A Sociolinguistic Study of the Use of Code Mixing in Social Media by Egyptian Bilingual Users(*)

Rehab Farouk Gad
Lecturer of Linguistics
Department of English, Faculty of Arts
Mansoura University

Abstract

The present paper aims to investigate how Egyptian bilingual social media users resort to code-mixing in their daily use of social media. The aim is to uncover the reasons behind code- mixing practices among this class of educated Egyptians in a monolingual country. In doing so, the paper attempts to demonstrate the nature of their linguistic endeavors and the role of code- mixing in identifying social media texts. Data for the present paper was collected from a sample of social media texts after permission to participants' accounts was requested. The study followed a qualitative research approach where the data was analyzed to identify the common factors of code- mixing, and find out the reasons why some bilinguals engage in the phenomenon and practice it in their social media texts. The theoretical framework within which this study is conducted corresponds to Muysken (2000); his classification of code-mixing phenomena at the sentence level (i.e. insertion, alternation, and congruent lexicalization) is followed here. The results revealed that most of the bilingual educated Egyptians who resort to code mixing view it as a facilitating and a time-saving strategy especially when expressing complex feelings, emotions and opinions. The paper claims, contrary to previous research, that the occurrence of a word or a structure from one language into the context of another language has to be referred to as code-mixing rather than code switching. I claim here that code switching is one of the processes of code mixing which is similar to alternation and it has to be embedded under the general frame of code mixing. The study proposes two types of code mixed texts that are referred to as *Multiple Code-Mixed Texts* (MCMTs) and

(*) A Sociolinguistic Study of the Use of Code Mixing in Social Media by Egyptian Bilingual Users, Vol. 8, Issue No.2, April 2019, pp.111-136.

Transliterated Code-Mixed Texts (TCMTs). The results also indicated that a high percentage of the participants, though extensively involved in code-mixing, view it as a negative influence on their learning of English as a second language.

Keywords

code- switching, code- mixing, social media, insertion, alternation, and congruent lexicalization

الملخص

يهدف هذا البحث إلى دراسة ظاهرة استخدام المصريين ثنائيي اللغة الخلط بين اللغتين في كتاباتهم اليومية عبر مواقع التواصل الاجتماعي المختلفة كالفيس بوك وتويتر والواتس اب، والهدف الرئيسي للبحث هو إيجاد الأسباب وراء هذا السلوك الشائع بين طائفة من المتعلمين المصريين المتحدثين للغة الإنجليزية بدرجات متفاوتة، وهذا بغرض إلقاء الضوء على مساعيهم اللغوية وعلى مدى تأثير الخلط بين اللغتين العربية والإنجليزية على النصوص المتبادلة في مواقع التواصل الاجتماعي، وقد تم جمع البيانات من عينة من النصوص المكتوبة بعد الحصول على موافقة أصحابها للاطلاع على نماذج من الرسائل المتبادلة بينهم ، واتبعت الدراسة المنهج الوصفي لتحليل البيانات للوقوف على النواحي السائدة والمشتركة والمحددة لظاهرة الخلط بين لغتين، واقترح البحث بعض الأسباب التي قد تدفع مستخدمي هذه المواقع للجوء إلى الخلط بين لغتين منهم اللغة الأم وهى العربية، واتبع البحث الإطار النظري الذي وضعه مايسكون (٢٠٠٠) حيث تم تصنيف الخلط بين لغتين إلى ثلاثة أنواع وهم: الإدراج والتناوب وتطابق المفردات، وتوصلت الدراسة إلى أن السبب الرئيس للجوء الأفراد المتعلمين ثنائيي اللغة للخلط بين اللغتين هو إن هذا الخلط هو الأوفر للوقت والأيسر في التعبير عن المشاعر والآراء ووجهات النظر، وعمد البحث (على عكس بعض الدراسات السابقة) إلى استخدام تعبير *الخلط بين اللغتين* وليس *التجول من لغة لأخرى* لتفسير هذه الظاهرة اللغوية، وقدم البحث نوعين جديدين لظاهرة الخلط بين اللغتين بناء على دراسة عينات من النصوص المكتوبة وهما: نصوص متعددة الخلط ونصوص بها خلط من اللغتين مكتوبة حسب النطق.

الكلمات الدالة

الانتقال من لغة إلى أخرى, الخلط بين لغتين, مواقع التواصل الاجتماعى, علم اللغة الاجتماعى, الإدراج , التناوب وتطابق المفردات

1. Introduction

Recently, the wide spread of social media such as Facebook, Twitter and WhatsApp has dramatically changed the traditional form of written and spoken language. Crystal (2001) and Herring (2001) argue that we can no longer differentiate between written and spoken language though the former is more formal. Language has witnessed a shift of colloquial features of spoken language into written language. Examples of these features are the use of hesitation and reaction words (e.g., um, you see) and words and symbols reflecting emotion (e.g., oh my god) (Gupta, 2016).

