"Arabic-English Code-Switching in Saudi Arabia: Exploring Bilinguals' Behavior and the Individual Factors Influencing It"

Researcher:

Nouf Aljasir

Assistant Professor of Applied Linguistics, English Language Institute, King Abdulaziz University, Jeddah, Saudi Arabia

Abstract

This mixed-method, phenomenological study was carried out to explore the code-switching (CS) behavior of Arabic-English bilinguals in Saudi Arabia. The study investigated the influence of several individual factors on CS, mainly: gender, age, educational level, employment status, exposure to English in daily life, spoken English proficiency, knowledge of other foreign languages, and parents' knowledge of English. The data were collected from 400 bilinguals using (a) two questionnaires developed specifically for this study, (b) audio-recorded oral conversations, and (c) unstructured interviews. The data analysis revealed that CS varied considerably according to the emotional state of the speaker, interlocutor type, interlocutor's knowledge of English, and conversation setting. In addition, all the individual factors investigated in this study were found to have a significant influence on the frequency of CS in certain situations. Since there is a scarcity of research investigating code-switchers' behavior in the Arab world, the study concludes by presenting some suggestions for future research.

Keywords: Arabic-English Bilinguals, Code-Switching, Demographic Characteristics, Language Background

Introduction

Sociolinguists have long been interested in the impact of social context on the way individuals speak and how the same speaker may alternate between different linguistic codes (languages or dialects) within the same conversation (see, for example, Basnight-Brown & Altarriba, 2007; Heredia & Altarriba, 2001; Hughes et al., 2006; Macswan, 2013; Sichyova, 2005; Toribio, 2011). Code-switching (CS) is considered a context-sensitive discourse strategy employed by multilingual speakers to produce a specific communicative effect (Ritchie & Bhatia, 2013). However, CS does not occur in all bilinguals' speech, and neither does it necessarily take place in similar ways. Grosjean (2001) explains that several factors contribute to variations in bilinguals' CS behavior, which include the manner in which they acquired or learned their different languages, whether they grew up in monolingual or bilingual communities, the number of languages they know, their proficiency level in each language, the situation, and the interlocutor type.

A review of the existing research on CS reveals that attention has been given to the discourse processes by which speakers join components from different codes to generate mixed utterances and the linguistic and cognitive mechanisms involved in CS. However, there is a scarcity of research investigating Arabic-English code-switchers' behavior and the factors that could have an impact on it. To fill this gap in the literature, I propose a comprehensive approach that examines Saudi Arabians' CS behavior in different situations and the possible influence of nine individual (demographic and language background) factors on it. The demographic characteristics that are examined in the study are gender, age, educational level, and employment status, and the language background factors are exposure to English in daily life, spoken English proficiency, knowledge of other foreign languages (FLs), and parents' knowledge of English. In order to provide an in-depth investigation of the phenomenon, the study triangulates quantitative and qualitative data collected from a variety of sources: two questionnaires, recorded oral conversations, and unstructured interviews. Exploring the impact of several intra-individual factors can provide evidence that CS is a complex phenomenon that goes beyond linguistic and cognitive constraints. It is hoped that the findings of this research will expand the existing knowledge and contribute new insights to the field.

To achieve this purpose, the study addresses the following research questions:

1. What is the CS behavior of Saudi bilinguals?
2. Is there a difference in CS behavior according to demographic characteristics?
3. Is there a difference in CS behavior according to language background?

Previous Research on CS

The term code-switching was first introduced in the bilingual speech literature by Hans Vogt in his 1954 article "Language Contacts" (Auer, 1998). A classic definition of CS, which has been widely quoted, was later proposed by Poplack (1980, p. 583), describing this phenomenon as "the alternation of two languages within a single discourse, sentence or constituent." An examination of most of the subsequent definitions reveals that they all convey the core concept of alternation between different linguistic codes. Gardner-Chloros (2009, p. 1), for instance, defined CS as "the use of two languages or dialects in the same conversation or sentence by bilingual people."

Two types of CS have been identified in the literature, according to where the switch takes place. The first is inter-sentential CS, in which "switches occur at clause or sentence boundaries so that each sentence or clause comes from a different language" (Migge, 2015, p. 187). It can occur at the boundaries of dependent clauses as well as simple, complex, and compound independent clauses (Liu, 2018). The example in (1) is taken from one of the conversations analyzed in this study.

(1)   hiyya   ka:tbat   halkitab.   Can you believe it!
       she   write-A.PART (of)   this-the-book
       "She is the writer of this book. Can you believe it!"

As we can see, the first clause is uttered completely in Arabic, whereas the second one is spoken completely in English. The second type is intra-sentential CS, which involves the "insertion of single elements or phrasal entities from one language into the morpho-syntactic frame or sentence structure of another language" (Migge, 2015, p. 187). The inserted constituent can be a noun, pronoun, verb, adjective, adverb, preposition, phrasal verb, or adjectival phrase (Liu, 2018). The example in (2) is also from one of the conversations of this research, and it demonstrates how the English adverb really is integrated into an entirely Arabic sentence.

(2)   zur-na pari:s   wa   aqam-na   fi: funduq   really   fa:xir
       visited-1pl Paris and   stayed-1pl   in hotel   really   luxurious
       "We visited Paris and stayed in a luxury hotel."

Due to the growing number of bilinguals around the world, the need to investigate how those individuals go back and forth between their two languages in the same conversation has become increasingly important (Basnight-Brown & Altarriba, 2007). Although cognitive linguists have carried out intensive research on the ways in which languages are stored and represented in bilinguals' minds (see, for example, Belazi et al., 1994; Bhatia & Ritchie, 1996; Bybee, 2010; Eppler et al., 2017; Green & Wei, 2014; Grosjean, 1997; Joshi, 1985), there is still a scarcity of research investigating the individual factors that could induce CS during interaction. In the following section, I review a few existing studies that have attempted to explore the influence of such factors on speakers' CS behavior.

