Language Use in Computer-Mediated Communication and Users' Social Identity

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Abstract

This study examines the relationship between language use in computer-mediated communication and the social identity of the user. The data were collected by surveying 298 Saudi bilingual speakers who are familiar with Arabizi, a blend of Latin characters and Arabic numerals to transliterate Arabic sounds, and then analyzed quantitatively by running tests for statistical confidence in order to determine differences in perceptions between young adults (ages 15-25 years) and middle-aged adults (ages 26-50 years). According to the findings of this study, English is the dominant language among most of the young adults surveyed, and when they do use Arabic, they use Arabizi because of its flexibility, compatibility with modern technology, and its acceptance among people of their age and sociocultural backgrounds. On the other hand, most middle-aged adults surveyed here tend to use Arabic, as they believe that they should show their loyalty to their origin. The results of the study demonstrate a mutual relationship between language use in computer-mediated communication and the user's social identity, as language is used both to reflect and co-construct that identity.

Keywords: Arabizi, computer mediated communication, digital communication, language use

1. Introduction

The global spread of computer-mediated communication has led to many changes in terms of language use. In this regard, it is important to make a distinction between language systems and language use. According to Hall (2013), language systems are autonomous, independent entities that are extractable from human minds due to their universal nature, and are shaped without individual interference. On the other hand, Hall also takes a more traditional view of individuals as decision makers in language use in order to communicate with their surrounding contexts, whereas human actions are driven by the internal state of the individual.

From an applied-linguistics approach, "Language use and identity are conceptualized differently in a sociocultural perspective on human action" (Hall, 2013, P. 31), and language use is related to how individuals wish to display their identity. Identity in this regard is defined as "a relational and sociocultural phenomenon that emerges and circulates in local discourse contexts of interaction rather than a stable structure located primarily in the individual psyche or in fixed social categories" (Bucholts and Hall, 2005, PP. 585-586).

According to Lightbown and Spada (2013), language use depends on many factors that shape an individual's social identity. These factors include the social history of the individual, which is defined in terms of individual membership in a range of social groups such as social class, gender, religion and race, and the involvement of individuals in various social institutions including school, family and the workplace. Such role-relationships also influence the interactions between individuals within these institutions. Other factors such as values, beliefs and attitudes are also important in the development of social identities because they help to determine the linguistic resources that are available and/or appropriate in a particular sociocultural context (Hall, 2013). Recent studies have been concerned with how individuals co-construct their social roles and identities and those of others via language use, taking on a variety of identities based on their membership in different groups. These identities are not fixed but are "multifaceted in complex and contradictory ways; tied to social practices and interaction as flexible and contextually contingent resources and tied to processes of differentiation from other identified groups" (Miller, 2000, P. 72).

This study investigates the relationship between users' social identity and language use, with a particular focus on the use of Arabizi, in computer-mediated communication (CMC) in Saudi Arabia. In order to understand this relationship, it is essential to discuss the changes in language use caused by the introduction of digital communication.

2. Literature Review

The emergence of digital communication influences the language used in different forums, especially informal ones in which vernacular written communication, which encompasses not only colloquial written language, but forms such as emoticons, abbreviations, acronyms, and expressive punctuation, has largely replaced spoken communication. Androutsopoulos (2011) refers to the generation that regularly and extensively uses these features in computer-mediated communication as "digital natives." However, examining language change in digital communication requires considering the broader picture of sociolinguistic change. When discussing sociolinguistic change, it is important to consider written language in its own right, identify the various domains of language practice, and "distinguish potential trajectories of change within online written usage, from digital to non-digital written language, or to spoken usage" (Androutsopoulos, 2011, P. 145).

According to Androutsopoulos (2011), digital communication has allowed vernacular writing to spread into new areas of practice shaped by different writing styles and norms, and has afforded vernacular writing more visibility, and tolerance than it has previously enjoyed. The three main strategies of vernacular writing are the mingling of spoken and written features; linguistic economy due to constraints on message size and the necessity of speed in synchronous exchange; and compensatory means for visual cues, facial expressions and intonation patterns (Androutsopoulos, 2006). Wichter (1991, cited in Alabdulqader et al., 2014) observes in a study of mailbox communication that the language used in such a context tends to be simple, containing conversational ellipses and representations of colloquial pronunciation. Haase et al. (1997, cited in Attwa, 2012) found in an observation of grammatical, lexical, and discourse innovations on German mailing lists that some of these features fit neatly within the three strategies mentioned above.