In this study, some attempts to differentiate code switching and code mixing are discussed: for example, Muysken (2000), Cardenas-Claros and Isharyanti (2009), Vyas, Gella, Sharma, Bali, & Choudhury (2014) among others. A sample of 23 social media texts (2 to 3 sentences each) was collected from three main social media: WhatsApp, Twitter and Facebook. Participants were divided into three main groups based on the degree and extent of their exposure to English as their second language. For the analysis of data, I followed Muysken (2000) in avoiding using the term code switching for the general process of mixing. With code mixing, some linguistic units such as morphemes, words and phrases of one language is embedded into an utterance of another language (Arabic/ English code mixing). Lexical borrowing is also differentiated; it is defined as a process of transfer or copying where a native speaker adopts an element from other language into the recipient language or a non-native speaker imposes properties of his/her native language onto a recipient language. Lexical borrowing takes place when second language speakers can't avoid phonological and syntactic interference from their native language, but they can avoid using words from their native language (Haspelmath 2009). In this study, lexical borrowing and insertion are used as two dominant models that underpin code mixing. Dwijayanti and Wahyana (2012, p. 199) argue that a main characteristic of insertion is that "it is similar to spontaneous borrowing in which well-defined lexical item is inserted into a sentence that belongs to the first language"; the following is an example of insertion based on Asy'ari (2009):

- Mudah-mudahan isi majalah **up to date** terus Hopefully the contenet of the magazine is always up to date.

(taken from Dwijayanti and Wahyana 2012, p. 200)

2. Internet Language

Due to the wide spread of social media such as Twitter, Facebook, Instagram, Snapchat, WhatsApp) and the availability of internet connections offered at reasonable prices, people have moved to a virtual world where actual interaction was replaced by written chat that has become people's means of expressing views, ideas and emotions. Every aspect of life has been converted into a virtual world. For example, students exchange materials, discussions, assignments; internet advertisements have become more popular; work meetings and arrangements are organized through these social media. All these tasks and activities are carried out through social media. Accordingly, linguists' attention has been directed towards the impact of the new written language employed in social media texts on spoken language. The difference between written and spoken language has raised a considerable attention in literature. For example, Crystal (2001, pp. 7-8) proposes the following features that highly characterize written language:

(1) graphic features: distinctive typography, page design, spacing, use of illustrations, and color
(2) orthographic (or graphological) features: the writing system of an individual language, defined in terms of such factors as distinctive use of the alphabet, capital letters, spelling, punctuation, and ways of expressing emphasis (italics, boldface, etc.)
(3) grammatical features: the many possibilities of syntax and morphology, defined in terms of such factors as the distinctive use of sentence structure, word order, and word inflections
(4) lexical features: the vocabulary of a language, defined in terms of the set of words and idioms given distinctive use within a variety
(5) discourse features: the structural organization of a text, defined in terms of such factors as coherence, relevance, paragraph structure, and the logical progression of ideas

A phenomenon that accompanied this dramatic shift to *Internet Language* is switching from one language to another or mixing a language with another language. In the following section, a distinction between code switching and code mixing is established.

3. Code-Switching or Code- Mixing?

In literature, there are many attempts to differentiate between code-switching and code-mixing. Cardenas-Claros and Isharyanti (2009, p. 68) argue that code-switching occurs when a bilingual speaker uses more than one language in a single utterance **above the clause level** to appropriately convey his/her intents. Cardenas-Claros and Isharyanti (2009, p. 69) provide the following example of English/Spanish code-switching where participant B interacted in English during most of the conversation and then switched into Spanish:

A: The picture looks so cool.

B: Which picture?

A: The one you have in your messenger.

B: Ah…Si, me gusto mucho. (Ah…Yes, I liked it a lot.

Vyas, Gella, Sharma, Bali, & Choudhury (2014), though they use the term code mixing to imply code switching, argue that code switching refers to the exchange of passages of speech from two different grammatical systems whereas code mixing refers to the embedding of part of language (phrases, words or morphemes) into a structure that belongs to another language Code mixing is a recurrent phenomenon in multilingual user-generated content in social media texts. Maharjan, Blair, Bethard, & Solorio (2015) view code- mixing as a process of alternation between two or more languages while speaking or writing. Cardenas-Claros and Isharyanti (2009) view code-mixing as a result of the user's attempt to change from a language to another, **below clause level**, within the same conversation. Cardenas-Claros and Isharyanti (2009, p. 70) discuss *insertion* as a main type of code-mixing as illustrated by the following example of Indonesian/English insertion:

B: Tergantung team, terus juga tergantung event.

(It depends on the team and on the event.)

Muyskn (2000) uses the term code-mixing to refer to cases where a speaker uses both lexical items and grammatical features of two or more languages in just one sentence. Barman, Das, Wagner, & Foster (2014) argue that multilingual participants, in social media conversations, switch between languages; they view code switching and code mixing as referring

to the same phenomenon. Gullberg & Couto (2016) hold the same view that code switching and code mixing include inserting linguistic units, such as phrases and words, of one language in the subsystem of a different language.

