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# A Sociolinguistic Investigation of Code-Switching on Facebook Messenger among Students of English at the University of Tlemcen 

> Dissertation submitted to the department of English as a partial fulfilment of the requirements for Master's degree in Language studies.

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## STATEMENT OF ORIGINALITY

I hereby declare that this Master's dissertation entitled "A Sociolinguistic Investigation of Code-Switching on Facebook Messenger among Students of English at the University of Tlemcen" is original as an outcome of my own work. The material included has not been previously submitted nor published, in whole or in part, for the qualification of any other degree or diploma of a university or other institution. I also certify that the present work contains no plagiarism and is the result of my own investigation, except where otherwise stated.

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## Dedications

## I dedicate this modest work :

To my beloved mother, without your warm prayers, encouragement and care, i would not be able to achieve my goal. Thank you for pushing me ahead when $i$ thought $i$ could not make it.

To my wonderful father who is always there for me, for your pure love, endless support, your sacrifices to make me the person who I am today. Thank you, Dad, for being kind with me and for making me inspired,

Whatever I do, wherever life takes me, I will always be thankful to my parents. May Allah protect them and grant them a long life.

To my dear brothers Walid, Abdenour, Yazid who have provided me with all my needs.

To my darling sisters, my big sister Imene and her daughter Meriem, my little Chaimaa who makes me laugh from my heart whenever things look bleak.

To all who know me and touch my heart.

I dedicate this dissertation.

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#### Abstract

With the rapid development of technology that has led to the existence of new modes of computer- mediated communication in recent years, a new way of communication has appeared to facilitate the interaction between people which is referred to as the internet language. This digital communication is affected by the use of code-switching or code mixing, the use of two or more languages in the same speech. This research work aims to find the reasons that stand behind the use of code-switching and figure out the most often used types of code mixing in written discourse. Code-switching is frequently used in Facebook Messenger, but the types of alternation differ according to various situations and social relationships. This study has investigated the use of codeswitching in Facebook Messenger among EFL students in Tlemcen University. To conduct the study, two research instruments have been used, namely a corpus of students' Messenger chats and an online questionnaire which have provided data for quantitative and qualitative analyses. The results confirm that there are several reasons behind the students' use of code-switching, chiefly the spontaneous way of writing messages, lack of equivalent words, the use of abbreviations and acronyms. The content analysis of Messenger chat records also proved that patterns of codeswitching are used depending on the situation such as the topic of conversation and the participants' personal relationship.


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# List of Abbreviations and Acronyms 

AA Algerian Arabic
BR Berber

BA Bachelor

## Phonetic Transcription

| Arabic Script | $\begin{aligned} & \hline \text { IPA } \\ & \text { symbol } \end{aligned}$ | Symbols used in Romaniszed Algerian Arabic |
| :---: | :---: | :---: |
| Consonants |  |  |
| أ - الهمزة | ? | 2/a |
| ب | b | b |
| $\because$ | t | t |
| ث | $\theta$ | th |
| ج | 3/d3 | j |
| ح | h | h |
| خ | x | kh |
| 2 | d | d |
| ذ | б | d |
| J | r | r |
| j | z | z |
| س | s | s |
| ش | J | ch |
| ش | t | tch |
| ص | $\mathrm{s}^{\text {¢ }}$ | s |
| ض | $\mathrm{d}^{\text {f }}$ | d |
| b | $\mathrm{t}^{\text {¢ }}$ | t |
| ظ | $\chi^{¢}$ | d |
| $\varepsilon$ | ¢ | 3 |
| $\dot{\varepsilon}$ | ¢ | gh |
| e | f | f |
| ق | q | q/9 |
| 5 | k | k |
| g | g | g |
| J | 1 | 1 |
| - | m | m |
| ن | n | n |
| - | h | h |
| , | w | w |
| ي | j | y |
| v | v | v |
| Vowels |  |  |
| 1 | a: | a: |
| ي | i: | i: |
| , | u:, o: | u:, o: |
|  | a | a |
| ¢ | i | i |
| 宔 | u | u |
|  | $\bigcirc$ | e |

## GENERAL

## INTRODUCTION

## General Introduction

In this age of digital communication, with the development of the Internet, electronic devices and the many ways of receiving and transmitting information online, people seem to be closer than ever to one another and can share all types of events, knowledge, feelings and personal messages. Indeed, online communication and social media allow us today to share content instantaneously, including voice messages, pictures and videos through various types of websites like Facebook, in particular.

Since its first launch in 2004, the social website Facebook, which is a trendy application today, provided an instant messaging service developed as Messenger in 2011, the most popular messaging application worldwide. It has become an important way of communication with others in real time for it makes it faster to chat and facilitates the interaction between people in daily life. As previously mentioned, the frequent use of messenger chats among people spreads widely nowadays; hence, a new way of language use is spread among bilinguals which is characterized by the use of code-switching as a social trend in multilingual communities, not only in spoken form but it also exists in the written conversations found in online communication.

Facebook messenger is one of the spaces where code-switching occurs daily. While chatting in Messenger, bi/multilingual speakers do not stick to a particular code; they mix or shift between languages and dialects in order to pass their message clearly. However, some well-known scholars such as Poplack (1980), Gumperz (1982), Myers-Scotton (1993), Valdez-Fallis (1978), focused in their studies on the spoken form of code switching in face-to-face interaction, but they hardly ever refer to code alternation in written conversations.

As online communication has become a global activity in the world, it is worth studying language use in general in the social media, and we are particularly interested in examining the use of code switching. Thus, this study focuses on code alternation found mainly in Messenger chatting. What makes us examine this phenomenon was in fact the lack of interest of linguists who studied the phenomenon of code-switching
just in spoken conversations rather than the second facet of language which is the written form, so the current study attempts to fill this gap.

In this dissertation, we will try to shed some light on the use of code-switching in facebook chats which contributes in linguistics in several ways. First, it gives value to the written form of code-switching in sociolinguistic study. Second, it offers a distinct form of language situation among the youth. Third, it provides our readers with the possible reasons behind using this phenomenon and the differences in codeswitching in Messenger chatting in our daily conversations. It also exhibits the motivation behind switching codes in social media.

The current study aims at investigating code-switching in relation to a networking website, facebook. It seeks to know if there are any patterns of alternation of codes in students' chats and how it varies according to personal relations. It also tries to uncover the reasons behind using code-switching while chatting on Facebook Messenger and to determine the motives that encourage its occurrence. This research attempts to explore the research questions below:

1/ Why do EFL students switch codes when they communicate with others online? What motivates them?

2/ What type of code switching occurs most in Facebook Messenger? Does the use of code switching vary from one person to another? If yes, on what basis?

In order to answer these questions, we may suggest the following hypotheses;
1/ EFL students switch codes when communicating because of different reasons including conveying a clear message easily, showing prestige and attracting people; but sometimes code switching may occur spontaneously.

2/ Code switching on Facebook chatting is contextual, as it differs from one situation to another and also on personal relations.

To identify the reasons that motivate students to alternate codes in their Facebook Messenger chatting, a mixed method study is conducted where the sample is
taken from the department of English in Tlemcen University. The questionnaire is designed for those students to test the previous proposed assumptions, in addition to the analyses of students' private chats on Messenger to highlight the use of patterns of code switching.

The current dissertation is composed of three chapters. The first two chapters present an overview of the theoretical aspects of code-switching and computer mediated communication and the relationship between them; in which the first chapter deals with various definitions of code-switching, its types and functions, bilingualism, code mixing and borrowing, while the second chapter is devoted to language and Internet. The third chapter which is practical aims at explaining the methods that have been used for conducting the research and discussing the sampling, the procedure, data gathering tools as well as data analysis tools and the interpretation of the findings which makes a link between the research questions and objectives.


Code-switching and the Algerian Linguistic Setting

### 1.1 Introduction

Algeria is a multilingual society as different codes are used in its community; these are: Modern Standard Arabic, Algerian Arabic, Berber, French and English, though used to different extents and by different types of people. The real mother tongue is either Algerian Arabic (AA) in most parts of the country or Berber ( Br ) in a number of areas where Tamazight and other Berber varieties have been preserved. In any case, the Algerian people do switch codes when speaking to each other, but also when interacting on the various social networks, in particular on Facebook Messenger which students often use. Thus, the present chapter aims to introduce bilingualism and its types since code alternation is rooted in it. Then, it defines the concept of code-switching along with its types, reasons as well as other related phenomena, including code-mixing and borrowing. It concludes with a discussion on code alternation in Algeria and language attitudes towards this phenomenon.

### 1.2 Bilingualism

In sociolinguistics, the ability of people to actively use two languages is often called bilingualism. This phenomenon is usually a result of different factors by which languages meet. As Hoffmann (1991) states in his book An Introduction to Bilingualism, there are many situations which may result in bilingual use: immigration, migration, close contact with other linguistic groups, schooling, growing up in a bilingual family, in addition to mixed marriage, colonization, religion, profession and many other reasons. The concept of bilingualism is often associated with code-switching, a speaker has to know two languages at least to be able to code switch which is considered as a natural product. Many attempts have been made by linguists to find an explicit definition for bilingualism which can be seen from different angles such as degrees, categories, factors, etc. Uriel Weinreich (1953), one of the famous figures in the field of bilingual studies and a bilingual himself, provides a clear definition of the notion of bilingualism in his famous book Languages in Contact, stating that "The practice of alternately using two languages will be called bilingualism, and the person involved, bilingual." (1968:1). So, the ability to use two different languages is referred to as "bilingualism" and the person
who produce those languages is called "bilingual". Furthermore, Longman (1991) made a distinction between individual bilingualism and societal bilingualism. He sees that individual bilingualism refers to the person who maintains two languages, whereas, societal bilingualism refers to the society use of two languages, even if not all citizens are bilinguals.

There are a number of definitions which are based on the criteria of competence such as that of Bloomfield who defines bilingualism as "near native control of two or more languages."(1933:56), while Oestreicher (1974:9) believes that bilingualism refers to a good command of the two distinct languages without a dominance of a language on the other. Moreover, Cristopherson (1948:4) views a bilingual as a person who masters two languages nearly like a speaker of that language does. Such definitions are considered as perfectionist views of bilingualism which can be described as "perfect bilingualism", "true bilingualism" and "ambilingualism" (Hoffmann,1991:21). On the other hand, some other linguists stated that if a person has a competency in one of the language skills of another language in addition to the mother tongue, he is considered as a bilingual (Macnamara1969:82 as cited in Hoffmann1991:22), which means that if a German speaker understands French language but cannot speak it, then, he is a bilingual. Haugen (1953:7) claimed that a bilingual is simply a person who can give a complete meaningful utterance in another language. Between the two extremes definitions, bilingualism is defined as the alternate use of two languages by the same speaker (Weinreich1953) and (Mackey1970).

In Algeria, the linguistic situation is complicated; it is agreed that Algeria is a bilingual country as its speakers have the ability to use Arabic with the French language in social life, education, administrative institutions, media, economy, etc. due to the French colonialism which lasted more than a century. But it does not mean that all the Algerian people are bilinguals, that is, bilingualism is not homogeneous since a large number of bilinguals live in and around the big cities where French goes with Arabic in many domains (Derni2009).

### 1.2.1 Types of Bilingualism

Linguists classified bilingualism into various types, a classification based on age, context, development, ability and the balance of the two languages. Weinreich (1953) proposed three types of bilingualism which are: subordinate, coordinate and compound bilinguals (as cited in Zouari Farhat 2015:12).

