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Faculty of Letters and Languages  
 Department of English

**Language Contact-Induced Change in Computer Mediated  
 Communication in Algeria: Synchronous Communications via Messenger  
 Versus Asynchronous Interactions Through Emails Amongst EFL Students at Ibn  
 Khaldoun University of Tiaret**

A Dissertation Submitted to the Department of English in Partial Fulfillment of  
 the Requirement for the Degree of Master in Linguistics

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## Dedications

To:

My grandfather

My mother

My siblings: Manel, Amel, and Mohamed

My best friend Mohamed who stood beside me through thin and thick

And all the close ones who passed away

...I dedicate this work

Abdelkader

I would like to dedicate this work to:

My father

My family as a whole

My grandmother and grandfather who passed away

And my friends

Mohamed

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### List of Abbreviations and Acronyms

**A.D.:** Anno Domini

**ADA:** Algerian Dialectal Arabic

**B.C.:** Before Christ

**BBSs:** Bulletin Board Systems

**CA:** Classical Arabic

**CIA:** Contact–Induced Assimilation

**CID:** Contact–Induced Differentiation

**CILC:** Contact–Induced Language Change

**CMC:** Computer–Mediated Communication

**CMDA:** Computer–Mediated Discourse Analysis

**CS:** Code Switching

**H:** High Variety

**IM:** Instant Messaging

**L:** Low Variety

**MC:** Messenger Conversation

**MMS:** Multimedia Messaging

**MRT:** Media Richness Theory

**MSA:** Modern Standard Arabic

**PLD:** Primary Linguistic Data

**SMS:** Short Message Service

## Key to Algerian Arabic Script

Arabic Script Consonants	IPA symbol/ Numbers	Arabic Script vowels	IPA symbol
أ - الحزرة	ʔ	ا	a:
ب	b	ي	i:, e:
ت	t	و	u:, o:
ث	θ	اَ نَاحَة	a
ج	ʒ	اَ كَسْرَة	i
ح	ħ/7	اَ ضَمَة	u
خ	x/5		
د	d		
ذ	ð		
ر	r		
ز	z		
س	s		
ش	ʃ		
ش	ʃ		
ص	s <sup>ç</sup>		
ط	t <sup>ç</sup>		
ض	d <sup>ç</sup>		
ظ	ð <sup>ç</sup> , z <sup>ç</sup>		
ع	ç/3		
غ	ɣ		
ف	f		
ق	Q/9		
ك	k		
گ	g		
ل	l		
م	m		
ن	n		
ه	h		
و	w		
ي	J		

## Abstract

The study aims at exploring the existing contact-induced language change in Messenger and email. It investigates the changes in computer-mediated communication, specifically between synchronous and asynchronous means of interaction that are represented by Messenger and email respectively. A methodological triangulation was employed, including a questionnaire, interview, and Content Analysis. Both the questionnaire and interview consisted of open and close-ended questions, which are intended to obtain pertinent data and samples. The samples gathered were put under scrutiny through content analysis to reach reliable results and, more importantly, to determine the frequency of the investigated linguistic phenomena. The results demonstrated significant changes for synchronous communication in Messenger. By contrast, the marginal percentages for emails suggested rather no changes with certain exceptions only. The overall presence of contact-induced language changes while interacting using Messenger and the lack thereof in emails shows that language in synchronous media may continue to change; while, asynchronous interactions could remain frozen as the two differ inherently in target audience and purposes.

*Keywords:* Computer-Mediated Communication, Contact-Induced language change, Synchronous and Asynchronous Interactions, Email, Messenger

### General Introduction

In an increasingly globalized world, languages have played a major role in facilitating communications, defining identities, and expressing nations' histories and cultures. To disentangle the notion '*language*', a whole epistemological framework was set to explore what Noam Chomsky (1968) referred to as a component of the human mind. This science is perceived as linguistics, while its scientists are recognized as linguists who pursue to put into practice the scientific methods of observing, questioning, hypothesizing, and eventually confirming or refuting a theory. Since it is identified as an interdisciplinary field, linguistics incorporates a number of branches, including sociolinguistics, psycholinguistics, applied linguistics, computational linguistics, among others.

Among the aforementioned branches, sociolinguistics is considered more prominent as it casts light on language as a conventional social phenomenon; it endeavours to describe the bonds that tie individuals to their societies. The social variables ought to have an indispensable influence on how speakers tend to use a language within a speech community. In that order, a prevalent social phenomenon that is referred to as '*language contact*' or '*contact linguistics*' has become almost inevitable in multiple speech communities. It occurs when two or more languages interact and affect one another. Therefore, individuals may shift from the level of being monolinguals to bilinguals or plurilinguals in an account of the several languages or language varieties that stem from that friction.

However, in the late 20th century, this occurrence was not solely restricted to the physical dimension as it also infiltrated the digital one. That is to say, any form of communication that requires the intervention of an electronic device was subjected to the phenomenon of language contact. This novel system of social network intercourse is certified as '*computer-mediated communication*' (CMC). Its origins are traced to the 1970s

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following the invention of the internet. By eliminating time and geographical constraints, CMC gives birth to a whole new form of language, which is perceived as a virtual language or language of the internet, as specified by David Crystal (2001), one of the pioneers who dedicated most of his works to deciphering the linguistic properties of the language implicated within CMC. Such form of language, unlike the others, is a hybrid variety characterised by a conglomeration of languages, excessive use of punctuations, unconventional spellings, emoticons, and abbreviations.

Pertaining to the preceding lines, this work is meant to unravel the outcomes of language contact in relevance to the linguistic nature of interaction involved within CMC amongst third year EFL students at Ibn Khaldoun University of Tiaret. Since CMC is a broad terminology, the focus of the research was itemized into two distinct components, namely synchronous interactions via Messenger in analogy with asynchronous ones through email.

Most importantly, when tackling the issue of '*contact-induced language change*', the centre of attention is to be oriented towards investigating the reverberating outcomes of the diachronic '*language contact*'. Therefore, the notions of '*code-switching*', '*borrowing*', '*diglossia*' and '*bi/multilingualism*' are to be enquired in parallel to the Algerian linguistic repertoire. In a like manner, the research dismantles the constituents appertained to the kind of language used within CMC. Ultimately, to realize this, a comparative approach was assigned to determine the aspects of differences and similarities between Messenger and email via the corpora assembled that is based upon: the used languages or language varieties, code-switching cases, transliteration, shortened words, and emoticons.

In reality, all researchers are driven by numerous forces that influence their research. The primary motives behind this study are bound to the fact that the notion of CMC is relatively novel in Algeria, and Tiaret is no exception. The shortage of research within

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this area promoted conducting an in-depth investigation by accumulating, to the furthest extent possible, a large amount of corpora for the holistic purpose of expanding the databases. From a computational stance, the compiled data are to be processed in a manner that provides the ability for an artificial intelligence model or a machine learner to decipher, decode, and recognize the natural language used not merely by the sample of students but also the whole target population. Such enablement may grant computers access the features of translating, understanding, voice recognizing, and generating language in a human-like manner

The critical intent behind this project is to put disclosure into the status pertained to the influence of contact-induced language change on computer-mediated communication. Therefore, to make the research aims more practical and actionable, the following questions are raised:

1. In what basic linguistic aspects does synchronous communication differ or match asynchronous interactions among third year EFL students in Tiaret?
2. To what extent do the linguistic choices in synchronous and asynchronous interactions frame in discourse amongst third year EFL students in Tiaret?
3. What linguistic practices can be found in both means of social contact?

As a starting point for further investigations, the following hypotheses are proposed to provide temporary explanations to the questions above:

1. It is hypothesized that synchronous and asynchronous interactions among third year EFL students in Tiaret differ and match in basic linguistic aspects to a certain extent.
2. It is postulated that the linguistic choices in both synchronous and asynchronous interactions frame in discourse amongst third year EFL students in Tiaret to a great extent.

3. It is assumed that some linguistic practices can be found in both means of social contact.

The following objectives are raised as a result:

1. To scrutinize the outcomes of language contact in computer-mediated communication with regards to the linguistic properties of language variety/ies used by third year EFL students in Tiaret.
2. To determine the language varieties used by third year EFL students in Tiaret while interacting via Messenger and/or email.
3. To identify text messaging correlations and analogues in a/synchronous interactions amongst third year EFL students in Tiaret.

To put this project in motion, a paradigm of three chapters is set to explore the main intents of the study. In the first chapter, a detailed profile of Algeria's physical, geographical, and sociolinguistic properties is provided. Following that, a brief history of Tiaret province along with an account of Ibn Khaldoun University that stands for the context of inquiry is succinctly afforded.

The second chapter gives an overview of the literature related to the research theme. It consists of two bisected parts; the first one is revolved around the subject of language contact, its types and outcomes, and the concept of contact-induced language change. Similarly, the second part is dedicated to identifying the notion of CMC accompanied by the characteristics of synchronous and asynchronous interactions via Messenger and email respectively.

The third chapter is the ultimate and most vital part of the research scheme. It represents the practical side of this dissertation that entails both qualitative and quantitative methods of data collection, namely the questionnaire and interview. To

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explore an extensive amount of data, the range is expanded to involve the use of content analysis; thus, the case of triangulation was eventually attained.

Bearing in mind that this research dissertation was explicitly conducted at Tiaret speech community, the conditions for further research on this theme may be set on entirely different settings. The findings attained may fill in the knowledge gap that emanated from the niche of physical context while probing the literature.



## 1.1 Introduction

Algeria is a nation with distinct ideological and societal roots. It traces its genesis to the successive generations of colonial exploitation, such as the Roman, Vandal, and Byzantine empires; the Arab-Islamic conquest; and the 132 years of French repression that inflicted what are perceived as detrimental damages to culture, language, and social infrastructure.

The overall objective behind this chapter is to present a detailed portrayal of one of the largest countries in Africa with diverse ethnic, cultural, and linguistic dimensions. Also, through the bibliography compiled, this chapter seeks to explore the physical, environmental, and demographic properties of the Algerian country by describing the geographic regions of the fertile Tell (hill) terrain and the significant portion of the Sahara Desert. In addition to that, succinct fine points are set to hint at the two major ethnic groups of Arabs and Berbers settling on the Algerian lands.

From a sociolinguistic perspective, these lines are pointed at the languages and/or language varieties that coexist within the Algerian linguistic framework, namely Arabic (CA, MSA, or ADA), Berber, French, and English. It also offers insights besides an assortment of scenarios illustrating the current state of the dynamic '*language contact*' that involves code-switching, borrowing, bilingualism, and diglossia.

Following that, the task is to be centred around Tiaret as the context of investigation by providing a brief summary of the wilaya's historical background, a map illustrating its administrative divisions, as well as a table listing the number of dairas and communes within the province. In the same vein, the dissertation directs its focus on the University of Ibn-

Khaldoun as the setting of survey by offering a synopsis of its establishment history, the number of faculties and institutes it entails, and the many services it grants (Cf, Map 1.1).

## **1.2 Physical Setting and Geographic Regions**

Algeria, the gateway to Africa, covers a vast area of 2,381,741 square kilometers, making it the largest country in Africa, and the 10th largest country in the world following the secession of South Sudan in 2011. Situated in North Africa, Algeria is bounded to the east by Tunisia and Libya, to the south Mauritania, Niger and Mali, and the west by Morocco as well as Western Sahara. With most of the inhabitants settling in the arable north and the Sahara dominating the geography of the south, Algeria is divided into two distinct geographic regions. The northern part, practically recognized as the '*Tell*' (hill), is a subject to the constraints of the Mediterranean and consists largely of the Atlas Mountains, which distant the coastal plains from the second region in the south. The southern region, which is also the biggest region, is the Sahara Desert. This range overlay 80% of the Algerian territory and is situated in the western portion of the Sahara, which sweeps across North Africa (Chanderli et al., 2023).

### **1.2.2 The Tell (the Hill)**

The centre of the nation, the verdant Tell, is the country's core to the majority of its people and places. The Tell Atlas stretches eastward from the Moroccan boundary to the mountains of the Grand Kabylie and the Bejaia Plains. It is made up of the hills and plains of the limited coastal area; numerous Tell Atlas mountains range with the intervening valleys and basins, and it ends with The Soummam River on the east. The mild slopes that begin 100 kilometers to the west of Algiers, namely the Mitidja Plains that used to be a malarial swamp before the French cleared it and the Bejaia Plain are the finest places for agriculture. The French were able to develop gardens for wineries and citrus plantations in these regions

thanks to the alluvial soils. In comparison, aridity and barrenness are present in the large valley of the Chelif River and other inner valleys and basins (Metz, 1993).

### **1.2.3 The Sahara Desert**

The Algerian Sahara spans 1,500 kilometers south of the Saharan Atlas to the borders of Niger and Mali. The desert is an exotic landscape that is hardly regarded as part of the country. Despite the fact that it is not entirely surrounded by dunes, this desert is a diverse area. The Erg, or quivering sand plain, is a distinctive element. These regions account for around a quarter of the total land size. The Great Eastern Erg is the biggest area with huge dunes two to five meters high spreading approximately 40 meters apart. A significant portion of the remaining desert is largely covered by stony outcrops known as Hamada, and nearly the whole southeast charter is occupied by the Ahaggar and Tassili-n-Ajjer mountains. Some of the mountains reach a height of over 2,000 meters. Sandstone peaks that have been carved into deep canyons by long-gone rivers surround the Ahaggar, and to the west, a rough desert extends to the Mali borderline (Metz, 1993).

### **1.3 Demography and Ethnic Groups**

With a population estimated at around 45 millions in 2022, Algeria ranks among the African countries with the highest rate of population. About three-quarters of Algeria's population live in urban areas, the largest of these areas is the capital city of Algiers, with a demographic ratio of 3.41 million inhabitants. Exceeding three-fourths of the country's population, Arabs are rated at 73.6%, Berbers around 23.2%, and others make up 0.2%. Nevertheless, the greater part of Berber Algerians and Arabs belong to one common offspring, namely Berber lineage. Yet, the only feature of discrepancy is of a linguistic stance rather than ethnicity (Chanderli et al., 2023; Ruedy, 2005, p. 9).

### 1.3.1 Arabs

The Arab population of Algeria, or the native speakers of Arabic, is of indigenous Berber progeny and the outcome of the mid-7th century's massive influx of sedentary and nomadic Arab tribes arriving from Arabia since the Muslim conquest of the Maghreb. Following the 1966 census, Arabs were rated with the highest demographic ratio in the country and were also regarded as the dominant ethnic group in both cultural and political stances. The lifestyle ranges from one place to another; that is to say, the urban inhabitants settle along the seacoast line, agriculturalists and gardeners reside in the Tell, and nomadic cattlemen rest in the desert (Metz, 1993).

In terms of language, different Arab communities vary little from one another with the exception of the dialects communicated by nomadic and seminomadic individuals. The latter are speculated to have originated from Beduin dialects, whereas the dialects spoken by the northern sedentary population are suspected to have evolved from early seventh-century foreign invaders. Urban Arabs are more inclined to associate with the Algerian country, whereas more distant rural Arabs' racial allegiance is anticipated to be confined to the tribe (Metz, 1993).

### 1.3.2 Berbers

The word '*Berber*' is of Greek ancestry and describes people who used to dwell in the Maghreb during the early history of barbarians. Etymologically speaking, the concept of Berber was first used by the Greeks to describe any sort of lifestyle or language that was completely foreign to them. Later on, the term was consequently embraced in multiple precepts by Arabs, Europeans, and Romans. In Algeria, the Kabyles are one of the largest and ultimate politically active factions of Algerian Berbers. They are designated as Imazighen, the singular form of Amazigh, pertained to noble or independent men. Still, other Amazigh groups reside in the Algerian lands, particularly the M'zabites who are the followers of Abd

al-Rahman Ibn Rustam, and who represent a sedentary group inhabiting the northern border of the desert; the Shawia (Chaouia) who settle in the Aures mountains; and the nomads who reside the Ahaggar region, well-known as the Touareg (Chanderli et al., 2023; Ruedy, 2005).

#### **1.4 Algeria: Government**

The politics of Algeria subsist in a framework of three main branches, namely executive, judicial, and legislative departments. The executive power features the president as the head of high security and council of ministers, whereas the prime minister acts as the head of government yet interchangeably shares the same warrant as the head of the Council of Ministers with the president. Next in order, the judicial sector is considered as a power that holds the Supreme Court. It consists of 150 judges divided into four fractions: administrative, social security and labour, criminal, civil and commercial. However, within the legislative branch, the council of ministers is regarded to comprehend two houses: the lower house (the People's National Assembly) and the upper house (the Council of the Nation) (globalEDGE, n.d.).

#### **1.5 Algeria: Conquest, Resistance, and Settlement**

The sociolinguistic situation in Algeria is considered to be sophisticated partially owing to the peoples who settled therein and whose impact on language still reverberate in the 21st century. The more prominent conquests, resistances, and settlements are narrated below.

##### **1.5.1 Pre-Colonial Era**

Depositions and documentations from certain archaeologists, anthropologists, and historians depicted the pre-modern history of Algeria. The earliest plantation on the Algerian territory dates back to the fifth century B.C., Berbers laid their foundation by establishing a number of states that secured its income through farming and rustic works. The Masaesydes and the Rhummel in eastern Algeria were the predominant Berber kingdoms. After several years of conflict, Massinissa of the Massydes vanquished his western rivals of Carthage and

spawned his own realm in what was classically perceived as the kingdom of Numidia. This kingdom rose to power for about seven centuries. It portrayed the Berber civilization at its peak of progression, which endured over 100.000 residents. Its capital city of Cirta was to become recognized as Constantine. By 109 B.C., the Romans had arrived, and Massinissa's citadels had been breached by an unprecedented external assault. Numidia was subdued and divided into three legions, whereby the agricultural lowlands and hinterlands succumbed to the Roman hegemony (Ruedy, 2005).

A myriad of European scholars underlined the Roman era as the foremost preeminent period in North African history with reference to the eye-catching public works and architectural designs, especially the Roman town of Timgad and the historic Numidian mausoleum. In 429 A.D., a further number of invaders came into existence and furnished the origins and development of Algeria, namely the Vandals who sailed from Hispania to North Africa, established their power, and merged into the Algerian population. After one century of influence under the yoke of the Vandals, the Byzantines encroached in 533 A.D. with a legion of more than 16.000 soldiers led by the captainship of Belisarius who put an end to the Vandal kingdom that diminished within a one year following the outbreak (Metz, 1993).