Computer-mediated communication has also led to the expansion of lexical innovations specifically in the field of information and communication technology, known as net neologisms, in many languages. In German, for example, lexis related to English information and communication technology is either morpho-syntactically integrated or loan translated (Cryastal, 2011). Even in English, new terms, such as *blogaholic,* have been coined on blogs but are not yet found in dictionaries, newspapers or spoken language corpora (Keong et al., 2015). Crystal (2011) also discussed lexical creativity on *Twitter* and in blogs, suggesting a need for a new lexis across many languages, including English, to account for social practices with digital technology.

In terms of spelling, CMC has developed a problem of total reliance on the autocorrection process and an increasing tolerance of typos, which might be interpreted as an outcome of speed rather than a lack of proficiency (Baron, 2008). In addition, younger users in particular have developed diverse spelling via various processes including graphostylistics, neography and respelling. Graphostylistics, as defined by Androutsopoulos (2006), refers to spelling that differs from standard orthography and from spoken language, such as "cu" for **see you**. Anis (2007) proposed three processes for neography: logograms, such as @ for **at**, syllabo-grams, such as "b4" for **before**, and phonetic spellings, which include phoneme replacement such as "*ke*" for "*que*" in French, simplification such as "*oci*" for "*aussi,*" or deletion of silent letters such as "vs" instead of "vous." Shortis (2009) indicates that respellings may offer "a simulation of spoken language" and "incorporate graphical and kinesthetic devices" for the purpose of linguistic economy (PP. 230-231). CMC users tend to respell words according to their technoliteracy and the physical constraints of message production in addition to their consideration of their audience. Changes in spelling have become a matter of suitability and identity rather than uniformity, a "deployment of choices from a range of options" (Shortis, 2009, P. 240). English spelling has also influenced internet spelling of other languages such as Turkish; for example, the substitution of "v" with "w" and "k" with "q" and "I" with "y", and the replacement of "s" and "c" with "sh" and "ch" (Alabdulqader et al., 2014). Similarly, due to the lack of support for the Cyrillic alphabet on mobile phones, Russian speakers tend to use the English alphabet to transliterate Russian messages.

In addition to language changes that may accompany digital communication, Androutsopoulos (2009) discusses script choices such as Romanized transliteration (Arabizi). Romanization has occurred in languages written in Arabic, Greek and Cyrillic script, and is thought to have originated as a response to technology at a time when the Internet was limited only to Roman characters. However, this writing script has re-emerged among young Arab users even though most CMC devices do accommodate non-Roman scripts. This variety tends to follow different spelling patterns, including "transcription (i.e. phonetic representation of native spoken language) and transliteration (i.e.

visual representation of native script)" (Androutsopoulos, 2011, P. 153). Accordingly, it has been shaped by everyday non-institutional writing; it is interpersonal rather than subject-oriented; and it is spontaneous and dialogical (Androutsopoulos, 2006).

In Saudi Arabia, this phenomenon began with the adoption of Blackberry mobile phones with systems that did not support the Arabic language, which inspired a new subculture that is highly immersed in technology. In addition to the use of Arabizi in CMC, the emergence of digital communication has also influenced the use of language in different forums. One such example is "chat language," a vernacular written form of communication characterized by, for instance, English abbreviations written in Arabic, such as "برب" "brb" ***be right back***", "تيت" "tyt" "***take your time***", or "لول" "lol" "***laughing out loud.***"

Many studies have been conducted on language change in the context of technical constraints on the support of users' native languages. In this regard, Warschauer, El Said and Zohry (2002) found that modern standard Arabic is rarely used in instant messaging due to the informal context of this form of communication; instead, a new subculture developed around the use of Arabizi, a writing script that was created to compensate for the lack of support for Arabic characters on electronic devices. In Arabizi, Latin characters and Arabic numerals are used to correspond to Arabic sounds. The term *Arabizi* "comes from two words "arabi" (Arabic) and "englizi" (English)", and "is the transliteration of the Arabic pronunciation" (Yaghan, 2008, P. 39). Yaghan (2008) noted that Arabizi is not only used as a substitute for Arabic characters on electronic devices, but also for emphasis, with capital letters in Latin script. The use of Arabizi is convenient for bilingual Arabic/English speakers who code-switch between these two languages. According to Muhammed et al. (2011), many Arab users believe that Arabic characters are not technologically friendly due to the different orthographies for the same letter in different positions in a word. Yaghan (2008) further notes that Arabizi gained acceptance and adoption among young bilingual speakers not only because of these technical challenges, but also because it can be used to communicate in Arabic using Latin letters without having to change the keyboard language. This justifies the re-emergence of Arabizi orthography even though smartphones and other CMC devices do support Arabic scripts.