- Subordinate bilinguals: they tend to translate words from the second language to the first language to understand them (Weinreich 1953).
- Coordinate bilinguals: they learn the two languages in separate environments or contexts. As a result, the words of those languages are stored separately in the brain and each word has its meaning. As an example, a French student who learns the word 'écouter' at home and the English word 'to listen' at school (ibid. 1953).
- Compound bilinguals: people who learn the two languages in the same situation or environment, so words of those languages have the same meaning in their mind (ibid. 1953).

On the other hand, Hoffmann (1991:33) divided bilinguals into two different groups depending on the age of an individual acquiring the second language: these are 'early bilinguals' and 'late bilinguals'.

- Early bilinguals: the second language is acquired during the age of infancy before the age of 5 . This type is divided into two kinds: 'simultaneous bilingualism', which means that the child learns the two languages at the same time whereas in 'sequential bilingualism', the child learns the second language after acquiring the first language.
- Late bilinguals: this refers to the ones who acquire the second language after the age of 5, in adolescence or adulthood. This kind of bilingual acquires the first language first then the second language which results in making a
transfer of knowledge and experience from the first language to the second language (Odlin 1989).

Bilingualism is also categorized based on the bilingual's skills:

- Balanced bilinguals: the bilingual has the same competence in the two languages and can use and understand those languages equally in a discourse (Baker, 2006). Today in Algeria, not a great number of speakers master Arabic and French equally (Belarbi Khaled 2014).


Figure 1.1 Representation of balanced bilingualism (from Goto Butler and Hakuta (2004).

- Unbalanced bilinguals: (dominant bilingualism) Bilinguals in this type are proficient in using one language than the other (Chin and Wiggleworth, 2007) while the mother tongue is more likely to be dominant. For example, there are old Algerian bilinguals who master the French language because of the colonization era, when all schools were programmed to teach in French only; which led people of that generation to use French more than Arabic, at least in formal settings. But after independence, with the process of Arabisation, the language situation in Algeria changed and newer generations started using Standard Arabic as a dominant language in formal contexts along with their mother tongue in everyday situations.
- Active bilinguals: (productive bilinguals) they can use the two languages in a conversation properly, i.e, they master the four language skills (speaking, listening, reading, writing) (Beardsmore, 1982 and Collin, 2006). For instance, there are Algerian bilinguals who master Standard Arabic and French with good command of the four skills in both languages (Belarbi Khaled,2014).
- Passive bilinguals: (receptive bilinguals) they are the ones who can understand the second language but are not able to produce complete meaningful sentences (Beardsmore, 1982 and Collin, 2006)..


### 1.3 Code-switching

### 1.3.1 Definition of Code-switching

Code-switching is one of the important fields in sociolinguistics. It results from bilinguals' speech, people who master two languages or more often mix those languages while speaking and this is due to several factors. Gumperz states that the code used depends on the interlocutor, topic of conversation and setting (Gumperz, 1982:61). The term code involves not only languages but also dialects, styles of speech, while switch refers to a change or an alternation between codes (Gardener Chloros,2009:11). Code-switching is a gripping subject; different linguists, anthropologists, psycholinguists and sociolinguists tried to describe this phenomenon, including: Weinreich (1953), Hoffmann (1991), Hymes (1974), Gumperz (1982) and Hudson (1996).

The Cambridge Dictionary (2023) defines code-switching as "The act of changing between two or more languages when you are speaking". Furthermore, Gumperz (1982:59) says that code alternation is "the juxtaposition within the same speech exchange of passages of speech belonging to two different grammatical systems or subsystems". Additionally, Fallis (1978:6) explains that code-switching of two languages occurs at the level of the word, the phrase, the sentence or the clause. Poplack (1980:208) relates the concept of code-switching to the bilinguals'
habit to shift between languages within the same conversation or the same utterance. Accordingly to Myers- Scotton (2006:239), code-switching is the "use of two language varieties in the same conversation". While Wardhaugh (2006) considers code-switching as a technique of communication which is meant to make a message clear and avoid misunderstanding and facilitates the interaction between the speakers.

Weinreich (1953) explains code-switching as a change of code depending on the situation, i.e, code alternation differs from one situation to another, thus the situation dictates the choice of a language over the other. For Myers-Scotton, bilingual speakers switch codes in their conversation to achieve a specific purpose; they change languages to reach a goal; she said "...all code choices can ultimately be explained in terms of such speaker motivations." (1993:113). Speakers who master two languages find themselves at different roles according to the social motivations that trigger their choice of language.

All the above definitions were suggested to describe the phenomenon of codeswitching but a complete definition is still not reached yet since bilinguals do not switch codes the same way.

### 1.3.2 Types of Code-switching

Different types were proposed by linguists who identified code-switching found in conversations. Poplack (1980) suggested that the switch of languages can take different kinds or types which are: inter-sentential code-switching, intrasentential code-switching and extra-sentential code-switching.

### 1.3.2.1 Inter-sentential Code-switching

This type of code-switching happens at sentence boundaries Lipski (1985:17), it occurs when the speaker begins with a complete sentence from language A and ends with a complete sentence from language $B$, which results in a switch from one language to another while the sentences are kept separate from each other. In this respect, Romaine (1989) noted that since the switch is related to complete sentences of each code, the structure and grammar of the language should be respected which
means that the speaker should master the two languages to be able to switch easily from the language A to language B. For instance, the speaker can say: [I have just finished my homework, je suis sûr que mon travail plaira au professeur].

### 1.3.2.2 Intra-sentential Code-switching

This kind of code-switching occurs within the sentence (Crystal, 2001). It is also called code-mixing, i. e, it is a mixing of two languages in the same sentence. The majority of Algerians often use this type of switch, as in [mfit frit les fruits lbənti] 'I went to buy fruit for my daughter'.

### 1.3.2.3 Extra-sentential Code-switching

It is also called tag-switching, a tag phrase or word from a language is inserted anywhere in the discourse of another language. Poplack (1980) calls this type of code-switching "emblematic" switching. Tags involve words like 'you know’, 'alright', 'donc', 'd'accord', 'alors', etc. As an example an Algerian speaker may say [Donc, nqadd nwalli Pandk ssimana 33ajja?] 'So, can I come back to you next week?' Wei (2000:239) presents the following figure of Poplack (1980) to show where code-switching happens in the three types:

a. Inter-sentential switching

b. 'tag'-switching

c. Intra-sentential switching

Figure 1.2 Representation of bilingual code-switching grammars.

### 1.3.3 Reasons for Code-switching

The reasons that encourage bilinguals to codeswitch are numerous. Hoffmann (1991:115-116) stated that the shift of codes that occurs when speaking depends primarily on the context. A change of topic for instance may cause a change of language which helps to pass the message clearly. As a matter of fact, when speaking about religion, Algerians use the Arabic language but when speaking
about sport or medicine, they choose the French language. Besides, the choice of language depends on the interlocutor. When the speaker knows that the person will understand him if he changes the language, then he is going to speak easily and freely; but if he knows that the person does not understand that language, the speaker tries to switch to an appropriate code. He adds that quotation is one of the reasons that push the speaker to change the language. For example, an EFL student is talking to his friends in Arabic then switches to English to quote his teacher [galna lprof (the professor told us):"prepare yourselves for the exam]. In addition, repetition of a speech into another language causes an alternation between two codes, either from language $A$ to language $B$ or from language $B$ to language $A$. (Hoffmann 1991:116). For example, an Algerian speaker can say: [je l'ai vu, fftah (I saw him)]. The sentence in French is repeated in Arabic to clarify or emphasize the idea for the interlocutor.

Hoffmann believes that the speaker changes codes to express identity, such as Algerians who switch to the French language to show that they belong to a bilingual community. Moreover, he contends that speakers who wish to express solidarity either by including or excluding people may use another language. An Algerian speaker talking to a group who speak only in French, needs to change his language to be part of the group. Another example, two speakers in a group shift into another language which no one knows to exclude the others. Furthermore, he said that "Code-switching, then, constitutes a habitual and often necessary part of social interaction among bilinguals." (Hoffmann1991:116). This means that bilinguals take the phenomenon of code-switching as a habit like other daily life habits and it is a must to use another language to carry on the speech without hesitation. In this respect, Grosjean (1982) wrote: "... switching might occur because of a lack of formal knowledge of words in the base language, that is, the language the speaker is switching from", as observed in Algerians' speech who often borrow words and phrases from the French language because they are well-known and frequently used even by illiterate people. The table below shows some examples:

Table 1.1 French words and expressions as established borrowings in Algerian Arabic.

| Toujours | Always |
| :---: | :---: |
| Déjà | Already |
| Franchement | Frankly |
| Direct | Direct |
| Ça y est | That's it |
| Danger | Danger |
| Jamais | Never |

Wardhaugh (2006:104) said:
"[....] the motivation of the speaker is an important consideration in the choice. Moreover, such motivation need not be at all conscious, for apparently many speakers are not aware that they have used one particular variety of language rather than another or sometimes even that they have switched languages either between or within utterances" Sometimes, people do not know that they are switching codes; it happens unconsciously and spontaneously because they do not have a purpose or a reason that justify their choice of language and they even forget which language they shift to when speaking.

Lack of equivalent words in one of the two languages is considered as a strong reason for code-switching. The word 'elhenna' for example, has no equivalent word in English, an EFL student may say [she put elhenna in her hand].

Additionally, the choice of language is determined by the degree of formality. When Algerians want to be formal, they use more French words but when they speak in casual life they use more Arabic words. Likewise, when they want to show prestige or attract people, they choose the suitable language for the purpose of being appropriate. In this regard, Auer (1998:221) says that" code-switching carries a hidden prestige which is made explicitly by the attitudes."

### 1.3.4 Code-switching in Algeria

The linguistic situation in Algeria is known by its complexity, since it is a multilingual country, people often code switch between different languages in daily life communication. Dialects of Algerian Arabic and Berber are used as a mother tongue depending on the region, Modern Standard Arabic is used for formal purposes and French as inherited from the colonial period. The switch often occurs between Algerian Arabic and French, Berber and French, due to the French colonization which lasted more than a century in the country which strongly affected Algerians' speech. In addition to this, there is another switch that occurs in schools mostly which is the mixture of Algerian Arabic and Modern Standard Arabic. The following utterances are some examples of code-switching in Algeria:
$1<$ [Salut les filles, rakum mlaћ?] (Algerian Arabic and French) Hi girls, Are you fine?

2_[Rani mafi La fac] (Algerian Arabic and French) I'm going to university.
3_[Ruћt la fac nzib ktuba] ((Algerian Arabic and French) I went to university to bring some books.

4_[jadra Naziha $\theta$ ұaðmað ði l'examen $\theta a Я r a f \theta$ ner walu?] (Berber and French) what's new Naziha, did you work in the exam of Arabic or not?

5_[ $\chi$ as $^{〔} s^{\varsigma} \mathrm{kum}$ tərrəsmu daPira nisbijja] (Algerian Arabic and Modern Standard Arabic) You have to draw a pie chart.

These examples show that code-switching occurs everywhere in the sentence, at the beginning, middle and the end of sentences. For example, in the first example, switching occurs at the beginning of the sentence while in the second example, switching occurs at the end of the sentence. Also, the switching occurs in the middle of the sentence in the third example. Therefore, all types of code-switching (intersentential, intra-sentential, tag switching) can be found in the speech of Algerian people.