Some studies on CS have attempted to examine participants' demographic characteristics, such as age, gender, and educational level. Dewaele and Li (2014a), for example, carried out large-scale quantitative research on individual differences among multilinguals in the frequency of their CS. The data analysis revealed that gender was related to a higher use of CS. Dewaele and Li (2014b) also found that their female respondents' use of CS when interacting with friends, family, and colleagues was significantly higher than their male counterparts. The influence of age varied depending on the interlocutor: older respondents used more CS with family members and strangers but less with friends and colleagues. Lastly, highly educated respondents used more CS with family members and colleagues. Conversely, in their more recent study with 298 multilingual respondents of different nationalities, Dewaele and Zeckel (2016) reported that gender, age, and educational level had no or a very modest effect on the use of CS.

Other studies have investigated the possible effect of language proficiency on CS and found that individuals with lower proficiency had more difficulty code- switching than their more proficient peers. Bentahila and Davies (1992), for example, compared CS in the natural speech of balanced and unbalanced Arabic-French bilinguals. They found that age and acquisition context had significant effects on the respondents' speech. Unbalanced bilinguals, who were native speakers of Arabic with low proficiency in French, tended to use more French nouns and verbs "within a clearly Arabic background structure" (Bentahila & Davies, 1992, p. 453). The researchers attributed this finding to the fact that compared to their peers, unbalanced bilinguals learned French at an older age, and they learned it in a formal school setting that depended on rote memorization of lexical items. Rodriguez-Fornells et al. (2012) examined the CS use reported by 582 Spanish-Catalan university students in Barcelona, Spain. The data analysis revealed that participants who acquired Catalan, a second language (L2), later in life tended to switch more to Spanish, their first language (L1). Proficiency in L1 or L2 was correlated negatively with CS to the other language. Dewaele and Li (2014a) also found that respondents who knew several languages, learned those languages early in life, had high proficiency levels, and worked in multilingual settings reported more CS. Similar results were revealed in a later study conducted by Dewaele and Zeckel (2016), which found that a high proficiency in and an early acquisition of a FL were significantly related to more CS. In this regard, Heredia and Altarriba (2001) suggest that lexical knowledge might not be the sole reason why bilinguals switch more frequently to one language over the other. Rather, speakers may use one language in their daily interactions more frequently, and consequently, they find it easier to use lexical items from that language because they are faster to retrieve from their memory.

A number of researchers (e.g., Heredia & Altarriba, 2001; Wei, 2002) suggested that CS was sometimes used by bilinguals to avoid miscommunication when the feeling or concept could be expressed more effectively in a particular language. It could also be employed as "a sociolinguistic tool" for emphasis, clarification, or to fulfill a specific communicative function when no matching term existed in the other language (Hughes et al., 2006).

Furthermore, CS behavior was found to vary depending on the interlocutor. Li (1995), for instance, investigated CS in three groups of Chinese-English bilinguals in the United Kingdom. Factors such as topic, interlocutor, and formality of

the situation were found to have significant effects on CS. Switches occurred frequently among friends but seldom when communicating with strangers. CS behavior also varied between private and public settings. Similarly, Dewaele (2010) examined the influence of interlocutor and topic on CS among 20 multilinguals. The findings revealed that the respondents employed more CS to their L1 when talking about personal and emotional topics than neutral topics. Dewaele (2010, p. 219) suggested that "strong emotional arousal can force the speaker from monolingual into bilingual language mode with more CS." Interestingly, a few respondents of Arab and Asian origins used more CS to English when communicating feelings such as anger, as it allowed them to express themselves more openly without being constrained by social conventions. When interacting with strangers, the respondents were more likely to continue the conversation in the same language. However, if the interlocutors were known to them, the speakers tended to switch to their shared languages.

Research on CS among Arab speakers is scarce and has mostly been conducted with immigrants living in foreign countries. Elsaadany (2003), for example, investigated CS among Arabic-English bilinguals from Saudi Arabia, Jordan, Egypt, Sudan, and Morocco who were living in the United States. The studied focused, among other things, on the reasons behind the speakers' switches to English when interacting with other Arabs. The findings revealed that CS was used to communicate meaning accurately and to emphasize understanding of the interlocutor's message. Another study was carried out by Albirini et al. (2011) to examine the morphosyntactic elements in oral conversations obtained from Egyptian and Palestinian bilinguals living in the United States. The results showed that the participants' switches to English were influenced by the Arabic syntax. This demonstrated that Arabic was the speakers' dominant language and thus functioned as the matrix (i.e., base) language, while English was the embedded (i.e., contributing) language (cf. Joshi, 1985; Myers-Scotton, 1993).

Method

This study employed a mixed-method, phenomenological approach, consisting of quantitative and qualitative data collection instruments and analyses in a way that "the resulting mixture or combination has complementary strengths and nonoverlapping weaknesses" (Johnson & Christensen, 2004, p. 50) The next sections begin with a description of the selection process for the participants, and their demographic characteristics. This is followed by a description of the instruments used to collect the data and then the procedures used for the data collection and analysis.

Participants

The primary selection method used in this research was purposive sampling, in which the characteristics of the population of interest were specified, and then individuals with those characteristics were located (Johnson & Christensen, 2004). The targeted individuals were Saudi adults (aged 21–60), whose L1 was Arabic and who had studied English as a FL for six years in intermediate and secondary schools in Saudi Arabia. Citizens of both genders and all educational levels were invited to participate in the study in order to explore whether these variables had an impact on CS behavior.

Since the population size was more than 5,000 individuals, a sample size of 400 was considered adequate (see Gay & Airasian, 2003). The research began by sending invitations to the targeted individuals, along with a consent form and participant information sheet, which explained the purpose of the research, the voluntary nature of participation, and the methodology used. After that, the participants' background information was collected using the Demographic Information and Language Background Questionnaire (DILBQ), which was developed specifically for this study. The results are displayed in Table 1.