The importance of this study relates to the growing bilingual segment of Saudi Arabia's population, due to the prevalence of English as an international language of communication, particularly on the Internet, and in the education system of Saudi Arabia, providing better employment opportunities for those who know both languages. Consequently, the relationship between using Arabizi and users' social identity is a major concern of this study.

It is also important to consider the written code of Arabizi and how it is used. Yaghan (2008) states that whereas consonant sounds are represented by their English counterparts in Arabizi, Arabic numerals are used for the Arabic sounds that are not phonemic in English. However, the representation of consonants depends on the mother tongue of Arabizi users due to the diaglosic nature of Arabic as it corresponds to the spoken language. For example, the phoneme /ج/ is pronounced /j/ in Saudi dialect, but /g/ in Egyptian dialect. The choice of Arabic numerals is based on the similarity of shapes between the numeral and the Arabic letter it represents (Yaghan, 2008). The dots that are used to distinguish between similarly shaped letters are represented in Arabizi with apostrophes (see appendix 1 for full list of Arabizi codes).

The use of vowels in Arabizi does not follow a strict policy. For some users, the use of short vowels is optional based on the user's familiarity with Arabizi, and the constraints of the size of messages allowed in different forums in CMC. Others tend to use /a/ for the *fatha,* /i/ or /e/ for the *kasra,* and /u/, /ou/, or /o/ for the *damma* (Yaghan, 2008). In the case of long vowels and stressed consonants, users tend either to double the letters or use a single letter.

With the introduction of computer-mediated communication, bilingual users tended to transliterate Arabic messages in Arabizi out of necessity, but later users have adopted it as a fashion (Essawy, 2010) and a way to express greeting, highly personal sentiments, or quotations, where no simple substitute exists in English. The use of Arabizi alongside English in computer-mediated communication would have long-term effects on the users' linguistic ability in Arabic (Abdel-Ghaffar et al., 2011). Attwa (2012) suggests that Arabizi could hinder the learning process of non-native speakers who are studying Arabic as a foreign language in Egypt because learners of Arabic are deprived of certain advantages that computer-mediated communication can offer. He adds that this might create a negative attitude towards learning Arabic if learners perceive native Arabic speakers as disloyal to their language.

This paper considers an inclusive conceptualization that addresses sociolinguistic rather than linguistic changes due to the scarcity of studies in this area. Accordingly, script choices of Saudi users in computer-mediated communication are studied in relation to users' social identity. The focus is on the language used in forums, texting and instant messaging, which has, in most cases, replaced spoken interaction.

3. Methodology

The focus of this study is to shed light on the relationship between the use of Arabizi in CMC and the user's social identity. As mentioned above, the need for this orthography arose due to the lack of support for Arabic characters on Blackberry smartphones, which were introduced into Saudi Arabia in 2006. The study focuses on two groups: young adults whose ages range between 15 and 25, and middle-aged adults whose ages range between 26 and 50. Users younger than 15 years are not included because it is not common to have a mobile phone before that age, and users over 50 years are not included because the study focuses on bilingual speakers who are familiar with Arabizi. Most Saudis in this age range are believed to be bilingual due to the importance of English in Saudi education over the past 20 years, the acceptance of Saudis in international schools in increasing numbers, and the custodian of the two holy mosques' scholarship program for mostly English-speaking countries. The first group in this study will be referred to as young adults (YAs) and the second group as middle-aged adults (MAAs). The re-emergence of Arabizi among YAs, even though MAAs created it in order to interact with others in Arabic when only Latin characters were available, inspired my interest in exploring the relationship between the choice of Arabizi in CMC and the user's social identity.