### 1.4 Code-mixing

In sociolinguistics code-mixing is considered as bilingual's strategy to avoid misunderstanding as Hoffmann (1991) said "Mixes can be used to clarify the message or make it more precise." (Hoffmann1991:104). Bilinguals tend to mix between two languages without changing the topic of conversation. Many linguists were interested to study the phenomenon of code-mixing, some of them viewed no difference between code-switching and code-mixing while others argue that there are differences between the two concepts.

Muysken (2000) believes that when a sentence is grammatically composed of a mixture of two languages, it is considered as a code-mixing. Nababan (1993) proposes that informal conversation usually includes code-mixing where bilinguals want to insert a word to mix it with another language or to create a new language which is characterized by language mixing. Additionally, Hudson (1996:53) suggests that code-mixing is a kind of code-switching which is referred to as "conversational code-switching" as the languages are mixed without a change of the situation. As an example, two bilinguals who master two languages produce some words from one language and other words from another language to carry on the speech which causes utterances with a mixture of languages. Moreover, Bokamba (1989:278) states that there are several linguistic units that can be mixed within the same sentence, which are affixes, words, phrases and clauses (as cited in Walwadkar,2013:45).

However, Hoffmann (1991:104) defines code-mixing in relation to the grammatical aspects by which he states that this phenomenon is found at the lexical level in one sentence which is referred to as intra-sentential switches. For example:
_ [kətbi basstilo 1 bleu] write with a blue pen

- [kanət fə zardan m@a shabatha] she was in the garden with her friends
-[tilifarziti lpdf m site li b乌athulək?] Have you downloaded the pdf from the site I sent you?

These utterances are some examples of intra-sentential switches or what is called code-mixing which shows the mixture of two different languages in the same sentence.

### 1.5 Code-mixing vs . Code-switching

Code-switching and code-mixing are two phenomena which result from language contact. Since bilinguals use two languages at the same time when speaking, it is worth studying their shifting or mixing of languages. Thus, numerous scholars try to understand the two phenomena from different angles. Some linguists argue that the two terms are the same, i. e, there is no difference between codeswitching and code-mixing. Some even use the term code-switching to cover the two concepts like Eastman (1992) and Scotton (1992), Hill and Hill(1980), while other linguists, such as Bokamba (1988), Kachru (1983), Halmari (1997), Sridhar and Sridhar (1980), Muysken (2000), Poplack (1980), Pffaf (1979), have a different point of view, stating that there is a distinction between code-switching and codemixing and use each term for its function or depending on the situation.

Linguists who are against making a distinction between code-switching and code- mixing state that since two languages or more are inserted in the same sentence, it is considered as language switching or mixing like Myers-Scotton (1992) who tends to mention the two terms interchangeably in her discussion of the phenomenon. She adds that forms of code-switching or code-mixing are commonly used morphosyntactically in the matrix language.

Additionally, Eastman (1992:1) said that "efforts to distinguish CS, codemixing and borrowing are doomed", the two concepts meet basically for the same function or usage of language. Thus, differences are fewer than similarities. Moreover, Hatch (1976) sees no clearcut distinction between inter-sentential codeswitching and intra-sentential code-mixing. When bilinguals share the same languages, they choose whatever code to interact with each other; it is acceptable to use two or more languages within the sentence or between sentences in the same situation.

However, other linguists view code-switching and code-mixing as two different concepts and they should be used separately each one for its function. Bokamba (1988) distinguishes between the two concepts defining them differently: code-switching refers to inter-sentential switching by which the grammar of two languages are kept separate in the sentence, as in for example, Je suis en retard [ $\chi$ assni nəwsəl bəkri] (I'm late, I have to arrive early), whereas code-mixing refers to intra-sentential switching which denotes that the switching is within the sentence; a lexical element is inserted in the sentence, for example, [fri:t une veste 3dida] (I have bought a new jacket). He adds that code-switching needs to make the grammar for each sentence while code-mixing does not.

Furthermore, Singh (1985) states that code-switching is related to the diglossic situations which dictate the choice of a code over the other, that is, each language is used for a specific purpose. Kachru (1983), on the other hand, used the degree of code alternation to differentiate between the two terms. Muysken (2000) also justified his point of view by saying that code-mixing contains three types, insertion, alternation and congruent lexicalization, while code-switching is the switch from one language to another with respect to the grammar of each language. He defines insertion as the addition of a single word or phrase of a language into the structure of another language. For example, [rani nћawwos 乌la taxi] (I'm looking for a taxi), while alternation is when there is a switch including grammar and lexicon of a language which occurs between sentences. Congruent lexicalization, then, is when the two languages meet grammatically by which lexical elements can be used from both languages. In addition, Pffaf (1979) used the term 'mixing' to cover both code-mixing and borrowing.

### 1.6 Borrowing

Borrowing is defined in sociolinguistics as taking words from another language to add in the speech of a particular language. Eifring and Thail (2005:1) suggest that borrowing refers to the adoption of words from another language and their frequent use. The donor language is the language being the source of the borrowed word whereas the recipient language is the language that adopts words
from other languages and uses them constantly. Cultural contact is the main reason for borrowing words. For example, the Arabic language takes many words from other languages like shoklata, internet, technologja, etc. This happens to all the languages around the world, when people make contact with each other and language is the first thing they use during the interaction, as they need to talk to exchange ideas and thus influence each other. In addition, the indirect contact of languages, i.e., written conversation, books, journals, etc. widens people's culture and pushes them to borrow words to cope with the present changes. So, people apply phonological and morphological aspects of their language on the borrowed words to make them sound more familiar to their native speech. But by time, the changes that occur on these borrowed words cause the loss of their origin and where they came from (Hudson, 1996).

Table 1.2 Some examples of Algerian Arabic borrowed words and their origins

| Algerian Arabic | Word origin | Translation | Origin language |
| :---: | :---: | :---: | :---: |
| qahwadるi | Kahveci | Waiter | Turkish |
| Fifta | Festa | Party | Italian |
| Blu:za | Blusa | Blouse | Spanish |
| Fas $^{\text {ma }}$ | Pansement | Plaster | French |
| Patisri | Pâtisserie | Pastry | French |
| Karta | Carte | Card | French |
| Tabla | Table | Table | French |
| Kartab | Cartable | Handbag | French |

In the examples above, most Algerian words are borrowed from the French language, some of them changed phonologically like the word [patisri] pastry, which is pronounced by illiterate people as [batisri] by which the phoneme $/ \mathrm{p} /$ is changed into the Arabic voiced /b/ and morphologically like the word [faliza] which takes the feminine form by adding the morpheme [a]. Some words are borrowed because there are no equivalent words in Algerian Arabic and sometimes the ones
from modern standard Arabic are not used like the word [tabla] 'table' which is called in Modern Standard Arabic [tawila] but it is rarely used by Algerian people.

### 1.6.1 Code-switching vs. Borrowing

Linguists have not reached yet a definite conclusion about the difference between code-switching and borrowing since it is a difficult task to deal with (Romaine,1995). First of all, code-switching is a well-known phenomenon which occurs in the speech of bilinguals with an average knowledge of the two languages, whereas borrowing can occur in the speech of monolinguals and bilinguals without even knowing the donor language or the origin of the word (Bentahila and Davies 1983). Furthermore, code-switching involves lexical and syntactic structures like words, phrases, clauses and sentences while borrowing involves only lexical elements (Hornberger and McKay, 1996).

Accordingly, Myers-Scotton (1993b) proposes that the criteria of frequency can differentiate between code-switching and borrowing because code-switching occurs less than borrowing. She adds that if a single element is added to the recipient language and carries a specific meaning which can be used by bilinguals frequently, it is regarded as a code-switching lexical element. She also made a distinction between cultural borrowing and core borrowing. The former indicates that such words are integrated to the register of the recipient language because of lack of equivalent words whereas the latter indicates that the borrowed words actually have equivalent words in the base language but they are not used in the speech community (Myers Scotton,2002:41).

Poplack, Sankoff and Miller (1988) made a clearcut difference of what is called established loans and nonce loans which are distinct from single element of code switches. The former refers to the popularity of borrowings in use in the base language whereas the latter is limited to a single speaker in a particular situation. On the other hand, a single word in code-switching is morphologically, lexically and syntactically used in grammar of that language (Poplack et al,1988). In other words, borrowings contain only one structure of grammar while code-switching contains
two structures of grammar. Another distinction is suggested by Poplack and Meechan $(1995,2000)$ which states that the insertion of a single element in one language is called borrowing whereas longer amounts of elements are seen as code switches. In the same respect, Holmes (2000) defines the borrowed words as being part of the repertoire of the speaker's base language which are integrated phonologically and grammatically in that language.

Poplack (1980) suggested three types of criteria to know whether single words are borrowed or code switched from a language to another, She contends that if a word is integrated phonologically, morphologically and syntactically into the recipient language then, it is referred to as 'borrowing'. However, if there is no adoption of any level or only one level is integrated then, it is considered as codeswitching, as shown in the following table:

| Type | Levels of Integration <br> Into Base Language | CS? | Example |  |  |
| :---: | :---: | :---: | :---: | :---: | :--- |
|  | phon | morph | syn |  | NoEs posible que te moGuEEN. <br> (They might mug you.) <br> (002/1) |
| 1 | $\checkmark$ | $\checkmark$ | $\checkmark$ | YesLas palabras HEAVY-DUTY, <br> bien grandes, se me han <br> olvidado. (I've forgotten <br> the real big, heavy-duty <br> words.) (40/485) |  |
| [da 'wari se] (58/100) |  |  |  |  |  |

Figure 1.3 Identification of CS Based on the Type of Integration into the Base Language. Poplack (1980: 584)

### 1.7 Language Attitudes Towards Code-switching

Attitudes are in fact an essential part in sociolinguistics. Thus, many scholars are interested in studying how things are viewed by people. Gardner (1985:9) defines attitude as "an evaluative reaction to some referent". Therefore, people react positively or negatively and sometimes between the two extremes, i.e., neutral attitude. Code-switching was considered before as a language deficiency and people who codeswitch cannot carry on the speech without shifting to another language; the act of using two languages when speaking was denigrated especially in the cases of intra-sentential switching. Thus, the phenomenon of code-switching was not even worth studying by scholars. Later on, things changed; bilinguals themselves started to study their language and give it importance rather than viewing it negatively, looking at the positive aspects of this phenomenon such as Poplack, Weinreich, etc. First of all, Algeria is known by its diglossic situation: Modern Standard Arabic is the high variety and Algerian Arabic is the low variety.

We would like to verify whether Algerians have positive attitudes towards code-switching, viewing the French language as more prestigious than their dialects. Thus, they tend to stigmatize Algerian Arabic and use French instead in formal settings while in informal settings they often code switch because of the frequency usage of this language (Hamzaoui, 2022). Although Algerians revere Modern Standard Arabic since it is related to the Qur'an, they do not use it when speaking (Dendane 2007) and any speaker who uses it in daily speech must be joking, if not he is then viewed weird.

### 1.8 Conclusion

Finally, it can be concluded that code-switching is widely spread among bilingual communities. This chapter tackles the definition of the phenomenon codeswitching by different scholars as well as its types and its relationship with other sociolinguistic concepts, including bilingualism, code-mixing and borrowing; these have been explained and illustrated with examples taken from the Algerian context.

Moreover, this chapter focuses on several reasons which vary from one speaker to another and ends with a brief discussion of Algerian attitudes towards using this phenomenon.


Code-switching and Computer-mediated Communication

### 2.1 Introduction

Since our study focuses on the use of code-switching on the Internet by EFL students, it is interesting to shed some light on the sites that people use to make contacts, more specifically Facebook application. One of the powerful computermediated communication application that allows people to communicate with each other is called Messenger. Then, it is worth studying some Netspeak features that are distinct from the spoken language and the relationship between code-switching and Facebook.

