Digital Literacy Practices of Female Saudi University Students: Insights from Electronic Literacy Logs

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This paper is part of a wider study that aims to investigate digital literacy practices of Saudi female university students. Addressing an ongoing debate about the effect of social media on Saudi youth's language and social relations, this paper reports on the descriptive analysis of data obtained from electronic literacy logs, in which 47 English department students registered their social media activity over a four day period. The results indicate that participants communicated in multimodal and multilingual ways. There is no unitary or single e.Arabic used. Participants used different languages with different recipients. Participants in this study engaged in digital interaction through various platforms, such as WhatsApp and Snapchat, and for different purposes, including entertainment, sharing information and keeping in touch. These results, derived from electronic literacy logs, present an overview of participants' digital practices, pave the way for a more in-depth investigation into samples of digitally-mediated communication, and offer insights into the online worlds of Saudi university students..

1. Introduction

Statistics on the use of digital media, especially social media, among Saudi youth suggest that the number of social media users is growing and ranks high globally. According to BBC News, 'Saudi Arabia has the highest per-capita YouTube use of any country in the world' (BBC, 2015). According to Social Clinic, a social media agency in Saudi Arabia, statistics published in 2013 showed that Saudi Arabia ranks first in the use of Twitter globally (Social Clinic, 2013). Furthermore, Saudi Arabia ranks seventh in the world for individual social media accounts per individual, with an estimate of seven accounts per person, eighth globally in using Snapchat (26% of Saudi teenagers use Snapchat), and fourteenth globally in using WhatsApp (Arab News, 2015).

   As part of the ongoing global conversation about the impact of digital media on young people's language and literacy, cultural identity and social relationships, there is currently a debate in Saudi Arabia regarding the language used by young people online. Digital media use is expanding rapidly among Saudi youth, and young women are at the forefront of this expansion.

   This wide use of social media has raised a host of concerns about the effect of digital communication on people's language and relationships. Among the prevalent issues of concern are fears that new ways of using and mixing languages, such as the use of e.Arabic (Daoudi, 2011), Arabish or "3arabizi" (Bianchi, 2013), in which young people use Latin script and numerals instead of, or in conjunction with, Arabic script, will potentially affect their use of spoken and written Arabic. Other people claim that digital media use has negative effects on people's social interaction, and further assert that Saudi family relations are in danger due to the long hours spent by teenagers on social media. The time "wasted" online is seen to weaken

general social skills, as well as leaving little or no time for social contact (Al-Haidari, 2015), which could ultimately lead to social introversion (Hashim, et al., 2016).

At the same time, there are other voices in the media that celebrate young people's use of digital media, arguing that it actually encourages linguistic creativity (Kutbi, 2015; Mahdi & El-Naim, 2012; Mahmoud, 2013), and that it improves their relationships and communication skills (Al-Saggaf, 2004; Hamdan, 2014).

Owing to a shortage of empirical research in Saudi Arabia, in particular that which offers conclusions addressing these specific debates, it has become necessary to attempt a study investigating questions such as the following: What are young female Saudis doing online? What languages are they using? Are they using an online language that might affect or even harm their grasp of the Arabic language? Why are the participants using different platforms? Are they simply "wasting time" by moving from one platform to the other? The current research attempts to answer these questions using a number of tools, including self-report questionnaires, literacy logs and a collection of samples of digitally-mediated communication. This paper seeks to address some of the aforementioned claims by examining the languages, modes, platforms, purposes and recipients involved in these social media interactions, utilising data from the electronic literacy logs. The use of electronic literacy logs (e.LL) in this study is an attempt to respond to Jones' call for developing new 'ways which encompass multiple modes and make use of multiple methods, ways which begin not with texts but with people's actions and experiences around texts' (Jones, 2004: 31).

2. Research in Digitally-Mediated Communication

There have been three main traditions in researching language and digital media: the first approach focuses on the linguistic aspects of digitally-mediated communication, the second considers more sociolinguistic approaches, and the third accounts for sociocultural approaches informed by new literacy studies.