Table 1: Participants' Background Information

Variable	Value	Frequency	Percentage
Gender	Male	177	44.25
	Female	223	55.75
Age	21–30	126	31.50
	31–40	143	35.75
	41–50	87	21.75
	51–60	44	11.00
Educational level	Secondary school	74	18.50
	Undergraduate university	233	58.25
	Postgraduate university	93	23.25
Employment status	Student	43	10.75
	Self-employed	53	13.25
	Employed part- or full-time	269	67.25
	Unemployed/Retired	35	8.75
Exposure to English	Often	130	32.50
	Sometimes	161	40.25
	Rarely	86	21.50
	Never	23	5.75
Spoken English proficiency	Very good	132	33.00
	Good	189	47.25
	Fair	79	19.75
Knowing other FLs	Yes	94	23.50
	No	306	76.50
Father's knowledge of English	Yes	108	27.00
	No	292	73.00
Mother's knowledge of English	Yes	116	29.00
	No	284	71.00

Instruments

Three types of instruments were employed to collect the data needed for this research: (a) two questionnaires developed specifically for this study; (b) audio-recorded oral conversations; and (c) unstructured interviews. The first questionnaire was the 9-item DILBQ. It consisted of two sections: the first elicited the participants' demographic information (gender, age, educational level, and employment status), and the second section probed the respondents' exposure to English in daily life, spoken English proficiency, knowledge of other FLs, and parents' knowledge of English. The second questionnaire was the Code-Switching Behavior Questionnaire (CSBQ), which consisted of 16 items and examined the respondents' CS behavior in relation to four aspects: emotional state of the speaker, interlocutor type, interlocutor's knowledge of English, and conversation setting. The participants were requested to rate their responses using a 5-point Likert-type scale, ranging from always to never. A 'not applicable' option was also provided in case the respondents thought they were not able to respond to a certain statement.

It should be pointed out that prior to conducting the main study, a small-scale study was undertaken to pilot test the CSBQ. Fifty participants were requested to take part in this preliminary stage (see Dörnyei, 2003b, p. 68), and they all shared similar characteristics to the target population. The CSBQ was administered to the same participants twice, with two weeks between the two administrations. First, test-retest reliability was assessed by calculating Pearson product-moment correlation coefficients (r) between the participants' responses on the two occasions in which the questionnaire was administered. The results showed that Pearson's coefficients ranged from a minimum of .558 for item 16 to a maximum of .880 for item 4. According to Cohen (1988, pp. 79–81), an r value between .50 and 1.0 indicates a large correlation between the items. All coefficients were also statistically significant at the .01 level; hence, it was concluded that the CSBQ had high test-retest reliability.

To assess the internal consistency of the CSBQ, Cronbach's alpha coefficient was calculated for the whole questionnaire. According to Nunnally (1978), Cronbach's alpha values above .7 are considered acceptable. This value has

also been agreed upon in more recent statistics books (e.g., Brace et al., 2012; Pallant, 2020). In this study, Cronbach's alpha coefficient for the CSBQ was .885, which indicated high internal consistency reliability.

The second type of instrument used in this study was oral conversations, which were conducted with a sample of 40 informants. In an attempt to elicit casual speech for the conversations, Trudgill's (1974, p. 51) technique was used, in which the informants were asked the following question: "Have you ever been in a situation, recently or some time ago, where you had a good laugh, or something funny or humorous happened to you, or you saw it happen to someone else?" As Trudgill (1974, p. 51) points out:

> In this kind of context, most informants found the questions quite natural and acceptable, and responded readily with an amusing incident. The informant is under some compulsion to make the story seem amusing, and usually becomes involved in the story-telling and the comedy of the situation to an extent that overrides the formal constraints of the interview.

Next, each of the 40 respondents was requested to participate in an unstructured interview to answer a number of general questions about his/her CS behavior. The questions ranged from seven to ten and were adapted to each participant's responses to the questionnaires in order to gain clarification about his or her CS behavior. As McLeod (2014) points out, "Unstructured interviews do not use any set questions, instead, the interviewer asks open-ended questions based on a specific research topic …. The interviewer modifies his or her questions to suit the candidate's specific experiences." The main advantage of unstructured interviews is that they are flexible and allow a better understanding of each informant's behavior. The interviews were also used to cross-reference the themes that emerged in the conversations.

Data Collection and Analysis

The study began with the reception of the signed consent forms from the participants, which confirmed their agreement to participate. This was followed by the first stage of data collection, which was the participants' completion of the two questionnaires, DILBQ and CSBQ. This stage took approximately five months, and it stopped when the total number of the responses reached 400.

The data obtained from the DILBQ and CSBQ were coded and entered into the Statistical Package for Social Sciences (SPSS 26). They were then analyzed using appropriate descriptive statistics. To answer the first research question in this study, the participants' scores on each of the CSBQ items were added up to obtain an overall score for each participant. After that, descriptive statistics were used to identify the participants' CS behavior. As is the case in most studies in the social sciences, the scores on the CSBQ were not normally distributed, and variance across groups was not equal (see Pallant, 2020). Therefore, non-parametric techniques were used to compare the differences in the scores of the different groups and their statistical significance.

Next, a random sample of 40 respondents from those who had completed the questionnaires were selected to participate in the second stage of this research. Each respondent was requested to engage in an oral conversation in Arabic with an interlocutor of their choice: the researcher, a friend, or a family member. The prompt was provided in Arabic, and no instructions were given to the participants to avoid using another language. The conversations were audio-recorded using a digital voice recorder and transcribed verbatim in order to investigate the frequency of CS and the potential factors causing it. The frequency of CS was examined by calculating the number of code-switched elements in each speaker's utterances. Both types of CS, inter-sentential and intra-sentential, were included in the analysis. The analysis of the conversation data focused on calculating the frequency of CS in order to compare it with the participants' responses on the CSBQ and, where possible, to examine the effect of the nine individual factors on it. Analyzing the linguistic features of CS occurrences was beyond the scope of this paper.

As the initial conclusions emerged, the conversations and questionnaire responses were triangulated to support and explain the findings. Table 2 summarizes the conversations in terms of duration, word count, and CS frequency.

Table 2: Conversation Analysis by Duration, Word Count, and CS Frequency

	Duration (minutes)	No. of words/minute	No. of Code-switches
Range	11:42–23:09	119–156	0–17
M	17:52	137.63	5.80
Total	714:50	5505	232

Within a week of receiving the recorded oral conversations, the respondents were requested to participate in unstructured interviews to answer a number of general questions about their CS behavior. This stage took approximately three months and was followed by sending thank-you letters to the participants.