In this study, I argue against the claim that the two terms of code switching and code mixing can be used interchangeably. Following Muysken (2000), the use of the term code switching to refer to the general process of mixing is avoided. Muysken (2000, p. 4) rejects the use of the term code-switching as it is less neutral in two perspectives: first, code-switching is closer to the process of alternation, not to insertion. He argues that switching or alternation can take place between clauses and within the clause itself. Second, code switching rules the general process of code mixing out of the phenomenon of borrowing from one language or interference between two languages. So, *switching* and *alternation* have to be embedded under the umbrella of code mixing. Hence, the general frame of the theory of code mixing that will be followed in this study can be summarized as follows:

1. Code mixing involves alternation and insertion
2. Alternation and switching are the same
3. Switching is an alternational type of mixing
4. What is encountered in social media texts is code mixing rather than code switching.
5. Alternation is taken to be "a clear example of code-switching which takes place between utterances in a turn or between turns" (p. 5).

4. Theoretical Framework of Code- Mixing

Having settled on referring to the phenomenon under investigation as code mixing rather than code switching, we move to the different processes that characterize code mixing and also refer to the phenomenon of *Transliteration* that forms a basic writing system that is frequently used by social media users in Egypt.

4.1 dominant models of code mixing

Muysken (2000, pp. 3-4) proposes the following three way classification of the types of code mixing:

(a) ***Insertion***: This includes inserting a material such as a lexical item or

an entire constituent from a language into a structure from another language. It is viewed as a type of borrowing. It entails the insertion of a lexical item or a phrasal category from one language into a certain structure from another language (e.g., a noun or a noun phrase can be inserted). The following examples of *insertion* are based on Muysken (2000, pp. 4-5):

(1) kalau dong tukan bikin dong tukan bikin
when they always make they always make
voor acht personen dek orang cuma nganga dong makan
for eight persons and then people only look they eat

'When they [cook], it is always for eight people, and then they only look at it, they eat. . .'

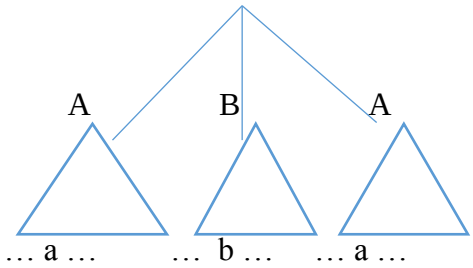
(Moluccan Malay/Dutch; Huwae 1992)

(2) na'iish-crash la
lsg:pass out-crash EM PH
'I am about to pass out. ' (Navaho/English; Canfield 1980: 219)

(3) Yo anduve in a state of shock por dos dias.
'1 walked in a state of s h o c k for two days.' (Spanish/English; Pfaff 1979: 296)

In (1), an entire Dutch prepositional phrase is inserted into a Moluccan Malay sentence. In (2), a single English verb stem is inserted in a complex Navaho verbal structure. In (3), the prepositional phrase *in a state of shock* is inserted between the verb *anduve* 'walked' and the temporal expression *por dos dia* 'for two days'. The process of *insertion* is exemplified by the following structural interpretation based on Muysken (2000, p. 7):

insertion



B is a single constituent; *b* are words from same language; *a* words

from language *A*

(b)***Alternation***: This includes alternating between structures from languages. Alternation, as a process of code mixing, highlights "the compatibility of the mixed languages at a certain switch point" (p.4). The following examples of *alternation* are based on Muysken (2000, p.5):

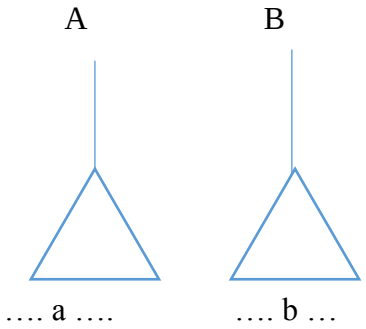
(4) maar 't hoeft niet *li-'anna ida seft ana . . .*
but it need not for when I-see I
'but it need not be, for when I see, I . . .'
(Moroccan Arabic/Dutch; Nortier 1990: 126)

(5) Les femmes et le vin, *ne ponimayu*.
'Women and wine, I don't understand.'
(French/Russian; Timm 1978: 312)

(6) An dale pues *and do come again.*
'That's all right then, and do come again.'
(Spanish/English; Gumperz and Hernandez-Chavez 1971: 118)

Alternation is a typical example of switching from a language to the other. The example in (6) illustrates a case of switching rather than embedding. The process of *alternation* is exemplified by the following structural interpretation based on Muysken (2000, p. 7):

alternation



A constituent from language A is followed by a constituent from language B

(c)***Congruent Lexicalization***: Muysken (2000, p.6) defines congruent lexicalization as marking a situation where the two languages share a certain grammatical structure which can be substituted by another lexical element from either language. It refers to a certain case of selecting a material from different lexical inventories into a shared grammatical structure. Congruent lexicalization can also be referred to as a type of style shifting. This is closer to bilingual language use. The following examples of *Congruent Lexicalization* are based on Muysken (2000, p.6):

(7) Bueno, *in other words*, el *flight* [que sale de Chicago *around three o 'clock*].

