

Does Arabizi Constitute a Threat to Arabic?

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Abstract

The main goal of this study was to empirically examine the impact of Arabizi (i.e. writing Arabic with English script) on Palestinian students' Arabic language development. This article seeks to enter the debate over the merits and risks of widespread Arabizi use with a quantitative study of its effects on Arab students. In order to assess whether internet use and Arabizi use affect performance in Arabic fluency, we administered an Arabic spelling test, followed by a brief survey assessing students' use of Arabizi to 420 eighth grade students in Bethlehem government schools. The overall results show that using Arabizi was correlated with weaker scores on the spelling test, indicating either that Arabizi use harms students Arabic capabilities or that other factors cause students to use Arabizi and to have weak Arabic spelling skills. However, more research must be done to tease out these differences and look beyond correlation.

Key words: Arabizi, Arabic script, language development, sociolinguistics

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1. Introduction

Modern technology has transformed the patterns of communication in Palestinian society. Arabizi is a transliterated Arabic chat alphabet that substitutes English letters and numbers for standard Arabic letters. For example, instead of writing طبعاً they would write tab3an (translation: “of course”). Due to Arabizi’s informal nature, it has not been codified. Thus, internet posters and academics provide descriptive charts. See Naji and Allan (2016), who provide a comprehensive description of Arabic letters and their Arabizi equivalents in order to help researchers find data in Arabizi sources.

Arabizi emerged two decades ago as social media platforms became popular in the Arab world. Since these ‘western’ technologies did not initially support Arabic-script languages, Arabic speakers resorted to Arabizi to fulfill their urgent need to express themselves on these platforms. Although technological support of Arabic script has emerged on most systems, Arabizi has been growing in popularity among teenagers’ online communications for various reasons. It seems that current users of Arabizi are now motivated by factors other than practical need (e.g. personal, social, aesthetic, political ...etc).

This practice may have serious consequences for the youths’ native language development. *Some people consider the use of Arabizi an easy and practical way for online communication. They argue that it does not have any negative impact on the Arab students’ first language. Others have concerns that unwarranted use of Arabizi will have negative effects on students’ native language competency.*

2. Statement of the Problem

People have different opinions about the effects of Arabizi on the Arabic language. Some teachers, parents, and officials claim that this will negatively affect teenagers’ Arabic language ability; in fact, they go even further to view Arabizi as a threat to the essence of the Arabic language. However, other people, especially teenagers and users of Arabizi, do not see such a threat to the Arabic language and consider Arabizi an easy and practical way to express themselves online. *Thus far no concrete empirical studies have been published on the effects of Arabizi on Arabic language development, so it is unclear if these concerns are well-founded. The purpose of this study is to empirically investigate the impact of Arabizi use on Palestinian students’ Arabic spelling skills.*

3. Literature Review

There is much research that deals with the impact of using technology in general and the Internet specifically on students’ academic achievement and other skills. For example, Jackson et al. (2006) conclude that the more youngsters use the Internet, the better they score on standardized reading tests. In a longitudinal three-year investigation, Judge et al (2006) find positive correlation between students’ usage of home-Internet and academic achievement.

In the same vein, Al-Shaer (2013) looks into the impact of using blended learning (BL) in a reading comprehension course on English as a Foreign Language (EFL) students’ attitudes and motivation. A comparison of the students’ mean scores of pre-and post-questionnaires reveals a statistically significant improvement in the students’ attitudes and motivation toward learning English and employing computer-based activities. Kuhlemeier and Hemker (2007) and Hohlfeld

et al. (2008) find that as access to computers and the Internet increases, the students' performance in computer applications and skills improves in school.

Regarding Arabizi, most available studies narrowly define the phenomenon, offer historical review of its development, or merely list the reasons behind teenagers' inclination to use Latin characters to write Arabic. For instance, Muhammed et al (2011) find that 82% of respondents actually used Arabizi; 40% of them frequently used it and 22% always use it. Around 20% of the respondents reported that they felt related to their colleagues when they used Arabizi as others would not understand it.