The first studies investigating language and digital media were predominantly concerned with the linguistic aspects and structural features of the 'new language" people were using online (Snyder & Joyce, 1998). "Internet language", or "netspeak", was defined by David Crystal as 'a type of language displaying features that are unique to the Internet … arising out of its character as a medium which is electronic, global, and interactive' (Crystal, 2006: 18). A key topic under this early tradition was to compare the linguistic structure of computer-mediated communication with speech and writing (Herring, 1996; Jonsson, 2015; Ko, 1996; Nishimura, 2013; Marchand, 2013). This resulted in language-focused research that did not consider, at that early stage, any social or contextual factors. Studies that exemplify this tradition are corpus-based studies that compared online data to written and spoken corpora (Ko, 1996; Marchand, 2013; Yates, 1996). Among the features that interested researchers were abbreviations, acronyms, emoticons and non-standard spelling and grammar (Crystal, 2001; 2006) in, for instance, emails (Baron, 2002; Lee, 2007; Maynor, 1994), instant messages (Baron, 2010b; Lee, 2007) and SMS texts (Tagg, 2009).

As a reaction to the limitations of the purely linguistic approach taken by early "internet linguists" and the techno-deterministic approach of early communication scholars, new approaches began to emerge, focusing more on the social context of internet use and the characteristics of different internet users. The move from a form-focused approach to a more user-centred tradition resulted in a reassessment of the aims of researching internet language. Research under this tradition sought to investigate the 'communication that takes place between human beings via the instrumentality of computers' (Herring, 1996: 1). However, researchers became aware that people use language online differently according to different situations and

purposes (Herring, 1996; 2007; Herring & Zelenkauskaite, 2008). This social perspective contributed to the emergence of studies of the *Multilingual Internet* (Danet & Herring, 2007); this book marked a turning point in research on digitally-mediated communication, which had previously been focused almost entirely on the English language. This new focus on multilingualism online gave rise not only to research on particular varieties of "internet language", but also to research on online code switching (Al-Khatib & Sabbah, 2008; Androutsopoulos, 2007; Sebba, 2012) and heteroglossia (Androutsopoulos, 2011; 2015).

One important aspect of new technology (especially more recent forms of computer-mediated communication) is the rich range of semiotic resources that have been made available to users, including modes such as image and video. In contrast to the early days of the internet, in which researchers focused mostly on text-based communication, texts on the internet today are almost always multimodal (Jewitt, et al., 2016). Multimodality, for example, is an important characteristic of most social media platforms. Barton and Lee (2013: 29) define modes or semiotic modes as 'systems or resources that people draw upon for meaning making'.

The third approach to analysis of online communication is characterised by focus on sociocultural aspects of interaction. This approach views online interactions as forms of social practices (Barton & Lee, 2013). This practice-oriented idea comes chiefly from new literacy studies, an approach to literacy that adopts a social or ideological perspective (Barton & Hamilton, 1998; Gee, 2014; 2015; Street, 1984; 1995; 2003). New literacy studies emerged as a reaction to the previous cognitive and linguistic understandings of reading and writing. This cognitive view of literacy as simply the ability to read and write dominated school contexts and influenced the research performed in literacy studies (Barton, 2001). Research in new literacy studies, on the other hand, such as those conducted by Lee (2011), Barton and Lee (2011), and Thurlow and Mroczek (2011), investigates interactions that are situated and multimodal, emphasising the plurality of 'literacies' (Street, 1984) and practices that converge at 'a nexus of practice' (Scollon, 2001).

The current study adopts a sociocultural approach to online communication that views literacy as a social practice. It examines literacy practices by first providing general insight on the participants' online activity patterns, and then following this with an analysis of authentic samples of computer-mediated communication. This approach is used in order to gain a better understanding of language and social practices (Barton & Lee, 2013).

3. Method

2.1 Participants

A total of 47 participants were included in a four day data collection exercise related to their usual social media activity. The participants were Saudi female undergraduate students majoring in English at the University of Dammam, Saudi Arabia. Their first language is Arabic and they speak English as a second language. All participants owned smartphones with access to the internet which they enjoyed at home and at the university, and have been participating on various social media platforms for a number of years (between four and six years).

2.2 Data Collection

One way to commence the investigation of digital practices is to obtain insights into the general patterns of practice that are common in the selected sample, in order to guide the research directions towards a more focused analysis. Literacy logs, i.e. a form of diary, were one of the tools used in this study, designed to give a general impression about the online activities of participants moving towards a detailed investigation of samples of online interaction. This

paper will not report on the qualitative analysis of the study and will only report the results from the data collected through the e.LL.