### 2.2 Computer-mediated Communication

Computer-mediated communication has simplified communication making it easy for people to be in contact at any time without the need to have direct physical contact, through sending messages and receiving them by using the computer. In addition to the internet and the existence of different applications such as Facebook, Instagram, WhatsApp, Viber, people gain time, effort and energy. Thus it is important to define computer-mediated communication.

### 2.2.1 Definition

Scholars have defined computer-mediated communication in different ways. Michel Metz (1994) said that computer-mediated communication is any form of communication that occurs through using any electronic device; in other words, people can communicate with each other by having just an electronic device and access to the Internet which allows them to contact each other and have a conversation. Moreover, December (1996) refers to computer-mediated communication as a field of exchanging information found in networks, while Higgins (1991) states that computer-mediated communication is "human communication via computer".

Thus, computer-mediated communication has developed as a new way of communication that is different from every day speech because face to face interaction involves simultaneous feedback, gestures, facial expressions, the pitch of the tone which are not found in the computer language. Additionally, in writing people cannot
cut and copy/paste pieces of writing in real life whereas in computer-mediated communication they can do it via using e-mails, Messenger, WhatsApp, Viber which allow sharing images, videos, voice messages and text messages. (Crystal,2006).

Researchers in computer-mediated communication often differentiate between two modes of communication including synchronous communication and asynchronous communication. Synchronous communication obliges users to be online and react on time and communication is successfully passed to the receiver. It can be in text, video, voice message, skype, video conferencing, chat rooms, instant messaging which require the internet user to be simultaneously active to receive messages immediately. Asynchronous communication, on the other hand which can be found in e-mail, Facebook, Instagram discussion groups do not require users to be connected on time; they can check their applications and respond to the messages the time they want. (Beibwenger \& Storrer, 2008). Although many applications exist, Facebook remains the most popular social network in the world since people use it much more frequently than other applications.

### 2.3 Facebook

Facebook is one of the social networks widely spread among people around the world, as it facilitates the interaction between people without making a real contact. Facebook website was first launched in 2004 by Mark Zuckerberg who created this application as a way for students to know each other. Then it spread later on when many people created accounts and began to connect. Users of Facebook can sign up to this application either with their email or phone number, they will have a personal profile page by which they can share photos, videos, status, links, with the ability to make a live with people, attach and create groups, etc. It also enables them to keep updated with new changes and events and allows them to see their friends' activities and react to them by commenting on the posts at any time. Moreover, Facebook is characterized by its chat box or what is called 'Messenger' which allows users to communicate with each other any time they want. Facebook is classified as both asynchronous and synchronous computer-mediated communication because of its various features and the services it provides to its users. As the late statistics indicate,
nowadays more than 2,9 billion users are active monthly in Facebook. (S.Dixon statics,2023).


Figure2.1 Most popular social networks worldwide as of January 2023, ranked by number of monthly active users. Published by S. Dixon, Feb 14, 2023.

### 2.4 Messenger

Messenger is an instant messaging application originally developed as Facebook chat in 2008 until it was launched as a separate application in 2011. Users of Messenger can get in contact by sending text messages, voice messages, audio calls, video calls, photos, videos links, etc. The user can talk to anyone available on Messenger from all around the world just by typing the name to get connected. Furthermore, people can create Messenger groups to share common interests like university students in the same specialty to have a conversation, to share lectures, news, etc. Messenger involves emojis, stickers and gifts to react on the message received or show the user's mood.

### 2.5 The Netspeak's Language Features

The Cambridge Dictionary 2023 defines Netspeak as "the words, abbreviations, etc. that people use when communicating on the internet." Netspeak is a phrase coined by David Crystal (2001); it combines two concepts "Net" and "Speak". "Net" means the "Web" whereas "Speak" covers both writing and speaking, and it includes also listening and reading which are referred to as receptive elements. Crystal (2006) states that "the core feature of internet is its real or potential interactivity". Internet language which is found in computer-mediated technologies is characterised by different features which make it different from the spoken language. Some scholars consider the internet language as a threat that impacts writing production negatively while others, like Crystal (2006:27), who calls the internet language as written speech, see that it can benefit people in many ways as it facilitates communication and interaction without being effort-taking and time-consuming.

### 2.5.1 Linguistic Shortenings

Computer users tend to make their messages as short as they can because of the small screen especially those of telephones, and sometimes they feel no need to write long words, they write just two or three letters and it is well understood by the receiver who shares the same knowledge of what those letters mean. Therefore, it is worth considering these features referred to as are acronyms and abbreviations.

### 2.5.1.1 Acronyms and Abbreviations

The internet language is characterised by the use of acronyms and abbreviations by its users, especially in social media where people share these phenomena and tend to use them frequently in their daily life conversations. Acronyms are made up by taking the first letter of each word; for example, COVID (corona virus disease); letters are not read separately but rather combined like a single word, or letters are spelled out separately not as a single word for example, CNN (cable news network), while abbreviations are words which are made up by taking the first letters of a word or expression, as in 'lab' for laboratory.

Examples of acronyms:
FAQ : Frequently Asked Questions
HTML: Hypertext Markup Language
URL: Uniform Resource Locator
_Words that can be reduced to 2 or 3 letters:
Table2.1 list of reduced words/acronyms

| B4 | Before |
| :--- | :--- |
| Thx | Thanks |
| L8r | Later |
| W8 | Wait |
| 2 moro | Tomorrow |
| 2 | Two_too |
| BF | Best friend |
| Okay | K |
| Pls | Ulease |
| You | Brother |
| Bro | Sister |
| Sis |  |

Examples of abbreviations:

The following table shows most used abbreviations found in user's messages.


Figure2.2 Some abbreviations in Netspeak conversation (David Crystal,2006.p91-92) Language and the internet.

### 2.5.2 Graphology

Netspeak is known by its graphology from other classical writings as it has special fonts and styles of writing in addition to bold and italics for example, typing
with Times New Roman style is better than other styles because of its simplicity, clearness which attract people to read such an essay or message. Moreover, users can use the lower case even at the beginning of the sentence which means that they are free from rules of writing. They use capitals for "shouting" or emphasizing for example "DO IT NOW" and writing names of people, animals and companies.

### 2.5.3 Spelling

Spelling in Netspeak is different; people often use US spelling rather than British one because some words are one character shorter than British English words; for example, the word 'color' vs. 'colour'. There are other features that appeared recently in Netspeak for instance, the replacement of the plural "s" by "z" such as in "filez". These non-standard spellings are very common in use by users of computers which make them a natural practice because it causes no problem in understanding each other as well as errors found in spelling are not considered as lack of knowledge of language spelling because many spellings are written the way words are pronounced like kay, so kay [it's okay], yep, yup, nope, nooo, nahh.

### 2.5.4 Punctuation

Netspeak is known by the absence of punctuation- Sometimes, the typing speed pushes users to ignore punctuation. Other users make use of punctuation but in another form like exaggerating the use of punctuation to emphasize (???,!!!); also, the use of ellipsis dots to express pause. Moreover, there is a combination of punctuation that expresses someone's facial expressions or mood which are known as smileys and emoticons text.

### 2.5.5 Omission

Netspeak users often delete letters from words to send shorter messages and gain space and time such as typing the word "u r" which is "you are", "wlem" for "welcome" and "thnx" for "thanks".

### 2.6 Code-switching and Facebook Messenger

Code-switching has been studied for many years and most studies were carried out in relation to face-to-face communication in bilingual communities (Cardenas \& Isharyanti 2009). But with the arrival of technologies such as computers and mobile phones and the internet, a new way of communication has appeared which is observed in written conversation exchanged by users of computer-mediated communication. Consequently, many studies have lately investigated the use of code-switching in written forms such as the work of Androuts opoulos (2011), Danet \& Herring (2003), Durham (2003), Goldbarg (2009).

Facebook is a widely-spread social media in the world and as a medium of communication it involves Messenger which allows people to interact with each other, send and receive messages immediately. It has influenced speaker's language while Messenger language is characterised by the use of code-switching as a social trend by which bilinguals use other languages mixed with their mother tongue for specific reasons. In Messenger chats Algerian speakers do not stick to one code when writing messages; the majority of them use Algerian Arabic mixed with French and others, in Berber-speaking areas, use Berber mixed with the French language to express their thoughts, emotions, feelings, discussing many topics which trigger the use of a specific code over the other. Such studies claim that research needs to work on the second facet of language, i.e., written form of code-switching in Netspeak context.

As an example of related works which investigated code-switching in computermediated communication, we can mention Racha Seghier and Meriem Djenidi (2020) who conducted a study on the use of code-switching among Algerian university students, taking Ibn Khaldoun University of Tiaret as a case study. Their study focuses on the patterns of code-switching while chatting on Facebook and tries to find out the reasons and motives behind using this phenomenon. They found that in Facebook chats, intra-sentential code-switching is the most often used between friends and family members. On the other hand, inter-sentential code-switching is used only between mates while tag switching is used only to clarify or to get an opinion. Moreover, their findings confirm that most participants have a positive attitude
towards using code-switching in Facebook, and point out several reasons and motives behind using code-switching in online conversations as the participants feel that codeswitching enhances their communication skills. Through code alternation users can transmit and understand words easily without taking much more time to search for equivalent Arabic words. In addition, participants agreed that using code-switching attracts people and shows that the user of this phenomenon is well-educated and prestigious.

### 2.7 Conclusion

At the end of this chapter, it is worth reiterating that code-switching can be studied from different facets since communication is not passed just in face-to-face interaction but also in written conversations in internet language and more specifically on social media. Moreover, Netspeak has different features that can be distinguished from verbal communication as people simplified many aspects of language to gain time and mobile space such as reducing long words to two or three letters. Besides, we can easily attest the occurrence of new forms of communication as in Messenger chatting which has boosted the act of alternating between languages among users of computer-mediated communication. Accordingly, the research attempts to study codeswitching in relation to Facebook Messenger to see how undergraduate students of

Methodology and Data analysis

### 3.1 Introduction

The third chapter is concerned with the practical part which attempts to describe the steps of the Methodology which were followed. Then, it presents the research instruments namely the questionnaire and Facebook chats which were used to collect data which seek to answer our research questions. After that, it presents the sample population of the study which are the undergraduate students of English of Tlemcen university followed by the procedures of investigating the research techniques. Moreover, it deals with analysing the data obtained quantitatively and qualitatively in addition to a discussion of results. It ends with listing the findings that confirm or reject the research hypotheses.

### 3.2 Research Methodology

Kothary (2004:8) said that "Research methodology is a way to systematically solve the research problem. It may be understood as a science of studying how research is done scientifically. In it we study the various steps that are generally adopted by a researcher in studying his research problem along with the logic behind them.". The objective of the present study is to explore the phenomenon of codeswitching on Facebook Messenger among EFL students of Tlemcen university. It aims at identifying types that exist in their messages and tries to find the most used type and according to what basis. Additionally, It seeks to know the reasons that trigger the occurrence of mixed languages when communicating. Therefore, both qualitative and quantitative approaches are used. The questionnaire is composed of close-ended questions and open-ended questions which provide qualitative and quantitative analysis of the questions based on the percentages, pie charts, bar graphs and students' views. On the other hand, Facebook chats as a data collection tool helps to do a qualitative analysis of types of code alternation used by the participants in the private messages.