The respondents in this same study gave a variety of reasons for using Arabizi such as: practicality & easiness, ignorance of the Arabic equivalence, difficulty of Arabic alphabets, *connectedness* to another person or a *social group*, joke-telling or humorous anecdotes, confidentiality or information privacy from parents or people of a higher status, imitating their colleagues, following the latest Arabizi fad ... etc. According to Mohammed et al (2011), 60% of Egyptian users did not view Arabizi as harmful for their Arab identity, not ruling out its negative impact on westernized younger generations. Other respondents, who declared that they never used Arabizi, attributed that to their respect for Arabic as the language of the Quran and the symbol of their national identity. Further, they described Arabizi as confusing and unsystematic.

Al-Khatib and Sabbah (2008) carried out a sociolinguistic investigation of 46 Jordanian university students' objectives, uses, and preferences using Arabizi. The study indicated that 61% of the participants generally used Arabizi: 39% of them wrote words and phrases in Arabizi; 54% used English vocabulary; and only 9% employed Arabic words in Arabic letters. The study also indicated that female participants (44%), as opposed to males, had more inclination towards switching to English instead of Arabic or Arabizi for the sake of showing off, gaining prestige or employing euphemism. Interestingly, the study revealed the choice of the language variety (i.e. Arabizi, English, or Arabic) largely depends on the topic. For example, Arabizi, which proved to be the most widely used variety among university students, was mostly employed in intimate social and personal interactions. Arabic was used in topics that are closely related to religious and cultural areas. English was mainly used in topics pertaining to work or university matters.

A similar study, conducted in 2011 (Bianchi, 2011) examines the use and distribution of Arabizi, or Latin-scripted Arabic, on the Jordanian website mahjoob.com. The study specifically seeks to understand how the use of Arabizi and codeswitching on online forums is used to build the identity of the posters. Bianchi finds that posters most often chose one script to write in: Arabic-scripted Arabic, English-scripted English, or Latin-scripted (arithmographemic) Arabic. This study also supports the conclusion of Al-Khatib and Sabbah (2008) that code choice relates closely to topic. Bianchi demonstrates that posters on mahjoob.com varied their language choice based on the topic and the online identity they wanted to create. Additionally, Latin-scripted Arabic, referred to in this paper as Arabizi is only used to transcribe colloquial Arabic rather than the formal form of Arabic that is taught in Arab schools. Thus the rules of this writing system do not conform to formal Arabic spelling conventions.

As for the impact of Arabizi on youngsters' first language development, there are a number of informal articles in which people at different levels (e.g. parents, teachers, or students)

make speculations about the potential effect of Arabizi on the users' first language. For example, in an article entitled "Arabizi is destroying the Arabic language" (Ghanem, 2011), teachers and parents appeared to be very concerned about the negative impact of Arabizi on teenagers' first language development.

In a report by Ghazal (2014a), prominent experts were extremely concerned over the pervasiveness of Arabizi and considered it a threat to Arabic language. In an interview with Ghazal (2014a), Abu-Ghazaleh states:

This malignant language is currently sweeping and jeopardizing the Arabic language, especially since it is being used heavily over the Internet through various chat applications with the help of smart devices for texting ... The continuous use of 'Arabizi' by individuals, intentionally or unintentionally, is also a crime against our mother language; it must be stopped immediately in order to protect our Arabic heritage and culture ... Arabizi should be regarded as a war against the Arabic language and a serious attempt to destroy it (p. 1)

Ghazal (2014b: 1) also reports business leaders' frustration with Arabizi's perceived encroachment on Arabic spelling. Marwan Juma is quoted saying:

It is annoying to write in Arabizi. It affects youths' ability to write in Arabic. At our companies we hardly find graduates capable of writing professional Arabic. This is a serious problem." Similarly, Jawad Abbassi, chairman of the ICT Association of Jordan, warned that "Arabizi is a threat to both Arabic and English and its users will lose the ability to write in both languages (p. 1)

From a different perspective, Attwa (2012) examines the views of students of Arabic as a foreign language (AFL) at the American University in Cairo towards Arabizi. AFL learners in the study described a new writing variety emerging in Arabic. They express the view that Arabizi was confusing and difficult to master owing to its inconsistent and unstandardized nature. According to respondents, Arabizi complicates their AFL learning process and hindered their acquisition of reading and writing skills needed for Modern Standard Arabic. In short, the study warns AFL teachers against an alarming situation of digraphia in Arabic, which might hinder the process of learning Arabic as a foreign language. Therefore, this study seeks to address these concerns.

Research Questions and Hypotheses

The purpose of the present study is to address one main research question, having a number of related sub-questions.