Participants used the e.LL to record their digital practices. The electronic log designed for this study was created through an application called Zoho. The program allowed the researcher freedom in designing the shape as well as content. The program also provides a hyperlink to the researcher's log, which was copied and sent to participants. By clicking on the link, participants were directed to the log via an online page where they filled in information regarding each online activity (Figure 1). The e.LL is considered user-friendly; this is because participants did not need to type in much information, but rather ticked boxes to log in details on their digital interactions. Data was collected in the form of responses to questions from the e.LL, which included user name, date, time, social media sites visited (such as Instagram, Snapchat, or WhatsApp), recipients (family, friends, or teacher), language used, type of communication (text, image, video, or a combination), duration of activity, reason for use (give information, ask for information, keep in touch, or entertainment), and type of literacy, whether it is receptive (read and watch), productive (write and like), or a combination of the two. These categories were elicited from the participants themselves during the pilot study that was conducted in retrospect. For example, the participants devised the purposes of using online platforms and also provided definitions for these, such as defining "entertainment" as "visiting sites with no previous aims, just to have fun". All participants' responses and log entries fed into an online collective table. This table was retrieved as an excel file and analysed quantitatively.
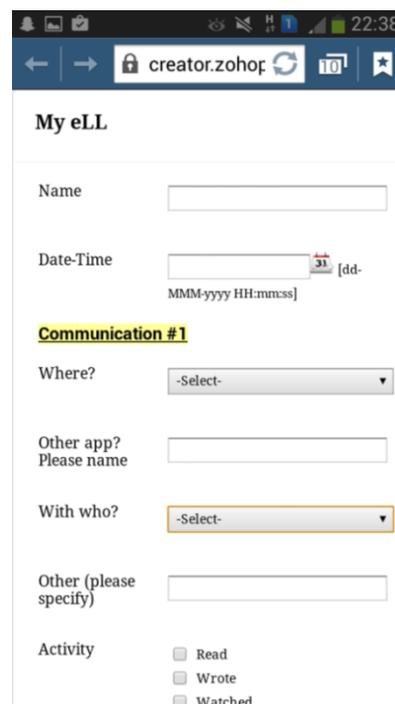
Figure 1. The electronic literacy log as it appeared on participants' phone screens

3. Results

3.1 Popular Social Media Platforms

Participants logged in the name of different applications used in their online interactions, under the question "Where?" in the literacy log. The reported data revealed that participants utilised a number of online platforms during the four day period. The following figure (Figure 2) shows that WhatsApp was the most popular site, followed by Snapchat. This result corresponds to statistics showing that WhatsApp is widely used in Saudi Arabia (Arab News, 2015). The least used application was email, used only for exchanging school work. For various reasons, such as its constraints in terms of participation framework and synchronicity, email was not a preferred option for entertainment or keeping in touch. Under the category "Other", participants listed the names of the applications used, which included YouTube, Vine and Tumblr.
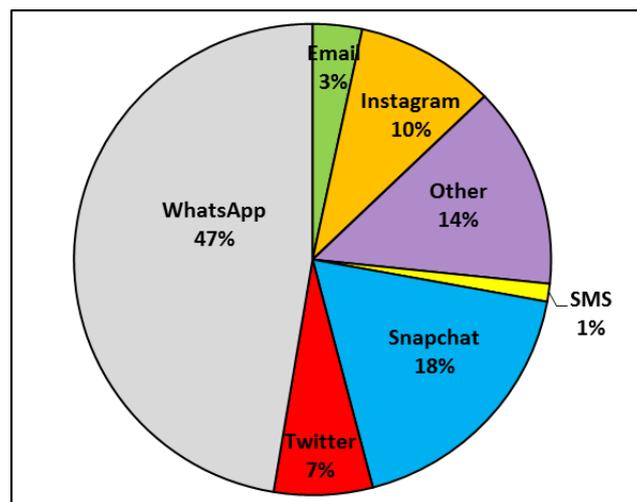

Figure 2. Social media platforms visited by participants

3.2 Codes Used

According to the e.LL data, four language varieties were used by participants:
1. Arabic,
2. English,
3. Arabicised English (English with Arabic letters, such as سي يو, i.e. see you), and
4. Arabish (Arabic with Roman letters and numerals, such as keef 7alik, i.e. how are you).

As reported by the e.LL, Arabic was the dominant language used in most (62%) of the participants' communication. When the participants code-mixed, the proportion of Arabic was greater, indicating that Arabic was more likely to be the matrix language. In addition to communicating using English (27%), participants also reportedly used Arabicised English (10%). It was easier for the participants to continue using Arabic letters for English language communication, as this did not require them to switch the keyboard to English. Arabish was used in only 1% of all interactions.

Results also indicate that different languages were used in different platforms. For example, when using SMS, only Arabic was used in almost all instances. In Instagram, participants reported an equivalent usage of Arabic (49.6%) and English (50.4%). When participants used WhatsApp, Snapchat, and Twitter, Arabic was used more frequently than English.