This paper uses a quantitative study, in which participants were asked to fill a survey questionnaire that consists of a majority of closed questions with a tick option and a few open-ended questions to enhance the findings. The data were then entered into an SPSS Programme and analyzed by running tests for statistical confidence to determine the difference in perceptions between young adults and middle-aged adults regarding the use of Arabizi codes in digital communication.

4. Analysis

The study participants consisted of 158 YAs and 140 MAAs. 40% of the young adults prefer to use a mixture of English and Arabizi in CMC, followed by 39.9% who use English, 12.7% who use Arabic, and only 7.4% who use both English and Arabic, compared to 74.3% of the middle-aged adults who prefer to use Arabic, followed by 10.7% who use English and Arabizi, and nearly a similar percentage for those who use either English only or English and Arabic. These data demonstrate that most of the YAs are influenced by the English language in computer-mediated communications with either English or Latin characters, whereas MAAs tend to use mostly Arabic even though all of the MAAs who participated in this study are bilingual.

88.6% of the YAs understand Arabizi very well, and only 11.4% understand it to an extent. On the other hand, 59.3% of the MAAs reported that they understand Arabizi, and only 40.7% understand it to an extent. In terms of using Arabizi, 88% of the YAs and only 30.6% of the MAAs tend to use it for different reasons, which will be discussed below. These numbers demonstrate a high tendency among YAs to use Arabizi compared to those of the MAAs who understand it but prefer to use Arabic.

In order to understand the popularity of Arabizi use among young adults, we must examine the similarities and differences between YAs' and MAAs' stated reasons for using Arabizi. A chi-square test was performed to show significant differences between these two groups.

Table 1. Reasons for understanding Arabizi codes

Reasons for understanding Arabizi codes	Young adults (%)			Middle-aged adults (%)			Chi-square
	Yes	Neutral	No	Yes	Neutral	No	
I have a good command of Arabizi as a writing variety.	86.7	10.1	3.2	50.6	27.8	21.6	.000
I can understand it from the context.	91.1	5.7	3.2	89.6	9	1.4	.380
Everybody in my circle uses Arabizi.	53.4	20	26.6	9	29.9	61.1	.000
I had an interest in learning Arabizi.	44.7	7.2	48.1	11.2	26.9	61.9	.000
It is important to keep abreast of the changes associated with the use of technology.	47.5	13.8	38.7	15.1	24.6	60.3	.000

One of the significant differences between YAs' and MAAs' reasons for understanding Arabizi is whether the respondent has a good command of Arabizi (P=.00). Table 1 shows that 86.7% of YAs, but only 50.6% of MAAs have a good command of Arabizi as a writing variety; this indicates that Arabizi is popular among YAs, even though almost all technical devices, including smart phones, support Arabic characters. The chi-square demonstrates that the

social circle of the user (P=.00) is another differentiating factor between these two groups: over 50% of the YAs are engaged in social circles that use Arabizi in their computer-mediated communication, but this is not the case for the MAAs. Less than 50% of the YAs have indicated that they had an interest in learning this writing variety to understand what others write, and they believe that it is important to keep abreast of the changes associated with the use of technology, whereas a very low percentage of the MAAs shared this view. However, both groups agree that context helps them understand Arabizi codes, as the Latin characters correspond to the Arabic phonemes and the numbers correspond to the shape of Arabic letters that are not phonemic sounds in English. Therefore, the reasons that YAs cite for understanding Arabizi are knowledge, context, social circles, interest, and technological changes.

The participants who use Arabizi were asked why they use Arabizi rather than Arabic characters; their answers are below:

Table 2. Reasons for using Arabizi codes

Reasons for using Arabizi codes	Agree %	Neutral %	Disagree %
Arabic spelling is difficult.	21.2	18.5	60.3
It is faster to use Arabizi.	70.6	14.7	14.7
It is difficult to use Arabic keyboards.	31.5	40.1	28.4
I use it to avoid language policies.	49.9	25.1	25
My keyboard does not include Arabic letters.	28.3	1.1	70.6
I use it when the content of my message cannot be expressed in English.	41.3	41.5	17.2