Main Research Question:

How do high school students perform on an Arabic spelling test? This broad question was translated into four sub-questions which are open to empirical investigation:

1. Are there statistically significant differences in eighth grade students' performance due to the variable of Internet availability at home?

2. Are there statistically significant differences in eighth grade students' performance due to the variable of Internet availability at school?
3. Are there statistically significant differences in eighth grade students' performance due to the variable of Internet use?
4. Are there statistically significant differences in eighth grade students' performance due to the variable of Arabizi use?
5. Is there a relationship between Arabic spelling performance and frequency of Arabizi use among Arabic-speaking students?

All sub-questions were converted into the following hypotheses:

- a. Internet availability at home has no effect on eighth grade students' Arabic spelling performance.
- b. Internet availability at school has no effect on eighth grade students' Arabic spelling performance.
- c. The less amount of time eighth grade students spend online, the better their Arabic spelling performance was.
- d. As the extent of eighth grade students' use of Arabizi decreases, their Arabic spelling performance will increase.
- e. There is no relationship between Arabic spelling performance and frequency of Arabizi use among Arabic-speaking students

4. Methodology

Procedures, Participants and Data Collection

This research paper examines whether or not usage of Arabizi by high school students impacted their Arabic spelling performance. The target population was eighth grade students in governmental high schools in the Bethlehem area—West Bank, Palestine (3509 students, including 1744 females and 1765 males) in the 2015/2016 academic year. The population was socio-economically homogenous.

A simple random sampling was carried out. All names of eighth grade students in Bethlehem area were copied into Column A of an Excel spreadsheet. The names were listed in alphabetical order, and a random number next to each student's name was produced in Column B. Then the "Sort A to Z" function was used to put the names in random order in Column B. All names were assigned random numbers (from 1 to 3509). A computer-generated random list of 420 eighth grade students (12%), including 226 males (54%) and 194 females (46%), was obtained. The median age of all participants was 14 years.

The data collection process involved two stages: stage one focused on collecting information about the students' characteristics. For this purpose, a brief survey was attached to the test administered in stage two. The goal of the survey was twofold: (i) to report the availability of technology resources within the home and school, and (ii) to find out the extent of using Internet and Arabizi by students.

Stage two consisted of an Arabic Spelling Test (AST) which was administered to the selected students in order to examine their spelling proficiency. The test was prepared by two Arabic language teachers based on the students' Arabic language textbook. The AST consisted of

three sections. In the first, students were *asked to identify and correct spelling errors given in complete sentences*. In the second section, which was made up of ten items, students were required to classify 12 Arabic words according to *hamza (ء) spelling rules*. In the third section, students were *asked to choose the correctly spelled word to complete given sentences*. Then, the content validity of the Arabic spelling test was evaluated by ten expert teachers who ensured that each test item covered content that matched all relevant skills in Arabic.

Three blind scorers, not involved in test development, independently graded the test. Inter-scorer correlations were computed in order to compare the three scorers' grades. The minimum correlation was (0.89), which meant that the three graders were fairly consistent in their assessment of the students' essays and so the inter-scorer reliability was decent.

The three graders' scores were then averaged and rounded to the nearest half-point interval on a 0–40 score scale to produce the student's final AST test score. In order to guarantee that students understood the items, all instructions were given in Arabic. Additionally, the class teacher explained to the students the procedure, and stayed in the classroom to answer their queries.

5. Results and Discussion

5.1 Highlights from the survey results

As a prelude to the discussion of the impact of Arabizi on students' spelling skills, this section gives some highlights from the results of the AST test and the brief survey attached to the test.

According to the overall statistics of the survey, the study sample consisted of (54%) males and (46%) females. The academic level of the sample as reported by the students was as follows: (37%) excellent, (36%) very good, (19%) good, and (8%) fair. Moreover, (70%) of the respondents indicated they have Internet access at home, and (89%) said they have Internet access at school. About (39%) of the students reported they used Arabizi and (61%) of them declared that they never used it.

5.2 Highlights from the AST test results

After marking the spelling test items, the mean scores for the subgroups were calculated and compared and will be presented in the following sections. The maximum total score for the test was 40 marks. Results showed *poor overall performance*; the mean score of the group with the highest academic level was only 23.66 out of 40, indicating defective Arabic spelling skills.

Gender

As Figure 1 indicates, the results of the study showed that female students (mean score 26.34) outperformed male students (mean score 16.58) in the Arabic spelling test.