### **1.5.2 The Arab-Islam Arrival**

During the mid-7th century and after thirty-five years of warfare, Arabs triumphed over the tenacity and resistance of the central Maghreb Berbers. While a negligible number of them sustained their Christian doctrine, the greater part of the Berbers converted to the Islamic faith that Arabs bore with them, a case history that was referred to as the de-Berberization of the Maghreb. It harks back to the Punic (Carthage) period and was prolonged by the Romans, Vandals, Byzantines, and the Arab reign as the cities; their vicinities; and the fertile crops came under the yoke of the latecomers. As a matter of fact, a lot of cities and

various near-seashore sectors were subject to the Arabization imported by the Arab conquest to the extent that some Berber-speaking peasants and nomads were almost obliterated from their Berber ancestry (Ruedy, 2005).

It is indisputable that the mass Algerians in the countryside pursued to speak Berber as late as the twelfth century. *Per contra*, away from language and identity, this conversion was undeniably one of the greatest and most stupendous everlasting facts that culminated a consecutive evolution of nearly every single prospect of life in North African history. This period witnessed the surge, prospering, and recession of a sequel of peculiar Berber kingdoms and empires; in a nutshell, the kingdoms of the Rustamids (739–910), the Hammadid (1011–1151), and the Abd al-Wadid (1235–1545) (Ruedy, 2005).

### **1.5.3 The Ottoman Rule and Regency of Algeria**

In the early sixteenth century, the vast geopolitical crisis that prevailed in the central Maghreb prompted Arruj (1474–1518) and Khayreddin Barbarossa (1483–1546), two daring corsairs originally from the Aegean Greek island of Mytilene, to establish themselves as thriving victorious pirate captains in the western Mediterranean Sea (Roughton, 1962). Following the anguished appeal from the North African residents to drive out the Castile and Aragon Spanish forces, the brothers arrived and entered upon a completely dilapidated land. The eastern part was under the receding sovereignty of the Hafsid Tunisian sultanate, which extended from the caravan portals of Biskra and Constantine to the sea.

The western part was ruled by the rickety command of the Abd al Wadid dynasty of Tlemcen, which struggled to wage wars for survival against the Moroccan raids (Ruedy, 2005). By 1515, the regency of Algeria had been established by the Ottoman Turkish admiral Khayreddine. It had Algiers as its capital and was divided into three provinces, namely Constantine in the east, Oran in the west, and Medea. In 1525, the area was shifted into an immersed construction yard and

reinforced to be a powerful naval garrison where the Ottoman squadrons ambushed the European shipping boats sailing in the Mediterranean (Maameri, 2008).

#### **1.5.4 France in Algeria, 1830-1962**

Following the controversial dispute in 1827, famously known as the *'fly-whisk'* incident, between the Ottoman ruler and the French delegate, King Charles X of France commanded his soldiers to advance and penetrate the coastal city of Algiers, leading to a massive genocide, extravagant expansions, and a death ratio of 500,000 victims. At the earliest stages of colonization, European and French inhabitants commenced to mob and cluster in the Algerian soils by spawning a centre colony later termed the *'pied-noirs'* (Black Feet). In 1848, Algeria was considered an annexation of the French estate apportioned into three communes restrained to the Minister of Domestic Affairs. By the 20th century, things started to take another shape as a liberal evolution under the supervision of Messali Hadj was impelled in 1926 by thriving pan-Arab nationalism and Vladimir Lenin's Third International Formation (TIF). This movement was incorporated with the establishment of the Star of North Africa. An extreme feeling of aversion against the masses and the chaotic practices of French despotism incited Messali Hadj in 1936 to reject the government proposal to enlarge and provide a politically equal rank to French citizenship as Muslims receive.

In May 1945, following the aftermath of World War II, the Algerian nationalist movement was fiercely subdued by the French persecution as a counteraction to the independence protests. Over 20,000 Algerians were brutally ravaged, Messali Hadj was incarcerated, and any political party that had gone against the French will was restricted. In October 1954, radicalism overtook Algeria, and a group of five young Algerian partisans fostered the emergence of a leading nationalist consensus known as the *'Front de libération nationale'* (FLN) or *'National Front of Liberation'* (NFL). On November 1st, the NFL



initiated a noteworthy program of broadcasts and transmissions demanding independence at once. Also, waging a war that continued for eight years, known as the eight-year war of independence, eventually prompted the French government into an armistice and a reconsideration of the case. On the 18th of March 1962, and directly after the signature of ceasefire reconciliation with the NFL, France managed an independence referendum on the 1st of July, which determined a staggering percentage of 99.72 percent calling for autonomy. The results were not taken for granted; almost a million pied-noirs were expatriated from Algerian lands, and Algeria eventually realized its independence on the 5th of July 1962 (Calvet, 2017).

### **1.5.5 Post Colonial Period: Arabization Policy**

After its independence on July 5, 1962, Algeria had salient inclinations towards reclaiming its Arabic and Islamic integrity. Along these lines, an extensive Arabization campaigns were put in motion to redeem the status of Classical Arabic and decimate the French language within the Algerian linguistic ambience. In these circumstances, certain regulations, commandments, and legislations were oriented towards initiating the resurgence, exaltation, and maintenance of Classical Arabic as an indispensable ingredient advocated to administrative, governmental, and educational scopes. Still, the unyielding residues of the die-hard French infiltration and 132 years of subjugation could not be replaced overnight.

Classical Arabic was repelled by a swarm of social, cultural, and linguistic predicaments recoiled from the French atrocities and marginalizing protocols versus the Algerian citizens. The Act of 1968 was sanctioned to be the preamble regarding the inauguration of Arabization in the Algerian administrations. The government sought to constitute a deep-seated adjustment at the level of public administration under the stewardship of President Houari Boumediène who publicly declared that “Dans un délai de trois ans, les fonctionnaires doivent apprendre suffisamment d’arabe pour travailler dans cette langue” (within a period of three

years, functionaries should learn enough Arabic to work in this language) (Grandguillaume, 1997, as cited in Mostari, 2004, p. 27).

Subsequently, an extended number of regulations were mobilized. Foremost among these is the Presidential Decree of March 1981 through which bilingualism was licensed via the use of both Classical Arabic and French in public prints. It might also be noted that one of the ultimate contentions binding the emanation of Arabization is to make restitution of Arabic as the central medium of teaching in all disciplines of education, with a remarkable financial expense of more than 40% of the country's total budget. Regardless of the immense amount of money invested, and the legislative efforts depleted, Arabization was contemplated as a failure in the matter of education since it did not concede the cultural and sociolinguistic settings appertained to students (Mostari, 2004).

## **1.6 Languages in Algeria**

The sociolinguistic situation in Algeria is sophisticated to say the least as the country is considered a melting pot of ethnic groups and language contact. As such, six language varieties are observed.

### **1.6.1 Classical Arabic**

Archaic or Classical Arabic serves as the divine language of the Quran used by Muslims in the mosque during the time of religious prayers and worship decrees. Houghton and Mifflin stated that "classical Arabic is used by approximately one billion Muslims for prayer and scholarly religious discourse" (1994, as cited in Mokhtar, 2018, p. 134). CA is highly codified with an immense corpus of literary traditions. To some scholars, it is a source of great pride to speak flawless Arabic, but any colloquial interference with CA is afforded a downward view. However, the Arabic stipulated by the third article of the Algerian constitution is rather a modernized form of Arabic certified as '*Modern Standard Arabic*' that seeks to meet the social and linguistic needs of the country (Mokhtar, 2018).

### 1.6.2 Modern Standard Arabic

Modern Standard Arabic and Classical Arabic are regularly observed as one, yet the feature of disparity lies at the level of formality. To some extent, Modern Standard Arabic, or MSA for short, is perceived to be less formal than CA. In fact, the Arabic upheld by the Algerian decision-makers is MSA rather than CA. The defined Modern Standard Arabic is manifested through contemporaneous literature, political speeches, broadcasting, administration, and government. The latter is standardized and codified with a conspicuous frame of a modern language acting as the agent of universal literature with a conventional degree of perception, making it intelligible by different Arabic speakers in the Arabic world as a whole. After all, an eminent number of Algerians give the impression of having a passive aptitude for MSA with regard to their inability to speak or write it properly. Indeed, some politicians and lawyers find it difficult, in some ways, to read and articulate intact Arabic without making a grammatical or pronunciation lapse (Mokhtar, 2018).

### 1.6.3 Algerian Dialectal Arabic

Algerian Dialectal Arabic (ADA) is a natively spoken variety perceived as Darja, Derja, or Darija. It is a colloquial language variety stemming from the interference of Arabic with French, Berber, Turkish, and even Spanish. With no written form, ADA is considered as an L, or the low variety of Standard Arabic, and the mother tongue of the majority of the Algerian population. At the events of the dynamic language contact, ADA is noticed to be a miscellany of mixed codes, signalled by the presence of a substantial amount of borrowed words that draw from Arabic verging on other linguistic systems. As an illustration, consider the following words used by ADA speakers and their origins: (Abbassia, 2021; Sahraou, 2020)

French: *échappement* /ʃa: tʻma/ (exhaust) / *misère* /miziriʃa/ (misery)

Tamazight: *xemmel* (to clean)

Turkish: *tebsi* (plate)

Spanish: *fiesta* /*fiti/ta*/ (party) / *sberdina* /*sberdi:na*/ (shoe)

In another respect, ADA has no cooperative version; in fact, it incorporates a melting-pot of dialects spoken in different parts of the country. Yet it is sort of interesting to observe the variety of dialects spoken in Algeria with an apparent linguistic distinctness in grammar, vocabulary, and pronunciation that gives a reason, in some cases, to the shallow degree of mutual intelligibility within the region. The most frequently marked dialects are known as the Hilālīān dialects, which comprise three nomadic sub-dialects: (1) the Hilālīā-Tellian dialect where its speakers permeate a large part of the Tell of Algeria and the high plains of Constantine, and which encompasses the north of Hodna region to the Seybouse River, (2) the Hilālīān Saharan that involves the entirety of the Algerian Sahara, and (3) the completely Bedouin dialect, which implies Algiers' near seashore cities and Blanks (Kessar & Hamdan, 2023).

#### 1.6.4 Berber

Berber is a subdivision of the Afro-Asiatic, also known as Hamito-Semitic, language phylum that covers, in Algeria, Kabyle Berber (north Algeria), Tashawit (Aures; northeast Algeria), and some oasis languages such as Berber of Mzab (south Algeria). Tifinagh (Libyo-co-Berber script) is sanctioned to be the customary writing system of Berber. It is an antiquated indigenous system of language that has been evolved and perpetuated by the so-called Touareg. The latter has currently been revitalized in some Berber speech communities, such as in Algeria, where it regained official status at the event of the 2016 amendment of the Algerian constitution that states in the 4th article "Tamazight shall also

be a national and an official language”. Furthermore, the planning of the Berber language made it officially taught in primary, intermediate, and secondary schools for some time whereby it attained a significant merit as a one display of the Algerian linguistic scenery (Lafikioui, 2018; Abbassia, 2021).

### **1.6.5 French**

French assumes the role of the first foreign language in Algeria. It stands for the Lingua Franca spoken by nearly 11.2 million Algerian citizens, making it the largest francophone country in the world in terms of speakers. During the colonial period, France exerted the law of Frenchification by annihilating indigenous languages, establishing a vast horizon of schools where students were taught via the medium of the French language, and coercing it as the most prestigious language that depicts universality and civilization. Hence, this suprastratum language was imposed on Algerians against their will (Benrabah, 2007).

Following its independence in 1962, Algerian nationalists and political leaders sought to establish a systematic makeover of rigorous language policies, commonly known as the Arabization policy, to uproot the existence of French and rectify Algeria’s linguistic situation and its long-lost cultural integrity of the Arabic and Islamic heritage. But, after several decades of regular conflicts amidst francophones (pro-Arabization) and arabophones (anti-Arabization), Arabization eventually failed to dislodge the status of French en masse (Benrabah, 2013).

### **1.6.6 English**

Algeria is undergoing a novel stage of linguistic upgrade, especially in the lines of globalization, economy, commerce, communication, and technology. To fully fill this newly experienced cycle, an advanced form of language is required, which is without a doubt

English. This variety stands for the second foreign language in Algeria. An while French remains omnipresent, English enjoys overwhelming consideration among Algerians. The emphasis on teaching English took a vital part at the event of the educational reform announced by the Ministry of Education in 2001 whereby English was introduced to middle (4-year) and secondary (3-year) schools (Benrabah, 2003).

As reported by Benrabah (2003), implementing English in the Algerian schooling system via reforms was meant to invalidate the French language and emancipate the Algerian schools from the leftovers of the French educational segregation. In fact, the reforms exerted were a clear pretext behind the support of the Arabization policy and the progressing desistance of the French educational system. In Algeria's latest updates concerning this matter, President Abdelmajid Tebboune has declared publicly in July 2022 that the country's schoolchildren would start learning English in primary school instead of intermediate school (Algeria Introduces English at Primary Level to Counterbalance French, 2022).

## **1.7 Linguistic Outcomes of Language Contact**

Language contact is an omnipresent and recurrent case for most language varieties. And as Algeria encompasses the abovementioned language varieties, language contact is an almost inevitable linguistic phenomenon.

### **1.7.1 Diglossia**

Algeria is likely to be regarded adiglossic community as it is distinguished by the use of MSA along with French as the high varieties used in formal settings, a sum of mutually intelligible colloquial dialects, in conjunction with Berber and ADA serving as the low varieties for intimate and informal contexts. MSA as an H is perceived by the Algerian constitution as the national and official language of the country, a learned superposed variety that enjoys a high prestige regarding its abundant literacy. ADA is allocated to informality with an unquestionable prevalence supposing its regular use in day-to-day

conversations and casual dialogues. It is the L variety ascribed to folk literature, advertising, radio programs, and caricatures (Djennane, 2014).

Furthermore, another critical aspect of aberration is that while MSA is stable and inadequately exposed to change as a result of its codification and affiliation to the educational curriculum, ADA is in a constant state of linguistic change that demonstrates the variety of dialects that stem from it. However, both of these varieties are in complementary distribution. Indeed, ADA and MSA are not conclusively detached from each other. To give an illustration for that, in a casual context such as a friends' gathering, the customarily used variety is ADA; nevertheless, if the discourse is shifted into more of a scientific frame, SA is practically the code to be switched to (Djennane, 2014).

### **1.7.2 Bi/multilingualism**

If one is apt to communicate in two languages conveniently (a mother tongue plus one other language), s/he can be categorized as bilingual. As for Algeria, it is a complex but significant issue to make inquiries about bilingualism within the Algerian linguistic network. However, describing this notion requires targeting three different dimensions, that is to say individual, social, and political dimension. From an individual stance, there are a few cases where bilingualism takes shape. For instance, an Algerian who can speak Arabic and Berber fluently, another who uses Berber along with French, and some others who communicate Arabic accompanied by French as well.

In some cases however, there are a few individuals who master and use the three languages interchangeably. This category of speakers is recognized as trilinguals marked by their competency in using their mother tongue along with two other languages. Another category that should be noted is plurilingual (polyglots), which is associated with those who can speak more than three languages. For example, an individual who speaks Arabic, Berber, French, and another language efficiently, which is a very rare gift to come across, is

standard as a plurilingual speaker. Nevertheless, when the focus of analysis is aligned with society, Algeria can be depicted as a multilingual speech community where several languages coexist determined by the variety of codes used: CA, MSA, ADA, Berber, French, and English lately. Yet, when discussing politics, Algeria is a politically bilingual country distinguished by the synchronicity of Arabic stipulated as the national and official language in the 3rd article of the Algerian constitution and Berber in the 4th article, as it turned out in the 2016 amendment.

### **1.7.3 Borrowing**

The concept '*borrowing*' had its share of the reverberating impact of language contact on the Algerian sociolinguistic situation. This terminology is conventionally used to depict the case in which a loanword is assimilated and adopted from the donor language with its canonical shape, then remodelled to fit the morpho-syntactic and phonological properties of the recipient language. As far as Algeria is concerned, this phenomenon is portrayed by the integration of French words into Algerian Dialectal Arabic. Owing to adaptation, a process of phonetic interference is marked by alterations of French words to suit and correspond to the phonetic constraints and native sounds of ADA. For example, the French words [*poste*] (post-office) and [*village*] (village) are adjusted to accommodate both morphological and phonological norms of ADA. Therefore, the words /bu:fta/ and /fila:ʒ/ are conceived. In this instance, the phonemes /p/ and /v/ were converted into /b/ and /f/ accordingly, and some French short vowels were protracted to be long in ADA. However, in some cases, a French word is morphologically and partially phonologically borrowed. For instance, the words /vi:sta/ (jacket) and /pi:pa/ (pipe); in this regard, /p/ and /v/ do not exist in the phonological system of Arabic but are used in ADA, so they are not completely integrated (Ahmed, 2009).

Another aspect concerning this matter is the non-adapted borrowing, whereby the French verbs are rated as raw materials or stems wherein ADA



suffixes and prefixes are embedded into the morpho-phonological properties of that verb. For instance, in [Je le derange] (I bother him) and [Je soigne mes blessures] (I treat my wounds), the verbs observe the ADA inflectional rules along with the Arabic prefixes and suffixes pattern. The results appear this way: /ndiro:njih/ and /nesoigni/. Apart from verbs, the next case about to be discussed is bound to French nouns solely. This type of borrowing is referred to as non-conventional borrowing whereby French nouns are rendered to benefit as verbs in ADA. For example, [J'ai passé le weekend] (I spent the weekend) shifts and becomes /wikandi:t/, as does the instance of [J'ai la grippe] (I have flu), which turns into /gripi:t/ (Ahmed, 2009).

#### **1.7.4 Code-Switching**

People often lean towards alternating between two or more languages or language varieties in their daily conversations in order to convey their messages, maintain the flow of discourse, and identify with a particular social group. This lexical practice of shifting from one linguistic code to another among interlocutors is often referred to as Code-Switching (CS). In Algeria, the reasons for CS are clear and determined by the rebounding effect of language interference and the deficit of the Algerian Arabic lexical repertoire. It is substantially bound between the use of Arabic, with its binary manifestation as MSA or ADA acting as the matrix languages accompanied by French as the second and embedded language spoken by the majority of educated Algerians along with bilinguals in view of the overstayed French colonization. Monolinguals on the other side are likely to be perceived as illiterate or poorly educated yet marked by their regular insertion of French words in their ordinary discourse. To exemplify the use of CS within the Algerian context, the following instances may mark typical spoken Algerian Arabic:

/rani ʕajaan we capable nro:h retard ljuum/ (I feel tired, and I might go late today)

/climat nta:ʕ ljuum rahi ʃa:ba / (Today's weather is good)

/raho rajah l'hopitale/ (He's going to the hospital)

/ka:n le prof jqari fina l'cours, w directement saʔlattu étudiante ʃala test ntaʕ la semaine prochain/ (The teacher was tutoring the lecture, and a female student directly asked him about next week's test)

/Pourquoi nahhdro ʃla la politique da:jman ? Non, ma ʃadna:ch le connaissances de base bah nahhdro ʃali:ha/ (Why do we always talk about politics ? No, we don't have the background knowledge to talk about it)

As it is observed in the above examples, CS in spoken Algerian Dialectal Arabic occurs in varied positions: at the initial, middle, and final segments of a sentence. By virtue of the coexistence between ADA and French, it is almost impractical to discern a full conversation without the interjection of a French word or expression, thus CS is observed from all angles, whether inter-sentential, intra-sentential, or tag switching (Bagui & Adder, 2020; Ahmed, 2009).