### 3.3 Data Collection

The process of gathering information is called data collection which has a relation with the researcher's interests. It gives the research a practical study about a particular
case study which provides answers to the stated questions, confirms or disconfirms hypotheses and evaluates results and findings after the interpretation of such data. Data collection serves to help researchers to check the reliability and validity of research variables and to justify the choice of informants of such answers. It gives also statistic information about a given topic. Although data and information have distinct meaning, still they are used interchangeably; in other words, data are the events and facts which have been gathered as primary source of the processed information. The present research data are collected through an online questionnaire and a combination of screenshots of students' private messages which contain code-switching.

### 3.3.1 Instruments

Since the objectives of this research paper is to determine the motives and reasons for EFL students' use of two or more languages in a chat discussion and to find the most often used type on those chats messages, a mixed method is used to collect data about the aforementioned purposes, namely the online questionnaire (quantitative and qualitative method) and records of Messenger chats (qualitative method).

### 3.3.1.1 Facebook Chats

To know the most frequent type that occurs in students' messages, different conversations have been collected from Messenger chats of students of the department of English. These are transcribed and analysed based on the occurrence of codeswitching in each conversation. Private messages that were chosen talk about different topics with different interlocutors. It is observed that code-switching exists in all students' Messenger chats; in each discussion we will identify which type is dominant over the others and which purpose or motive cause its occurrence.

### 3.3.1.2 Questionnaire

The questionnaire is a data collection tool which consists of a set of questions produced by the researcher to be answered by particular informants whose answers are useful to carry on the study and reach objectivity. The questionnaire has two types, close-ended questions (or closed questions) and open-ended questions (or opened questions). The former require only two answers, 'yes' or 'no' which provides
quantitative data, whereas the latter type involves a full answer from the respondents in which they give their own opinions which brings out qualitative data. Additionally, the questionnaire is beneficial in many ways. It is very helpful to the researcher as a way of contacting a large population easily, which provides reliable data about the topic studied. Moreover, questionnaires are easy to analyse, especially with the use of close-ended questions.

To reach the objectives of this study, we have designed an online questionnaire using 'Google forms' and published it in Facebook groups of all EFL students of Tlemcen university. Our questionnaire includes 19 items, 3 items represent students' demographic data such as gender, level and age, 2 open-ended questions, 12 closeended questions and 2 multiple-choice questions. The answers to the questions seek to know whether students of the English department switch codes most in face-to-face conversations or written conversations and between which languages they switch in their private messages. It also demonstrates the use of code-switching by EFL students in different situations in addition to the reasons that encourage its occurrence and students' attitudes towards mixing languages.

### 3.3.2 Sampling

Population is defined by Singh (2006, p.82) as "the entire mass of observation, which is the parent group from which a sample is to be formed". In other words, population and sample are tightly related since the sample is part of the population. Our research project included 132 students from the English department in Tlemcen University. The sample consists of males and females with more or less the same age and university level. They have collaborated to make this research succeed and to achieve reliability and objectivity. The reason for which this sample is chosen is that those students use two other languages apart from their mother tongue: English and French. In fact, they are a concrete example of Algerian multilingual speakers who code switch most of the time in their daily life communication since Arabic is their mother tongue, French is used as a pervasive language in Algeria, while English is the language they study at the university. The real names of the interlocutors who share with us their private messages are replaced by other names in order to protect their
privacy and confidentiality which is very important to be kept personal. Besides, before collecting data, students were aware about the purpose of the research study.

### 3.3.3 Procedures

As aforementioned, the questionnaire was sent through Google Forms to EFL students, including $1^{\text {st }}, 2^{\text {nd }}$ and $3^{\text {rd }}$ year students and all specialties at Master's levels. It is also sent via Messenger to M2 students of English to help spread the questionnaire as fast as possible by sharing it to their friends from other groups and levels. The participants do not have the right to send their answers twice to avoid having different responses from the same informant. Besides, we have explained to the participants that their responses will remain confidential and will only be used for a research purpose. The data were collected since February $9^{\text {th }}, 2023$. The collected private messages were presented in their original forms with all flaws such as abbreviations, incorrect grammar, mis-spellings, lack of punctuation, etc., to achieve objectivity of the research.

### 3.4 Data Analysis and Discussion

### 3.4.1 Facebook Chats Analysis

The followings are some examples of undergraduate students' Facebook chats:

## 1)_Conversations in a group chat of students of English

Fatima: Guys, جمعة مباركة، cvpl li darou qst in google form, esq sta3mlto hadok charts, graphics li kayen tema wela kifah rakom t analysiwah.

Meaning: Guys, blessed Friday, please the ones who did a questionnaire in google form, did you use those charts, graphics that were there or how are you analysing them

Douaa: جمعة مباركة، oui drthom ghi homa

Meaning: Blessed Friday, yes I used only those graphics

Rania: Welli ma3amloch en ligne kich y3mlo?

Meaning: and who did not do it online what do they have to do?

Douaa: Thasbo whdkom, diro table mb3d diro graphics
Meaning: You calculate by yourselves, make table then graphics.

## Rania: Eum ok eya sahit

Meaning: Eum ok thank you
In this conversation, from the beginning we see that the conversation is informal since it is between classmates. We observe that code-switching in this conversation occurs at intra-sentential level. Fatima first called her classmates in English by saying 'Guys!', then switches to Arabic to congratulate her classmates about that special day. while the rest of the sentence is a mixture of Arabic, French and English. This means that intra-sentential code-switching is mostly used in students' group chat. This does not mean that other types are not found in their messages but not to a great extent.

Fatima: Check progress, 7ato deliberation
Meaning: Check 'Progres', they posted the deliberation
Douaa: Maalich dirolna capture maandich progres
Meaning: Could you make a screenshot I do not have progres

Fatima: It's a personal account, kolwahed has his own progress
Meaning: It is a personal account, each one has his own 'progres'.

Douaa: kich nhaloh

Meaning: How can we open it?

Fatima and Douaa switch between English and Algerian Arabic (AA) resulting an intra-sentential code-switching.

## 2)_A discussion between two friends

Amina: Ghdwa 3ndach tokhorji
Meaning: At what time do you leave tomorrow?
Safaa: $12: 30$, tkoni f la fac nti?
Meaning: 12:30. Will you be in the university?
Amina: wah, ni baghya nmchi nactivi la carte aya wnji la fac nhtaj ktoba, 12:30 nesnak 3and l'arret, ghi 3aytili n3rf belli raki tem.

Meaning: Yes, I want to go to activate my ID card and I will come to university; I need books, 12:30 I will wait at the bus station. Just call me I will know you're there

Safaa; iya saha, wah ki nokhrej n3aytlk, ki n3aytlk 3arfi rani f l'arret
Meaning: OK, Yes when I leave I'll call you, when I call you, I'll be at the bus station.

Amina: Sah nchllh

Meaning: Ok God willing.

This is a conversation between two close friends using informal language; they mix Arabic and French. Amina is an EFL student who tends to switch only between Arabic and French when communicating with Safaa since she is not a student of English. The most often used type in this discussion is the intra-sentential codeswitching.

## 3)_Students' group discussion

Yasmina: Guys, where $\mathrm{r} u$, which room?
Meaning: Guys where are you, which room?
Amina: choufi mmr2

Meaning: Look in MMR2

Yasmina: No makach

Meaning: No, no one is here

In this conversation we can see that Yasmina started to speak only in English when she asks her classmates where she can find them, but Amina replied in Algerian Arabic; Yasmina too switched to Algerian Arabic mixed with English by using intrasentential code-switching.

## 4)_A conversation between a student and a teacher

Student: Could you send us our marks, there are some students who can not come tomorrow

Teacher: السلام عليكم، I'm still correcting. I'll send them after tomorrow's consultation ان شاء الله

Meaning: Peace on you. I'm still correcting. I'll send them after tomorrow's consultation. God willing.

Student: Alright, Thank you

It is observed that the use of language is too formal since the student is addressing his teacher which expresses respect and appropriateness. In this conversation, another type is detected which is tag switching or what is called extra sentential codeswitching. The student used only English whereas the teacher introduced his message by peace greeting "asalamo 'alaikom" then switches to English then to Standard Arabic when he said "inchallah".

## 5)_A discussion between two friends

Imane: Yadra fewetou?

Meaning: What's up? Have you taken the exams?
Malak: ouiii kmlna w ntoma

Meaning: Yes we have finished and you
Imane: mzl dimanche 3ada nbdiw hnaa

Meaning: Not yet, we will start on Sunday.

Malak: bon courage, rebi yshlk nchllh

Meaning: Good luck, may god make it easy for you

## Imane: Yferhak merci beaucoup

Meaning: May God make you happy, thank you very much
In this discussion, the two friends are talking about exams, code-switching between French and Algerian Arabic. It is noticed that English is not used because Imane is a student of biology, that is why Malak, who is an EFL student, does not use English. The second and third messages contain intra-sentential where we can observe the use of French words "oui" and "dimanche", whereas the fourth and fifth messages contain inter-sentential code-switching where Malak starts her sentence with French language and finished with Algerian Arabic. While imane started with in Arabic and finished in French.

## 6)_A conversation between two students of English

Zineb: Ask ni dyra structure ta3 essay plz need u help, mzal mkmlto
Meaning: did I make the structure of the essay please i need your help, i didn't finish it

Sanaa: yaaaa hata ana rani hasla fel structure
Meaning: yaaaa me too I'm struggling with the structure
Zineb: 9rahli wchfli ask ila nichn wla nn

Meaning: read mine and tell me if it is correct or not
Sanaa: choof hadi m 9bayel w ana nkteb w n3awad

Meaning: Look I'm writing and rewriting for hours
Zineb; Ya wlh rana kml hkk mzl ba9i ghda nchllh

Meaning: I swear we are all in the same situation we have one day left and it's tomorrow, God willing.

Sanaa: structure wa3ra ktar m essay information lmohim ntina dir f thesis statement wsm rak machya tahki fel body paragraph, homa yrakzo 3liha bzf

Meaning: The structure is more difficult than the essay information what is important is to mention in the thesis statement what you are going to write in the body paragraph, they always focus on it.

Zineb: Ahh oui Rani dyra hkk hfdk zina mrc bQ

Meaning: Ahh yes I did like that may Allah protect you pretty thank you very much

In this chat record, two students of English are talking about an assignment, Zineb sent to Sanaa her essay and asked her if it's correct. It is observed that she is switching between three languages French (Ask), Algerian Arabic "ni dyra" and English "essay" which result an intra-sentential code-switching. She used French because it is a habit for Algerians to insert some French words to their dialect while English is used because she studies that language in university as an academic language while the topic of conversation which is the assignment pushes them to use some technical words like: essay, structure. Zineb used also inter-sentential codeswitching when she said "plz need u help" and finished in Algerian Arabic "mzal mkmlto". While, the rest of the conversation contains intra-sentential code-switching.

## 7)_A discussion between two classmates

Leila: Hi Rania plz tell me wsm drto

Meaning: Hi Rania please tell me what you did

Rania: Drna nouns and plurals, li drnh kml hatah f group, check I didn't write, tana ni nhws 3la recording psq hdert ghi ness session.

Meaning: We did nouns and plurals, all what we did he posted in the group, check I didn't write, me too I'm looking for recording because I was present only half an hour.

Leila: ha bniiya tell me kach haja gal 3liha f exam like how to answer wella. W esq raja3lkom doros lwala f lbdya nte3 session.