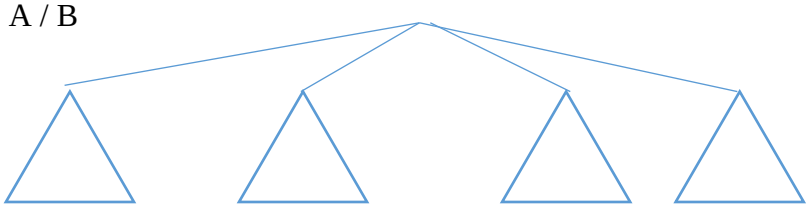
'Good, in other words, the flight that leaves from Chicago around three o 'clock.'

(Spanish/English; Pfaff 1976: 250)

Muysken (2000) explains the mixing of English and Spanish in (7) as an example of both alternation and insertion. In addition to the two processes, the elements (constituents or words) from the two languages are inserted into a single structure. Hence, congruent lexicalization is similar to or an example of style or register shifting and monolingual linguistic variation (p. 7). The process of *Congruent Lexicalization* is exemplified by the following structural interpretation based on Muysken (2000, p. 8):

Congruent lexicalization

A / B



With *congruent lexicalization*, grammatical structure is shared by languages *A* and *B*, and words from both languages *a* and *b* are inserted more or less randomly.

4.2 Transliteration

Transliteration, a phenomenon that has widely spread in social media text in Egypt, needs to be included in this definition model. Ameur, Meziane

and Guessoum (2017) define it as "the process of converting words from a given source language alphabet, in a way that best preserves the phonetic and orthographic aspects of the transliterated words". Cardoso and Roy, (2016) state that in the Internet, limitations of hardware foster the growing tendency towards the use of transliteration. The first models of computers and mobile phones did not offer the possibility of switching from a language to another; hence, transliteration was the only writing system available. Now, in spite of the evolution of hardware, transliteration remains the easier and more frequently used system in social media texts.

5. Proposed Methodology & Data Collection

This section describes the method used to collect the data from social media accounts of some Egyptian bilinguals. Data will be analyzed qualitatively following Mason (2002). She proposed the following categories as the most frequently used data sources in qualitative research (p. 52):

(1) People (as individuals, groups or collectivities)

(2) Organizations, institutions and entities

(3) Texts (published and unpublished sources including virtual ones)

(4) Settings and environments (material, visual/sensory and virtual)

(5) Objects, artifacts, media products (material, visual/sensory and virtual)

(6) Events and happenings (material, visual/sensory and virtual).

Data collected in this study belongs to type 3 and 5 of the above categories; that is *texts as a type of media products*. Mason (2002, pp. 55-58) proposes different approaches to qualitative research:

(1) Ethnographic approach: reflects first- hand experience and certain social setting based on participant observation

(2) Interpretivist approach: sees people, and their interpretations, perceptions, meanings and understandings, as the primary data sources

(3) Biographical, life history and humanist approach: deals with people as social actors, or active social agents who provide narration of their life, a biography or auto/biography

(4) Conversation analysis and discourse analysis: focuses on talk and texts as data sources and analyzes people's 'methods' for 'producing orderly social interaction' through naturally occurring talk
(5) Psychoanalytic approach: employs loosely structured interviews to tap into a 'psycho-social subject

The qualitative approach that is applied in the present paper is the *interpretivist approach*. This approach seeks to explain people's activities and their use of language that shapes their social reality (Mason, 2002, p. 56). The interpretivist qualitative approach seeks to explain the sociolinguistic factors behind code mixing in social media texts.

In the present study, I examine the manifestation of code mixing in social media accounts of Egyptian bilingual speakers and the reasons behind such practice. The term bilingual is used here to refer to participants who can communicate in English in varied degrees. The first group encompasses some teaching staff who can communicate effectively; they are in direct contact with the English linguistic system. The second group participants are less exposed to English as their familiarity with language is restricted to their specialized field of study (medical school students). As for the third group participants, they are university postgraduates who retained few structures from past education and are in occasional contact with English. So, participants were classified into three main groups based on the degree of their exposure to their foreign language (English) as follows:

(1) Group One: highly educated participants who are intensively exposed to English. Some staff members at the Department of English, Mansoura University were selected. This group is referred to as (L2 teachers of English)
(2) Group Two: Medical school students in Mansoura University. This group is referred to as (non–specialist L2 users of English)
(3) Group Three: postgraduates with less exposure to English. This group is referred to as (occasional L2 users of English)

6. Data Analysis

Crystal (2001) investigates the role of language in the Internet and the impact of the Internet on language. He explores the Internet's global scale and the effect of its intensive use on language in general and on individual

language in particular. He argues that the language people use in a certain situation is controlled by some factors such as politeness, interest and intelligibility; failure to observe the sociolinguistic expectations and values of the interlocuters and the community is an inappropriate conduct (p.7). The paper attempts to find out whether the Internet is a homogenous language-using electronic situation as assumed by Crystal (2001, p. 9), and whether Internet users can create their own unified internet language. In the following sections, social media texts of each group of participants are handled.