### 1.8 Tiaret: Context of Enquiry

Tiaret or Tihert, 'the lioness' in Berber, could represent the old Carthaginian settlement Tingartia which is the site of a 5th-century bishopric. The area also had a Roman influence in the third century A.D. during the reign of Emperor Septimius Severus. Following the Muslim conquest of North Africa, the Kharidjites, headed by Imam Abderahmane Ibn Rostom, moved to the Maghreb in 761 to establish the Kharidjite state (or the kingdom of Tahert) in the valley of Oued Mina about ten kilometers east of Tiaret. This state thrived through commerce and cultural development, and it spanned a significant portion of the Maghreb for more than 150 years in the shape of an imamate.

Between the years 1836 and 1841, Emir Abd el-Kader lived in Tagdempt. He managed to create weaponry and wealth in what was classically known as Zmalet El Emir Abdelkader, which was a town (commune) in Tiaret Province in north-western Algeria. Tiaret is situated at an altitude of more than 1,080 meters on Mount Gezoul, which is part of the Tell Atlas range and is mostly forested with cypress and Aleppo pine. It has been the headquarters of the department since 1956, accredited by a division of 13 Dairas and 19 communes (Rosso, n.d.).

See the attached map (Cf, Map 1.2) and table 1.1:

**Table 1.1** *Administrative Divisions of Tiaret*

Aïn Bouchekif	<b>Commune</b>	عين بوشكيف	Mahdia	<b>Daira</b>	المهدية
Aïn Deheb	<b>Daira</b>	عين الذهب	Mechraa Safa	<b>Daira</b>	مشرع الصفاء
Aïn El Hadid	<b>Commune</b>	عين الحديد	Medrissa	<b>Commune</b>	مدريسة
Aïn Kermes	<b>Daira</b>	عين كرمس	Medroussa	<b>Daira</b>	مدروسة
Aïn Zarit	<b>Commune</b>	عين زاريت	Meghila	<b>Daira</b>	مغيلة
Bougara	<b>Commune</b>	بوقارة	Mellakou	<b>Commune</b>	ملاكو
Chehaima	<b>Commune</b>	شحيمة	Nadorah	<b>Commune</b>	الناظورة
Dahmouni	<b>Daira</b>	دهموني	Naima	<b>Commune</b>	النعيمة
Djebilet Rosfa	<b>Commune</b>	جبيلات رصفة	Oued Lilli	<b>Daira</b>	واد ليلي
Djillali Ben Amar	<b>Commune</b>	جيلالي بن عمار	Rahouia	<b>Daira</b>	رحوية
Faidja	<b>Commune</b>	الفايجة	Rechaiga	<b>Commune</b>	الرشايقة
Frenda	<b>Daira</b>	فرندة	Sebaïne	<b>Commune</b>	سبعين
Guertoufa	<b>Commune</b>	قرطوفة	Sebt	<b>Commune</b>	السبت
Hamadia	<b>Daira</b>	الحمادية	Serghine	<b>Commune</b>	سرغين
Ksar Chellala	<b>Daira</b>	كسر الشلالة	Sidi Abdelghani	<b>Commune</b>	سيدي عبد الغاني
Madna	<b>Commune</b>	مادنة	Sougueur	<b>Daira</b>	السوقر

### **1.8.1 Ibn Khaldoun University: A Brief Account**

Officially accredited by the Ministry of Higher Education and Scientific Research, Ibn Khaldoun University has been in operation since 1980. It is a non-profit institution of higher education based in Tiaret, Algeria. In 1984, the former was partitioned into two national institutes of higher education: civil engineering and agro-veterinary. By 2013, the university was promoted with an expansion of eight faculties and two institutes, including: Applied Sciences, Material Sciences, Mathematics and Information Technology, Natural Sciences and Life, Law and Political Sciences, Economics and Commercial Sciences and Management Sciences, Humanities and Social Sciences, Letters and Languages, and Institutes of Veterinary Sciences, alongside Technology. Ibn Khaldoun University also offers students academic and nonacademic services and facilities that include libraries, athletic facilities and/or activities, international study as well as exchange programs, and administrative support services (Ibn Khaldoun University of Tiaret – Free-Apply.com, n.d; The University in Brief, n.d.).

### **1.9 Conclusion**

To put all the previous points in a nutshell, this chapter provides a thorough description of Algeria's physical and demographic characteristics. Briefly, it elaborates on the number of ethnic groups that reside on the land. Following that, it provides insight into Algeria's governmental structure as well as its colonial history by highlighting the classical period, which witnessed a succession of empires and kingdoms as well as the arrival of Arab-Islam, which brought extraordinary changes at the levels of culture, language, and ethnicity. In addition, the French presence is narrated as far as the generated tipping point with the adverse impacts on social infrastructure that resulted in the birth of the Arabization policy as a retaliatory measure to diminish the remnants of French influence.

The research then shifts its attention to Algeria's sociolinguistic features, beginning with the number of languages and/or language varieties that coexist inside the Algerian linguistic framework together with the implications of dynamic language interference. Afterwards, an in-depth discussion of Tiaret, which stands for the context of the investigation, is provided in tandem with a concise outline introducing the University of Ibn-Khaldoun as the setting of the survey.

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## 2.1 Introduction

This chapter is dedicated to overview the current literature pertaining to this research project. It is divided into two sections, both of which aim to define, trace, and differentiate the core concepts of this study. The first section deals with the language related concepts of the dissertation; to that end, language contact and thus types and outcomes are to be defined with reference to some of the more influential writings. Likewise, contact-induced language change is briefly discussed along with its types; such discussion may help discern contact-induced language change from language contact as a general phenomenon. The second section tackles computer-mediated communication (CMC) from two facets, the first of which addresses the emergence of such communication while the other gives a review of the sociolinguistic research and theories upon which the study thereof is founded and developed. Moreover, this section defines synchronous and asynchronous interactions and illustrates respectively how Messenger and email represent each.

## 2.2 Language Contact

Language contact as an inherent phenomenon of human languages may be ascribed to various causes. From the traditional sense, language contact may exist by means of direct contact among speech communities or, simply put, whenever conquests; exogamies; emigrations; or other similar forms of contact take place. However, with the emergence of new technologies, the *raison d'être* of such a phenomenon has been inclusive of a less direct contact that comprehends, but is not limited to, interpersonal interactions.

*'Language contact'* or *'contact linguistics'* has been a subject of interest for many a researcher ever since it was first introduced, but even so few linguists gave working

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definitions of the phenomenon with Sarah Thomason even critiquing her definition. As such, it is worth noting that Weinreich was the first linguist to introduce the concept of language contact. Weinreich (1953) stated that “two or more languages will be said to be in contact if they are used alternately by the same persons” (p. 1).

Referring back to Thomason, she stipulated that “language contact is the use of more than one language in the same place at the same time” (2001, p.1). Thomason then argued that the “simplest definition” is “flawed” inasmuch as place is not a prerequisite for language contact to take place (Thomason, 2001, p. 3) which, for the sake of the current study, is an integral insight to highlight.

### **2.2.1 Contact–Induced Language Change**

Language contact is a phenomenon that can generate both synchronic and diachronic outcomes. In that respect, contact–induced language change (CILC) is by and large based upon diachronic related language change. Hence, it is of vital importance to limit when and where the latter may exist.

Chamoreau and Léglise (2012) defined CILC as multi–faceted changes whose traces are attributed to a triadic set of causes: historical and sociolinguistic factors besides internal change. By the same token, Ellison and Miceli (2012) have further established a correlation between the aforementioned causes and language contact besides situations where bi– or multilingualism is of the norm.

But, perhaps the more exhaustive definition of CILC is accredited to Lucas (2015) who has specified that:

From the acquisitionist perspective, change is contact-induced when the innovating acquirer’s PLD contains elements which are not consistent with the natively acquired grammars of older speakers of the same language, and when these elements owe their existence to some form of bi- or multilingualism (henceforth bilingualism) among the

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speakers contributing to the acquirer's PLD. From the 'sociohistorical' perspective, on the other hand, a contact-induced change has occurred whenever the whole of some subgroup of a speech community has adopted a speech habit which owes its existence, again, to the presence of some form of bilingualism in that community. (p. 3)

Lucas proposed that in addition to the changes instigated by sociohistorical factors, primary linguistic data (referred to as PLD) could also produce CILC. PLD caused changes occur whenever the acquired "grammars" of a group differ to a larger extent from that of the previous group; such differences can be spotted in the outcomes of language contact situations. As an example, changes that are contact-induced may account for different codes being switched to relative to former ones. This is clearly the most in-depth definition since it acknowledges that CILC covers other phenomena besides bi- or multilingualism.

### 2.2.2 Types of Contact-Induced Language Change

CILC may take different shapes and forms; accordingly, the typology thereof may vary according to different scholars. The types mentioned below may be labelled differently and/or are considered to be subcategories from the general viewpoint of linguists.

On that account, Thomason and Kaufman (1988) distinguished two categories of CILC, namely '*borrowing*' and '*interference*' (also referred to as '*substratum influence*') by means of shifting (as cited in Winford, 2003). This typology is quite defective given that the listed types are incomprehensive and quite equivocal considering how poorly defined the concepts are.

Another typology includes, in a like manner, two types: contact-induced assimilation (CIA) and contact-induced differentiation (CID). And while CIA comprehends both of the categories mentioned above and is perceived as a change whereby languages become more similar, CID is, *au contraire*, a change wherein languages are rendered less similar (Ellison et al., 2012).



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Lucas (2015) has highlighted the following types of CILC: restructuring, imposition, borrowing beyond loanwords, and convergence. The lack of transfer from a source language (SL) to a recipient language (RL) results in restructuring wherein the change takes the form of reduction or simplification as in the general case of creoles. The second respective type takes place when such transfer exists with the condition that speakers of SL are dominant. Imposition involves a multigenerational acquisition of second language competence with some speakers acquiring it as a first language; it is the result of direct contact via colonialism. If the opposite is true however, or whenever speakers of RL are dominant, CILC may take the form of borrowing. Within this context, borrowing covers various levels of language beyond loanwords among which the most obvious occurs at the syntactic level. The fourth and final type is referred to as convergence. This type is the product of transfer from SL to RL with neither being dominant. In other words, situations where bilingualism is common lead to the intersection, and subsequent influence, of first languages on one another. In the case of an ongoing situation of influence, convergence occurs.

Lucas' typology is quite definitive; the identified types in his work not only serve as an encompassing point of reference for CILC in general and for this dissertation in particular, but his ascription of how such changes come to exist truly shapes the cases in which each type may occur.

### **2.2.3 Types of Language Contact**

Language contact entails three main types, namely language maintenance, language shift, and creation of new languages (Romaine, 1989). Moreover, each type represents a situation with a different stance towards language contact.

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### **2.2.3.1 Language Maintenance**

Language maintenance refers to those situations in which speech communities make collective efforts to continue using their native languages with little to no change in the face of competition from another, more dominant language. Such maintenance is dependent on three main factors, namely status, demography, and institutional support (Gilbert et al., 1977).

### **2.2.3.2 Language Shift**

As the name suggests, language shift is the opposite of maintenance. This type denotes a partial or complete replacement of a language by another for socialization. Status is also a deciding factor for this type of language contact.

### **2.2.3.3 Creation of New Languages**

Language contact may be manifested in the form of new languages. Languages of this type are primarily pidgins and creoles. One of the main distinctions between the two lies in the fact that creoles are used as a primary means of communication while pidgins facilitate communication.

## **2.2.4 Outcomes of Language Contact Situations**

Situations where there is contact among languages bear a number of phenomena that are ubiquitous and common among the large majority of languages. These outcomes are listed below.

### **2.2.4.1 Diglossia**

Diglossia is an outcome of language contact whose existence is chiefly dependent on the language varieties that are used by a speech community. In this respect, Ferguson (1959)

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argued that diglossic situations involve the use of a high variety (H) that is identified by some rubrics locating it above the low varieties (L). Ferguson's diglossia follows rather a narrow description attributed to Marçais (1930) who was the first to use the term to refer to the Arab situation; ergo, classic diglossia is an umbrella term that encompasses diglossic situations in which both H and L varieties are perceived to be two dialects of one language. This description does not fit all diglossic situations as it fails to mention that such situations involve, more than often, genetically unrelated language varieties as in the case of Algeria.

In reference to a more befitting account of this concept, the dissertation will consider the later extended diglossia that encompasses any language varieties that co-exist in one context but serve different purposes. Diglossia from this perspective could intersect with bilingualism as long as the latter is commonplace in a diglossic speech community (Fishman, 1967). As for the served purposes, Wardhaugh stated that "a diglossic situation exists in a society when it has two distinct codes which show clear functional separation; that is, one code is employed in one set of circumstances, and the other in an entirely different set" (2006, p. 89).

#### **2.2.4.2 Bilingualism**

Bilingualism has proved to be quite an ambiguous concept in the sense that it may be used interchangeably with multilingualism. In this regard, Mackey's definition that bilingualism is "the alternate use of two or more languages by the same individual" is a prime example of such use (1962, p. 52). However minimalist statements of this kind seem, they prove to be fundamentally flawed due to the simple fact that bilingualism *per se* denotes the usage of two languages and no more. Therefore, a more befitting definition would be that of the Webster Dictionary (1961) which identified a bilingual as "having or using two languages especially as spoken with the fluency characteristic of a native speaker; a person using two

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languages especially habitually and with control like that of a native speaker” (as cited in Aronin & David, 2012, p. 2).

From this perspective, bilingualism and multilingualism are not to be treated as synonymous concepts; likewise, bilingualism is to be considered from a functional dimension with the following types: incipient, receptive, and productive bilingualism (Moradi, 2014).

### **2.2.4.3 Borrowing**

Borrowing is a phenomenon that may stem from direct as well as indirect contact among languages. Hence, a definition with fitting precision will play a pivotal role in this study.

According to Thomason and Kaufman, borrowing is “the incorporation of foreign features into a group’s native language by speakers of that language: the native language is maintained but is changed by the addition of the incorporated features” (1988, p. 21). In a similar vein, Haspelmath and Tadmor (2009) have identified another, more universal sense whereby borrowing may be used: transfer through adopting features of foreign languages into receiving languages by both native and non–native speakers. The transfer brought about by foreigners may be synonymous with imposition.

#### **2.2.4.3.1 Material and Structural Borrowing**

The above insights assign a two–fold taxonomy to borrowing, that of material and that of structural nature.

Material borrowing is generally understood as “borrowing of sound-meaning pairs”. Material borrowing characterises instances wherein fixed forms are adopted from a source language with no change to either form or function of said forms. The most prevalent form

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of such borrowing entails the adoption of single words referred to as loanwords or lexical borrowings, though material borrowing may also involve affixes and phrases (Haspelmath et al., 2009).

By contrast, structural borrowing (referred to as borrowing beyond loanwords in 2.2.4) is a process whereby the adoption of features occurs at the: syntactic, morphological, or semantic areas. Calque is one main manifestation of structural borrowing and refers to fixed translations of items from one language to another; these items could be single words as well as fixed expressions. Additionally, borrowing of this kind includes loan meaning extension which revolves around copying semantic meaning of words so that the extended meaning of the source language is also found in the receiving language (Haspelmath et al., 2009).

#### **2.2.4.4 Code–Switching**

With the ubiquity of bilingualism throughout the world, code-switching (CS) has become an ever-present phenomenon in different mediums and nearly an inevitable feature of speech considering how many functions it served.

Code is an umbrella term that covers both languages and dialects or, simply put, language varieties (Brown & Miller, 2013). Accordingly, CS from the lens of Myers–Scotton (2005) is “the use of two language varieties in the same conversation” (p. 239). Definitions of CS may vary to a certain extent from one scholar to another mainly due to the different stances and theoretical frameworks these scholars take. So, the matter of whether a speaker switches to two language varieties or more is debatable as many linguists link CS to multilingualism (Auer, 1998; Heller, 1988; Muysken, 2000 among others).

##### **2.2.4.4.1 Types of Code–Switching**

The epistemology of this dissertation suggests a typology that considers where CS occurs in communication, thus the types identified by Poplack (1980): tag-switching,

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intersentential CS, and intrasentential CS (as cited in Romaine, 1989). Then again, this does not limit CS to these types only as the counterpart to this typology traces CS to function rather: congruent and non-congruent lexicalization.

#### **2.2.4.4.1.1 Tag-Switching**

Romaine (1989) defined tag-switching as “the insertion of a tag from one language into an utterance which is otherwise entirely in another language” (p. 122). For phatic communication, tag-switching is blank in meaning as the inserted tag does not add value to the sentence semantics.

#### **2.2.4.4.1.2 Intersentential Code-Switching**

Intersentential CS could be described as a switch of language varieties that happens at the outer limits of or in between two sentences or utterances. This switch occurs in one conversation; likewise, interlocutors do not change themes by means of intersentential CS (Romaine, 1989).

#### **2.2.4.4.1.3 Intrasentential Code-Switching**

Intrasentential CS or code-mixing happens, in contrast to the previous type, inside the boundaries of a single sentence; such transfer ranges from words to phrases and is characterised with the use of one language elements into another. It is generally understood as “the transfer of linguistic elements from one language into another: a sentence begins in one language, then makes use of words or grammatical features belonging to another” (Crystal, 2003, pp. 78-79).