Meaning: OK, tell me what he said about exams like how to answer or something like that and If he did a revision of the previous lectures in the beginning of the session

Rania: Rah hat exercises, I don't know ki dkhlt sbth yhdr 3la nouns
Meaning: He posted the exercises, I don't know when I joined I found him talking about nouns

Leila: Okiii thank uuuuu ...

Meaning: ok Thank you
This is a chat collected from two students of English while they were talking about their studies and by analysing these messages, we can recognize that the most often used type is the intra-sentential code-switching. They mixed three languages namely Algerian Arabic, French and English, Algerian Arabic is frequently used in daily life while English is used here because the two understand it and share the same interests since they study it in university as a specialty. The inter-sentential codeswitching can be found in the first message "check I didn't write" and the third message "I don't know"

## 8)_A discussion between a student and an administrator

Student: Good afternoon, Madam, j'espère que vous allez bien. I am master 2 student and I am wondering if there is a deadline for submitting the certificate. Sorry for disturbing you, have a good night.

Meaning: Good afternoon, Madam, I hope you are doing well. I am master 2 student and I am wondering if there is a deadline for submitting the certificate. Sorry for disturbing you. Have a good night.

Administrator: Hello, the deadline is late October.

This is a message sent by a student who wrote a message to the administrator of his university to ask about administrative issues. It is noticed that the conversation is too formal since there is no close relationship between them. The student used English and French since his interlocutor understands the two languages. An inter-sentential code-switching is detected in the student's message as he started the first sentence in English "Good morning" and finished the second one in French "J'espère que vous allez bien".

After analysing students' private messages on Facebook Messenger, we found that there exist three types of code-switching and the most often used type is intrasentential code-switching between friends and family members and classmates because they use an informal language when communicating with each other. They also have a close relationship which encourages the mixing between Arabic, French and English. However, inter-sentential code-switching occurs mostly between the student and the teachers or the administrators. Additionally, another type is detected which is tag- switching that is found in students' messages but it is rarely used compared with the other types. Moreover, it is observed that students of English do not switch to English when they chat with their family members or friends who do not know English, they tend to switch only between Algerian Arabic and French because of the sociolinguistic situation of Algeria by which the dialect is affected by the French language. Besides, Algerian people often borrow French words and insert them into their dialect.

### 3.4.2 Analysis of the Questionnaire

The aim of using the questionnaire is to analyze students' answers concerning the use of code-switching, the reasons behind using it and their attitudes towards this phenomenon of mixing languages.

## Section1: Informants' personal data

## Item 01: The first item of students' questionnaire is about gender.



Figure 3.1 Participants' gender
The first item was about participants' gender where students were asked to select their gender. As it is shown in the above figure, the majority of the participants were females with a percentage of $84,1 \%$, while only $15,9 \%$ of the total population were males because the overall number of female language students is always about three times that of boys. Also, females are more curious to know the research content than males.

Item 02: The second item of students' questionnaire is about age


Figure3.2 Students' age

The second item represents participants' age, the age category that participated more has between 20 and 30 years old with a percentage of $82,6 \%$ whereas, the participants who are under the age of 20 with a percentage of $14,4 \%$. The last group age contains participants who are older than the age of 30 with a percentage of $3 \%$.

## Item3: Participants' level



Figure3.3 Participants' level
The third item seeks to know Participants' level. All of them are EFL students in the University of Tlemcen. They are both BA and Master students. The Master students represent more than half the participants' total number of our sample with a percentage of $53 \%$ whereas, BA students represent $47 \%$ of the total population.

## 1. Do you switch languages in Facebook chatting?



Figure 3.4 Usage of code-switching in Facebook chatting
We observed that students' answers confirm the occurrence of code-switching in their Facebook messages as it becomes a new way of communication. Results show
that $127(96,2)$ out of 132 EFL students population code switch in Facebook Messenger while only $3,8 \%$ of them do not mix languages in Facebook chatting.
2. Do you mix languages most while...


Figure 3.5 Students mix languages most while texting vs. Speaking
The aim behind asking this question is to know at what level students of English switch languages most, while speaking or texting. Results demonstrated that more than half the students' number answered that they use code-switching most in texting with a percentage of $51,5 \%$ while the others replied that they mix languages more while speaking with a percentage of $48,5 \%$ which means that texting is another way of communication that is influenced by the use of code-switching.
3. What languages do you use when switching in Facebook chatting?


Figure 3.6 languages used to code switch in Facebook Messenger

According to the pie chart shown above, it is observed that the majority of students $68,2 \%$ mix between their mother tongue AA, the second language French and the academic language English. $19,7 \%$ of them stated that they code switch between Arabic and English while only $7,6 \%$ said that they mix between Arabic and French. Besides, only few students 4,5\% code alternate between English and French.
4. Number these languages based on how frequently you use them in online communication?


Figure 3.7 Frequency of use of languages in online communication
Students' answers demonstrated that Algerian Arabic (AA) is the most frequently language used in their online communication since two groups chose this language as the first one then the other languages follow, as they justified, the Arabic language is their mother tongue and most of their surroundings understand only Arabic. Whereas, the second group chose the English language first because they study it in university as a specialty and they want to enhance the language skills by practicing the language outside the classroom. Besides, they talk most to their classmates and friends who understand English in Facebook chatting. The fourth group chose the French language as they grew up in a bilingual family who masters French and probably they are more willing to use French than AA. However, the fifth group consider Arabic and English as the first languages used equally in their online chatting stating that they do not master French and consider English as their second language. Interestingly, there is a sixth group who chose the three languages Arabic, French, English to be used equally and frequently used in their online conversations since they master the three languages and their interlocutors understand them all.
5. With whom do you talk to most during your online communication?

Friends family members classmates teachers


Figure 3.8 People with whom students talk the most in online communication
The majority of students $(78,8 \%)$ said that they talk most with their friends in online communication whereas $11,4 \%$ of them chat with their classmates and $8,3 \%$ stated they talk most with their family members and only few students (1,5\%) talk with others.
6. Your attitudes towards code-switching between languages in Facebook chat?
Positive
Negative
neutral


Figure 3.9 Students' attitudes towards code-switching

Question 6 aims to explore whether students are with or against or neutral towards using code-switching. The majority $(67,4 \%)$ have positive attitudes towards using code-switching since they view this phenomenon as a way of enhancing their learning of languages. In addition, it helps them to communicate better and avoid misunderstanding and lack of words. Moreover, they consider code-switching as a communication strategy to switch between the languages that they know depending on the situation, interlocutor, the context, the subject, etc. However, $30,3 \%$ see codeswitching differently, having negative attitudes towards mixing languages since they consider people who do so lack proficiency. They think that the person who uses two languages or more should know first if the interlocutors are able to understand the languages used. Additionally, the frequent use of some foreign words leads to obliteration of our native language. They also add that code-switching causes many mistakes such as spelling and grammar mistakes, etc. Besides, it is not that necessary to use other languages with persons who understand Algerian Arabic. Few respondents $(2,3 \%)$ prefer to be neutral as they see code-switching as a natural phenomenon spread among bilinguals but can have an impact on their native language.

## 7. Which language do you use most with:

Teachers classmates friends family members


Figure 3.10 languages used when students text their interlocutors

This question seeks to know what language students use most while texting with their family members, classmates, teachers and friends in Facebook Messenger. The results show that students tend to switch to English mostly when they chat with their teachers and classmates since they share the same language, the academic language of study. But they use Algerian Arabic mixed with French with their friends and family members since these ones do not understand English.

## 8. In which subjects do you switch from one language to another on

 Facebook? (possibility of selecting more than one language).Table 3.1 Subjects in which participants codeswitch languages

|  | Arabic, <br> French <br> and <br> English | Arabic <br> and <br> French | Arabic and <br> English | French <br> and <br> English | Arabic | French | English | Total number <br> of students |
| :--- | :--- | :--- | :--- | :--- | :---: | :---: | :---: | :---: |
| Education | 22 | 1 | 35 | 7 | 6 | 2 | 59 | 132 |
| Culture | 20 | 14 | 30 | 5 | 27 | 14 | 22 | 132 |
| Religion | 2 | 3 | 24 | 0 | 97 | 1 | 5 | 132 |
| Politics | 4 | 17 | 13 | 5 | 76 | 10 | 7 | 132 |
| Sports | 16 | 15 | 13 | 12 | 44 | 18 | 14 | 132 |
| Personal life | 25 | 10 | 38 | 4 | 25 | 4 | 26 | 132 |

The results shown in this table demonstrate that students code switch languages depending on the topic discussed, every single subject will be analysed by using the following bar graphs:


Figure 3.11.1 Languages used when participants talk about education

The results show that 59 students use only English when they chat about the topic of education, 35 students use a mixture of Arabic and English, 22 students use a mixture of Arabic, French and English, 07 students use a mixture of French and English, 6 students use only Arabic, 02 students use only French and only one student uses a mixture of Arabic and French.


Figure 3.11.2 Languages used when participants talk about culture
From the graph we notice that 30 students use a mixture of Arabic and English when they talk about culture, 27 students use only Arabic, 22 students use only English, 20 students use a mixture of Arabic and French and English, 14 students use a mixture of Arabic and French, other 14 students use only French and only 5 students use a mixture of French and English.


Figure 3.11.3 Languages used when participants talk about religion

From the bar graph we work out that the majority of participants ( 97 students) use only Arabic to chat about the subject of religion, 24 students use a mixture of Arabic and English, 05 students use only English, 03 students use a mixture of Arabic and French, 02 students use a mixture of Arabic and French and English and only 01 student uses only French.


Figure 3.11.4 Languages used when participants talk about politics
Students answers demonstrate that the majority of them (76 students) use only Arabic to discuss political issues, 17 students use a mixture of Arabic and French, 13 students use a mixture of Arabic and English, 10 students use only French, 07 students use only English, 05 students use a mixture of French and English while only 04 students use a mixture of Arabic and French and English.


Figure 3.11.5 Languages used when participants talk about sports

Results show that 44 students tend to use only Arabic when they speak about sports, 18 students use only French, 16 students use a mixture of Arabic and French and English, 15 students use a mixture of Arabic and French, 14 students use only English, 13 students use a mixture of Arabic and English, 12 students use a mixture of French and English.


Figure 3.11.6 Languages used when participants talk about personal life
The bar graph shows that 38 students have a tendency to mix between Arabic and English when they chat about their personal life, 26 students use only English, 25 students use a mixture of Arabic and French and English, other 25 students use only Arabic, 10 students use a mixture of Arabic and French, 04 students use a mixture of French and English, other 04 students use only French.
9. Tick the answers that best describe your reasons behind switching languages in online communication:


Figure3.12 Students' reasons behind switching codes in online communication

Question 9 is a closed ended one; its aim is to know why undergraduates mix between languages when they communicate in Facebook Messenger. Eight answers showed the main reasons for using code-switching: the majority of students, with a percentage of $74,24 \%$, said that they codeswitch between languages unconsciously, while $60,6 \%$ stated that they switch to other languages when there are no equivalent words. $57,6 \%$ do it because they use technical terms such as discussing about a given module or a scientific topic. $50,8 \%$ tend to switch to other codes when their interlocutors speak that code. $45,5 \%$ chose the option which is to be clear and avoid misunderstanding. The other $37,1 \%$ picked the option 'When I want to add some sense of humour'. Only $22 \%$ ticked the seventh suggestion that says that code-switching is used to provide more space for writing (abbreviations and acronyms). Few students $(10,6 \%)$ tend to alternate between different codes to show prestige and impress the interlocutor. It is worth noting that the participants can choose more than one reason or motive to switch languages which means that each person may have different reasons behind his choice of code.