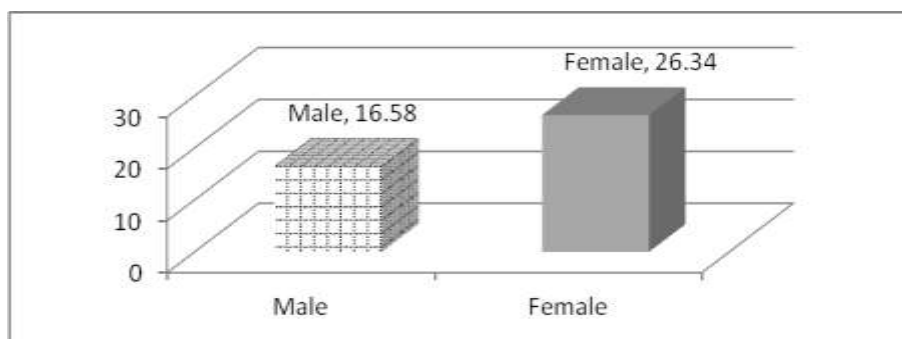


Figure 1 AST mean scores for male and female students

To test the hypothesis "The spelling performance of female eighth grade students is better than male students", a t-test was performed to compare female students' performance with males' performance (Table 1).

Table 1 T-test results for female students vs. males

Gender	Number	Means (Max score 40)	Standard deviation	T	DF	Significance level
Male	226	16.58	8.89	-9.725	418	.000
Female	194	26.34	4.68			

The results show that there is a highly significant difference at the 5 percent level in the students' performance on the spelling test between female and male students in favor of females with a p-value of 0.000

Academic Achievement

The data presented in Figure 2 do appear consistent with common sense. As the students' overall academic achievement increases, their spelling performance increases (which seems logical).

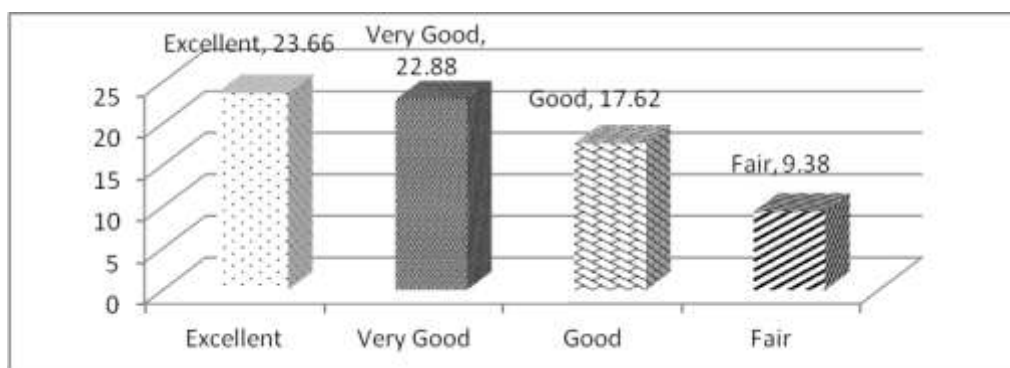


Figure 2 AST mean scores according to Academic Achievement (Max score 40)

To test the hypothesis, *The spelling performance of high academic achievers is better than that of low achievers*, as shown in Table 2 a one-way ANOVA test was used to measure the significance in the differences of the overall means regarding the students' performance in the spelling test due to academic achievement.

Table 2 *T-test results for academic achievement*

Source of Variation	SS	DF	MS	F	P
Between-group	6836.709	3	2278.903	38.253	.000
Within-group	24664.095	414	59.575		
Variance	31500.804	417			

The results show that there are highly significant differences at the 5 percent level in the students' performance on the Arabic spelling test due to academic achievement (p-value 0.000). High academic achievers performed better than low academic achievers in the AST test.

5.3 Internet availability at home and school

Table 3 presents the AST mean scores of non-home-Internet group (24.46) vs. home-Internet-group (19.40) and the AST mean scores of non-school-Internet group (22.01) vs. school-Internet-group (13.91).