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### 2.3 Computer–Mediated Communication

As technology evolves, novel forms of interaction arise. With the advent of the Internet in 1969, CMC has developed and evolved throughout the years where individuals connect with one another via computers and networks. According to Herring (1996), CMC is “communication that takes place between human beings via the instrumentality of computers” (p. 1). However, Squires’ (2016) formulation could qualify as a conclusive statement that addressed the premise of CMC from every angle. She asserted that:

Computer-mediated communication" is a broad designator that encompasses multiple semiotic/linguistic modes (including voice, text, and image) as well as technological interfaces and platforms (mobile phones, tablets, social media, immersive online games, virtual workplace environments, and more). The term circumscribes communication that is carried out via a mediating interface, and these mediating interfaces produce layers of structure that require linguistic and social negotiation. (p. 2)

The previously mentioned passage could stand for the ultimate definition that includes all of the required key words regarding CMC, namely voice, text, and image; computer, mediation, and communication. But some scholars were inclined to opt for other notions, such as those in David Crystal's 2008 volume *Txtng: The Gr8 Db8* where, in a different manner, he introduced the term CMC or any sort of interaction that depends upon an electronic intervention as “short messaging, short mail, SMSing, person-to-person messaging, mobile messaging, wireless messaging, text messaging, texting, and txtng” (p. 6). Regardless of how the concept was interpreted, this definition is confined to asynchronous text-based messaging only and skips the various types of synchronous engagements that incorporate voice and visuals. In a similar fashion, Hertz & Turoff (1993) provided a different viewpoint on this subject matter by defining it using other typically broad yet not specified terminologies such as computerized conferencing, computer-based conferencing, or computerized teleconferencing, meaning "any system that uses the computer to mediate communication among human beings" (p. 30).

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CMC as an interdisciplinary field is augmented by other specializations, most notably computer-mediated discourse (CMD) and its analysis (CMDA). CMD is an aspect of CMC that revolves around online language and language usage. Herring (2005b) rectified that term by offering an even more detailed elaboration, as she stated that:

Computer-mediated discourse is the communication produced when human beings interact with one another by transmitting messages via networked computers. The study of computer-mediated discourse (henceforth CMD) is a specialization within the broader interdisciplinary study of computer-mediated communication (CMC), distinguished by its focus on language and language use in computer networked environments, and by its use of methods of discourse analysis to address that focus. (p. 1)

On the same agenda, CMDA emerged as an approach to investigate online communicative behavior that affiliates the role of language-focused conduct via implementing a linguistic paradigm to the analysis of CMC with the incorporation of pragmatics, discourse analysis, critical discourse analysis, and interactional sociolinguistics that support counting and identifying computer-mediated text corpora of a discourse phenomenon (Herring, 2004).

By applying the CMD and CMDA models to language, this project, with the obtained databases, may consequently determine the nature of text-based communication via computers and the most commonly used type of language online. It will also be determined using textual observations what word-formation processes, lexical choices, and code-switching cases are involved in the typed CMC language of our respondents.

### **2.3.1 Emergence of Computer–Mediated Communication**

The latter half of the 20<sup>th</sup> century witnessed major advances of technology that paved the way to ingenious inventions and developments. With home computers, cellular phones, and the internet becoming household items, it was but a matter of time before a



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conglomeration of such inventions would result in a new era of distant communication known today as CMC. This section is allocated to

The Bulletin Board Systems (BBSs) are among the first computer software that allowed a considerable number of users to engage in distant communication. BBSs as an early form of CMC first emerged in a period in which the internet was still in infancy stage with an accessibility limited to researchers. So, although these systems appeared in the 1970s, their usage reached a widespread extent only in the 1980s and the 1990s when much of the previously unavailable equipment that allow computer connectivity had become commercialised. In that respect, Driscoll (2022) maintained that BBSs were “built by amateurs using off-the-shelf parts and regular telephone lines,” he then pointed out that “this ‘modem world’ offered an open, grassroots alternative to the closed, institutional networks sponsored by state agencies, research universities, and multinational corporations” (p. 2). Hence, an outgrowth of BBSs ensued with a multimillion user base in the United States alone (Driscoll, 2022).

During the period when BBSs were reaching peak level user bases, new information–sharing system that features CMC was in development. Tim Berners–Lee invented World Wide Web in 1989 and released the source code for the software in 1993. That same year, Mac and Windows produced their own versions of the system, and Mosaic browser had already been released to the public, implying the start of a second phase of the internet. Thanks to the World Wide Web, internet users had access to a broader range of uses which BBSs lack, including information sharing on a global scale, communication through various channels such as email, and research access among other uses. As a result, the total number of internet users by the end of the 20<sup>th</sup> century had exceeded 248 million with the World Wide Web accounting for the largest portion of that growth (W3C).

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The potential of World Wide Web to meet the needs of a larger audience was ever-growing through the turn of the century. As far as CMC was concerned, a substantial number of platforms emerged thanks to the infrastructure and technology of this system, including MySpace (2003), Skype (2003), Facebook (2004), Twitter (2006), and WhatsApp (2009); and most of these platforms, despite being more than a decade old, remain popular today. This wave of new social media development transcended into the second millennium with the launching of similar platforms like Instagram (2010), Viber (2010), Snapchat (2011), and TikTok (2016). According to Statistica (2023), as of the fourth quarter of 2022, the number of monthly active users on Facebook alone neared the 3 billion mark. A significant point to consider is that much of this popularity is owing to the advent of smartphones which allowed users to access the internet at any time. As such, a trend of creating mobile versions for social media followed establishing optimal circumstances for real-time communication. And, with the constant updates to both applications and smartphones, social media is expected to reach 5.85 billion people by 2027 (Statistica, 2023).

### **2.3.2 An Overview of Sociolinguistic Research on Computer-Mediated Communication**

Ever since CMC gained relative popularity, it has received a great deal of attention from linguists interested in examining how language functions in digital contexts, the impact CMC has on language use and language change, as well as linguistic features and patterns in online discourse. This section reviews some of the important sociolinguistic dimensions that scholars investigated over the years in relation to CMC.

In its early stages, linguistic research in CMC aimed to determine the similarity of such communication to spoken or written language; likewise, studies at that period shared a common theme to investigate some structural features like acronyms (e.g., Maynor, 1994;

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Murray, 1990, as cited in Herring et al., 2013). This was somewhat a short-lived period; linguistic work soon shifted towards patterns of interactions in CMC, especially in regards to politeness, gender, and turn-taking (Herring et al, 2013). Similarly, sociolinguistic studies in CMC appeared few years after and tackled language choice and code-switching. Typography and orthography as subsequent concerns of sociolinguistic research were studied in relation to some variables, including gender, regional dialect, and social status (Herring et al, 2013).

As of recent years, and as new media became ubiquitous, a shift of interest in the study of sociolinguistics in CMC has taken place. More to the point, scholars began exploring linguistic practices with critical importance given to context, as opposed to the previous focus on the study of often isolated concepts in media. In this regard, Thurlow and Bell (2009) explored the linguistic and cultural practices of young generations in new media giving the argument that such practices present a challenge to the traditional views of language. In a similar manner, Androutsopoulos (2010) analyzed how social and spatial boundaries are constructed and negotiated through language and linguistic practices. More recently, numerous studies have delved into the matter of language contact in CMC as a result of the cross-cultural communication that social media sparked, exploring in particular code-switching and multilingualism (Herring, et al; 2013, Cutler & Røyneland, 2018; Shoo & Moses 2019; among others). It is worth noting that sociolinguistic research in CMC is a rapidly growing field of study, and this overview covers the more important topics only; a more exhaustive account would take into consideration other trending topics such as online identity and emoticons.

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### 2.3.3 Theories of Computer–Mediated Communication

There are several important theories of CMC, and each theory attempts to explain CMC from a certain angle. Due to the large number of proposed theories, this section considers only four theories that pertain to interpersonal communication.

#### 2.3.3.1 Social Presence Theory

Social Presence Theory is defined by Short et al. (1976) as “the degree of salience of the other person in the interaction and the consequent salience of the interpersonal relationships” (p. 65). This definition suggests that the presence of a person in a conversation is determined by his/her ability to make a difference in the interaction; the relationship among people is accordingly of importance in the outcome of an interaction. Social Presence Theory focuses on the relational cues such as body language and what the lack thereof in CMC does to communication depending on different media (Short et al., 1976, as cited in Schultze, 2019). However, it is important to note that this theory focuses solely on non–verbal channels in new media and, by effect, neglects other important aspects such as linguistic cues.

#### 2.3.3.2 Social Information Processing Theory

Social Information Processing Theory was developed by Walther (1992) in article titled *Interpersonal effects in computer-mediated interaction: A relational perspective*. This theory, in contrast to Social Presence Theory, explains online communication in the absence of non–verbal cues (Walther, 1992). Also, it highlights how people in CMC develop impressions and relationships from accumulated conversations (Walther, 1992). But, despite how it focuses on textual cues, Social Information Processing Theory overlooks an important point: the impact of individual differences in communication style. In other words, Social

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Information Processing Theory does not recognize the importance of the backgrounds of people, which may affect how people interpret and respond to text-based cues.

### **2.3.3.3 Uses and Gratifications Theory**

The Uses and Gratifications Theory is a CMC model that focuses on understanding how and why people choose certain media outlets. According to the Uses and Gratifications Theory, audiences opt for certain media based on personal motivations and receive, in a reciprocal manner, gratifications that fulfil their needs and desires (Egede, 2013). Laswell (1948) proposed four functions of media in society, namely surveillance; correlation; cultural transmission; and entertainment (as cited in Egede, 2013). By way of explanation, different media could fulfil four users' needs, including accessing information, establishing connections of different pieces of information, transmitting the culture from one generation to another, and amusement. The Uses and Gratifications Theory provides useful insights into the 'why' of personal media preferences; nonetheless, one fundamental flaw of this theory is the non-existent recognition of media characteristics (such as personalization and feedback) that contribute to their effectiveness and favourability to audiences. The Uses and Gratifications Theory also neglects interpersonal relationships and treats subjects as individuals, thus it is impractical for CMDA.

### **2.3.3.4 Media Richness Theory**

Media Richness Theory (MRT), like Uses and Gratifications Theory, focuses on media choice and usage in CMC. As such, El-Shinnawy and Markus (1992) based on previous literature held the view that MRT "is concerned with determining the most appropriate communication medium for the task at hand" (p. 92). Similarly, Bergin (2013) has maintained that MRT is applied within organizations to describe communication mediums; the effectiveness of such mediums is then measured to test issues that may result from using

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them such as uncertainty and equivocality of messages. MRT was constructed in 1986 by Daft and Lengel who developed a measuring scale for the richness of media. This scaling system comprehends the following criteria: feedback speed, available visual and auditory cues, message personalization, and variety of language; respectively, these criteria are laid out by Daft et al. as follows: feedback, channel, source, and language (as cited in Bergin, 2013). Daft et al. also suggested that low richness media are more preferable for communicating unequivocal, clear information. By contrast, high richness communication mediums are advisable whenever for delivering more ambiguous messages.

MRT was initially utilized to compare traditional media with the later inclusion of email (El-Shinnawy et al., 1992). With that, the ascription of media choice veered towards social causes such as the symbolic meaning of one medium compared to another in terms of formality and the reactions and attitudes of peers towards certain media. This focus on social learning originated in the Social Influence Model (Bergin, 2013).

Although the scaling system for MRT is often regarded as oversimplified as it accounts for media richness only, this theory acknowledges that different communication channels are better suited for different types of messages and exchanges. Hence, MRT is applied as part of the theoretical framework in this study.

### **2.3.4 Text Messaging**

Text messaging has become one of the main channels of communication in CMC thanks to the many features it provides, like instant delivery, language informality, and the short nature of such messages. Accordingly, this channel constitutes an integral part of social media and CMC, thus it is of importance to define what text messaging is along with some of its characteristics in respect of the Algerian context.

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Text messaging, or texting, is a global method of communication that allows for mobile phone users to send and receive up to 160 character messages (Battestini et al., 2013). Based on the character limitations of the messages, text messaging is marked by a distinct and succinct structure to fulfil intended communicative function/s; this method of communication also combines elements of “both informal spoken and written discourse” (Crystal, 2008, as cited in Berrabah & Benabed, 2021). However, text messaging from this perspective is exclusive to Short Message Service (SMS) which Bodic (2003) regarded as being “very limited” given that “mobile messaging services had great margins for improvement” (p. 8). This improvement gave rise to a new messaging service known as Multimedia Messaging (MMS). In addition to text messaging, MMS allows users to send and receive rich content such as pictures, videos, and audio files. Bodic (2003), in a brief description of MMS emergence, stated that:

The first MMS wave offers basic messaging features to mobile users and a second MMS wave is already appearing. This second wave builds up from basic messaging functions to offer more sophisticated features, from photo messaging to video messaging. In 2003, MMS is still in its infancy and still has to meet the expectations of the mass market. (p. 1)

However, MMS did subsequently meet such expectations. As previously mentioned, the first and second millennia of the 21<sup>st</sup> century witnessed the launch of various messaging applications. And, one shared feature of these software programs is the integration of Instant Messaging (IM) that allows for real-time communication and support multimedia content. Most of IM software are internet-based and could be accessed from digital devices other than smartphones.

SMS and messaging applications revolve around text messaging as one main channel of communication. In this regard, text messaging in Algeria appeared only in 2002 after Djezzy, a mobile phone carrier, was launched granting access for its customers to send SMSes (Berrabah & Benabed, 2021). As for messaging applications, 2001 marks the launching of the

first internet service provider Easy ADSL, which had a change of name to Idoom in 2014. In the concrete, it was not until the latter part of the second millennium that a relatively large percentage of the population had internet access (Privacysield). Competing phone carriers (Mobilis, Djezzy, and Ooredoo) that provide mobile data plans and services with decreased prices meant a wider coverage of internet, an increase in the number of internet users in Algeria, and more access to messaging applications.

### 2.3.5 Features of Text Messaging

The following titles describe the main features of text messaging in regards to the Algerian context. As such, examples are randomly chosen from digital discourse in ADA.

#### 2.3.5.1 Shortenings

In text messaging, shortenings are abbreviated words that save time and screen space. As such, initialisms and acronyms are two forms of shortenings that found their ways to digital Algerian discourse. Regarding French and English, it is common to find the following initialisms and acronyms among many others:

English: ok (oll korrekt), lol (laugh out loud), ty (thank you), hry (how are you), cya (catch you after), wyd (what are you doing), wym (what do you mean).

French: stp/svp (s'il te/vous plait) meaning "please", mdr (mort de rire) meaning laugh out loud, jsp (je sais pas), pc meaning personal computer, nn (non) meaning no.

But, perhaps the most widespread shortenings in Algerian text messaging include reducing single words to fewer letters with the deletion of vowel letters. Reduction of this type occurs chiefly when people code-switch to French and may include reduced forms like nrml (normal/e), bnjr (bonjour), cc (coucou), cv (ça va), nn (non), prq (pourquoi), dmg (dommage). This does not take from the fact that there are many ADA shortenings of this



kind in use such as *slm* (salam, /sala:m/), *hmd* (elhamdulillah, /ʔlhmdllh/), *lbs* (labas /lba:s/), *brk* (bark, /bark/), *knt* (kount, /kunt/).

### 2.3.5.2 Spelling and Numbers

Spelling of different varieties of Arabic has always been idiosyncratic in social media due to the fact that not only did the first batches of computers and phones offer only Latin script, but also because younger generations still use this script today despite how most keyboards offer Arabic script. Therefore, ADA is no exception to these varieties as Algerians employ transliteration with Latin script in their online interactions. In short, transliteration is based on the phonetic representation of sounds of one language through a foreign script. But, since the Latin alphabet cannot accommodate to all Arabic consonants, Algerians chiefly use the following numbers to represent those missing consonants: 2: ء /ʔ/, 3: ع /ʕ/, 6: ط /tʕ/, 7: ح /ħ/, 9: ق /q/. Some excerpts of random transliterated conversations in ADA are provided below:

Bghit nsa9sik 3la l'examen brk psq kayen li rahoum ygolou yti7 bel 7ad hada wkayen li galou bel 7ad ljay. /byi:t nsaqsi:k ʕla lɛgzamɛ̃ bark pa:sk kæjn li rahum jgu:lu jti:ħ bəl lhad hɛða wkɛjn li gɜlu bəl lhad lɜɛj/ (I just wanted to ask you about [the date] of the exam since some are saying it'll take place this Sunday and some said [it'll take place] the next Sunday).

Lyoum rou7t lihoun wgalouli lazem tji nti wtpresenti la carte 3ad bah ymedouhalak. /ljum roħt li:hum wga:luli la:zəm dʒi nti wtɔprizonti la kartə ʕɛd bɛħ jməduhɛlək/ (I went to them today and they told me that you are obliged to go [there] and show them your identity card so that they'll give it to you).

Ki y2adan 6ab6ab 3lih. /ki jʔəðən tʕabtʕab ʕlih/ (knock on his door after adhan).

In the Algerian context, numbers serve another purpose in text messaging as they replace parts of words similar in pronunciation: r1 (rien) meaning nothing, bn8 (bonne nuit) meaning goodnight, 2m1 (demain) meaning tomorrow, mr6 (merci) meaning thanks, b1 (bien) meaning good, 2r1 (de rien) a common reply to thanking.

### 2.3.5.3 Emojis

Emojis are small, colorful graphical symbols that convey feelings, add context, or enhance the meaning of a message. Emojis are standardized across social media and used in daily internet conversations. Consider the following examples of emoji use:

This is so sad 🤔🤔. The laughter emoji in this example is used for sarcastic purposes.

Rani lahya 👩🍳. /rani ləhja/ (I'm busy). In this case, the pan emoji adds to the meaning indicating that the person who is texting is currently cooking.

“Nrou7 na9ra” 🤓. /rani naqra/ (I'm studying). In this example, the nerd face emoji indicates mockery of the quoted text.

### 2.3.6 Types of Computer–Mediated Communication

In the process of exploring the different technologies that mediate interactions among people, early studies on synchronous and asynchronous communication (such as Kern, 1995) focused on analysing from different dimensions how these technologies matched or differed to face-to-face interactions. However, later sociolinguistic research veered from this approach by treating types of CMC as independent from face-to-face interaction.

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### 2.3.6.1 Synchronous Interactions

This section defines synchronous interaction as far as text messaging is concerned. It also illustrates how messenger is designed for synchronous interaction.

O'Rourke and Stickler (2017) have defined synchronous interaction as “dialogic communication that proceeds under conditions of simultaneous presence (co-presence) in a shared communicative space, which may be physical or virtual” (Properties of synchronous communication section, Para. 1). While it is clear that real-time communication is the main focus of synchronous interaction, this definition comprehends text-based conversations which were previously labeled as “quasi-synchronous” by Garcia and Jacobs (1999). From that perspective, this dissertation will distinguish synchronous and asynchronous interactions by means of temporality; therefore, simultaneous presence covers instant text messaging besides the other synchronous methods such as video and audio chatting (Smith et al., 2003, as cited in Lin, 2014).

#### 2.3.6.1.1 Messenger as a Synchronous Interface of Interaction

Messenger is an IM application that was initially developed in 2008 as an integrated Facebook chat. In 2011, Facebook released Messenger as a stand-alone platform which meant that users could access it via installing the Messenger app or by logging into their accounts throughout the web.