6.1 Group One: L2 teachers of English

In the following WhatsApp conversation, L2 teachers are exchanging views regarding a title of a dissertation:

Example 1:

A: ايه رأيكم في موضوع الرسالة ده؟ مؤيد أم معارض؟

B1: interesting حلو جدا و

C: Discourse analysis طبعا أنا مش لغويات بس حساه قوي .... طول السنين اللي فاتت كل الرسايل كانت عن

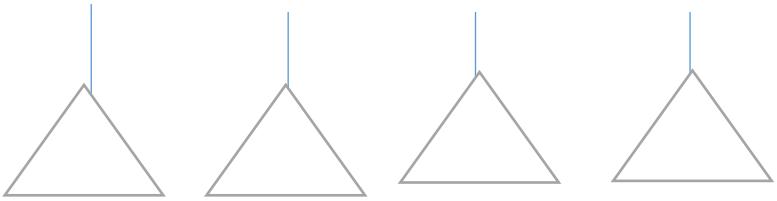
D: Agree

B2: discourse analysis عن ال at all و أنا الصراحة مبفهمش اي حاجة في اللغويات interesting علشان كده قلت عليه معنديش فكرة

In the above conversation, code mixing is encountered. The question now is: what is the prominent model of code mixing employed in this example conversation? I propose here that the second sentence (B2) written by speaker B provides an example of **alternation**. As claimed in section (3), code mixing is the general process under which code switching is embedded. Muysken (2000) states that "switching is only an appropriate term for the alternational type of mixing" (p. 4). The only model of code mixing that involves code switching is alternation. In other words, alternation is a type of code switching where participants switch from one language to another within an utterance in a turn or between turns. The whole constituent with its grammatical and lexical feature is used. If this constituent is embedded under the constituent of another language, it will be a case of insertion

(insertion ⟶ embedding) (alternation ⟶code switching). A constituent from Arabic (with words from the same language) *"معنديش فكرة"* is followed by a constituent from English (with words from the same language) "*at all*". Similarly, *"عن ال"* is followed by *"Discourse Analysis"*. This idea is illustrated by the following representation:

alternation



In the second WhatsApp conversation, linguistics staff members are discussing some arrangements regarding a language course:

Example 2:

	مساء الخير على أحلى linguistics staff هرسلكم بيانات الدورة أربع أسابيع و أربع module and the week as you wish الرجاء اختيار ال Module
	لو حد عندة الى ملاحظات رجاء كتابتها لو شايفين ان we could do it or not
	حبيبتي أحليdoctor كله group منوره ال Guys, she is my best friend, one of the kindest ever

In the above example, two processes of code mixing are encountered: insertion and alternation. With insertion, it is agreed that part of the constituent of a language is inserted into a structure from another language. In the above conversation, the noun "module" is inserted as the head of the noun phrase "*Module أربع* " . With alternation, the determiner "*ال* " is followed by the noun phrase "module and the week as you wish". Examples such as the one written by speaker A are referred to here as multiple code mixed texts (MCMT). Participants here share a high degree of bilingual

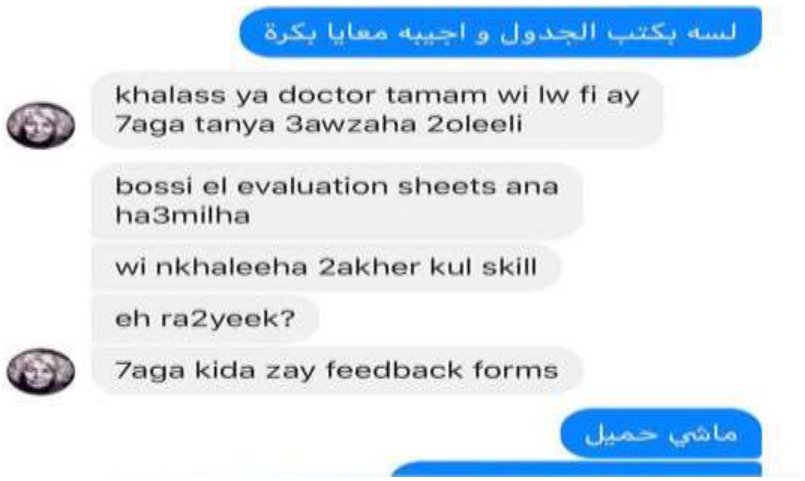
proficiency. Being proficient in both Arabic and English, they tend to use Arabic courtesy phrases such as "حبيبتي " and "منوره " while expressing a viewpoint in English "*we could do it or not*" and "*Guys, she is my best friend, one of the kindest ever*".