## 10. How often do you switch languages in your messenger chats?



Figure 3.13 Code-switching usage in Facebook chatting

An attitude scale was given (always, often, rarely, never) to know the extent of using code-switching while students communicate through Facebook Messenger. The results show that code-switching is widely used among EFL students since the half of sample population ( $50,8 \%$ ) use it frequently while writing their messages and 45,5\% of them often mix languages while chatting through Facebook. While only few students $3,7 \%$ use it rarely in their chats. However none of them chose the option never which means that code-switching exists in all students' private messages.
11. In case you do not know how to spell a word you change your whole message.


Figure 3.14 The possibility of changing the message because of misspelling words

Question 11 seeks to know if students change their whole message because of lack of spelling knowledge. It is observed that approximately half the population ( $49.2 \%$ ) rarely change their chat because of misspelling while $27.3 \%$ never do it and this is a good habit. However, $16.7 \%$ of the participants often misspell some words which pushes them to change their messages and $6.8 \%$ always do it. This activity has a negative impact on the learning process since some students have no curiosity to check for the exact and correct spelling of the words to learn them. Consider the pie chart below:
12. How often do you use abbreviations, acronyms and initials in your Facebook messages?


Figure 3.15 The use of shortenings in Messenger chats
This question is provided to the participants to know if they use abbreviations, acronyms and initials in their Messenger chats. It is observed that almost all students use those short forms while communicating since $46.2 \%$ often use them, $29.5 \%$ always do it. While $23.5 \%$ rarely use abbreviations and only $0.8 \%$ of participants said that they never use them. From the results shown it can be noticed that most students have a tendency to use acronyms and abbreviations in their private messages which may impact their academic writing.

## 13. I am with/against the idea that the French language dominates our conversations in Facebook chatting.



Figure3.16 The French language dominates students' conversation
Students were provided statements to read and give their personal opinions or attitudes towards those expressions. The results show that more than a half population of participants $59.8 \%$ are against the idea that the French language dominates their Messenger chats while $40.2 \%$ are with the idea that their private messages are dominated by the use of the French language.
14. I am with/against the idea that the English language dominates our conversations in Facebook chatting.


Figure 3.17 The English language dominates students' conversation
This statement is provided to the participants to know if they are with or against the idea that the English language dominates their Facebook chatting. The pie chart shows that the majority of students $72 \%$ are with that idea that their massages are
affected by the use of the English language. However only $28 \%$ of participants claim that their messages are not dominated by the English language.
15. I am with/against EFL students who mix languages in online communication.


Figure 3.18 Students opinions about their use of code-switching
The objective here is to know if EFL students have positive attitudes towards their use of code-switching. The results demonstrated that almost all the participants $89.4 \%$ are with undergraduates who mix languages while chatting in Facebook Messenger while only few participants $10.6 \%$ are against EFL students who switch between languages.

## 16. I am with/against the idea that EFL students mix languages more than the

 others.

Figure 3.19 EFL students mixing languages more than the others

This statement was given to EFL students to know if they think that they switch codes most than the others. The pie chart shows that the majority of participants ( $82.6 \%$ ) are with that idea. However, only $17.4 \%$ are against the idea. For them, there are other people from other specialties who mix languages more than EFL students.

### 3.5 Findings and Discussion

All in all, the online questionnaire and Messenger chats that were collected from EFL students helped us finish this work and give it an importance since the participants responses are needed to answer the research questions and test the previously set hypotheses. As we would like to mention that questions were not selected randomly; every single question had a purpose behind its occurrence. The objective of the present work was to figure out first the reasons that push undergraduate students to switch between languages and, second, the different types of code-switching that occur in students' private messages.

Accordingly, the following statements are presented to list the findings reached from the data analysed from records of chats and the online questionnaire.

- It Is observed that almost all the students codeswitch frequently when they communicate in Facebook Messenger since they are multilinguals, knowing Arabic, French and English and the majority of them use all these languages when communicating in online communication. Besides, it is noted that they mix a bit more while writing than in speaking.
- Most of the students confirm that code-switching happens rather unconsciously; in other words, they do not recognize sometimes that they are switching codes which means that it occurs spontaneously in their Facebook chats.
- Some students concord with our hypotheses that state that they mix languages to convey a clear message easily, showing prestige and attracting people. But interestingly, the majority of them confess that they alternate between codes because they lack equivalent words in one language, and therefore, they switch to other language to pass the message easily. Furthermore, most of participants said that when they use technical terms such as discussing about a given
module or a scientific topic, they need to switch to other languages that have the working terms that they wish to use.
- The data analysed from Facebook chats prove that types of code-switching depend on the formality of relationships. When participants text their friends, they use mostly intra-sentential code-switching, but when they write messages to their teachers or administrators, they tend to use inter-sentential codeswitching.
- Students' private messages confirm that the different patterns of code-switching are used based on the situation such as the topic of conversation. When participants discuss about their study, they use inter-sentential code-switching; but when they talk about their daily life activities, which is another situation, they use intra-sentential code-switching.
- The results demonstrated that the majority of EFL students have positive attitudes towards mixing languages in Facebook Messenger, seeing the practice as a natural phenomenon used by bilinguals and a better way for successful communication.
- The data show that females participated more than males and the majority of students were between the age of 20 and 30 . Besides, all the students from different levels participated in this study.
- The data obtained revealed that undergraduates talk much more with their friends in Messenger. Furthermore, they choose the languages they know depending on their interlocutors since they use more English while texting their teachers and classmates but Arabic mixed with French with their friends and family members. Moreover, they prefer using one language than the other based on the subject of conversation. For example, when they discuss about education, they use English since it is the academic language of study but when they talk about religion they switch to Arabic since it is related to their native language.
- The answers of students show that they always use abbreviations, acronyms and initials in their Facebook chats; but some tend to change the whole message when they misspell some words, which affects their writing and listening skills.
- It is noticed that the participants use Arabic and English frequently since four groups chose them as the languages most often used in online communication and this is because Arabic is their mother tongue which is understood by most of their interlocutors and the need to improve their level in the English language while most of them mention that they do not master the French language.
- The majority of students were against the idea that the French language dominates their Facebook chats and claim that the English language does.
- Most undergraduate students think that they switch codes more than other people and they are with EFL students who mix languages as they see it as a way of improving language skills and increasing their vocabulary.


### 3.6 Conclusion

As a conclusion, this chapter was set to explain the research methodology that was chosen to study the issue of code-switching in online communication, mainly in Facebook Messenger. It seeks to analyse students' answers of the online questionnaire in addition to the records of their Messenger chats. The investigation made with the participation of students of English from all levels has effectively succeeded to answer and explain the research questions. The analysis of the findings showed that codeswitching in Facebook Messenger happens for several reasons: students may mix Arabic, French and English spontaneously; lack of equivalent words; the use of technical terms. While the analysis of Messenger chats proved that the use of types of code-switching depends on personal relations and different situations such as the topic of conversation. Finally, this chapter gives a value to our investigation since cooperation from the students helped us to complete this study and substantial data were collected to go deeply into every detail; these were presented in forms of tables, pie charts, bar graphs and analysed carefully and demonstrated with students' arguments and opinions for a clearer idea and a better picture of the studied phenomenon of code-switching and its fascinating features.

## General Conclusion

The phenomenon of code-switching is overwhelmingly used in any bilingual or multilingual society and with the technological progress that has been so rapid over the last few years, a new way of communication has appeared which is referred to as computer-mediated communication. Facebook Messenger and code-switching are tightly related, and it has become a trend to switch between Arabic, French and English while texting through Messenger by undergraduate students of Tlemcen university. Thus, this research project aims to study code alternation in relation to online communication, more specifically, Messenger language, and to examine the reasons behind students' mixing between Arabic, French and English and to find the linguistic patterns that occur in their messages when they switch codes. In order to answer the research questions, we devoted three chapters; the first chapter and the second chapter have provided the literature review of code-switching and computer mediated communication while the third chapter is concerned with the research methodology and data collection, analysis of students' messages and the questionnaire followed by the discussion of findings.

The study results prove that EFL students of Tlemcen university often codeswitch in Facebook Messenger. Besides, the analysis of the online questionnaire confirms that participants mix between languages spontaneously and only few of them concord with our hypotheses that they codeswitch to show prestige and attract people and to convey a clear message at ease. But, interestingly, other reasons were detected since the overwhelming majority said that they mix languages because of the use of technical terms and lack of equivalent words. Additionally, the students' private messages reveal that they use three types of code-switching namely intra-sentential, inter-sentential and extra-sentential code-switching. These patterns, however, differ according to the situation such as the topic of conversation which has a hand in switching languages in Facebook Messenger, the interlocutor whom students text with also encourage the existence of code-switching in Messenger chats because the language used between the student and his teacher is vastly different from his chat with friends or family members. In other words, when engaging in a formal conversation, undergraduates use
inter-sentential code-switching, but when discussing in a casual or informal setting, they tend to use intra-sentential code-switching. Since the aforementioned phenomenon becomes a trendy activity all around the world, it is important to know students' attitudes towards moving back and forth between languages. Our findings show that most students have positive attitudes towards switching codes, explaining that it helps them communicate in a better way, avoid misunderstanding and improve their level in practicing the languages they know. Surprisingly, students indicate that the French language does not dominate their conversation as the majority of them state that they do not master that language. Moreover, the results demonstrate that they often use abbreviations and acronyms which push them to codeswitch. Since this investigation seeks to know types of code-switching that exist in students' chats, we have confronted difficulties in collecting records of chats because of the lack of collaboration of students who were hesitant to share screenshots of their private messages. Second, the findings cannot be generalized to all undergraduates since the majority of participants were females and only few males collaborated. Although, the research topic has many references to look for, it can be noted as a limitation that many books and articles of relevance were not accessible.

Some recommendations can be made at this point. First, code-switching strong relationship with computer mediated communication can open for future researchers many attempts to study and analyse reasons and motivations, types, functions of codeswitching in different modes or platforms, including YouTube, Instagram, WhatsApp, Podcasts. etc. Second, since code alternation occurs in both spoken and written forms of language, it is highly recommended for researchers to conduct a comparative study of code-switching in face-to-face interactions versus code-switching in written discourse. Third, since our investigation did not focus on gender or age categories of participants, it can be taken as a new investigation of code-switching based on those variables. Fourth, code mixing has a great population who tend to use it in their daily life communication, future researchers have an unlimited choice of participants such as students of biology, sociology, medicine, economy, psychology and also workers such as doctors, teachers, administrators and even musicians of the Rai category. Fifth, as the English language is nowadays taught in Algerian primary schools, it is interesting
to do an investigation to know if they have started to use it or to switch to it when they speak to each other and their attitudes towards this language.

Finally, it is hoped that this investigation will open the way for more studies about the phenomenon of code-switching. It can be said that the reasons that push EFL students to switch between Arabic, French and English in Facebook Messenger are lack of equivalent words, the use of technical terms and the spontaneous way of writing messages which result in the occurrence of the three types of code-switching, inter-sentential, intra-sentential and extra-sentential code-switching in their private messages that differ according to the situation and personal relationships.