Messenger allows users to make video and audio calls, but it is perhaps the text messaging in this app that is the most feature-rich. Messenger as an IM software presents users with three important options that act as determiners for temporality. First, users are able to see other active contacts as well as the last time those contacts used the app. Deactivating the active status in Messenger means that the user's contacts cannot see when s/he is active and vice versa; however, users can still make and receive calls even if this option is turned

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off. Also, Messenger incorporates another feature that allows users to see when they are active with others in the same chat, but active status is a prerequisite for this option to be turned on. Most importantly, messages in Messenger can be set by choice to appear on notification panels and lock screens of phones with sounds and vibrations; likewise, chat heads act as notifications and afford a quicker alternative to reply to messages by not opening the app. All of the abovementioned options, when temporality is considered, render Messenger a more synchronous type of CMC since they grant faster replies to messages at a higher rate.

### **2.3.6.2 Asynchronous Interactions**

Before referring to asynchronous interactions, it is worth mentioning what is meant by interaction. To that end, Simpson and Galbo (1986) described interaction as “behavior in which individuals and groups act upon one another... a continually emerging process, as communication in its most inclusive sense” (as cited in Weggman & McCauley, 2014, The Nature of Social Interactions section, para. 1). Based on this description, interaction refers to the combined endeavours of exchange that occur whenever people come into contact and the course of actions that follow.

Asynchronous interactions in a similar manner refer to those exchanges that do not require immediate response or real-time interaction. Asynchronous interactions have a number of characteristics that mediate digital workplaces, and thus are viewed to be fit for geographically dispersed teams. Synchronous interaction services are perceived as less urgent than synchronous communication services since they do not require immediate responses; this asynchronicity also translates to less distractions as opposed to social media in which users may have to reply to a number of messages. Also, synchronous interactions take a written

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form allowing time for more deliberate communication; these interactions may act as reliable sources for documentation and keeping records.

### **2.3.6.2.2 Emails as an Asynchronous Counterpart to Messenger**

Emails, short for electronic mail, refer to an asynchronous method of exchanging messages by electronic devices. The first email was developed by Ray Tomlinson in 1971; a plethora of emails were launched after, including Gmail; Yahoo! Mail; Outlook; and Zohomail. As opposed to Messenger, Emails lack features of synchronous communication since these services are not intended for IM despite how they are based on a written form; for this reason, emails put up rather additional steps for interaction such as requiring users to write the email/s of the recipient/s for every email to be sent. The absence of IM features in emails is not to be viewed as a flaw for the reason that these services provide an interface for asynchronous interactions, thus less distractions and urgency are a priority to consider in the development of emails. Accordingly, emails serve as the more professional and academic platforms to exchange attached files like assignments and documents thanks to how they were designed. This design also allows users to star or move emails to folders for more organization. And while some emails differ from others in some traits, the common aim of each email service is to provide users with optimal asynchronous interactions. To sum up, the features of Messenger and emails result in different temporality; that is, Messenger is a synchronous type of CMC and email is, by contrast, an asynchronous interaction interface.

## **2.4 Conclusion**

This theoretical chapter has given a review of the main issues to be investigated in the current study. In the first section, some concepts relating to language contact have been defined from different perspectives to establish a comprehensive overview with no ambiguity. This overview has proved that types of CILC comprehend the outcomes of language contact

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but are more extensive. The second section has shed lights on different sectors of CMC, and, in that respect, the titles intersect to a large extent and prove that, through the provided examples, CMC is truly an area of investigation in sociolinguistics.

### **3.1 Introduction**

Chapter three is devoted to the practical side of this dissertation so that the functional framework is outlined to proceed with data collection, analysis, and interpretation. As for the framework, the used methodology and data collection tools are to be described along with the participants which will lay out how data is to be processed through the used instruments. As this chapter is additionally allocated for the discussion of findings; charts, graphs, and tables are also integrated along with interpretations for a better and elaborate display of data.

### **3.2 Methodology**

Given that the study in question is of a comparative nature, the required methodology entails both qualitative and quantitative research tools to attain a methodological triangulation. This study will make use of the questionnaire and interview incorporating both open-ended and close-ended questions as well as content analysis approach to ensure the reliability of the obtained data and to check the frequency of the investigated phenomena. This triangulation will ensure reliable results that go hand in hand with the research questions.

#### **3.2.2 Population Sampling**

For the purpose of generalisation, the questionnaire is only limited by the academic level of respondents given that university students belong to a similar age group. As such, the questionnaire was projected to include a total of 100 third year EFL students selected at random; however, this study proceeds to analyze only the 72 returned questionnaires. Moreover, the interviews were carried out with nine university teachers as to obtain professional views about email usages.

### **3.2.3 Data Collection Tools**

As an attempt to collect data about Messenger and email use, this study employs a separate data collection instrument for each counterpart. Furthermore, the last section of the questionnaire is devoted to collect samples to be analyzed using content analysis.

### **3.2.4 Description and Interpretation of the Questionnaires**

Given the fact that reliability of research is determined by respondents' perspectives and a response rate, an appropriately designed questionnaire is crucial when attempting to accumulate significant data in a cost-effective and time-efficient manner.

Apropos to the preceding points, a semi(quasi)-structured questionnaire was put into operation, consisting of four sorted sections, each containing a specific number of subject-related questions in the form of multiple-choice answers, a dichotomy of two possible replies (yes/no), and a Likert scale pattern of response.

The first section was allocated to measuring students' attitudes towards language use in Messenger; the following part devoted its focus to language alternation among Messenger users; and the aim was targeted at deciphering the messaging features of Messenger.

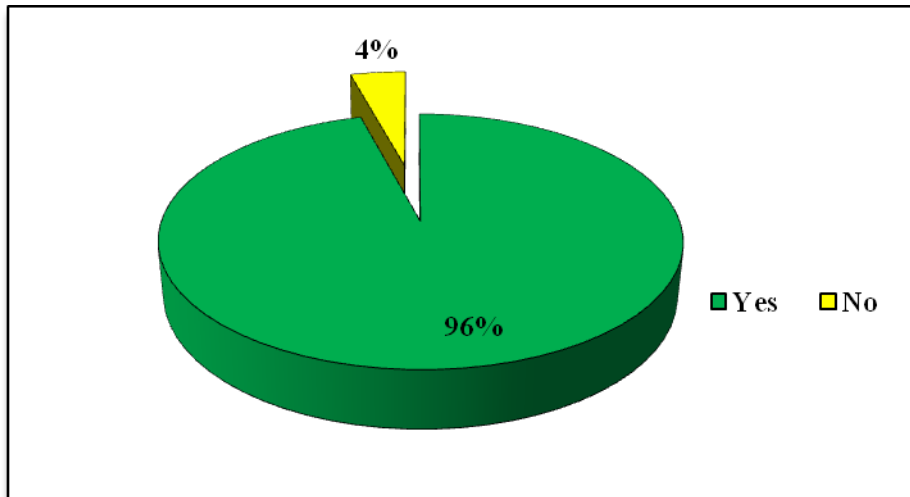
However, unlike the previous sections, the fourth phase was the ultimate and vital part of the questionnaire wherein respondents were asked to present samples of their messages by either writing in the allocated blank spaces or simply attaching screenshots taken from their casual interactions via the medium of Messenger.



**Section One: Attitudes towards Language Use in Messenger**

**Q1** Do you use Messenger?

**Graph 3.1** Respondents' Utilization of Messenger

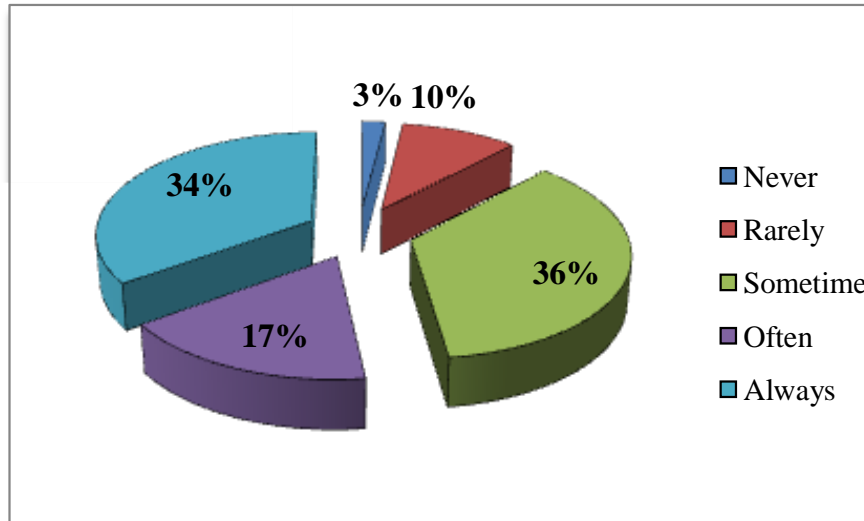


The first item of the questionnaire was meant to assess respondents' preferences towards using or not using Messenger as an electronic means of communication. The results, as graph 3.1 displays, suggest a staggering percentage of 96% (69) for those who tend to use Messenger as a medium of interaction. The genuine explanation for this extraordinary average is tied to the numerous services Messenger provides to its customers, such as rapid information exchange, audiovisual calls, and group conversations; which enable real-time interactions.

Still, the remaining 4% (3) of respondents were at odds with this interface, yet reasons of not putting it into service may vary from person to person. One can suggest that the respective three respondents are not so fond of texting via the intervention of an electronic medium, or they may be familiar with other platforms such as Telegram, Viber, or WhatsApp deranged the same participants from realizing Messenger use.

Q2 How often do you use Messenger to interact with other students?

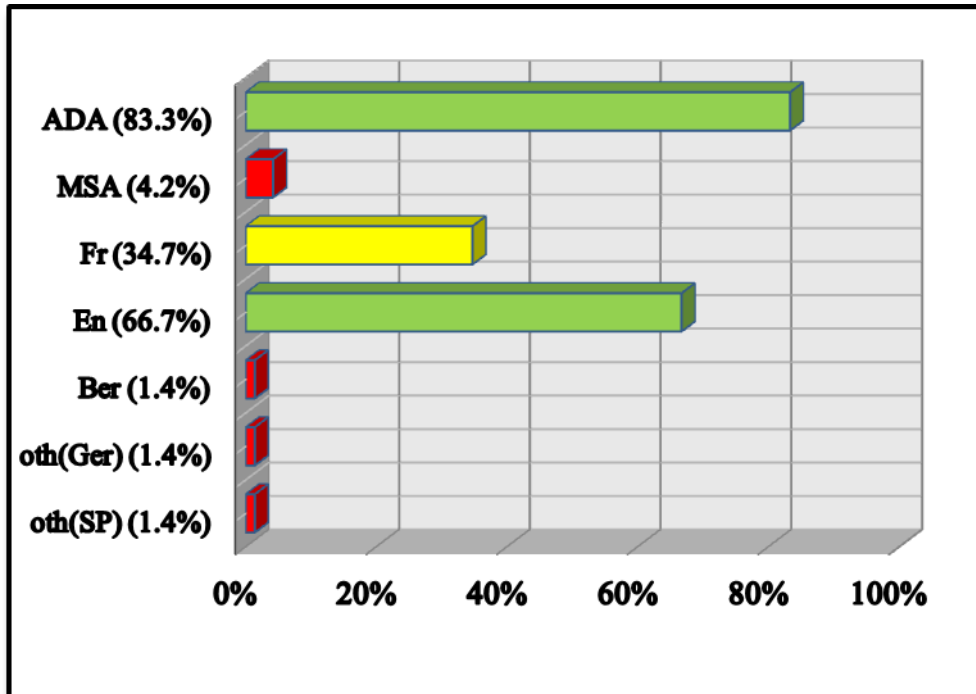
**Graph 3.2** *The Frequency of Messenger Usage*



With reference to graph 3.2, a prevailing proportion of 36% (26) was ascribed to those who selected ‘*sometimes*’ as a response. Following that, a quantum of 34% (25) of respondents qualified their perspective by resolving on ‘*always*’. In a similar vein, although relatively low, 17% (12) of respondents were inclined towards choosing ‘*often*’ as a reply, along with the remaining 10% (7) of them who picked ‘*rarely*’ and, needless to mention, the 3% (2) that opted for ‘*never*’. The frequency of Messenger use for participants may be attributed to the need or desire for interaction with peers and other members of the society. Accordingly, those participants who do not interact via messenger, or rarely do so, may achieve the aforementioned aims by other media such as Instagram, email, phone calls, and face-to-face interactions in addition to other means.

Q3 Which language variety(ies) do you use while interacting via Messenger?

Graph 3.3 The Language Variety(ies) Accounted on During Messenger Interactions



Throughout this portion of the process, respondents were given the possibility of picking more than one option from the proposed language variety(s), as well as the opportunity to recommend other variety(s) they would employ in the middle of their Messenger interactions. As the statistics of graph 3.3 entail, it is proportionally apparent that the largest scale of 83.3% (60) was assigned to 'ADA' as the most commonly used variety, which is not surprising given the fact that it is their mother tongue and the most frequently spoken variety in daily life conversations and casual dialogues. However, since the targeted sample of this research is aimed at students who study English as a specialty, it is not of a great deal to observe through analysis that some of them centred their preference on choosing 'English' as the medium language throughout Messenger discourse, with a remarkable ratio of 66.7% (48). Again, another foreign language is observed within this scheme, which is

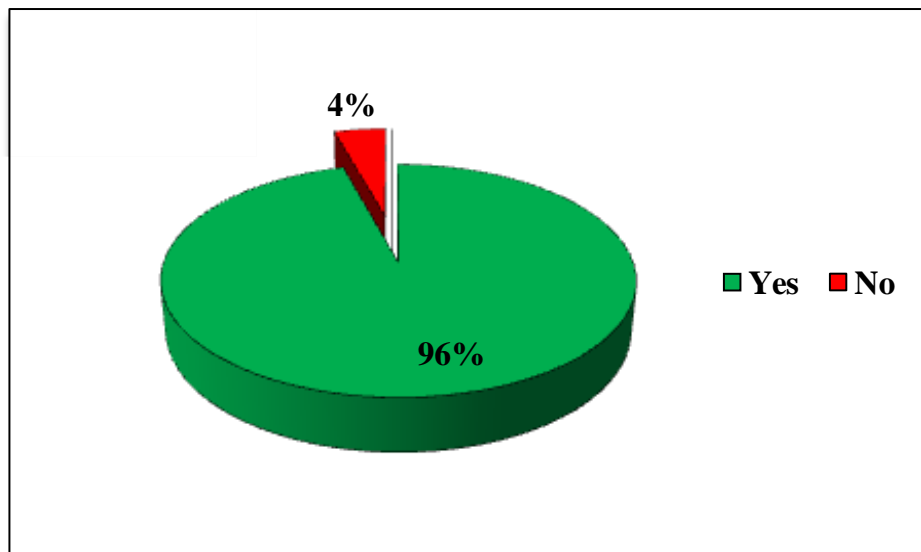
*'French'* that occupies a rate of 34.7% (25) and is, beyond a doubt, the outcome of the reverberating French influence on the linguistic situation of the Algerian speech community.

Differing from the aforementioned quotas, *'MSA'* 4.2% (3) and *'Berber'* 1.4% (1) scored a portion of no more than 5%; perhaps the limited need for both of them could stand for a reason, or the minority of speakers concerning Berber led to this sort of below-average result. Similarly, with a ground-level record, the remaining language variety(s) suggested by respondents took the shape of *'German'* 1.4% (1) and *'Spanish'* 1.4% (1) on the basis of how they were introduced to these languages during high school or possibly being in proximity with these language varieties in an account of the several language contact determinants.

**Section Two: Language Alternation among Respondents in Messenger**

**Q1** Do you switch between languages and language varieties in the course of Messenger interactions?

**Graph 3.4** *Implementing the Use of Code-Switching Within Messenger Interactions*

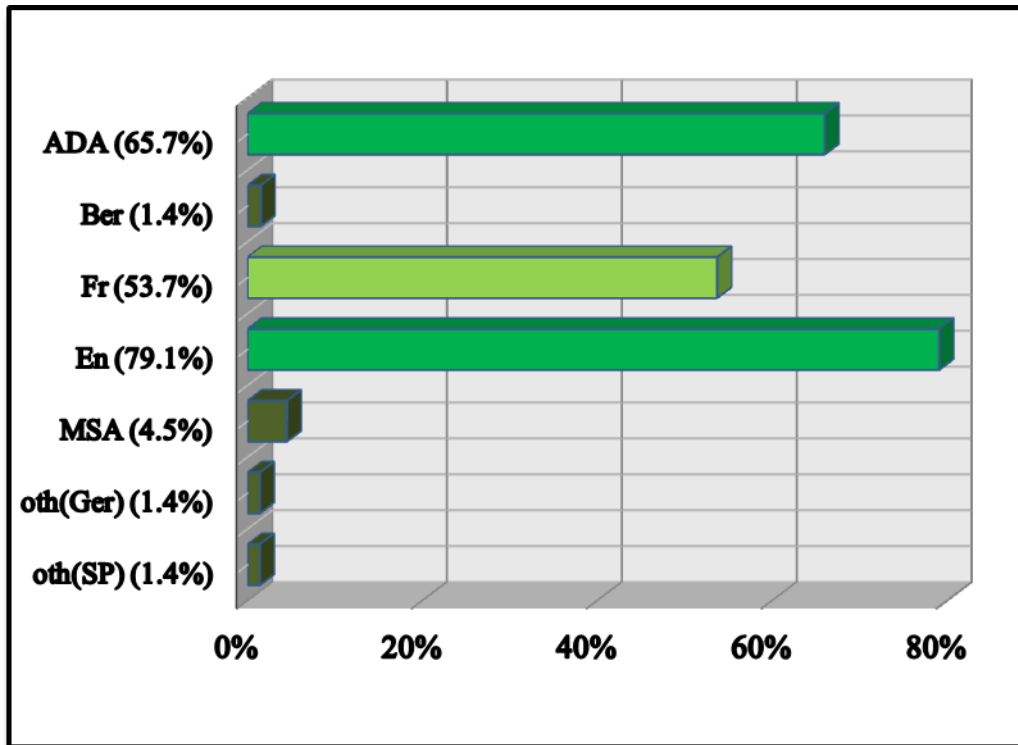


As illustrated in graph 3.4, the greater number of respondents, subjugating an allotment of 93% (67), tends to use more than one language variety during Messenger interactions by virtue of their familiarity with more than one code. Obviously, the report inferred from this average could stand as a confirmation to the case in which language contact infiltrated the Algerian linguistic network.

Nevertheless, the remaining 7% (5) were unaccustomed to this practice of mixing between languages, which might depict their stance of being monolinguals by preference or having a radical inclination against any form of language alternation.

Q2 Which languages do you switch to and from while interacting with other students via Messenger?