The third example is a Facebook messenger written conversation between two L2 teachers regarding some teaching arrangements:

Example 3:

In example (3), lexical congruent (the 3rd model of code mixing) is used where the constituent "*Doctor*" is shared by English and Arabic. Insertion is clarified by the last sentence in the conversation which is "*See you there at 11*".

Example 4:



Example 5:

Example 6:

The examples in (4), (5) and (6), which are provided by two different participants, illustrate a combination of both insertion and alternation. In (4), the noun phrase "*evaluation sheet*" is inserted to be modified by the determiner "*el*"; the noun "*skill*" is part of another constituent headed by the quantifier "*kul*". In the last sentence, alternation takes place as "*zay*" is

followed by a whole constituent (the noun phrase *feedback forms*). In (5), the noun phrase "*Facebook*" is inserted to be modified by the determiner "*el*"; alternation takes place as the verb "*nkhaleeha*" is followed by a whole constituent (the noun phrase *small celebration*). As explained in section 4.2, these examples represent the use of transliteration in social media texts. Participants use it as an easier way to communicate and at the same time show linguistic modernity.

6.2 Group Two: non–specialist L2 users of English

The tweets here are based on conversations among medical students who are members of Mansoura Students Scientific Association (MSSA).

Example 7:

Example 8:

It is notice that in examples (7) and (8), medical students provide explanations and procedures in Arabic to guarantee clarity of the message; however, English specialized terms are intentionally inserted. Physicians and engineers mix their colloquial Arabic with their profession language. I assume here that if similar ideas are discussed by students at the Department of Geography, as an example, code mixing is not expected to occur as this branch of knowledge is taught and explained in Arabic and almost all terms have their Arabic equivalents. Regarding the structure "EBM Pyramid للـ" in example (7) and "abstract الـ" in example (8), I argue that what facilitated code mixing here is the grammatical similarity between the two languages as assumed by Muysken (2000, p. 11).

"The perceived similarities between the languages bilinguals speak facilitate code-

mixing, and in the bilingual setting the languages will tend to converge. The use of

a word from another language may easily trigger other material from that language,

either in anticipation of that word or subsequently"

In both Arabic and English, a preposition requires a noun complement. The structure "EBM Pyramid للـ" stands for "*to the Pyramid*" or "*الى الهرم*". Another grammatical feature shared by the two languages here is the requirement that a determiner is followed by a head noun; the mixed constituent "*abstract الـ*" stands for "the abstract" or "*الـ ملخص*". Additionally, the word order of prepositional and determiner phrases are the same in Arabic and English. The analysis here aims at establishing the idea that what are encountered in these tweets are examples of code-mixed social media texts which is the main claim of the paper. In the theoretical framework section, it is agreed that insertion is accompanied by embedding. The English NP "EBM Pyramid" is inserted into an overall Arabic structure which is a prepositional phrase "EBM Pyramid لـ " ; insertion includes a spontaneous use of a lexical item (as suggested by Muysken, 2000); this lexical item varies according to the situation. In these tweets, the most recursive case of insertion is that of medical/ specialized lexical items. Similar analysis applies to the following illustrative examples which share similar situations:

Example 9

Example 10

Example 11

Example 12

Example 13

Example 14

Further examples of written social media texts occurring in a specialized discussion groups are given in Appendix (1). Some examples from group one and two represented the use of transliteration in social

media text. One way to account for it is that transliteration makes digital communication much easier. Another possible reason is that transliteration reflects users' resourcefulness which enables them to use English letters and numbers to write Arabic words. Transliteration might also be a mere reflection of social media users' desire to show linguistic modernity.

6.3 Group Three: occasional L2 users of English

Participants of this group are former university graduates who are less exposed to English. However, they resort to Arabic/ English code mixing in different situations for different reasons. All participants of this group differ in their language attitudes as illustrated below:

Example 15:

The above tweet clarifies one of the main factors governing the use of code mixing in written social media which is *language attitude*. In example (14), the participant would like to show English language proficiency, so he resorted to a type of alternation/code mixing. The participant's reason here for code mixing is different from that of medical students. While medical students explain important steps in Arabic then refer to a specialized English term, the participant in example (14) expresses two specialized terms in two different languages: احصا/ and *data management*. Another participant who is assumed here to share the same language attitude provided the following two tweets in examples (16) and (17):

Example 16

Example 17

In section (6.1), data based on written social media provided by L2 teachers was analyzed as exhibiting two models of code mixing which are insertion and alternation. Written social media texts collected from group (3) participants or (occasional English language users) reflect a common tendency among those participants towards the use of congruent lexicalization. In the following examples, certain grammatical features shared by Arabic and English that can be substituted by another lexical element from either language are encountered.

Example 18

Example 19

In the above examples, we come across certain cases of selecting a material from different lexical inventories into a shared grammatical structure (e.g., *بالثيم* "with the theme", *رتويت* "retweet", *اللينك* "the link". Congruent lexicalization exhibited in these examples can be argued to resemble a type of style shifting which is remarkable in bilingual language use. The question now is: can we consider the written texts in examples (18) and (19) similar to the following example of *Congruent Lexicalization* which is based Muysken (2000, p.6)?