Table 2 shows that the majority of the users in this study (70.6%) tend to write Arabic using Latin characters because it is faster than shifting between Arabic and English. It is also used when the message cannot be expressed in English, as reported by 41.3% of Arabizi users, which provides evidence of the dominance of English in computer-mediated communication. Nearly 50% of Arabizi users think that Arabizi helps them avoid language policies, since Arabizi codes do not follow a strict policy, especially for those who have problems with Arabic spelling; in addition, Arabizi is a vernacular variety that corresponds to the spoken language. Most MAAs argued against considering Arabizi a language, as it does not follow strict rules and is not governed by a language policy. Therefore, in this study, Arabizi is referred to as a code, orthography, or writing variety that corresponds to the vernacular form of the Arabic language. Other reasons cited for using Arabizi include the difficulty of using the Arabic keyboard, the difficulty of Arabic spelling, and the lack of Arabic keyboards on certain devices.

The effects of using Arabizi in CMC on the users' technical, social, and linguistic levels were analyzed via an application of the chi-square test in order to categorize discrepancies between the two groups' points of view:

Table 3. The effects of using Arabizi

The effects of using Arabizi	Young adults (%)			Middle-aged adults (%)			Chi-square
	Yes	Neutral	No	Yes	Neutral	No	
It helps the users shift between English and Arabic.	74	12.7	13.3	36.4	30.7	32.9	.000
It facilitates communication with those of my age.	63.3	19.6	17.1	25	31.4	43.6	.000
It weakens the Arabic linguistic ability of the user.	36.2	35.3	28.5	83.5	11.5	5	.000
It affects the identity of the Arab user.	31.8	35.9	32.3	83.6	13.6	2.8	.000
It makes young generation embrace western cultures.	38.1	34.1	27.8	69.3	26.4	4.3	.000

The results in table 3 reveal significant differences between the YAs and the MAAs with regard to the effects of using Arabizi in computer-mediated communication at (P=.000). The majority of the young adults recognized the positive effects of being able to shift easily between English and Arabic without changing the keyboard language, and to communicate effectively with the vast majority of others of their age. On the other hand, the majority of the MAAs recognized the negative effects of using Latin characters instead of Arabic ones. Many of them reported that

using Arabizi would weaken the users' Arabic linguistic ability for three reasons: Arabizi is a vernacular form of Arabic that, due to the diaglosic nature of the language, is quite different from the 'standard' form; it does not follow a strict language policy; and it weakens the orthographic lexical knowledge acquired from exposure to the written form of the language. In addition, the MAAs reported that Arabizi users could potentially perceive the Arabic script over time as a traditional and old-fashioned version of the language that is not suitable for technology, and this would eventually lead them to embrace western cultures. The validity of this view is based on the experience of the majority of MAAs who were forced to use Latin script in the absence of Arabic script, and on their awareness of the negative effects of Arabizi that were raised in this experience. Accordingly, a number of MAAs noted that educators and guardians should be warned about the possible negative effects of Arabizi on their mother tongue language, the language of the Qur'an. Others mentioned that using informal writing would affect the users' linguistic ability in Arabic, and that using Arabizi codes could possibly weaken both Arabic and English.

On the other hand, one young adult expressed a positive view in saying, "I think it is useful to make nonnative speakers of Arabic pronounce Arabic sounds that are not phonemic in English, for example, *su6an* instead of *sultan*. It would help those who are trying to learn Arabic to pronounce these sounds correctly." Several middle-aged adults expressed similar positive opinions: it is acceptable to use Arabizi when it is necessary, for example, when chatting with someone who does not have an Arabic keyboard, chatting with non-native speakers of Arabic who can only understand Arabic, or trying to introduce non-phonemic sounds in English to non-native speakers to allow them to recognize the difference and encourage them to pronounce the correct sounds, especially in the case of names.

The factors that influence individuals' social identities and language use include historical, social, and educational backgrounds, beliefs, ethnic affiliations, and attitudes. The table below shows how these factors affect the user's choice of language script by categorizing the agreement and disagreement of the participants on the following statements:

Table 4. Language use and individuals' social identity

Statements	Young adults (%)			Middle-aged adults (%)			Chi-Square
	Agree	Neutral	Disagree	Agree	Neutral	Disagree	
Language use reflects my ethnic affiliation, so I prefer to use Arabic in computer-mediated communications.	37.3	37.4	25.3	85.7	11.4	2.9	.000
Language use reflects my educational background, so I prefer to use English in computer-mediated communications.	48	29.7	22.3	45	30	25	.903
Language use reflects my acquaintance with technology, so I prefer to use Arabizi.	55.6	18.4	26	20.7	23.6	55.7	.000
Language use reflects my belonging to a particular group, so I prefer to use the code used by group members.	59.5	24.1	16.4	29.3	34.3	36.4	.000
Language use affects my acceptance in a particular group.	51.8	27.8	20.4	22.9	25	52.1	.000