Table 3 *Descriptive Statistics on Internet Usage %*

Do have Internet at ...?	Number	Means (Max score 40)	Standard deviation	T-test	DF	P
Home	Yes	280	19.40	-4.105	418	.000
	No	140	24.46			
School	Yes	374	22.01	4.309	416	.000
	No	44	13.91			

The hypothesis was *Internet availability at home has no effect on eighth grade students' Arabic spelling performance*. In order to test this hypothesis, a t-test was performed measure the significance of the differences in the overall AST mean scores. As shown in Table 3 above, the obtained results showed that there was a highly significant difference at the five percent level between the AST mean scores between non-home-Internet group and home-Internet-group with a p-value of (0.000).

It also indicated that there was a highly significant difference at the five percent level between the AST mean scores between non-school-Internet group and school-Internet-group with a p-value of (0.000).

The results indicate that students without Internet in their homes outperformed students using the Internet at home in the AST test.

5.4 Internet usage at home and school

According to the results Table 4 the less time eighth grade students spend online, whether at home or at school, the better their Arabic spelling performance appeared to be.

Table 4 Descriptive statistics on home & school Internet usage

Time spent using the Internet (hour/day)	Home Internet Users %	AST Mean Scores (Max score 40)	Standard deviation	School Internet Users %	AST Mean Score (Max score 40)	Standard deviation
Less than 1 hour	172 = 41%	22.53	8.30	246 = 58.6%	21.51	8.39
2 hours	38 = 9%	19.74	6.41	12 = 2.8%	10.67	10.37
3 hours	38 = 9%	12.96	8.72	10 = 2.4%	4.67	6.35
More than 3 hours	46 = 11%	12.89	10.25	6 = 1.4%	4.60	1.52

As shown in Table 4 the more time students spend on the Internet, the lower their scores in the Arabic spelling Test (AST). Interestingly, there seems to be an inverse correlation between the AST mean scores and the amount of time spent on the Internet. As the duration of home or school online time decreases, the Arabic spelling performance of students increases.

In order to test the hypothesis *Internet usage at home has no effect on eighth grade students' Arabic spelling performance*, a one-way ANOVA test was used to measure the significance in the differences of the overall means regarding the students' performance in the spelling test due to the extent of the Internet daily use as shown in Table 5.

Table 5 ANOVA results for the students' performance in the spelling test due to the extent of the Internet daily usage at home.

Source of Variation	SS	DF	MS	F	P
Between-group	2606.174	3	868.725	24.246	.000
Within-group	10149.826	286	36.58		

Variance	12756.000	289			
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The results showed that there is a highly significant difference at the 5 percent level regarding students’ performance on the spelling test due to the extent of the home Internet daily usage (p-value (0.000)). The results indicated that frequency of online use at home was inversely proportional to Arabic spelling performance

In the same way, in order to test the third hypothesis *Internet usage at school has no effect on eighth grade students' Arabic spelling performance*, a one-way ANOVA test was used to measure the significance in the differences of the overall means regarding the students’ performance in the spelling test due to the extent of the Internet daily use at home as shown in Table 6.

Table 6 ANOVA results for the students’ performance in the spelling test due to the extent of the Internet daily usage at school.

Source of Variation	SS	DF	MS	F	P
Between-group	2694.711	3	898.237	25.24	.000
Within-group	9217.932	166	35.45		
Variance	11912.642	169			

Again, the results show that there is a highly significant difference at the 5 percent level regarding students’ performance on the spelling test due to the extent of the school Internet daily usage (p-value (0.000)). The results indicated that the less time eighth grade students spend online at school, the better their Arabic spelling performance was.

5.5 Arabizi usage

As mentioned earlier, 61% of the respondents (256 students), as opposed to (39%) 162 students, indicated that they never used Arabizi. Figure 3 indicates that non-Arabizi users performed better than Arabizi users (mean scores 23.48 vs. 17.49).

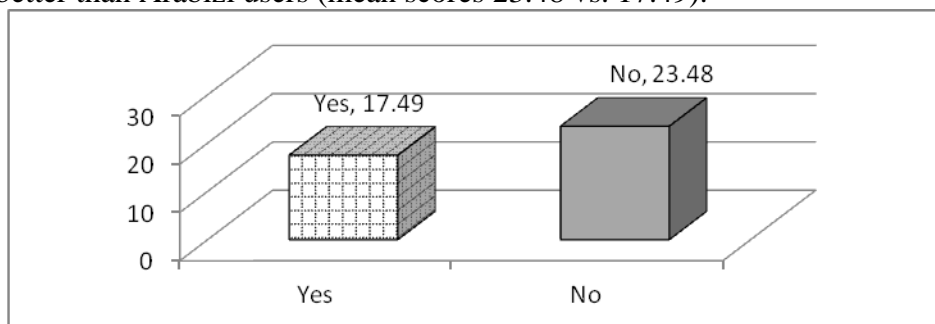


Figure 3 AST mean scores for yes/no Arabizi users

To test the hypothesis *as the extent of eighth grade students' use of Arabizi decreases, their Arabic spelling performance will increase*, an independent-samples t-test was performed to compare the AST mean scores between Arabizi users and non-Arabizi users.