Results and Discussion

Although a small number of previous studies (e.g., Dewaele & Li, 2014a; Dewaele & Li, 2014b; Dewaele & Zeckel, 2016) have examined the influence of some of the factors investigated in this study, the fact that they only used quantitative data obtained through online surveys did not facilitate the explanation of their findings. Nonetheless, where possible, comparisons are made between their findings and those of this research.

The first research question was concerned with exploring the CS behavior of Saudi bilinguals. As pointed out in the previous section, descriptive statistics of all items in the CSBQ were calculated to address this question. The results are presented in Table 3.

**Table 3: Descriptive Statistics of the Scores on the CSBQ**

CSBQ Item	Min	Max	M	SD
CS to express anger	1	5	2.18	1.061
CS to express fear	1	3	1.31	.469
CS to express grief	1	3	1.26	.445
CS to express irony	1	5	2.10	1.107
CS to express humor	1	5	2.46	1.149
CS with family	1	5	2.38	1.053
CS with neighbors	1	5	2.31	1.083
CS with friends	1	5	2.54	1.078
CS with colleagues	0	5	2.02	1.515
CS with strangers	1	5	2.05	.972
CS when the interlocutor knows English well	1	5	2.49	.984
CS when the interlocutor knows a little English	1	4	2.04	.919
CS when the interlocutor does not know English	1	4	1.57	.759
CS at home	1	5	2.33	1.047
CS at work or college	0	5	2.63	1.688
CS in public	1	5	2.52	.912
Total CS scores	15	54	34.19	8.687

As we can see, expressing humor was the emotional state most inducing of CS among the participants. What is remarkable about this finding is that it was supported by the recorded oral conversations obtained from the participants in this research. They were requested to talk about an amusing incident, and a total of 232 code-switches were identified in their talks. Expressing anger and irony came next, with just a small difference between their mean scores. This finding is congruent with Deweale (2010), which found that CS was often induced by the speaker's emotions, and that a few respondents of Arab origin used more CS to English when communicating anger, as it allowed them to express themselves more openly without being constrained by social conventions. Figure 1 shows the participants' mean scores on the CSBQ according to their emotional state.
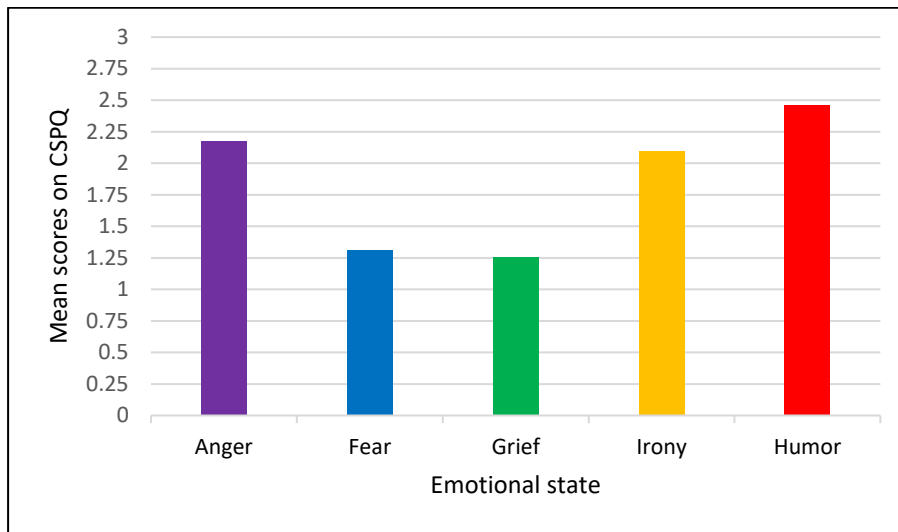
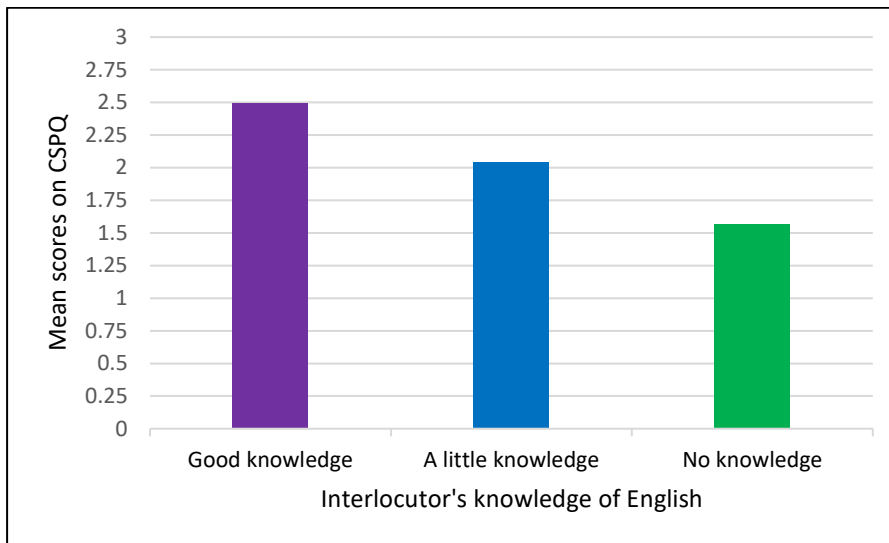**Figure 1. CSBQ Mean Scores According to Emotional State**