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## Appendices

## Appendix 01

## Tanscription of messenger chats

## 1）＿A conversation in a group chat of students of English

Fatima：Guys，جمعةة مباركة، cvpl li darou qst in google form，esq sta3mlto hadok charts， graphics li kayen tema wela kifah rakom $t$ analysiwah．
／Guys，djumu〔a mubaraka ‘sılvəpli li darv questionnaire in google form，asku sta§məltu haduk charts，graphics li kayən təma wəla kıfah rakmm t analiziwah／

Douaa：جمعة مباركة، oui drthom ghi homa
／ḑumu§a mubaraka oui drthom үı homa／
Rania：Weli ma3amloch en ligne kich y3mlo
／Wəli ma§amluf en ligne kif y〔amlu／
Douaa：Thasbo whdkom，diro table mb3d diro graphics
／təちasbu wahdkum，dirv table mba§d dirv graphics／
Rania：Eum ok eya sahit
／əm ok rya sahit／

Fatima：Check progress，7ato deliberation
／Check progres，ћato deliberation／
Douaa：Maalich dirolna capture maandich progress
／ma¢lif dirulna capture ma§andif progres／
Fatima：it a personal account，kolwahed has his own progress
／it a personal account，kolwahəd has his own progress／
Douaa：kich nhaloh
／kı nћaluh／

## 2)_A discussion between two friends

Amina: Ghdwa 3ndach tkhrji
/ydwa ؟andaf tұurzi/
Safaa: 12:30, tkoni f la fac nti?
/12:30, tkunı f la fac ntr?/
Amina: wah, ni baghya nmchi nactivi la carte aya wnji la fac nhtaj ktoba, 12:30 nesnak 3nd l'arret, ghi 3aytili n3rf bli raki tem.
/wah, nı bayja nəmfir n actıvı la carte aja wə nзı la fac naћta3 ktuba, 12:30 nasnak Gand l'arrêt, үI ¢ajtılı na@raf blı rakı tom/

Safaa; iya saha, wah ki nkhrej n3ytlk, ki n3ytlk 3arfi rani f l'arret
/ija saћa, wah kı nuðrəj n乌ajtlk, kı n乌ajtlk €arfı ranı f l'arrêt /
Amina: Sah nchllh
/Saћ nfalah/

## 3)_Students' group discussion

Yasmina: Guys, where ru, which room?
/ Guys, where are you, which room?/
Amina: choufi mmr2
/Sufi mmr2/
Yasmina: No makash
/ No makaf/

## 4)_A conversation between a student and a teacher

Student: Could you send us our marks, there are some students who can not come tomorrow Teacher: السلام عليكم،'m still correcting. I'll send them after tomorrow's consultation ان شاء اله /asalamo alajkum, i'm still correcting. I'll send them after tomorrow's consultation in $\int a \mathrm{a} a$ lah/

Student: Alright, Thank you

## 5)_A discussion between two friends

Imane: Yadra fewetou?
/jadra fəwətu?/
Malak: ouiii kmlna w ntoma
/wi kməlna wa ntoma/
Imane: mzl dimanche 3ada nbediw hnaa
/Mazal dimanche Yada nbədıw ћna/
Malak: bon courage, rebi yshlk nchllh
/ bon courage rabı jsahəlk njalah/
Imane: Yferhak merci beaucoup
/jfər九ak maxsi boku/

## 6)_A conversation between two students of English

Zineb: Ask ni dyra structure ta3 essay plz need u help, mzal mkmlto
/ask ni dajra structure ta§ essay please need you help, mazal makəməlto/
Sanaa: yaaaa hata ana rani hasla fel structure
/ ja ћata ana ranı ћasla fəl structure /
Zineb: 9rahli wchfli ask ila nichn wla nn
/qrahlı w chuflı ask ıla nıfan wala yp/
Sanaa: choof hadi m 9bayel w ana nkteb w n3awad
/ Juf hadı m qbajəl wə ana nəktəb wə n乌awəd/
Zineb; Ya wlh rana kml hkk mzl ba9i ghda nchllh
/ja wəlah rana kaml hakək mazal baqı yəda nfalah/
Sanaa: structure wa3ra ktar m essay information lmohim ntina dir f thesis statement wsm rak machya tahki fel body paragraph, homa yrakzo 3liha bzf
/ structure wa§3ra ktar m essay information lmohım ntına dir f thesis statement wasm rak majja taћkı fəl body paragraph, homa jrakzu €lıha bəzaf/

Zineb: Ahh oui Rani dyra hkk hfdk zina mrc bQ
/ah wi Ranı dajra hakək hafdək zına maxsi bukv/

## 7)_A discussion between two classmates

Leila: Hi Rania plz tell me wsm drto
/ Hi Ranja please tell me wasm dərto/
Rania: Drna nouns and plurals, li drnh kml hatah f group, check i didn't write, tana ni nhws 3la recording psq hdert ghi ness session.
/Dərna nouns and plurals, li dərnah kaməl ћatah fə group, check i didn't write,, tana nı nћawəs ¢la recording pasku ћdərt үı nəs session /

Leila: ha bniiya tell me kach haja gal 3liha f exam like how to answer wella. W esq raja31kom doros lwala f lbdya nte 3 session.
/ha bnij
a tell me kaf haza gal ¢liha fə exam like how to answer wəla. W asku raza¢lkum durus ləwala fə lbədja ntạ session /

Rania: Rah hat exercises, i don't know ki dkhlt sbth yhdr 3la nouns
/Rah ћat exercises, i don't know ki dzalt səbtah yahdər 乌la nouns /
Leila: Okiii thank uuuuu
/ok thank you/

## 8)_A discussion between a student and an administrator

Student: Good afternoon madam, j'espère que vous allez bien. I am master 2 student and i am wondering if there is a deadline for submitting the certificate?? Sorry for disturbing you, have a good night..

Administrator: Hello, the deadline is late October.

## Appendix 02

## The Online Questionnaire :

Questionnaire
Dear students,
This questionnaire is part of a research for a Master's degree which tackles the phenomenon of Code-Switching on Facebook Messenger among Students of English at the University of Tlemcen. Please be informed that your answers will remain confidential and will only be used for research purposes. So, we will appreciate if you respond to all the following questions honestly as your opinion is crucial and your answers are helpful to complete the work.
Code-switching: refers to the use of two languages or more in discourse.

```
&) kenzatim52@gmail.com (non partage) Changer de compte
*Obligatoire
```

Gender: *
Male
O Female
( Autre

Age: *
under 20
20-30
older than 30

Level: *
$\bigcirc$ Licence
$\bigcirc$ Master

1. Do you switch languages in facebook chatting? *

〇 Yes
$\bigcirc$ No
2. Do you mix languages most while... *

Texting
Speaking
3. What languages do you use when switching in facebook chat? *

Arabic/French
Arabic/English
French/English
Arabic/French/English
4. Number these languages based on how frequently you use them in * online communication

|  | 1 | 2 | 3 |
| :--- | :---: | :---: | :---: |
| Arabic | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ |
| French | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ |
| English | $\bigcirc$ | $\bigcirc$ |  |

Explain why they are ordered that way? *

Votre réponse
5. With whom do you talk to most during your online communication? *
$\bigcirc$ Friends
Family members
Classmates
Others
6. Your attitudes towards code switching between languages in * facebook chat:
$\bigcirc$
PositiveNegativeNeutral

## Why? *

Votre réponse
7. Which language do you use most with... *
Teachers
Classmates
Friends
Family members
8. In which subjects do you switch from one language to another language in facebook chat? (with the possibility of selecting more than one language):

|  | Arabic | French | English |
| :--- | :---: | :---: | :---: |
| Education | $\square$ | $\square$ | $\square$ |
| Culture | $\square$ | $\square$ | $\square$ |
| Religion | $\square$ | $\square$ | $\square$ |
| Politics | $\square$ | $\square$ | $\square$ |
| Sports | $\square$ | $\square$ | $\square$ |

9. Tick the answers that best describe your reasons behind switching * languages in online communication:When there are no equivalent words.It happens unconsciously.To be clear and avoid misunderstandingTo show prestige and impress the interlocutor.When the interlocutor speaks that language.When I use technical terms (discussing about a given module, scientific topics, etc.)Because it provides more space for writing (abbreviations \& acronyms).When I want to add some sense of humour.
10. How often do you switch languages in your messenger chats? *AlwaysOftenRarelyNever
11. You may change your whole message in case you did not know the spelling of a single word.AlwaysOftenRarelyNever
12. How often do you use abbreviations, acronyms and initials in your * facebook messages?AlwaysOftenRarelyNever
13. I am $\qquad$ . the idea that the French language dominates our conversations in facebook chatting.WithAgainst
14. I am $\qquad$ the idea that the English language dominates our conversations in facebook chatting.WithAgainst
15. I am........EFL students who mix languages in online communication. *WithAgainst
16. I am. the idea that EFL students mix languages more than the * others.WithAgainst

## Appendix 03

## Screenshots of The Collected messenger chats:



## A Sociolinguistic Investigation of Code-Switching on Facebook Messenger among Students of English at the University of Tlemeen

> يحاول هذا البحث در اسة التنديل بين اللغات العربية و الفرنسية والإنجليزية في محادثات الفيسبوك مسنجر بين طلاب اللغة الإنجليزية في جامعة تلمسان بتسليط الضوء على الظواهر اللغوية المختلفة المتعلقة بالتبديل بين اللغات، بما في ذلك
والماسنجر . فالغرض الرئيسي هو العثور على الأسباب التي تدفع الطلاب إلى خلط اللغات وأنماط التبديل بين اللغات التي
تظهر بكثرة في محادثات المسنجر بين المشاركين. تم استخدام استبيان عبر الإنترنت ولقطات شاشة لرسائل الطلاب
الخاصة كأدوات بحث،فبينت النتائج أن عدة أسباب تثتجهم على خلط اللغات بين العربية والفرنسية والإنجليزية في
محادثاتهم على الفيسبوك، في حين تختلف أنواع التبديل بين اللغات حسب الموقق والعلافات الاجتماعية.
الكلمات المفتاحية: التبديل اللغوي، فايسبوك مسنجر ، طلاب اللغة الانجليزية، ازدواجية اللغة.

## Summary

This work attempts to examine Arabic, French and English code-switching in Facebook Messenger among undergraduate students of English at Tlemcen University. The research sheds light on different linguistic phenomena related to code-switching, namely bilingualism, code mixing and borrowing as well as computer-mediated communication with a particular focus on Facebook Messenger. The main purpose is to find reasons that make students mix languages and the patterns of code-switching that occur most inthe participants' chats. An online questionnaire and screenshots of students' private messages were used as research tools. The findings revealed several reasons that encourage students to mix Arabic, French and English in their Facebook chats while types of code-switching differ according to the situation and social relationships.

Key words: Code Switching, Facebook Messenger, University students of English, Bilingualism.

## Résumé

Ce travail vise à examiner l'alternance de codes entre l'arabe, le français et l'anglais sur Facebook Messenger chez les étudiants d'anglais de l'université de Tlemcen. Cet article de recherche met en lumière différents phénomènes linguistiques liés à l'alternance de codes, notamment le bilinguisme, le mélange de codes et l'emprunt, ainsi que la communication médiée par ordinateur et ses caractéristiques, avec un accent particulier sur Facebook et Messenger. Le but principal est de trouver les raisons qui poussent les étudiants à mélanger les langues et les modèles d'alternance de codes qui se produisent le plus dans les discussions des participants sur Messenger. Un questionnaire en ligne et des captures d'écran des messages privés des étudiants ont été utilisés comme outils de recherche. Les résultats ont révélé qu'il existe plusieurs raisons qui encouragent les étudiants à mélanger l'arabe, le français et l'anglais dans leurs discussions sur Facebook, tandis que les types d'alternance de codes diffèrent selon la situation et les relations sociales.

Mots clés: Alternance de codes, Facebook Messenger, Etudiants d'anglais, Bilinguisme.