- Bueno, *in other words*, el *flight* [que sale de Chicago *around three o 'clock*].

'Good, in other words, the flight that leaves from Chicago around three o 'clock.'

(Spanish/English; Pfaff 1976: 250)

I argue here that what we have in (17) and (19) is a special type of congruent lexicalization where a bilingual uses Arabic letters to write an English item while keeping its phonetic form (see example (19) *رتويت* "retweet"). In section (6.1), we encountered cases where L2 teachers used Latin letters to represent Arabic items (see example (5) *nkhaleeha* "we make it"). In this research, I refer to such specific type of special media texts as Transliterated Code-Mixed Texts (TCMTs); below is a further example:

Example 20:

Looking at the analysis of the written texts selected in this study, some remarks about the psycholinguistic aspect of code mixing can be proposed. Group one participants (L2 teachers), who are intensively exposed to English, resort to a type of alternation and/or insertion that I refer to as *recursive insertion*. This can be justified by the fact that they share high degree of bilingual proficiency as well as high degree of activation of

Arabic language components in their production; when this activation shifts from Arabic to English, insertion and/or takes place.

Based on the analysis of the social media texts of the three groups of participants, I propose that no integrated model of code mixing can be traced in social media texts. The study detected a significant variation in the mixing patterns met in the selected social media texts. The study suggests that the main factors triggering code mixing are the degree of participants 'bilingual proficiency and their language attitudes. The type of interactive setting is also a crucial factor as reflected by written texts of MSSA students in the second group.

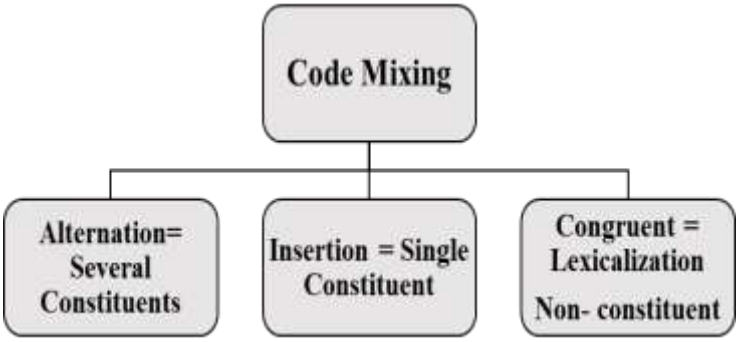
7. Conclusion

Code mixing and code switching are two terms that caused controversies in literature. With code switching, the speaker shows linguistic performance while moving from one grammatical structure to another. As for code mixing, it involves both code switching and borrowing of words and phrases. It covers these two types of linguistic behavior and reflects the speaker's linguistic competence. This study was motivated by the need to describe how Egyptian bilinguals combine elements from Arabic and English to process mixed sentences. It aimed at analyzing a sample of 23 code-mixed sentences collected from three main social media: WhatsApp, Twitter and Facebook Messenger. The study aimed at finding out the main reasons behind the occurrence of Arabic/English code mixing in written conversations of Egyptian users of social media. The study proposed a sociolinguistic account of this phenomenon; psycholinguistic interpretations were also suggested to account for users' sudden shift from Arabic into English and vice versa. The conclusion is in accordance with the major claim that the written language used in different social media contexts is similar to spoken communication which is less formal and simpler. The study proposed the following two types of code mixing as they are the most frequently used by participants in three groups:

(1)Multiple Code- Mixed Texts (MCMTs)

(2) Transliterated Code-Mixed Texts (TCMTs)

A general framework of code- mixing was discussed and I offer the following representation to summarize the framework adopted here:



The theoretical framework of code-mixing was adopted here for the analysis of the collected written social media texts. In the present paper, I argue against the use of the two terms of code mixing and code switching interchangeably. The term code- mixing is used to refer to the general process of mixing. The phenomenon of code switching is similar in nature to that of alternation; hence both of them have to be embedded under the general frame of code-mixing. In other words, code-mixing refers to all instances where a lexical item and a grammatical feature from a language appears in one sentence from another language.

8. Suggestions for Further Research

In the present study, examples (3-5) illustrated a new trend of writing social media texts: that is *Arabish* (a type of written language that has recently become common among youth in the Arab world). I consider Arabish as a natural result of the evolution of the 21 century technology. This study recommends a further examination of the language used by Egyptians in their social media written texts at various levels: phonological, grammatical, lexical and orthographical and the impact of this language on our mother tongue (Arabic). This triggers a need for a new orthography with a set of conventions for writing Internet language.

Works Cited

Al-Badrashiny, M., & Diab, M. (2016). The George Washington University System for the Code-Switching Workshop Shared Task 2016. In *Proceedings of The Second Workshop on Computational Approaches to Code Switching*. 108-111.

Ameur, M, Meziane, F & Guessoum, A. (2017). Arabic Machine Transliteration using an Attention – based Encoder-decoder Model. Procedia Computer Science 117 (287-297).