Regarding interlocutor type, CS when speaking with friends received the highest mean score. That was followed by CS with family members and neighbors, respectively. A possible reason for this order could be that, compared with friends, family members and neighbors often shared a common language, which could have reduced the necessity for CS when interacting with them. Furthermore, CS with strangers received the lowest score. Adapting the use of CS to interlocutor type supports previous studies (e.g., Li, 1995; Dewaele, 2010; Dewaele & Zeckel, 2016). As Dewaele and Zeckel (2016, p. 606) explain, "Multilinguals are less likely to engage in CS with interlocutors they do not know, probably because they need to establish which languages they have in common with their interlocutors. CS becomes more likely when the interlocutor is known to the speaker, and participants are aware of which languages are shared." Figure 2 shows the participants' mean scores on the CSBQ according to their interlocutor type.
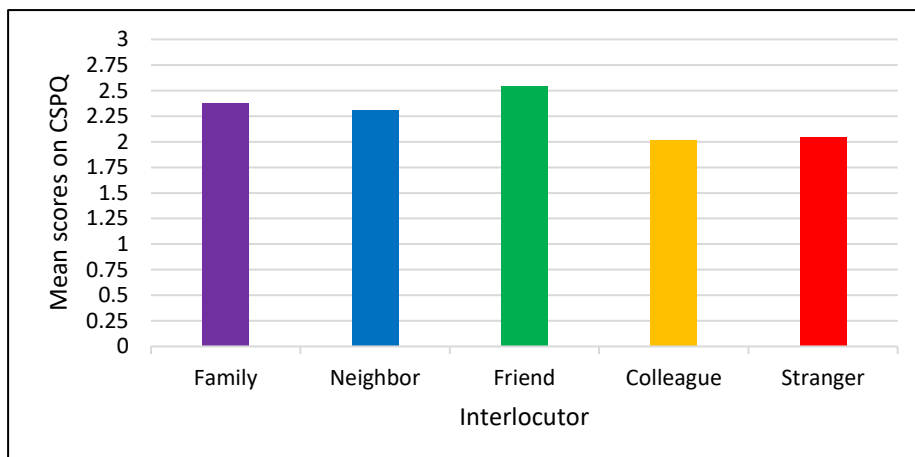
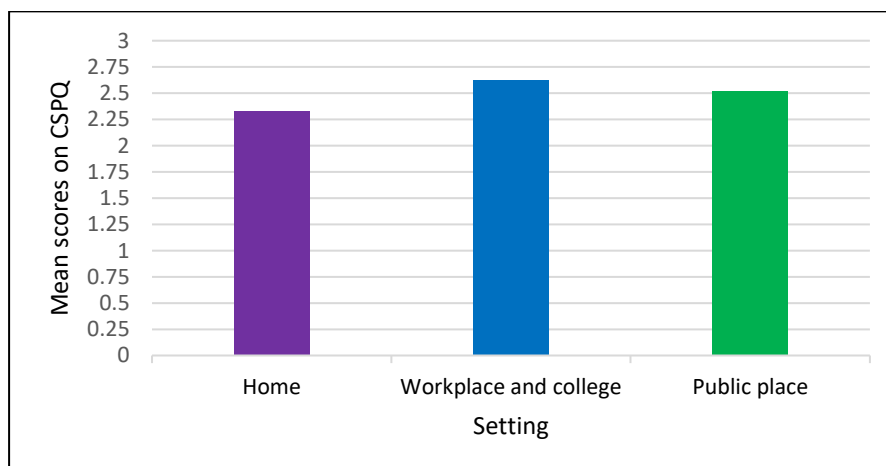**Figure 2. CSBQ Mean Scores According to Interlocutor Type**

Furthermore, the participants' use of CS was found to correspond to their interlocutors' knowledge of English—that is, they employed more CS when the other person knew English well, and vice versa. This confirms the finding presented above that CS is often adapted to the conversational partner. It also shows that the speakers abided by the speech of their communities of practice (see Lave & Wenger, 1991). As one of the interviewees explained, "When I communicate with people, I need to make myself as clear as possible to get my message across. Using English when my conversational partner does not understand it could cause not only confusion, but probably misunderstanding as well." Figure 3 shows the participants' mean scores on the CSBQ according to their interlocutor's knowledge of English.

Figure 3. CSBQ Mean Scores According to Interlocutor's Knowledge of English

Lastly, workplace and college were the most common settings where the participants used CS. Next came public places, and home was the least common setting for the participants to use CS. The finding that the use of CS varied between public and private settings is interesting and could possibly be linked to the pragmatic need of English in a variety of occupations and academic disciplines; however, there is no such necessity for using it at home. Figure 4 shows the participants' mean scores on the CSBQ according to the conversation setting.

Figure 4. CSBQ Mean Scores According to Conversation Setting

Research question two probed the difference in the participants' CS behavior according to their demographic factors. First, the Mann-Whitney U Test was used to test for differences between males and females. The results showed that gender had a significant influence on the frequency of CS. Males employed more CS to express anger (Md=3, U=14121.5, z=-5.114, p<.01), while females used it more to express humor (Md=3, U=13595.0, z=-5.543, p<.01). Males tended to code-switch more with their friends (Md=3, U=12860.0, z=-6.233, p<.01), while females code-switched more with their family members (Md=3, U=16312.5, z=-3.115, p<.01) and neighbors (Md=3, U=13617.5, z=-5.525, p<.01). CS was higher among males when conversations took place in the workplace or at college (Md=3, U=12206.5, z=-6.654, p<.01), but higher among females in public places (Md=3, U=17575.5, z=-2.002, p<.05). When analyzing the conversation data, which involved telling amusing stories, it was also found that the females' conversations contained approximately 27% more CS instances than those of the males. Similarly, previous studies (Dewaele, 2010; Dewaele & Li, 2014a; Dewaele & Li, 2014b) reported that their male and female respondents varied significantly in their CS behavior, but the

patterns they provided were different from one another and from the one found in this study. This variation could possibly be attributed to the different linguistic and social profiles of the participants.

Next, the Kruskal-Wallis H Test was used to examine the differences in CSBQ scores across the four age groups, three educational levels, and four employment categories that are represented in this research. Like gender, the data analysis showed that age had a significant influence on the frequency of CS. It was employed to express anger by the youngest age group (21–30) more frequently (Md=3, H=16312.5, df=3, p<.01) than the other three groups. On the other hand, CS to express humor was the highest (Md=3, H=30.727, df=3, p<.01) among the second oldest age group (41–50). The youngest age group tended to code-switch more with their friends (Md=3, H=57.314, df=3, p<.01) than the other groups, while the second youngest age group (31–40) code-switched the most with their colleagues (Md=3, H=78.002, df=3, p<.01). It was not surprising that these two groups recorded the highest scores on CS at work and college (Md=3, H=106.036, df=3, p<.01). Conflicting findings regarding the relationship between age and CS were reported by previous studies (Dewaele, 2010; Dewaele & Li, 2014a; Dewaele & Li, 2014b). However, the interviewees in this research provided interesting reasons for their CS behavior. The youngest age group reported that they frequently used CS because they felt that some concepts could be expressed more effectively in English. The second youngest age group explained that their use of CS was mainly for clarification of meaning, while the second oldest age group employed it for emphasis (see Heredia & Altarriba, 2001; Hughes et al., 2006; Wei, 2002).

