	16	.031
QA5 & QB8	46.047 ^a	16	<.001
QA5 & QB10	34.374 ^a	16	.005
QA8 & QB3	41.467 ^a	16	<.001
QA8& QB8	50.278 ^a	16	<.001
QA10 & QB2	42.165 ^a	16	<.001
QA10 & QB6	38.329 ^a	16	.001
QA10 & QB8	28.792 ^a	16	.025
QA10& QB9	36.410 ^a	16	.003

Pearson Chi-Square

To conclude, the findings of this study clarified that mobile Apps could help students to learn Arabic vocabulary in many helpful ways, as well as enhance their learning of Arabic vocabulary. Additionally, it provided them with confidence and relaxed environments because mobile Apps is learning is more fun.

Discussion and Conclusion

This study attempts to answer three research questions, as previously mentioned. The result of the study clearly shows that students preferred to learn through using mobile Apps. According to the findings they are learning methods that could be provided by mobile Apps such as videos, pictures, sound can help them to learn the Arabic

**The impact of using mobile applications to learn Arabic vocabulary 203
among non-native secondary students**

vocabulary easier than the classic learning method. Besides, they can use games and funny things for revising which motivates them to learn and helps them to overcome the exams stress and feel confidence with their capabilities. Additionally, mobile Apps are very rich with different materials that are available to them all the time, so they can watch the lessons many times.

The findings showed that students prefer some learning styles when it comes to learning Arabic vocabulary which are synonyms, antonyms, direct pairing, translation, and repeat reading. Similarly, they are also preferring some mobile Apps content than others in learning. As it is concluded from this study these methods could enhance their communication performance, maybe because the mobile Apps helping to practice the language and to be more familiar with the Arabic language vocabulary because for example, they can attend Arabic videos. So more they can access additional information without limiting themselves with their schoolbooks. Mobile Apps could provide them with more visual examples, which help them to have more understanding of what they are studying, at the same time make the understanding of new vocabularies easier. Using mobile Apps in can help them to pick up the activities and doing them on their own time without any feelings of threatening situations.

The result of this study is like many studies that were conducted to investigate the use of mobile Apps for learning (Al-Mabaridi & Al-Khouli, 2019; Al-Khurasat, 2019; Abu Rumman & Hamdi, 2017). This study also confirmed the recommendation of Abu Rumman and Hamdi (2017) study.

Recommendation

This study was focusing on the student's perception only, so there is a need to conduct an empirical study that tests the learning styles and method practically. Most of the international schools in Kuala Lumpur are using traditional methods of learning that depend completely on books which make the student not interested in learning Arabic. So, there is an argent need to design mobile applications to motivate the student to learn Arabic.

204 The impact of using mobile applications to learn Arabic vocabulary among non-native secondary students

Limitation:

The number of participants was less than 100 so the study result cannot be generalized. The research used an online survey, which could affect the result because the researchers were not able to reach the participants to make sure the questions were well understood by them.

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Conflict Of Interests

The authors declare no competing interests such as financial or personal relationship, regarding the writing of this article.

Authors' Contributions

The authors designed the study and gathered the literature and wrote the article.

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**The impact of using mobile applications to learn Arabic vocabulary 205
among non-native secondary students**

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Appendix

The questionnaire

Section A: Demographic data

1. Choose your gender Male Female.
2. Choose the option that includes your age.
 Less than 13 13 14 15 16 and above
3. Your nationality? _____
4. You are study in Grade:
 Grade 7 Grade 8 Grade 9
5. Degree of proficiency in the Arabic language:
Very weak

**The impact of using mobile applications to learn Arabic vocabulary 207
among non-native secondary students**

- Weak
- Fair
- Good
- Very Good
- Excellent

Section B: Preferable Learning style

This section is about knowing your preferred learning style for Arabic vocabulary.

Please indicate the best describes your agreement with the bellow statements: Choose from 1 to 5, as 1 means not preferable and 5 means most preferable,

1 = Not Preferable (NP), 2 = Somewhat Preferable (SP), 3 = Neutral (N),
4 = Preferable (P), 5 = Most Preferable (MP)

In your opinion which is the most preferable method of learning Arabic vocabulary?

Items	NP = 1	SP = 2	N = 3	P = 4	MP = 5
	1	2	3	4	5
1. Synonyms	1	2	3	4	5
2. Antonyms	1	2	3	4	5
3. Show models (e.g., describing pictures)	1	2	3	4	5

208 The impact of using mobile applications to learn Arabic vocabulary among non-native secondary students

4. Role performance	1	2	3	4	5
5. Direct pairing	1	2	3	4	5
6. By explaining the meaning of word	1	2	3	4	5
7. Derivation (e.g., root words / source)	1	2	3	4	5
8. Translation	1	2	3	4	5
9. Search in the dictionary	1	2	3	4	5
10. Repeat reading	1	2	3	4	5

Section C: Application content

This section is about knowing your preferred application content for Arabic vocabulary.

Please indicate the best describes your agreement with the bellow statements: Choose from 1 to 5, as 1 means strongly disagree and 5 means strongly agree,

1 = strongly disagree (SD), 2 = disagree(D), 3 = Neutral (N), 4 = agree (A), 5 = strongly agree (SA)

In your opinion which is the most preferable method to explain the meaning of Arabic vocabulary?

Items	SD=1	D=2	N=3	A=4	SA=5
1. Learn vocabulary could be better when it is presented in multiple ways. (Pictures, Sound, Definition, Examples, etc.)	1	2	3	4	5

**The impact of using mobile applications to learn Arabic vo-cabulary 209
among non-native secondary students**

2. Using the Arabic mobile apps could enhance my communication performance.	1	2	3	4	5
3. Using apps could help me access additional info easier.	1	2	3	4	5
Items	SD=1	D=2	N=3	A=4	SA=5
4. Using a mobile app to test my Arabic vocabulary knowledge could be more fun & less stressful.	1	2	3	4	5
	1	2	3	4	5
5. I can use the vocabulary learn by apps better, since they provide me with more visual examples.					
6. The game/tests in the mobile apps could help me to build confidence and overcome stress in class evaluation tests.	1	2	3	4	5
7. Mobile apps give me confidence knowing I have my resources at hand and can access it at any time.	1	2	3	4	5
8. Picking up activities (such as games, videos.... etc.) and doing them on my own time could help to learn vocabulary better	1	2	3	4	5
9. Using the Arabic mobile apps could enhance my	1	2	3	4	5

210 The impact of using mobile applications to learn Arabic vocabulary among non-native secondary students

communication performance.					
10. By participating in frequent non-threatening situations/ testing (with apps), I could be able to face more challenges in my Arabic learning.	1	2	3	4	5
11. Using mobile apps could be more practical than reading textbooks when I am moving around.	1	2	3	4	5
12. Using mobile apps could be easier than browsing the web.	1	2	3	4	5
13. Interacting with the mobile apps could help me remember my Arabic vocabulary better.	1	2	3	4	5
14. I could quickly access my study materials and notes with the mobile apps.	1	2	3	4	5
15. I feel more motivated to do my Arabic vocabulary assignments when there are mobile apps	1	2	3	4	5
16. I am increasingly engaged in learning Arabic vocabulary via mobile devices compared to paper-and-pencil methods.	1	2	3	4	5

Do you like to add any suggestions and recommendations?

**The impact of using mobile applications to learn Arabic vo-cabulary 211
among non-native secondary students**

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End of the questionnaire.

Thank you for your time.