**Graph 3.5** *The Language Variety(ies) With the Most Cases of Code-Switching*



The numerical contents of graph 3.5 bear witness to a prominent percentage of 79.1% (53) for ‘English’ as the most code being switched to. One may deduce, as previously stated in the interpretation of graph 3.3, that the targeted sample of students learning English as a specialty places a great deal of emphasis on the variety used in their Messenger interactions. Correspondingly, ‘ADA’ captured the second largest rate of 65.7% (44). One particular rationale for this procedure is that employing ADA is a form of code-switching itself due to the fact that it is a melting-pot with the unique property of verging on more than one language

to the extent of being unable to discern a full conversation without the insertion of words that belong to other languages such as French, Berber, Turkish, and Spanish.

Next in order, *'French'* had an honourable share of 53.7% (36), a score that lays behind the remains of the French colonization campaigns and military occupation over the Algerian citizenship. Afterwards, marginal quotas of 4.5% (3) and 1.4% (1) were assigned to *'MSA'* and *'Berber'*, a paradoxical score that does not reflect their status as Algeria's official and national languages. Similar to the former graph, the proposed languages by respondents, namely *'German'* and *'Spanish'*, had a modest value of 1.4% (1) for each indicating peripheral functions as agents of interaction for an exclusive number of interactants.

**Q3** For what purpose/s do you switch between language varieties in Messenger conversations?

**Table 3.1** *The Motifs Contributing to the Implication of Code-Switching*

<b>Proposed Options</b>	<b>Responses</b>	<b>Percentage%</b>
➤ Address different audiences	18	25%
➤ Attract attention	8	11.1%
➤ Communicate more effectively	41	56.9%
➤ Convey precise meaning	25	34.7%
➤ Express emotions	18	25%
➤ Use as technical terms	15	20.8%
➤ Add comic/funny effect	14	19.4%
➤ Lack of equivalent terms in a language	19	26.4%
➤ Other	0	0%

The overall objective of this inquiry is to identify the motifs behind respondents' adoption of code-switching. This was accomplished by providing them with an assortment of options representing the most common causes that incite an individual to shift between language varieties. As table 3.1 shows, the first among these choices is to '*address different audiences*' with a ratio of 25% (18), denoting the influence of the addressee on how speakers tend to interact with others. Following that, a portion of 11.1% (8) was assigned to those who opted for '*attracting attention*' perhaps as a factor for them to exhibit prestige or reveal their educational background.

In a similar vein, a partial of 56.9% (41), which is a sizeable figure, was ascertained to using code-switching for '*communicating more effectively*' on account of the flow of information exchange with clarity and purpose. Along the same pattern, 34.7% (25) of respondents aligned their aim towards using language alternation on the basis of '*conveying precise meaning*' for a careful, accurate, and comprehensive way of transmitting a message.

The Table also presents a percentage of 25% (18) for respondents who make the practice of shifting back and forth between codes for the sake of '*expressing emotions*' to communicate a psychological state or attitude while 20.8% (15) resort to it for '*technical terms*' that have a particular meaning within a specific field of expertise. Then, 19.4% (14) of them exert this process to '*add comic/funny effect*' for raising the spirits of intimacy in addition to the '*lack of equivalent terms in a language*' that holds a minimum of 26.4% (19) which means that "the target language has no direct equivalent for a word that occurs in the source language" (Baker, 1992, p.20).



**Q4** In which cases or contexts do you feel that you are obliged to switch between languages while interacting with other students via Messenger?

**Table 3.2** *The Appropriate Contexts for Code–Switching*

Proposed Options	RESPONSES	PERCENTAGE%
➤ Topic–specific interactions	22	30.5%
➤ Simplification for other students	22	30.5%
➤ Information sharing/exchanging	34	47.2%
➤ Cases that require specific terms	31	43%
➤ All of the above	1	1.4%
➤ Others: <ul style="list-style-type: none"> <li>• Sharing lessons and projects</li> </ul>	1	1.4%

Following the same paradigm of analysis to the previous section, table 3.2 signifies the number of cases wherein respondents may feel the urge to switch between languages while interacting via the intervention of Messenger. At the initial line, ‘*topic–specific interactions*’ were rated 30.5% (22), at which point respondents are keen enough to draw a line between any casual interaction and a subject–specific one that requires a particular language to be implemented within discourse. Interchangeably with the preceding option, the second choice of ‘*simplification for other students*’ scored a parallel proportion of 30.5% (22) which occurs when respondents seek to reduce the difficulty of grasping a message by their recipients, thus relying upon a simple, conventional code to achieve mutual intelligibility.

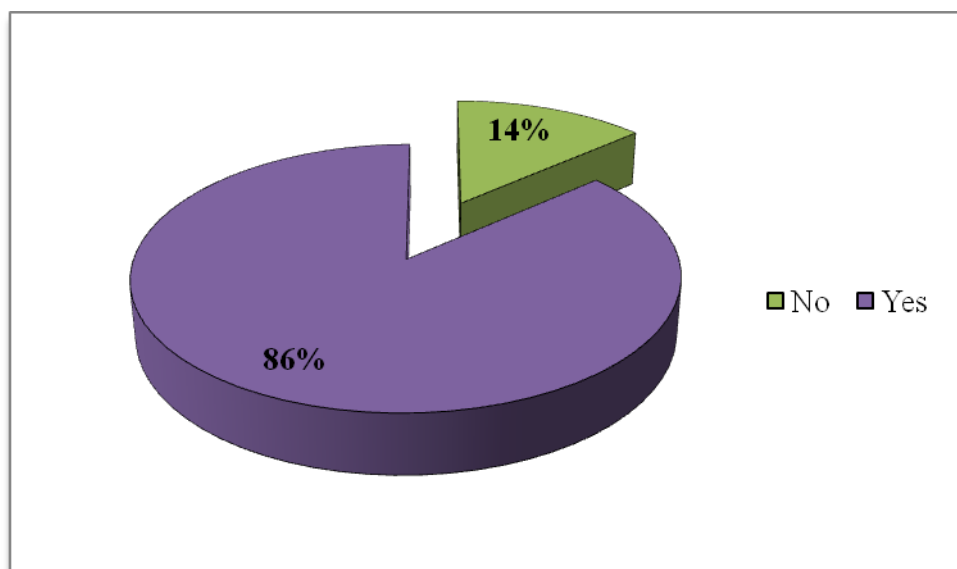
Subsequently, the maximum percentage of 47.2% (34) adhered to the use of code–switching for ‘*information sharing and exchange*’ cases wherein respondents felt dedicated to send and receive data with one another even if it required other languages to be involved during discussions. By the same token, ‘*cases that require specific terms*’ attained the second

largest scale of 43% (31) in a way that some of the respondents might tend to lean on a particular register that is not contained in one language yet included in another one. The proposed options were not the only resort for respondents to engage in the practice of code-switching; thus, another choice was suggested that focuses on ‘*sharing lessons and projects*’ 1.4% (1), or simply ticking ‘*all of the above options*’ 1.4% (1) as long as all of them were observed to be valid cases that prompt an individual to embrace this shifting process.

**Section Three: Messaging Features in Messenger**

**Q1** Do you use shortened words while communicating with other students in Messenger?

**Graph 3.6** *The Use of Shortened Words Within Messenger Interactions*



With short forms used more often than long ones in social media, the primary concern of this part was the inclusion of shortened words and abbreviations by students within Messenger interactions. The outcome of analysis, as graph 3.6 displays, decided a parcel of 86% (62) symbolizing the faction that agreed upon using it, whereas the rest 14% (10) of them declared the opposite.

In rough terms, the bulk of respondents were more partial to involve the use of shortened forms of words while interacting in Messenger, yet the minority of them saw no requisite use for it. So, that translates into a myriad of reasons, which are going to be discussed in the following two questions.

**Q2-3** If yes, why? If no, why not?

**Table 3.3** *Participants' Viewpoints on the Use or Disuse of Shortened Words*

<b>Proposed Options</b>		<b>RESPONSES</b>	<b>PERCENTAGE%</b>
<b>Yes</b>	➤ Easier and quicker to type	53	73.6%
	➤ Appear less formal/more casual	11	15.2%
	➤ Take less screen space	10	13.8%
	➤ Do not know the correct spelling of the shortened word/s	11	15.2%
	➤ Other	0	0%
<b>No</b>	➤ Shortened words are less formal	3	4.1%
	➤ Unfamiliarity with shortened words	1	1.4%
	➤ Others may not understand the shortened words	5	6.9%
	➤ Use of shortened words may affect spelling negatively	4	5.5%
	➤ Other	0	0%

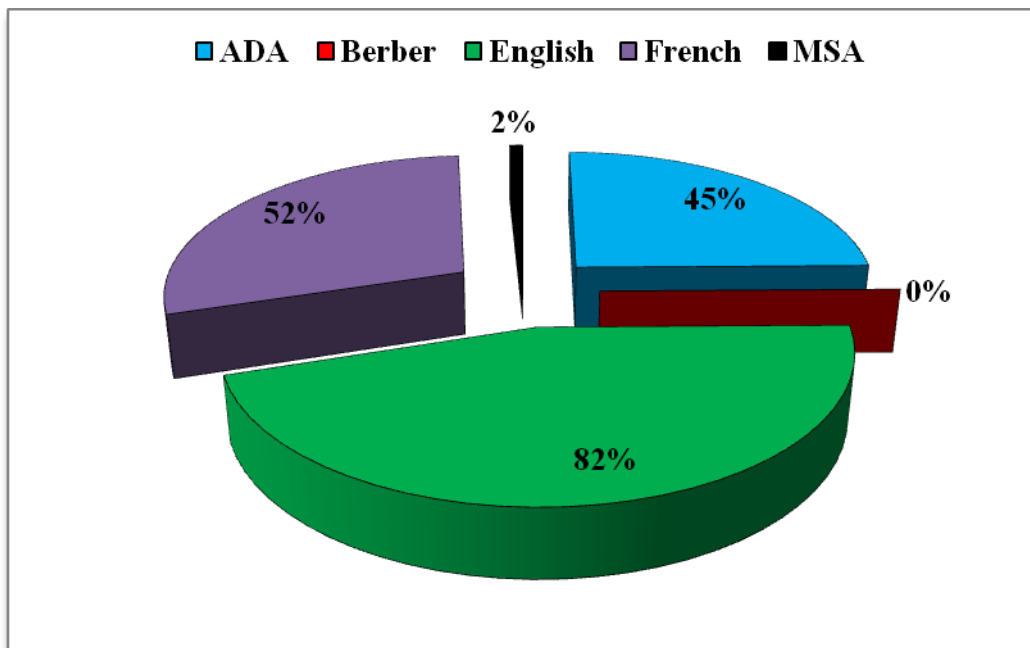
As previously mentioned, questions 2 and 3 scrutinize the motives that bring about the use of shortened words when engaging in Messenger interactions. With reference to table 3.3, about 73% (53) of respondents stated that shortened forms of words are much '*easier and quicker to type*'; that is to say, writing shortened words is less time-consuming and thus more straightforward. Also in percentage terms, 15.2% (11) of them conceived this measure to be '*less formal*', hence allowing for more casual and spontaneous interactions with fellow students in written conversations. Indistinguishably, 13.8% (10) of respondents lined up for the option that shortening words '*takes less screen space*' on the basis of how it reduces letter count to suit smaller or shrunken screen spaces, for smartphones in particular, rather than spelling every single word. As a matter of fact, being '*unfamiliar with the correct spelling of shortened words*' also contemplated a unit of 15.2% (11) for those who might feel perplexed or unacquainted with the exact spelling of the contracted sort of words.

By contrast, the remaining contingent that agreed upon not using it was subject to several determinants. One of these factors, which underlined a score of 4.1% (3), perceived the notion of shortening words to be '*less formal*'. Certainly, shortened words are ascribed with negative connotations since they are partially perceived as a form of slang. Besides, '*unfamiliarity with shortened words*' was the alternate choice out of which 1.4% (1) of respondents expressed their status of being unenlightened about. In a like manner, 6.9% (5) of them had an aversion to this process in the sense of how it minimizes mutual understanding among interlocutors by resolving to the option of '*others may not understand the shortened words*'. At the ultimate stage, an average of 5.5% (4) was attributed to the case in which the '*use of shortened words may affect spelling negatively*'. Indeed, full words that are neither contracted nor abbreviated are considered proper language, yet any form of shortening is

perceived as a negative act of mutilating the morphological properties of those words and, for some, a negative subsequent impact on spelling.

**Q4** Do you shorten words that belong to:

**Graph 3.7** *The Language Variety(ies) With the Average Case of Shortening Words*

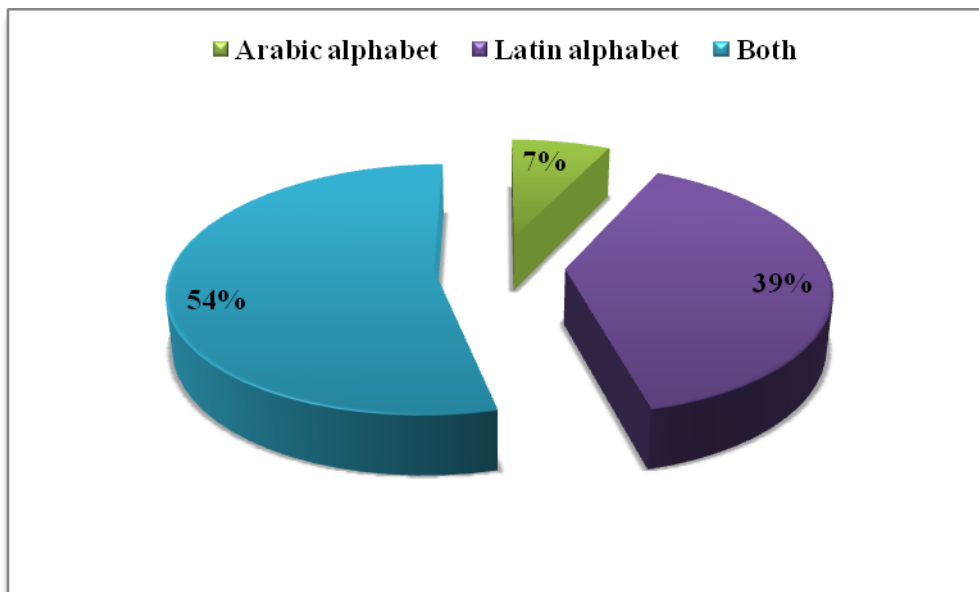


This question endeavours to testify the language varieties that witness the case of shortening words on regular bases. To that end, a varying number of percentages were assembled. As it is laid out in graph 3.7, the tendency for contractions was chiefly disposed towards ‘English’, which attained a peak value of 82% (59), followed by a moderate portion of 52% (37) for ‘French’. In a similar manner, 45% (32) of respondents appointed their standpoint on ‘ADA’. However, ‘MSA’ along with ‘Berber’ were allocated with inadequate averages of 3% (2) and 0% (0) respectively. The answers provided in this graph demonstrate recurrent percentages with graph 3.3; as such, it is safe to assume that respondents only

shorten words in languages that they use in Messenger, and most likely in the ones that they are competent in.

**Q5** Which alphabet/s do you rely on while texting in Messenger?

**Graph 3.8** *The Commonly Used Alphabet(s) Within Messenger Interactions*



Giving consideration to graph 3.8, three contrasting averages could be distinguished: 39% (28) for the ‘*Latin alphabet*’, 7% (5) for the ‘*Arabic alphabet*’, and a neutral decision of 54% (39) for ‘*Both*’. One can deduce that the disparity of respondents’ viewpoints stands on the following assumptions: the system that participants are using does not support Arabic, hence relying on Latin, or they use the Arabic script primarily or exclusively for MSA and prefer to use Latin script for dialects (ADA), therefore switching between both. Or, the constant interference of words from other languages such as French and English does not lead them to switch persistently between keyboards, thus depending solely on Latin script.

**Q6** Why do you prefer to use the Arabic alphabet in Messenger interactions?

**Table 3.4** Respondents in Favour of the Arabic Alphabet

Proposed Options	RESPONSES	PERCENTAGE%
➤ Arabic keyboard is easier to type with	13	18.5%
➤ Arabic alphabet offers letters that lack in Latin alphabet	21	29%
➤ Addressees may not understand Latin alphabet	8	11.1%
➤ Preference to use Arabic alphabet while messaging in Arabic	16	22.3%
➤ Preference to use Arabic alphabet while messaging in different language varieties	6	8.3%
➤ Others	0	0%

The details exhibited in table 3.4 report an array of suggestions that participants may settle on while trying to confirm their preference for the Arabic alphabet. Following the analysis, a portion of 18.5% (13) of respondents certified that ‘*the Arabic keyboard is easier to type with*’ due to the fact that it is the writing system of their mother tongue. Other participants agreed on the point that the Arabic script incorporates a certain number of letters that are missing in the Latin one, including (خ) /x/, (ح) /fi/, (ق) /q/, (ع) /c/, and (ظ), /z<sup>s</sup>/; therefore, selecting the option of ‘*Arabic alphabet offers letters that lack in Latin alphabet*’, which attained a ratio of 29% (21). Also, 11.1% (8) of respondents were determined for the

proposition ‘*addressees may not understand Latin alphabet*’, plainly certifying how the recipient pressurizes them to employ the use of Arabic alphabet exclusively for the sake of maintaining the flow of interaction. Moreover, a quantum of 22.3% (16) was credited to the faction that favoured the ‘*use of Arabic alphabet while messaging in Arabic*’; nevertheless, the other 8.3% (6) of respondents were more partial to using it ‘*while messaging in different language varieties*’.