The data analysis also revealed that education had a significant influence on the frequency of CS. It was employed to express irony by the participants who held undergraduate and postgraduate degrees more frequently (Md=2, H=23.451, df=2, p<.01) than those who only completed secondary school. While the middle group code-switched the most with their neighbors (Md=3, H=8.689, df=2, p<.05) and friends (Md=3, H=15.059, df=2, p<.01), the highly educated group tended to code-switch the most with their family members (Md=3, H=19.012, df=2, p<.01) and with strangers (Md=3, H=32.725, df=2, p<.01). It was not unexpected that the latter group recorded the highest scores on CS at home (Md=3, H=12.472, df=2, p<.01) and in public (Md=3, H=29.503, df=2, p<.01). Dewaele and Li (2014a) also found that their highly educated participants employed more CS with strangers, while Dewaele and Li (2014b) reported that this group used it more with their family members. On the other hand, Dewaele and Zeckel (2016) found no effect of educational level on CS. The interviewees in this research provided convincing, though to some extent complex, reasons for their behavior. They explained that as one progressed through different educational levels in Saudi Arabia, they learned more English and expanded their knowledge and understanding of its use in different contexts. That led to a higher proficiency level, which, in turn, was reflected in their frequent use of English in their daily lives.

Furthermore, employment status was found to have a significant influence on the frequency of CS. It was employed to express anger and humor by the unemployed and retired participants (Md=3, H=63.564, df=3, p<.05 and Md=3, H=21.651, df=3, p<.01, respectively) more frequently than the other three groups. In addition, this group, together with those employed part- and full-time, tended to use more CS when expressing irony (Md=2, H=49.176, df=3, p<.01) than the other groups. Lastly, CS with family members was the highest among the unemployed and retired participants (Md=3, H=11.445, df=3, p<.01). Interestingly, when analyzing the conversation data, it was also found that the conversations obtained from the unemployed and retired group contained approximately 31% more CS instances than the other groups. This intriguing finding necessitated enquiring about it in the subsequent interview. The reasons provided could be categorized into: (1) identifying with a particular group (reported by 68% of the participants), (2) making the topic of discussion more interesting (49%), and (3) manifesting their skills in both Arabic and English (34%).

Research question three probed the difference in the participants' CS behavior according to their language background. First, the Kruskal-Wallis H Test was used to examine the differences in CSBQ scores according to English exposure and spoken English proficiency. The results showed that exposure to English had a significant influence on the frequency of CS. It was employed to express anger and humor by the participants who were often exposed to English in their daily lives (Md=3, H=63.564, df=3, p<.01, and Md=3, H=21.651, df=3, p<.01, respectively) more than the other groups. In addition, the two groups who were often and sometimes exposed to English tended to code-switch to express irony more frequently (Md=2, H=49.176, df=3, p<.01) than the other two groups. Those who were often exposed to English recorded the highest score on CS with family members (Md=3, H=11.445, df=3, p<.01) and friends (Md=3, H=122.308, df=3, p<.01). They also employed CS the most in the workplace and at college (Md=4, H=216.834, df=3, p<.01) as well as in public places (Md=3, H=18.055, df=3, p<.01). This finding is not surprising, as frequent exposure to English is likely to make the individual more familiar with its different components, which would, in turn, facilitate the use of CS in meaningful communication when so desired.

As is the case with exposure to English, the data analysis showed that spoken English proficiency had a significant influence on the frequency of CS. It was employed to express anger and humor by the participants who possessed a very good level of spoken English (Md=3, H=70.213, df=2, p<.01 and Md=3, H=6.058, df=2, p<.05, respectively) more than the other groups. In addition, the two groups who possessed very good and good levels of spoken English tended to code-

switch to express irony more frequently (Md=2, H=30.885, df=2, p<.01) than the other group. Lastly, the group with the highest proficiency in spoken English recorded the highest scores on CS with friends (Md=3, H=121.613, df=2, p<.01), at home (Md=3, H=18.055, df=2, p<.01), and in public places (Md=3, H=13.268, df=2, p<.01). This difference was also noticed when analyzing the conversation data. Participants who self-rated themselves as "very good" in spoken English made approximately 34% more code-switches than the other two groups. This supports the previous findings (e.g., Bentahila & Davies, 1992; Dewaele, 2010; Dewaele & Li, 2014a; Dewaele & Zeckel, 2016), which all showed that individuals with higher proficiency levels in a FL reported more CS in using the language. As Dewaele (2010, p. 201) points out, CS is obviously "not an indication of a deficit in the LX but on the contrary a characteristic of participants who feel proficient in their LXs."

Next, the Mann-Whitney U Test was used to test for differences in CSBQ scores between participants who knew other FLs and those who did not. The results showed that knowledge of other FLs had a significant influence on the frequency of CS. Participants who knew other FLs tended to code-switch more with their friends (Md=3, U=10464.5, z=-4.160, p<.01), while those who did not used CS more with their family members (Md=3, U=11354.0, z=-3.228, p<.01). CS in the workplace and at college was higher among the former (Md=3, U=13595.0, z=-4.714, p<.01) than the latter group. The multilingual interviewees in this research explained this finding by pointing out that they generally felt competent in the use of their other FLs in communication, which also led to greater use of CS to English whenever it was a shared language with their conversational partners. This finding confirms those reported by Dewaele (2010), Dewaele and Li (2014a), and Dewaele and Zeckel (2016).