Table 7 T-test results for the students' performance in the spelling test due to the use of Arabizi in the social media.

Do you use Arabizi in the social media?	Number	Means (Max score 40)	Standard deviation	T-test	DF	P
Yes	162	17.49	8.71	-5.139	416	.000
No	256	23.48	7.86			

As shown in Table 7, the results indicate that there is a highly significant difference at the 5 percent level regarding students' performance on the spelling test due to the use of Arabizi (writing Arabic in English letters) in the social media in favor of those who do not use Arabizi (p-value 0.000).

Of course, correlation does not prove causation. In particular, this study showed that excessive Internet use is correlated with extensive Arabizi use and poor spelling performance, but it does not prove that such high Internet use or extensive Arabizi use cause poor spelling performance. It might be the case that Arabizi use causes poor Arabic spelling, or that it is possible that it's the other way around. That is, if a student has a hard time spelling Arabic, he's more likely to use Arabizi.

The hypothesis there is no statistically significant relationship was tested at the 5 percent level between the students' use of Arabizi in online texting and their spelling AST test scores. In order to validate this hypothesis, simple linear regression was used.

Table 8 ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	1775.613	1	1775.613	26.408	.000 ^a
Residual	13918.177	207	67.238		
Total	15693.789	208			

According to the analysis presented in Table 9, there is a statistically significant correlation between students' spelling performance and Arabizi use. This means that as the amount of time spent using Arabizi increases, mean spelling scores decrease and vice versa.

The analysis shows that the coefficient for Arabizi use in hours is 5.983 grades. The coefficient indicates that for every additional hour in Arabizi use you can expect scores to decrease by an average of 5.983 grade units.

6. Discussion

According to the results of the study, Internet access at home and school are correlated with poor spelling performance of high school students. This finding appears to be inconsistent with many previous studies which found that home internet use improved academic performance. According to Judge et al. (2006: 52), "... most educators agree that computer access and literacy have become vital and necessary for young learners in the 21st century."

In an investigation of the relationship between home Internet access/parental support and student outcomes, Lei and Zhou (2012) find that students with home Internet access outperformed those without home Internet on computer and internet self-efficacy evaluations.

In my view, while the use of new technology has been effective in improving language skills, it seems that mixing Arabic and English is counter-effective. The exceptional use of Arabic mixed with English should not be taken to negate the value of the Internet for developing other skills in normal contexts. It may be misleading to conclude that the problem lies in the Internet usage; rather the problem may be attributed to the confusion stemming from mixing English with Arabic.

The results of this study clearly show that using Latin characters and numbers as an alternative for the Arabic script weakens the students' spelling performance. In this respect, it appears that writing in Arabic using Arabic characters which are now available on most computer keyboards has the potential to preserve Arabic spelling competency.

7. Summary and Conclusion

The main objective of the study was to investigate the impact of using Arabizi on Palestinian youngsters' spelling performance. Results indicated that poor performance on the AST was significantly correlated with extensive use of Arabizi and excessive use of Internet. There was a highly significant difference at the 5 percent level regarding students' performance on the spelling test due to Internet availability at home/school, Internet daily usage, and Arabizi usage.

There is still research left to be done on this topic. If using Arabizi weakens the teenagers' Arabic spelling skill, what about its impact on other language skills? The AST test only measured spelling, but it did not measure other aspects of language, like vocabulary, essay writing, analytical writing, and reading comprehension. Moreover, the fact that the sample of the present study was taken from only government-based schools may be viewed as a possible limitation. Thus, this study is only the beginning and other research must be done to answer these questions and apply these findings to a wider population.

The main finding was that using English script to write Arabic was correlated with weaker native language spelling skill among teenage students. The clear differences in Arabic spelling performance do raise critical questions about the effect of Arabizi on teenagers' first language development.

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