The data further demonstrated that participants used different languages with different recipients. Participants used Arabic almost invariably with their families, but tended to code-switch with their friends. Arabish and Arabicised English were used often with friends but very rarely with family and never with teachers.

3.3 Modes Used

Most of the reported communication was text-based, representing a total of 42.6% of all participants' social media interaction. Combinations of text and images came in second place, with 17.1%, followed by images and videos at 12.6%. Other combinations of communication modes were used as well, with lower percentages reported.

Analysis of the relationship between communication mode and platform showed a tendency among participants to vary modes of communication according to the platform being used. This result is linked directly to the affordances and constraints of different platforms. For example, Snapchat was the most popular platform for sharing videos and images, followed by Instagram, as these two platforms are designed mainly for the exchange of these modes and have constraints only over the use of text. On the other hand, WhatsApp was reported to be used mainly for text, as the application is designed for chats between two or more users; nevertheless, although WhatsApp has the affordances for exchanging images and videos, these modes were used less frequently by the participants than text.

In relation to the recipient type, it was observed that text, images, and videos were exchanged with friends and family, while very few images or videos were exchanged with teachers. This implies that the nature of the relationship with a recipient affects the mode of communication. Generally speaking, participants appeared unlikely to use social media platforms to interact with teachers and, in the few interactions mentioned, they used platforms reported to be used primarily for textual interaction.

3.4 Reasons for Using Social Media

The results from the e.LL indicate that participants were using social media for various purposes. It was found that a large number of the participants used social media for entertainment (43%), while others used it to keep in touch with others (27%), to give information (16%), and to ask for information (14%).

The data also shows that different platforms were used for different purposes. For example, Instagram and Snapchat (80.2%) were used mainly for entertainment, whereas WhatsApp was used mostly to keep in touch with others (Table 1). It appears that those platforms used primarily for exchanging texts were used by participants for purposes other than entertainment, which typically involved a need to obtain some form of information. Where the platforms' main affordances related to the exchange of images and videos, the nature of the participants' interest was more likely to pertain to entertainment.

	Email	Instagram	Other	SMS	Snapchat	Twitter	WhatsApp
Entertainment	0%	82.9%	65.3%	0%	80.2%	69.3%	18.2%
Ask for information	43.8%	0.8%	6.0%	45.5%	1.9%	10.7%	20.6%
Give information	37.5%	2.4%	7.2%	45.5%	3.8%	6.7%	24.5%
Keep in touch	18.8%	13.8%	21.6%	9.1%	14.1%	13.3%	36.7%
	100%	100%	100%	100%	100%	100%	100%

Table 1: Reasons for using different social media platforms

The e.LL data also shows that there are different reasons for communication with different recipients, involving different codes and modes of communication. Participants communicated with family mostly to keep in touch, with friends for entertainment and with teachers to ask for information. The participants used different languages for different purposes. Arabic was used

mostly for entertainment and to keep in touch with others. English was used more for entertainment than for keeping in touch with others. Furthermore, Arabish was never used to ask for information. The data also reveals that some modes were preferred for certain purposes. Text, unlike other modes, was used on its own for all purposes, (i.e. for entertainment, to ask for information, to give information, and to keep in touch with others) indicating that, for this sample, online interaction was mainly textual. The participants also indicated that combinations of text and image, text and video, or both, were used for entertainment. These findings reveal that, despite multimodality online, text is capable of carrying out a diverse range of actions. However, multimodality shows an indirect link with enjoyment and entertainment, given that social media platforms are highly multimodal but are not used solely for entertainment.

3.5 Type of Literacy

The purpose of interaction is not only linked to language use and platform, but also to the type of literacy or mediational tools used in that interaction. The e.LL reports that participants interacted online using various literacies; this included reading, writing, watching, liking, and a combination of any of the aforementioned categories (Figure 3). The most commonly practiced type of literacy was reading and writing, representing 33% of participants' overall actions; this was for asking or giving information and keeping in touch with others. Other activities, such as watching and liking, were mostly linked to entertainment purposes.
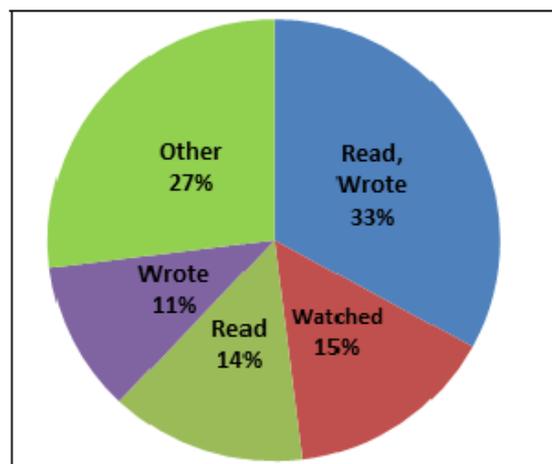