A general look at the chi-square examination indicates that nearly a similar majority of both groups agree that language use reflects their educational background, so they prefer to use English in computer-mediated communication. As mentioned above, most of the YAs use English as their main language for online communication, whereas a very low percentage of the MAAs use English as an alternative language to Arabic when needed. Indeed, from table 4, we can conclude that a majority of MAAs (85.7%) use Arabic as the main language in their CMC as it reflects their ethnic affiliation, compared to 37.3% of the YAs who shared this view, confirming a statistical difference at (P=.000). Some of the MAAs indicated that it is their responsibility to raise awareness among younger generations about the importance of maintaining the Arabic language because it is part of their identity. Promoting and showing a positive attitude toward one's native language would influence the way it is perceived by other nations.

Young adults and middle-aged adults also perceive the relation between language use and technology differently. For over 50% of the young adults, whom Androutsopoulos (2011) calls "digital natives," language use reflects their

acquaintance with technology, so they prefer to use Arabizi in their digital communication whereas only 20.7% of the MAAs agreed on this point. One of the YAs reported, "due to the fast changes in technology, we must pursue these changes and be 'cool' in the way we talk, write, or look." Many YAs view Arabizi as a modern variety of language that suits modern technology.

On the social level, over 50% of the YAs also expressed the idea that language use reflects and affects their acceptance and participation in a particular group, so they prefer to use the code(s) used by the members of that group. In most cases, those codes would be either English or Arabizi. This section confirms that language use in computer-mediated communication reflects the beliefs, attitudes, ethnic and social affiliations, and educational backgrounds of the users, and these factors are elements of the users' identities.

It is also essential to discuss how identities are co-constructed via language use to establish a relationship between language use and social identity. The participants were asked about how they prefer to present themselves in computer-mediated communication, bearing in mind that most of the young adults in this study reported that they spend more than three hours daily communicating digitally with their friends and family members:

Table 5. Language use and identity co-construction

How do you like to present yourself in digital communication?	Young adults (%)			Middle-aged adults (%)			Chi-square
	Agree	Neutral	Disagree	Agree	Neutral	Disagree	
Cool	54.5	19.2	26.3	15.7	37.1	47.2	.000
Arab	69.2	19.9	10.9	69.8	23.7	6.5	.343
Bilingual	66	22.4	11.6	66.4	27.2	6.4	.249
Educated	38	28.7	33.3	40	29	31	.903
Funny	50.5	23.2	26.3	20	35.1	44.9	.000
Distinctive	74.1	12.6	13.3	36.4	30.7	32.9	.000

Table 5 shows that there is no statistical difference between young adults and middle-aged adults in terms of how they present themselves in computer-mediated communication as Arab, bilingual, and educated users. However, a statistical difference appears in characteristics associated with young adults' perception of the importance of presenting themselves as cool, funny and distinctive users, especially when they chat with their friends. "Some teenagers consider Arabizi as a trend that makes them sound cool and open-minded, especially in chatrooms," one middle-aged adult said. Their choice of language use is influenced by what makes them popular and accepted by those of their age who share similar social and educational backgrounds. The extensive use of English among young adults reinforces the dominance of English in the world of technology as a whole, and Arabizi demonstrates young users' membership in the Arab community, but in a westernized manner.

The following section discusses important findings in the data analysis in relation to the literature review to reach a conclusion about the relationship between the re-emergence of using Arabizi and users' social identity.

5. Discussion and Conclusion

The relationship between the use of language, specifically the use of Arabizi, and the social identity of the user can be traced through the function of the language in relation to the individual user and the natural environment. Language is one of the basic means of communication, which people use to express feelings, ideas and goals. It is what differentiates groups of people from one another. Each social group has linguistic rules that influence, and are influenced by, social and environmental conditions. Language, whether written or spoken, is an essential part of the culture of any society. Language use is a determinant of the social status of individuals; for example, many upper- and middle-class people encourage their children to learn English, which has become the most widespread language in the world, and knowledge of English therefore becomes a marker of high cultural and social status. As Hall (2013) has pointed out, language use depends on factors such as values, beliefs, attitudes, and social history, which shape the social identity of individuals.