Lastly, the Mann-Whitney U Test was used to test for differences in CSBQ scores between participants whose fathers and mothers knew English and those whose parents did not. Similar to the other independent variables examined in this study, parents' knowledge of English was found to have a significant influence on the frequency of CS. Participants whose fathers and mothers knew English tended to employ more CS to express humor (Md=3, U=9013.0, z=-6.822, p<.01) and (Md=3, U=8552.0, z=-7.825, p<.01), respectively. This group also used more CS with family members (Md=3, U=4514.0, z=-11.459, p<.01 and Md=3, U=3637.5, z=-12.786, p<.01), neighbors (Md=3, U=8346.5, z=-7.499, p<.01 and Md=3, U=8729.5, z=-7.654, p<.01), and strangers (Md=3, U=8901.0, z=-7.047, p<.01 and Md=3, U=9822.0, z=-6.677, p<.01). Consequently, they recorded a higher score on CS at home (Md=3, U=5513.0, z=-10.452, p<.01 and Md=3, U=4582.5, z=-11.856, p<.01) and in public (Md=3, U=11426.0, z=-4.503, p<.01 and Md=3, U=11474.0, z=-5.071, p<.01) than the other group. When discussing this finding with the interviewees whose parents knew English, most of them (62.5%) pointed out that they were accustomed to hearing their parents speak English and occasionally interacted with them in English at an early age. Hence, they had the advantage of learning the language faster and easier, and they subsequently developed the *mental flexibility* to switch to it when needed. This finding supports Dewaele and Li's (2014a, p. 240) argument that "linguistic practices in childhood continue to resonate through a multilingual's life."

Conclusion

The present study is one of the very few studies in the L2 literature, and to the best of my knowledge, the first in the Arab world, that has investigated CS, not simply as a linguistic phenomenon, but as a complex phenomenon that involves the interaction of several situational and individual factors. The mixed-method, phenomenological approach utilized in this study facilitated the exploration of the speakers' CS behavior and provided possible interpretations of the patterns that emerged. Interestingly, CS was found to vary considerably according to the emotional state of the speaker, interlocutor type, interlocutor's knowledge of English, and conversation setting. In addition, the nine individual (demographic and language background) factors investigated in this study were found to have a significant influence on the frequency of CS in certain situations. The conclusion that CS is prevalent in bilinguals' interaction calls for greater attention to this phenomenon. As Johnston (2011, p. 2) puts it, "In a day and age in which the number of bilinguals and bilingual communities is ever increasing, this is a subject matter that will only grow in its importance and relevance to the study of languages as a whole."

Certainly, more mixed-method research is needed, especially in the Arab world, in order to continue to explore the complex nature of CS and the impact of a variety of individual and social factors on it. Conducting longitudinal studies would be particularly useful in investigating the effect of some variables, such as gender and education, on CS in greater depth. Future research may also include the viewpoints of the interlocutors, such as family members and friends, who frequently interact with code-switchers, in order to examine how they perceive as well as influence CS.

Acknowledgements

References

Albirini, A., Benmamoun, A., & Saadah, E. (2011). Grammatical features of Egyptian and Palestinian Arabic heritage speakers' oral production. *Studies in Second Language Acquisition*, *33*(2), 273–303. https://doi.org/10.1017/S0272263110000768

Auer, P. (1998). *Code-switching in conversation: Language, interaction and identity*. Routledge.

Basnight-Brown, D. M., and Altarriba, J. (2007). Code-switching and code-mixing in bilinguals cognitive, developmental, and empirical approaches. In A. Ardila & E. Ramos (Eds.), *Speech and Language Disorders in Bilinguals* (pp. 69–89). Nova Science.

Belazi, H., Rubin, E., & Toribio, A. J. (1994). Code switching and X-Bar theory: The functional head constraint. *Linguistic Inquiry*, *25*(2), 221– 237.

Bentahila, A., & Davies, E. E. (1992). Code-switching and language dominance. In R. J. Harris (Ed.), *Cognitive processing in bilinguals* (pp. 443–458). Elsevier.

Bhatia, T., & Ritchie, W. (1996). Bilingual language mixing, universal grammar, and second language acquisition. In W. Ritchie & T. Bhatia (Eds.), *The handbook of second language acquisition* (pp.627– 688). Academic Press.

Brace, N., Snelgar, R., & Kemp, R. (2012). *SPSS for psychologists* (5th ed.). Palgrave-McMillian.

Bybee, J. L. (2010). *Language, usage and cognition*. Cambridge University Press.

Cohen, J. W. (1988). *Statistical power Analysis for the behavioral sciences*. Erlbaum.

Dewaele, J.-M. (2010). *Emotions in multiple languages*. Palgrave Macmillan.

Dewaele, J.-M., & Li, W. (2014a). Intra- and inter-individual variation in self-reported code-switching patterns of adult multilinguals, *International Journal of Multilingualism*, *11*(2), 225–246, https://doi.org/10.1080/14790718.2013.878347

Dewaele, J.-M., & Li, W. (2014b). Attitudes towards code-switching among adult mono- and multilingual language users. *Journal of Multilingual and Multicultural Development*, *35*(3), 235–251. https://doi.org/10.1080/01434632.2013.859687

Dewaele, J.-M., & Zeckel, I. (2016). The psychological and linguistic profiles of self-reported code-switchers. *International Journal of Bilingualism*, *20*(5), 594–610. https://doi.org/10.1177/1367006915575411

Dörnyei, Z. (2003b). *Questionnaires in second language research: Construction, administration, and processing*. Erlbaum.

Elsaadany, K. A. (2003). Code alternation among Arab speakers in America. Umm Al-Qura University. *Journal of Educational and Social Sciences and Humanities*, *15*(2), 67–95.

Eppler, E. D., Luescher, A., & Deuchar, M. (2017). Evaluating the predictions of three syntactic frameworks for mixed determiner–noun constructions. *Corpus Linguistics and Linguistic Theory*, *13*(1), 27–63. https://doi.org/10.1515/cllt-2015-0006

Gardner-Chloros, P. (2009). *Code-switching*. Cambridge University Press.

Gay, L. R., & Airasian, P. (2003). *Educational research: Competencies for analysis and application* (7th ed.). Pearson Education.

Green, D. W., & Li, Wei. (2014). A control process model of code-switching. *Language, Cognition and Neuroscience*, *29*(4), 499–511. https://doi.org/10.1080/23273798.2014.882515

Grosjean, F. (1997). Processing mixed language: Issues, findings and models. In Annette M. B. de Groot & J. F. Kroll (Eds.), *Tutorials in bilingualism: Psycholinguistic perspectives* (pp. 225–254). LEA.