**Q7** Why do you prefer to use the Latin alphabet in Messenger interactions?

**Table 3.5** Respondents in Favour of the Latin alphabet

<b>Proposed Options</b>	<b>RESPONSES</b>	<b>PERCENTAGE%</b>
➤ Latin keyboard is easier to type with	41	56.9%
➤ Latin alphabet is convenient for interactions related to academia	19	26.3%
➤ Type many language varieties using Latin alphabet	35	48.6%
➤ Latin alphabet is more preferable to use with others	23	31.9%
➤ Others	0	0%

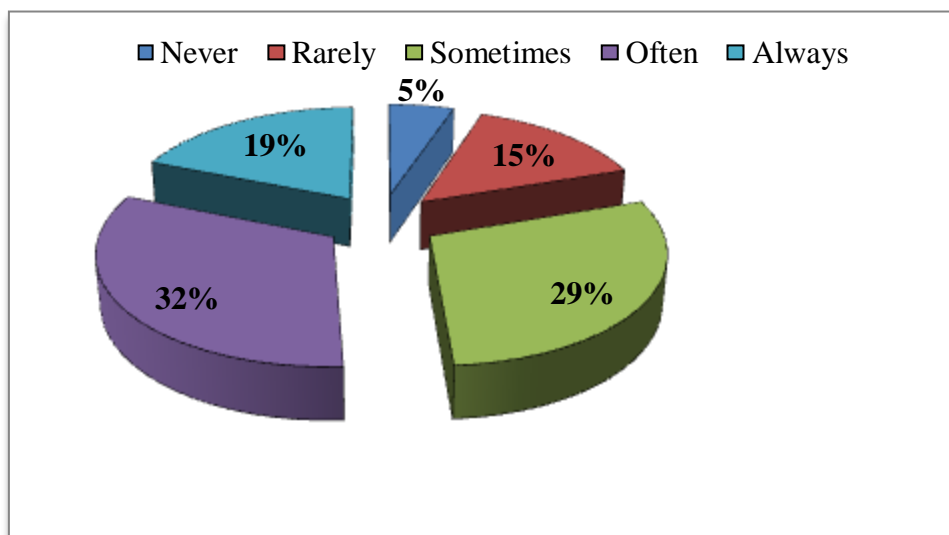
Following the same methodology, this item, in opposition to the previous one, sustains the contingent that revealed its preference for using the Latin alphabet. Table 3.5 illustrates that the vast majority of respondents, occupying a notable scale of 56.9% (41), considered the ‘*Latin keyboard as easy to type with*’ which is probably drawn on the fact that it facilitates



access to a large number of letters that sound equivalent to those in respondents’ mother tongue. Following that, an average of 26.3% (19) of participants picked the option which proclaims that the *‘Latin alphabet is convenient for interactions related to academia’*. Of course, whether it is math, biology, or Western literature, Latin is the key medium as long as it has a legitimate reputation for academic heritage. The other part, covering a reasonable share of 48.6% (35), perceived the Latin system of writing as one that offers respondents’ the potentials to *‘type many language varieties’*. One excuse for this claim is that most of the respondents are inclined towards implementing the use of Latin script when communicating in a foreign language (Latin alphabet), Berber (Berber Latin alphabet), and Arabic in what is recognized as transliteration. In due course, a moderate value of 31.9% (23) symbolized those who went for the suggestion that affirm *‘Latin alphabet is more preferable to use with others’*.

**Q8** How often do you write messages in one language or language variety using letters of another language in Messenger?

**Graph 3.9** Scale of Transliteration Usage



During this part of the survey, the focus was aligned to examine the frequency of employing transliteration as an approach of representing or spelling a language using the

characters of another one within Messenger interactions. Apropos of graph 3.9, an eminent average of 32% (23) represented those who selected ‘often’, followed by ‘sometimes’, which met the requirements of about 29% (21) of respondents. Meanwhile, the option of ‘always’ matched approximately 19% (13) of them, alongside the 15% (11) who went for ‘rarely’ as a response, and the remaining 5% (4) that appointed ‘never’.

**Q9** If you do, why?

**Table 3.6** *Pro–Transliteration Participants*

<b>Suggested Replies</b>	<b>RESPONSES</b>	<b>PERCENTAGE%</b>
➤ It is easier and/or faster to type using certain alphabet/s	45	62.5%
➤ The used alphabet adds emphasis to messages	9	12.5%
➤ The used alphabet is well displayed and organized on screen	18	25%
➤ Replicate sounds of words that are difficult to write	15	20.8%
➤ Address different audiences	12	16.6%
➤ Others	0	0%

The statistical representation of table 3.6 visualizes an inventory of objectives that ratifies the usage of transliteration by participants. Amidst the course of analysis, around 62.5% (45) asserted the proposal of ‘*it is easier and/or faster to type using certain*

*alphabet/s*'. By means of illustration, some Messenger users prefer transliteration given that they are conversant with one alphabet more than the other; accordingly, certain native Berber speakers have a firm propensity of using Latin alphabet because it appears to be less challenging in contrast with the Arabic one.

Also, an approximate unit of 12.5% (9) answered that '*the used alphabet adds emphasis to messages*' accompanied by an aggregate of 25% (18) for those who alternatively went for '*the used alphabet is well displayed and organized on screen*'. When discussing typography, the Arabic alphabet seems to have a clear, legible, and more visually appealing font format compared to that of Latin; however, this did not grant it the merit to be extensively used, conforming to what was elaborated in graph 3.8. Following that, a total of 20.8% (15) stood for the coalition that privileged the choice of '*replicating the sounds of words that are difficult to write*', consequently implying that some of them are not proficient enough in spelling words, therefore assuming to adopt a different writing system that accommodates or simulates words' original sounds for the welfare of importing a message.

Next in order, around 16.6% (12) of participants decided on the option that stipulates '*address different audiences*'. Thus, in respect to the sample being inquired, it is professional to implement the Latin script when interacting with colleagues or teachers, particularly in those that involve the use of the English language.

Q10 If you do not, why not?

Table 3.7 *Anti-Transliteration Participants*

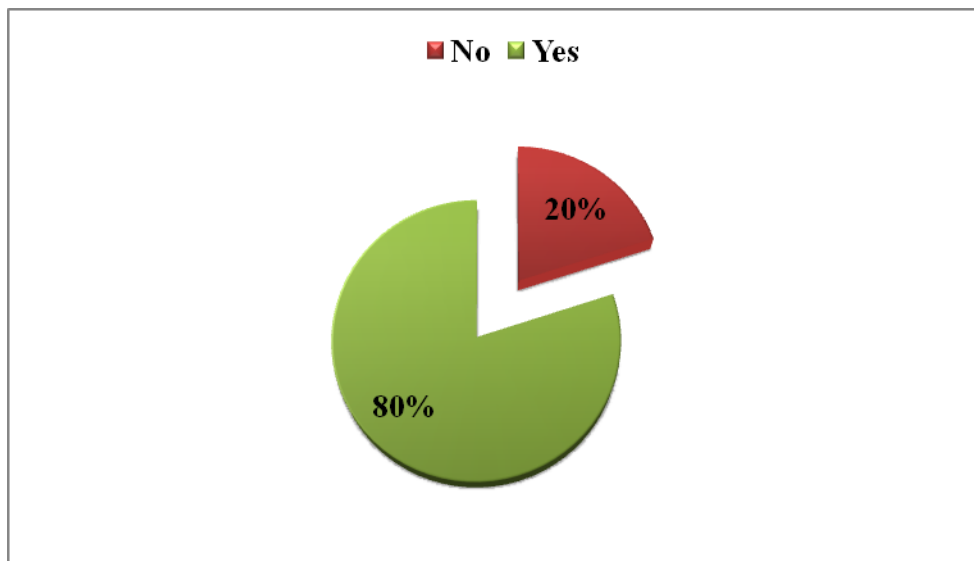
The Suggested Replies	RESPONSES	PERCENTAGE%
➤ Writing a language variety using another alphabet can be challenging for certain addressees to understand	2	2.8%
➤ It is less formal and authentic than using the original alphabet	3	4.2%
➤ There is no need for writing this way	4	5.6%
➤ Meaning of message may be lost or misunderstood	1	1.4%
➤ Others <ul style="list-style-type: none"> <li>• I don't use Arabic in Messenger</li> </ul>	1	1.4%

Table 3.7 shows a minor number of responses, indicating that the fewest of participants are inattentive when it comes to the notion of transliteration. Some of them, estimated at around 2.8% (2), certified that *'writing a language variety using another alphabet can be challenging for certain addressees to understand'*. Once more, the role of the recipient is indispensable within conversations constraining the sender to weigh the alphabet he or she is using before getting the message delivered. The same could be said about the faction that proclaimed *'it is less formal and authentic than using the original alphabet'* which dominated a unit of 4.2% (3) overall.

Nearest in position, an assertive quantum of 5.6% (4) evinced that ‘*there is no need for writing this way*’ while 1.4% (1) was targeted at the proposal that attests ‘*meaning of message may be lost or misunderstood*’ together with an extra suggestion offered by one of the respondents claiming “*I don’t use Arabic in Messenger*”. Certainly, there is no one–size–fits–all interpretation for these answers, but it could be synopsised that the degree of formality, authenticity, and understanding are the key aspects, which participants are concerned about the most.

**Q11** Do you use emoticons in your Messenger conversations with other students?

**Graph 3.10** *The Insertion of Emoticons Within Messenger Interactions*



Generally, displaying sentiments or emotional states is one of the features of Messenger that assumes the form of emoticons which employs the use of letters, punctuation marks, and numbers to create icons. A noteworthy percentage measure of 80% (58) encapsulated those who determined their use of these pictographs, as graph 3.10 displays, whereas the remaining 20% (14) of them were unsettled about it.

**Q12-13** Why do you use emoticons in such cases? If no, why not?

**Table 3.8** *Pros and Cons of Emoticons*

<b>Proposed Options</b>		<b>RESPONSES</b>	<b>PERCENTAGE%</b>
<b>Yes</b>	➤ Add emotional context (mood of message)	39	54.1%
	➤ Avoid misunderstandings	17	23.6%
	➤ Enhance social connections	14	19.4%
	➤ Express needs or physical states	19	26.3%
	➤ Add humour	20	27.8%
	➤ Display facial expressions, tone of voice, and human gestures	20	27.8%
	➤ Others	0	0%
<b>No</b>	➤ Appear more professional/academic	10	13.8%
	➤ Unfamiliar with emoticons use	5	6.9%
	➤ Lack of familiarity with others	11	15.2%
	➤ Emoticons sometimes mislead	5	6.9%
	➤ Other	0	0%

As per table 3.8, most of the responses, which scored an average of 54.1% (39), were substantially aimed at the purpose of ‘*adding emotional context*’ as a framework to describe what occurs around a person using virtual characters (emoticons). Following the same sequence, a certain average of 23.6% (17) was associated with those who opted for ‘*avoid misunderstandings*’, perhaps as an option to circumvent any sort of breakdowns or unclear messages when interacting with the targeted recipients. However, the other 19.4% (14) of them were more biased towards using it by virtue of ‘*enhancing social connections*’. In a similar fashion, a sum of 26.3% (19) agreed upon implementing the use of emoticons in contemplation of ‘*expressing needs or physical states*’; while, ‘*adding humour*’ scored, equivalently with ‘*displaying facial expressions*’, a portion of 27.8% (20).

Per contra, the subject matter of professionalism interrupted around 13.8% (10) of participants from realizing the use of emoticons as a tribute to ‘*appear more professional/academic*’. Still, the notion of emoticons is completely foreign to 6.9% (5) of respondents, hence resolving on the line that states ‘*unfamiliarity with emoticons use*’. Likewise, the results suggest an accumulation of 15.2% (11) portraying those who appointed their viewpoint on the idea of ‘*lack of familiarity with others*’ along with the remaining 6.9% (5) of them who proclaimed that emoticons, in some cases, carry a sense of deception, therefore they felt sceptical about it by deciding on the answer of ‘*emoticons sometimes mislead*’.

### **3.2.5 Description and Interpretation of the Interviews**

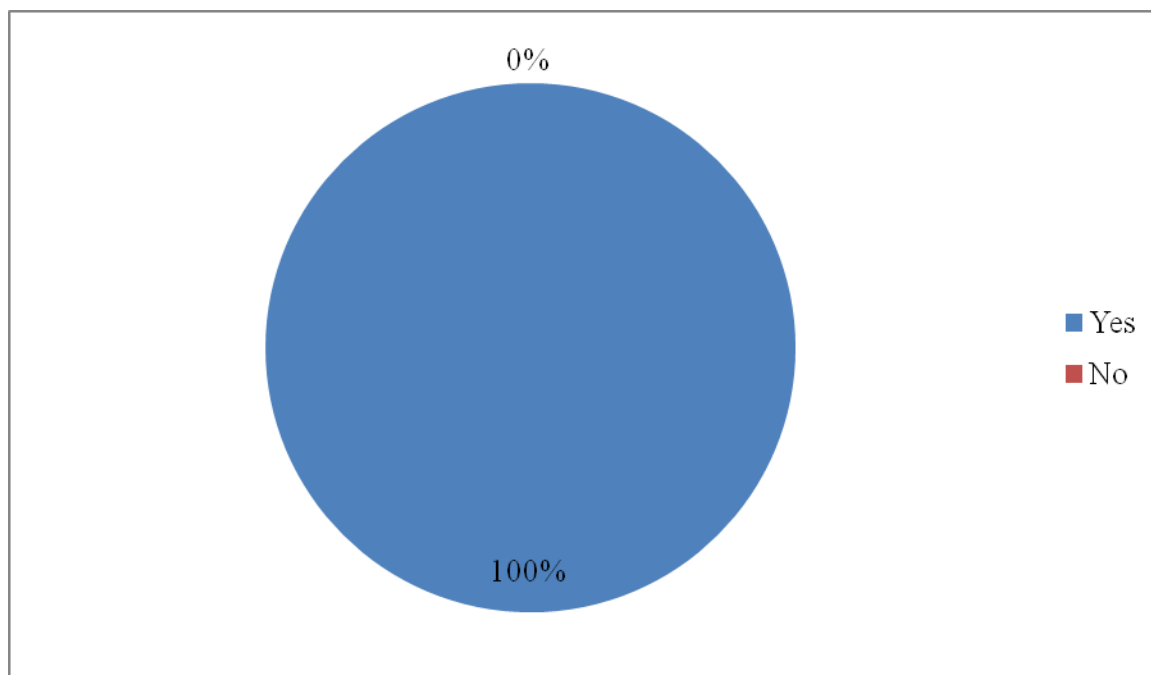
The interview was designed to seek answers from university teachers as it offered a method of data collection for email use vis-à-vis students. To that end, this interview is designed to be semi-structured as to incorporate both close-ended and open-ended questions that are relatively comparable to those of the questionnaire and thus lay the groundwork to

draw out similarities and differences between the two counterparts. As for the incorporated informants, the interview was projected to include ten teachers at the English department of Ibn Khaldoun University to obtain reliable corpus as well as professional views in regards to observable email changes. However, it is worth mentioning that the sampling is one informant short and the discussion below is based upon the answers of nine informants.

Referring back to the structure of the interview, a set of nine questions were asked to the interviewees including five close-ended questions among which one required clarifying the chosen answer. The remaining three open-ended questions were designed as such to allow informants to proclaim and expand upon their choices with no restraints. The last question was simply a request for email samples to include in the content analysis.

**Q1** Do you use email as a medium of interaction?

**Graph 3.11** *Use of Email Among Informants*

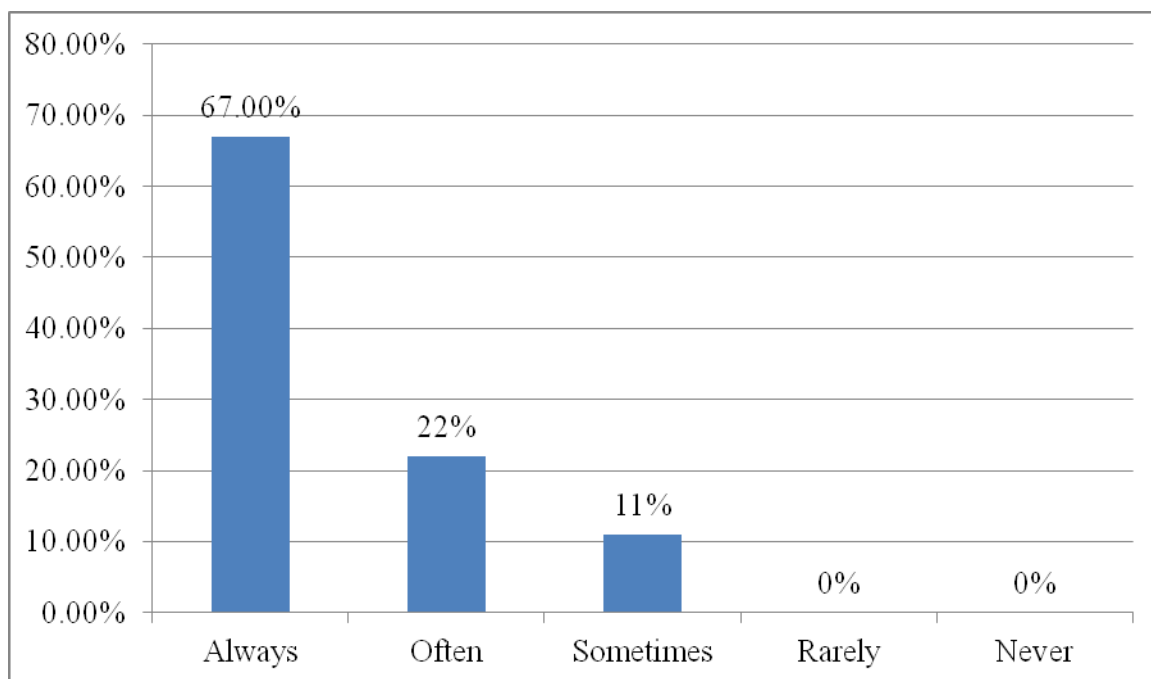




The purpose behind this question is to check whether the informants use email to either continue or terminate the interview with said informants. Graph 3.11 shows that all nine informants (100%) do in fact use email to interact. This is mainly due to the fact that university teachers, who are the informants of this interview, are generally well versed in email use. This question sets up a ground for all subsequent questions including those that specify addressees of informants’ emails.