In addition, the rapid development of modern technology, especially the progress of new means of digital communication, has influenced the tendency of younger people to seek the easiest and most flexible method of communication. Consequently, the effects of cultural globalization are evident in the choice of young adults who spend much of their time on digital communication devices to use English, or Arabizi in the case of highly personal content. The use of Arabizi can be seen as a code, a flexible means of communication that is not subject to strict

rules or language policies, which provides young users with privacy and helps to distinguish them from other social classes. Accordingly, computer-mediated communication has resulted in an expansion of vernacular writing into new domains of practice shaped by different writing styles and norms, and has provided vernacular writing with more visibility and tolerance than it has enjoyed in the past (Androutsopoulos, 2011).

However, since almost all digital communication devices now support Arabic characters, the re-emergence of Arabizi codes among an increasing segment of young people and adolescents in Arab society could risk marginalizing the authentic Arabic language, the language of the Qur'an. The choice to use Arabizi in computer-mediated communication is based more on appropriateness and identity than on uniformity because, according to Shortis (2009), it is a specific choice from a range of options. However, heavy use of Arabizi could pose a long-term risk to the users' cultural heritage and could also potentially affect students' linguistic skills, particularly in written orthography, in both Arabic and English. On the other hand, Arabizi is useful when communicating with speakers who only understand Arabic, when using a keyboard that lacks Arabic characters, or when introducing non-phonemic sounds in English to non-native speakers.

For most of the middle-aged adults surveyed in this study, the use of language reflects their ethnic affiliation and their identities as Arabs, and a positive attitude toward their language would influence its perception by others. On the other hand, for most of the young adults, language use reflects their familiarity with technology and a desire for acceptance by others of their age who share similar social and cultural backgrounds.

As mentioned earlier, Bucholtz and Hall (2005) point out that the social identity of an individual is not fixed but is "multifaceted in complex and contradictory ways; tied to social practices and interaction as flexible and contextually contingent resources and tied to processes of differentiation from other identified groups" (Miller, 2000, P. 72). The data gathered in this study demonstrate that many young adults use Arabizi in digital communication in order to co-construct their social identities as cool, funny, and distinctive users, especially in communication with their friends, and to present themselves as members of the Arab community, but in a distinctly westernized manner. On the other hand, most of the middle-aged adults consistently indicated a strong sense of belonging to their Arab community of origin. Accordingly, the findings of this study show a reciprocal relationship between language use and social identity in which the use of language in digital communication not only reflects the social identity of the users but also co-constructs the users' social identity.

In conclusion, guardians and educators should observe the extent of the spread and usage of this phenomenon as a means of daily communication among the younger generation and try to raise awareness of the importance of their mother tongue. It is also important to resist the potential atrophy of Arabic orthography in order to maintain the strength of the language, and the media can play an important role in educating younger people and offering Arabic programs suitable for a globalized and open world.

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Appendix 1 Arabic Conventions

Consonants

Arabic Grapheme	Arabizi Possibilities		IPA Symbol
	Numeral	Character	
أ	2	a	2
ب		b	b
ت		t	t
ث		th	θ
ج		j,g	d
ح	7		h
خ	7', 5		x
د		d	d
ذ		d'	ð
ر		r	r
ز		z	z
س		s,c	s
ش		sh,ch	ʃ
ص	9		s
ض	9'		d
ط	6		t
ظ	6'		dh
ع	3		ʕ
غ	3'		ʃ
ف		f	f
ق	8,2	q	q
ك		k	k
ل		l	l
م		m	m
ن		n	n
ه		h	h
و		w	w
ي		y	j

Vowels

Arabic Grapheme	Arabizi Possibilities	IPA Symbol
أ (short vowel)	A	a
و (short vowel)	U	u
ي (short vowel)	I	i
أ (long vowel)	Aa	a:
و (long vowel)	uu,w,o,ou	u:
ي (long vowel	i,ii,e	i:

Note: This table is based upon Yaghan's (2008) table of characters and their Arabizi counterparts