Figure 3: Type of literacy

These types of literacies are also linked to the affordances and constraints of different platforms. For example, liking took place on Instagram because, in contrast with WhatsApp, there is a like button on this platform. On WhatsApp, reading and writing took place more commonly than on Snapchat, in which the most frequent literacy activity was watching; this variance can be explained by the different affordances of these two applications. Different literacy types were also used with different recipients. With family, for example, the dominant literacies were reading, writing, and watching, though not much liking was taking place.

4. Conclusion

The results from the e.LL indicate that the participants communicated in complex ways. They took up the affordances provided by different platforms and adjusted their language use

according to different recipients, purposes and situations. These results are supported by the notion that people act differently in different gatherings (Scollon, 2001; Scollon & Scollon, 2003). Addressing the claims raised at the beginning of this paper, with regard to the negative impact of social media on the language of Saudi youth, requires evidence from samples of authentic interaction, in addition to reported results from the literacy logs used here. However, this paper attempts to address these claims in light of the results obtained from the e.LL.

The study participants interacted in multilingual and multimodal ways in a strategic manner, as shown in the way they managed their use of different codes and modes in different situations. Among the various languages used by participants, Arabic was the most frequently used and, therefore, the fears of digital communication minimising or eliminating use of the Arabic language are not reflected in the data collected in this study. On the other hand, Arabish is rarely used. This result contradicts previous claims regarding the use of e.Arabic in online interaction (Bianchi, 2013; Daoudi, 2011; Palfreyman & Khalil, 2003) in two ways: first, there is no single or unitary netspeak used in the participants' interaction and, second, the claims about netspeak dominating or taking over Arabic or English is refuted because, according to the data, Arabizi, Arabish or 3rabizi, claimed to be the "funky" language young Arabs are using (Palfreyman & Khalil, 2003), were rarely used (1%). The use of very few netspeak forms in this data is in line with the findings of Baron (2004) and Tagliamonte and Denis (2008), who also found short forms and emoticons to represent less than 3% of communication in their data.

The findings also indicate that language use (including codes and modes) is not evenly distributed among recipients; there seems to be a pattern that differs according to different people and platforms. Arabic was used with family who are native speakers of Arabic, while English and other mixed varieties were used with friends who know how to use these languages. The study participants also utilised various modes, indicating their creative and multimodal ways of communication. In using images mostly on Instagram and Snapchat, but not in emails, participants showed awareness of different platforms and what they can actually do with each medium. However, text was the most commonly used mode in participants' online interactions, supporting the claims that, in spite of the multimodal tide, the internet is mainly textual (Herring, 2015).

Claims that social media is weakening social relations are also challenged by the results of this study. Participants reported that they were engaged in actual interactions, as indicated by their utilisation of receptive and productive literacies. It was clear that they were not passive or simply "lurking", as the most common literacy used by participants was reading and writing at the same time, which took place on interactive platforms such as WhatsApp. Another finding that exhibits the participants' engagement in social interaction is that "keeping in touch" was reported by participants' as a common reason for using all social media platforms. WhatsApp, in particular, which was the most commonly used app among study participants, was used mainly to keep in touch with family and friends. Participants meet with others online several times a day and perhaps arrange for actual meetings. These results are in line with the findings of Baron (2010a), which demonstrated no relation between computer-mediated communication and weakened social interactions. In fact, other studies have indicated that social media has a positive effect on Saudis. Young Saudis who used social media gained more self-confidence, open-minded thinking, and awareness of their individual characteristics and the opposite gender (Al-Saggaf, 2004). Social media offers Saudis open platforms for self-expression (Guta & Karolak, 2015) and, as a result, enhances their communication skills (Hamdan, 2014).

To conclude, this paper is part of a study addressing certain claims that have been raised in the debate on social media's effect on Saudis' language and social relations, which reflects a similar ongoing global concern. Some of these concerns have been addressed by investigating digital literacy practices of Saudi university students. Language use and motivation in different social media platforms were examined in order to obtain a general impression of the kind of

digital social practices that are common among participants. Analysis of data from the e.LL was a step taken to provide a general overview of participants' online activities and, at the same time, to direct the analysis of authentic samples.

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