Grosjean, F. (2001). The bilingual's language modes. In *One mind, two languages: Bilingual language processing,* J. L. Nicol (Ed.), (pp. 1–22). Blackwell.

Heredia, R. R., & Altarriba, J. (2001). Bilingual language mixing: Why do bilinguals code-switch? *Current Directions in Psychological Science, 10*(5), 164–168. https://doi.org/10.1111/1467-8721.00140

Hughes, C. E., Shaunessy, E. S., Brice, A. R., Ratliff, M. A., & McHatton, P. A. (2006). Code switching among bilingual and limited English proficient students: Possible indicators of giftedness. *Journal of the Education of the Gifted*, *30*(1), 7–28. https://doi.org/10.1177/016235320603000102

Johnson, B., & Christensen, L. (2004). *Educational research: Quantitative, qualitative, and mixed approaches.* (2nd ed.). Pearson Education.

Johnston, B. (2011). *Code switching as Spanglish*. Seminar paper, University of Leipzig (Institut für Romanistik). Munich, Germany: GRIN Verlag.

Joshi, A. K., (1985). Processing of sentences with intrasentential code-switching, in D. R. Dowty, L. Karttunen & A. M. Zwicky (Eds.), *Natural language parsing: Psychological, computational and theoretical perspectives* (pp. 190–205). Cambridge University Press.

Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge University Press.

Li, W. (1995). Variations in patterns of language choice and code-switching by three groups of Chinese-English speakers in Newcastle upon Tyne. *Multilingua*, *14*(3), 297–323. https://doi.org/10.1515/mult.1995.14.3.297

Liu, H. (2018). Intra-speaker variation in Chinese–English code-switching: The interaction between cognitive and contextual factors. *International Journal of Bilingualism*, *22*(6) 740–762. https://doi.org/10.1177/1367006917698586

Macswan, J. (2013). Code-switching and grammatical theory. In T. K. Bhatia & W. C. Ritchie (Eds.), *The handbook of bilingualism and multilingualism* (2nd ed.) (pp. 323–350). Blackwell.

McLeod, S. A. (2014). The interview research method. *Simply Psychology*. https://www.simplypsychology.org/interviews.html.

Migge, B. (2015). The role of discursive information in analyzing multilingual practices. In Stell, Gerald & Kofi Yakpo (Eds.), *Code-switching between structural and sociolinguistic perspectives* (pp. 185–206). Mouton De Gruyter.

Myers-Scotton, C. (1993). *Duelling languages: Grammatical structure in codeswitching*. Clarendon Press.

Nunnally, J. C. (1978). *Psychometric theory* (2nd ed.). McGraw-Hill.

Pallant, J. (2020). *SPSS survival manual: A step by step guide to data analysis using IBM SPSS* (7th ed.). Open University Press.

Poplack, S. (1980). Sometimes I'll start a sentence in Spanish Y TERMINO EN ESPANOL: Toward a typology of code-switching. *Linguistics*, *18*, 581–618.

Ritchie, W. C., & Bhatia, T. K. (2013). Social and psychological factors in language mixing. In T.K. Bhatia & W.C. Ritchie (Eds.), *The handbook of bilingualism* (pp. 375–390). John Wiley & Sons.

Rodriguez-Fornells, A., Krämer, U. M., Lorenzo-Seva, U., Festman, J., & Münte, T. F. (2012). Self-assessment of individual differences in language switching. *Frontiers in Psychology*, *2*, Article 388. https://doi.org/10.3389/fpsyg.2011.00388

Sichyova, O. N. (2005). A note on Russian–English code switching. *World Englishes*, *24*(4), 487–494. https://doi.org/10.1111/j.0883-2919.2005.00432.x

Toribio, A. J. (2011). Code-switching among US Latinos. In Manuel Díaz-Campos (Ed.), *The handbook of Hispanic sociolinguistic* (pp. 530–552). Blackwell.

Trudgill, P. (1974). *The social differentiation of English in Norwich*. Cambridge University Press.

Wei, L. (2002). The bilingual mental lexicon and speech production process. *Brain and Language*, *81*(1–3), 691–707. https://doi.org/10.1006/brln.2001.2557

"التبديل بين اللغتين العربية والإنجليزية في المملكة العربية السعودية: استكشاف سلوك ثنائيي اللغة والعوامل الفردية المؤثرة عليه"

إعداد الباحثة:

نوف الجاسر

أستاذ اللغويات التطبيقية المساعد، معهد اللغة الإنجليزية، جامعة الملك عبدالعزيز، جدة، المملكة العربية السعودية

ملخص البحث:

أجريت هذه الدراسة ذات المنهجية المختلطة لاستكشاف سلوك تبديل اللغة لدى المتحدثين بالعربية والإنجليزية في المملكة العربية السعودية. بحثت الدراسة أيضًا تأثير العديد من العوامل الفردية على تبديل اللغة، وتحديدًا، الجنس والعمر والمستوى التعليمي والحالة الوظيفية والتعرض للغة الإنجليزية في الحياة اليومية وإتقان التحدث باللغة الإنجليزية ومعرفة لغات أجنبية أخرى ومعرفة الوالدين للغة الإنجليزية. تم جمع البيانات من 400 ثنائي اللغة باستخدام (أ) استبيانين تم تصميمهما خصيصًا لهذه الدراسة (ب) محادثات شفوية مسجلة (ج) مقابلات شخصية. أظهر تحليل البيانات أن تبديل اللغة اختلف بشكل كبير وفقًا للحالة العاطفية للمتحدث ونوع المحاور ومعرفة المحاور للغة الإنجليزية ومكان المحادثة. بالإضافة إلى ذلك، وجد أن جميع العوامل الفردية التي تم بحثها في هذه الدراسة لها تأثير كبير على تكرار تبديل اللغة في حالات معينة. وبما أن هناك ندرة في الأبحاث التي تدرس سلوك تبديل اللغة في العالم العربي، اختتمت الدراسة بتقديم عدد من الاقتراحات للأبحاث المستقبلية.

الكلمات المفتاحية: ثنائيو اللغة العربية–الإنجليزية، تبديل اللغة، الخصائص الديموغرافية، الخلفية اللغوية.