Anicich, E. M., & Hirsh, J. B. (2017). The psychology of middle power: Vertical code-switching, role conflict, and behavioral inhibition. *Academy of Management Review*, *42*(4), 659-682.

Barman, U., Das, A., Wagner, J., & Foster, J. (2014). Code mixing: A challenge for language identification in the language of social media. In *Proceedings of the first workshop on computational approaches to code switching*, 13-23.

Cardenas-Claros, M., & and Isharyanti, N., (2009). Code switching and code mixing in the internet chatting: between ”yes”, “ya” and “si” a case study. The Jalt Call Journal. *5* (3), 67-78.

Cardoso, P &Roy, A. (2016). Language identification for social media: short messages and transliteration. In *Proceeding of the International World Wide Web Conference Committee*, 611-6114.

Chen, J. (2016). An investigation into teacher code-switching in EFL classrooms at tertiary level in China. *ICLLS 2016*, 17.

Crystal, D. (2001). Language and the Internet. Cambridge: Cambridge University Press.

Dawoud, A., & Shah, S. R. (2017). Identifying the Functions of Code Switching in a Computer Mediated Online Communication. *Journal for the Study of English Linguistics*, *6*(1), 1-23.

Dewaele, J. M., & Li, W. (2014). Intra-and inter-individual variation in self-reported code-switching patterns of adult multilinguals. *International Journal of Multilingualism*, *11*(2), 225-246.

Dwijayanti, A &Wahayana, A. (2012). An analysis of code mixing in the readers' letters of "Looks" and "Chic" magazines. *English Edu*, *10* (2), 197-222.

Eldin, A. A. T. S. (2014). Socio linguistic study of code switching of the Arabic language speakers on social networking. *International journal of English linguistics*, *4*(6), 78.

Gambäck, B., & Das, A. (2016, May). Comparing the Level of Code-Switching in Corpora. In *LREC*.

Gullberg, M., & Couto, M. C. P. (2016). An integrated perspective on code-mixing patterns beyond doubling? *Bilingualism: Language and Cognition*, *19*(5), 885-886.

Gupta, S. (2016). Towards understanding code-mixed social media texts.MA thesis, International Institute of Information Technology, India.

Hall, K., & Nilep, C. (2015). Code switching, identity, and globalization.

Haslam, S. A., van Knippenberg, D., Platow, M. J., & Ellemers, N. (Eds.). (2014). *Social identity at work: Developing theory for organizational practice*. Psychology Press.

Haspelmath, Martin. (2009). Lexical borrowing: Concepts and issues. In: Martin Haspelmath &

Uri Tadmor (eds.). Loanwords in the World's Languages: A Comparative Handbook.

Berlin: De Gruyter Mouton, 35-54.

Herring, S. C. (2001). Computer-mediated discourse. In Schiffrin, D., Tannen, D., & Hamilton,

H. (Eds.), The Handbook of Discourse Analysis. Oxford: Blackwell Publishers, 612-634.

Kharkhurin, A. V., & Wei, L. (2015). The role of code-switching in bilingual creativity. *International Journal of Bilingual Education and Bilingualism*, *18*(2), 153-169.

Kim, H. J. (2015). The use and perception of codeswitching among teachers and students. *The Journal of Language teaching and learning*, *5*(1), 34-51.

Maharjan, S., Blair, E., Bethard, S., & Solorio, T. (2015). Developing language-tagged corpora for code-switching tweets. In *Proceedings of The 9th Linguistic Annotation Workshop* (pp. 72-84).

Mason, Jennifer. (2002). Qualitative Researching. Sage Publications: London

Masrahi, N. (2016). Causes of Code Switching by Low Level EFL Learners at Jazan University, Saudi Arabia: A Teachers' Perspective.

Muysken, P. (2000). Bilingual Speech: A typology of code-mixing. Cambridge: Cambridge University Press.

Susilo, R. A., & Nugroho, H. A. (2015). CODE-SWITCHING IN EFL CLASSROOM BY ENGLISH TEACHER OF SMP NEGERI 2 REMBANG. *RETAIN*, *3*(2).

Toribio, A. J. (2017, October). Structural approaches to code-switching. In *Romance Languages and Linguistic Theory 12: Selected papers from the 45th Linguistic Symposium on Romance Languages (LSRL), Campinas, Brazil* (Vol. 12, p. 213). John Benjamins Publishing Company.

Vyas, Y., Gella, S., Sharma, J., Bali, K., & Choudhury, M. (2014). Pos tagging of english-hindi code-mixed social media content. In *Proceedings of the 2014 Conference on Empirical Methods in Natural Language Processing (EMNLP)* (pp. 974-979).

Wu, F., Li, Z., Lee, W. C., Wang, H., & Huang, Z. (2015, May). Semantic annotation of mobility data using social media. In *Proceedings of the 24th International Conference on World Wide Web* (pp. 1253-1263). International World Wide Web Conferences Steering Committee.