**Q2** If yes, how often do you use email to interact with students?

**Graph 3.12** *Frequency of Email Use With Students*

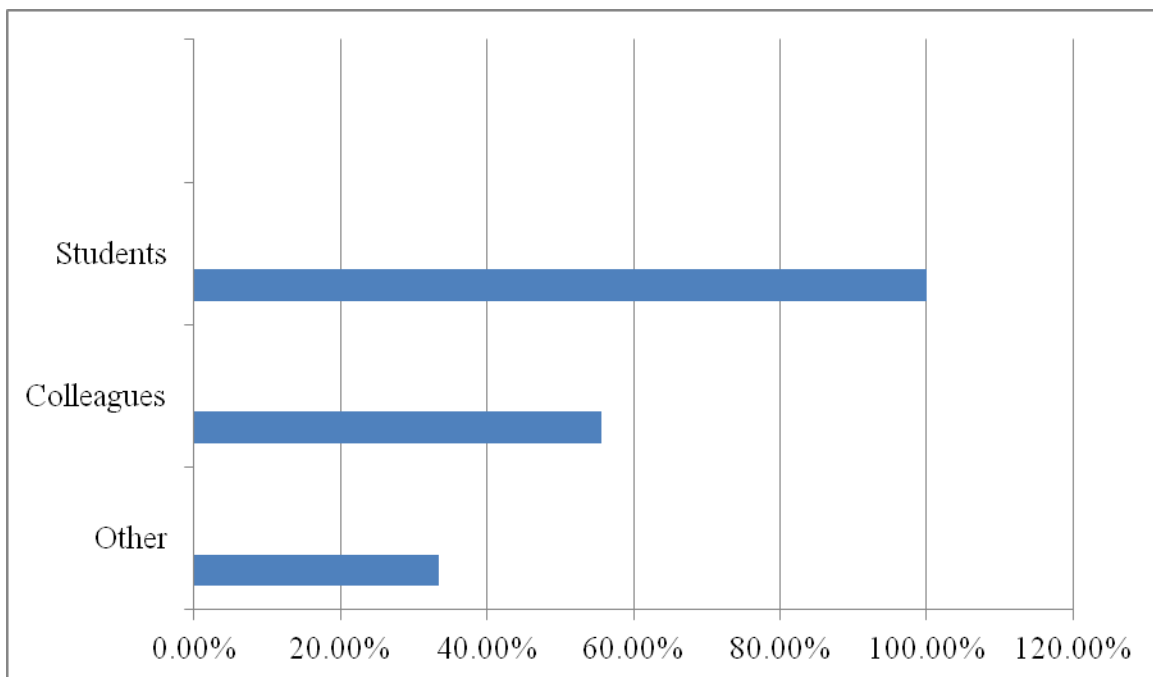


This question aims at checking the extent to which teachers use email to interact with the target population of this study (EFL students). Graph 3.12 shows that all informants use email with students given that none opted for ‘never’ or even ‘rarely’. In fact, 67% of the total responses included ‘always’ followed by 22% for ‘often’ and a mere 11%, or one response, for ‘sometimes’. The frequency at which teacher-to-student email interactions happen is

mainly attributed to and determined by email use in academic contexts to send lessons, receive assignments, and guide supervisees among a myriad of other activities.

**Q3** With whom do you generally exchange emails?

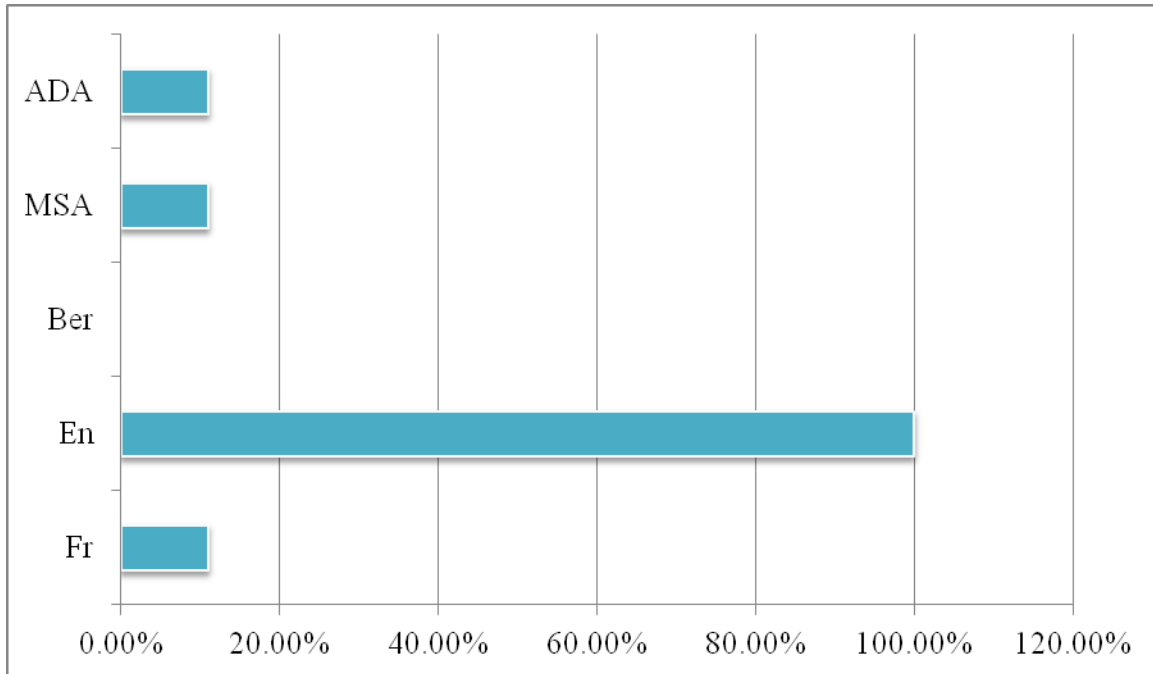
**Graph 3.13** *Email Exchanges Relative to Addressees*



As displayed in graph 3.13, all nine informants (100%) exchange emails with students while four of them do so only with students; the other five informants (55%) mentioned that they also exchange emails with colleagues and other teachers. Three of the five informants (33%) collectively exchange emails with the following co-participants: friends, researchers, and companies. Taking into account the occupation of the interviewees and the professional design of emails, it is obvious that emails in such cases reflect academic purposes more than anything. Likewise, this question further authenticates the frequency at which teacher-to-student interactions occur through email. More importantly, this identification is crucial for the simple reason that subsequent questions may vary in responses depending on this variable.

**Q4** Which language varieties do you use to interact with students through emails?

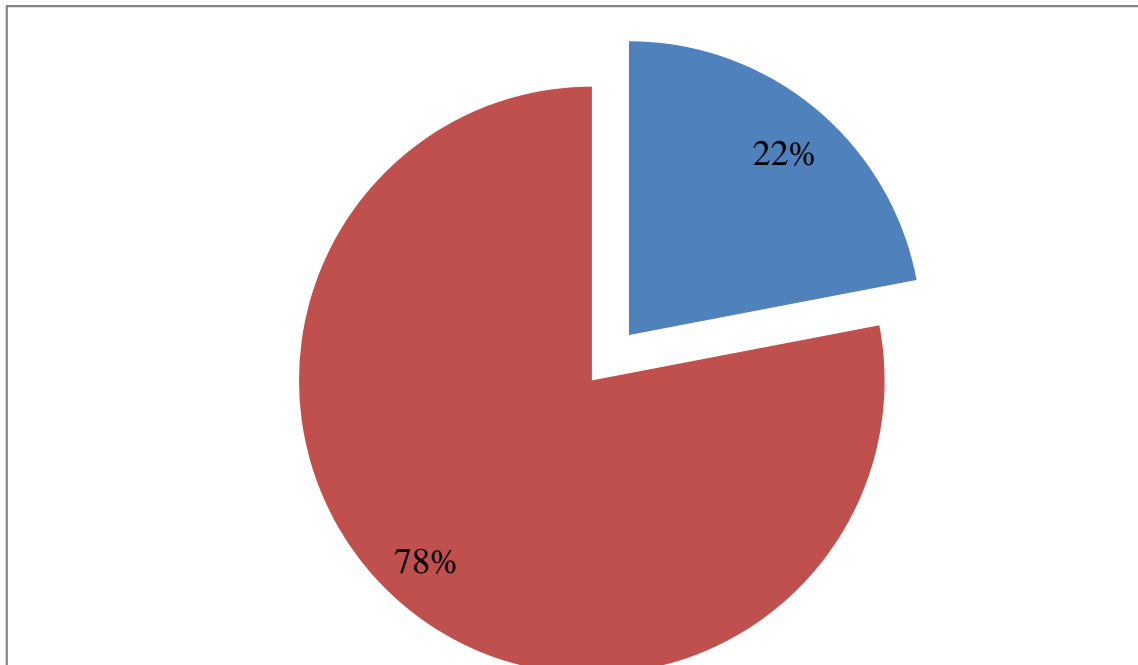
**Graph 3.14** *Used Language Variety(ies) With Students in Email*



The main concern of this question is to determine the more predominant language varieties in email interactions. On that account, ‘*English*’ was selected by all nine informants with a singular 100% rate as can be observed in graph 3.14. This predominant use of English with students is further cemented by the fact that the 11% rates for ‘*ADA*’, ‘*MSA*’, and ‘*French*’ are accredited to one informant only. As for ‘*Berber*’, none of the informants selected it and thus the 0% rate. The most plausible interpretation for such rate difference is one that is dependent on the preceding question and which entails that informants are more likely to interact through email employing what they consider to be formal; language use is also restricted by the same virtue.

**Q5** Do you switch between codes in your email interactions?

**Graph 3.15** *Code-Switching in Email Interactions*



Given the comparative nature of the study, this question attempts to seek responses related to language contact which are to be compared with the obtained data relative to Messenger. As such, it is clear from graph 3.15 that the majority of informants (78%) do not alternate between codes in their general email interactions while 22% do so. However, by recalling question 3, this rate is not necessarily indicative of code-switching between teachers and students; the following question reveals rather general reasons that could not be applicable to students only.

Q6 Why or why not?

**Table 3.9** *Reasons Behind Switching (or not) Between Codes*

	Provided answers	Percentage
Why?	➤ Informant does not know words in first language or forget them while writing	50%
	➤ Sometimes one code does not make ideas clear	50%
Why not?	➤ Formality of emails	28.5%
	➤ Importance of using English/one language only	28.5%
	➤ Recipients are English speakers	14%
	➤ To indirectly teach students about academic English and how to formally write an email	28.5%

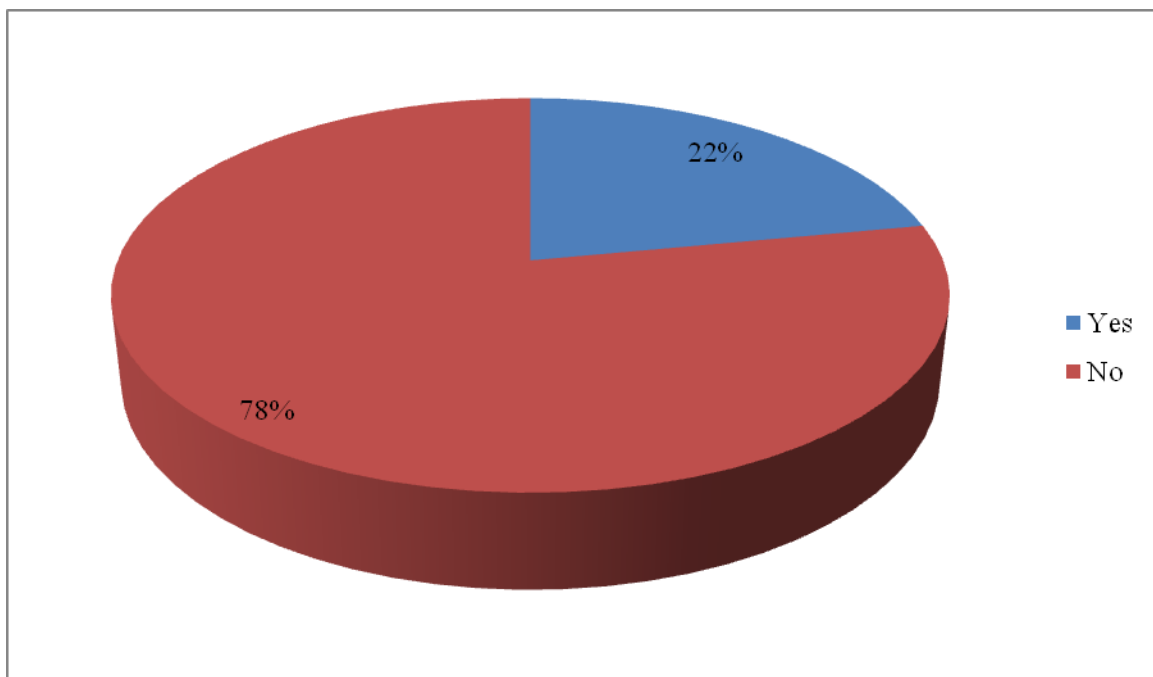
As for the reasons that account for the informants' choices to either switch or not between codes, rates are calculated according to the previous question so that: two informants (or 22%) account for both of the provided answers for 'why' while the remaining seven informants (78%) represent the whole percentage (100%) of 'why not'. It is also worth pointing out that informants were not provided with choices; hence the answers were grouped together since they have the same meaning. As for the two informants who switch between codes in email interactions, table 3.9 shows that one of them ascribes their alternation between codes to 'not knowing or forgetting' words in the first language which could be

interpreted in a number of ways depending on the context. The other informant referred by “*sometimes one code does not make ideas clear*” to linguistic ambiguity as the reason behind their code-switching.

Informants who do not alternate between codes provided four main reasons. Two of them (28.5%) held the view that code-switching should not be found in email interactions as it decreases formality. Similarly, two other informants (28.5%) emphasised the importance of using one language only to interact through email. One informant (14%) did not feel the need to switch between codes since their recipients were all English speakers. And, the remaining two informants (28.5%) wanted to use email to teach their students about academic English and correct email writing.

**Q7** Do you incorporate shortened forms of words in your email interactions with students? If yes, why do you do so? If no, why not?

**Graph 3.16** Use of Shortened Words in Email Interactions With Students



Graph 3.16 displays a recurring case similar to question 5 in the sense that three out of the total nine informants use shortened forms in email while only two informants (22%) do so with students. Accordingly, when asked about their reasons, five informants referred to the issue of formality related to the shortened forms of words. One informant mentioned that they rarely need shortened words and another interviewee believed that spelling for students may be affected negatively. Informants who prefer to use shortened forms provided reasons related to mutual understanding and time management but did not specify whether the case remains if the addressees are students. It is obvious from this graph that interviewees regard email as a more formal platform and treat the addressees therein with accordance, which not only explains the choice of using email rather than other social media, but also provides a justification for refraining from shortened forms of words.

**Q8** Do you think that language use in emails has changed over the last decade in terms of form and content? How?

**Table 3.10** *Language Change in Email Over the Last Decade*

Choices	Number	Percentage	Provided Answers
Yes	9	100%	<p>So many vernacular forms, short forms, and new words and expressions have been introduced in email language.</p> <p>New concepts have come to existence and put new exigencies on language and foreign language users.</p> <p>It has changed in terms of form, content and vocabulary. Emails used to have the standard form that starts with “Dear Sir/ Madame” and ends with “yours faithfully” or “best regards”, signed up by the sender's name. Now no need for this since everything is mentioned in the email address, and we usually address someone we know.</p> <p>Emails from students used to be very formal; however, a lot of students nowadays use dialects (ADA), and other language varieties with no regard to formalities.</p>

			It depends on the teacher and how he manages the language used between him/her and his/her students.
			Depending on the context or purposes and whether they are formal or informal.
			If you are a teacher and you contact your students, you should be formal. If you are a student and you want to talk to your teacher, you have to avoid shortened forms. So, it depends on the context and its elements (addressee for instance).
			Previously, many people used the latin letters to write Arabic sentences. Now, with the smartphones keyboards, they are using Arabic letters.
			People in general, not only students, want to summarize everything in just few words. One could understand here that they focus more on the sense rather than the language. They completely forget about the linguistic rules.
No	0	0%	

The last question of the interview aimed to obtain the views of informants regarding language change. Table 3.10 reveals that all nine informants (100%) do think that language change has occurred over the last decade; however, their views differ in explaining how so. Two informants believed that new vernacular and short forms, concepts, and words have been introduced over the last decade that may change how people generally interact through emails. One informant mentioned that the change has occurred in regards to form, content and vocabulary; there is no need for formalities either since email addresses nowadays contain information that identify the sender. Another informant also referred to the lack of formalities in addition to the informal use of dialects such as ADA, and other language varieties besides English, among EFL students.

Other informants tackled rather different dimensions as three interviewees respectively tracked the change to context and purposes of emails, specifically in respect to teacher–student relationship and the constraints imposed thereof. That is, the formality degree of an email is a pivotal factor that dictates changes so that the rate at which changes in form and



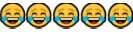

content increases whenever emails are less formal. On a different note, the last two views referred respectively to how transliteration is less common as smartphones offer different keyboards and the decreasing size of email with no respect to linguistic rules.

### **3.2.6 Content Analysis Approach**

As an attempt to calculate the frequencies at which the investigated phenomena occur, this dissertation employs one final approach known as content analysis. This approach is to be used to delve into email and Messenger samples that were provided by participants for a comprehensive analysis; the latter ensures obtaining preferable data and validates the rates that were gathered from the participants in the previous sections.

To achieve a more exhaustive analysis of the samples, ten examples from each of the previous tools are to be separately analyzed through five main rubrics, namely language varieties, code-switching, transliteration, shortened words, and emoticons. Furthermore, this part may recall to the answers provided by respondents, as students, and informants, as experts, to interpret the data in a correct and more objective manner.

**Table 3.11** Analysis of Provided Messenger Samples

Examples	Word count	Language varieties					Code-switching	Transliteration	Shortened words	Emoticons
		ADA	MSA	Ber	En	Fr				
<p><b>E.g. 1:</b> Zaema tae esp ydirlna test mercredi? / Oui je pense ydirlna / Winta nbdaw revision / Men ghdwa psq mab9a welo / Ouah ana Dok nwli le matin w le soir nrevisi nchllh / B wech nbdaw / ESP since test mercredi / Bonne idée</p> <p>/ zɛma: nta:ʕ/ / jdirlna:/ / jdirlna:/ / winta: nbdaw/ / men ydwa/ / ma: bqa: wa:lu/ /wa:h ʔna: dwk nwlj/ /nrjʃzj nʃa:lh/ / bwa:ʃ nbdaw/</p>	38	19/ 50%	0	0	4/ 10%	15/ 40%	7/ 18% ADA/En 2/ 3% ADA/Fr 5/ 13% Fr/En 1/ 2%	Latin 19/ 50%	3/ 8% En 2/ 5% Fr 1/ 3%	0
<p><b>E.g. 2:</b> Cha esp / Nrmlm rslth yak / Galna diro assignment lyoum deadline / W mrvisit Walo fi ling / Li dernah f classa / Hata lsbah kchma nfhm / Dhli fel classroom dok tsibi dirih khrilh</p> <p>/ ʃta:/ /rslth ja:k/ /ga:llna: diru/ /ljum/ /wma: rifizit wa:lu fi/ / li drna:h fa:lkla:sa/ /hta lsba:h kʃma: nefham/ /du:k tsibi:h diri:h xrilh/</p>	30	22/ 73%	0	0	5/ 17%	3/ 10%	8/ 27% ADA/En 5/ 17% ADA/Fr 3/ 10%	Latin 22/ 73%	3/ 10%En 2/ 7% Fr 1/ 3%	0
<p><b>E.g. 3:</b>  ويلي رقيدي وديريه رافاي افون و غنية تصرع  /wlj rqdj wdjrjh ra:fa:j ʔfwn w ʔnja tsʕʕ/</p> <p></p> <p>باہ تصرعني ختي في بلاصتي؟  /ba:h tsʕʕnj xtj ʃj bla:sʕtj/</p> <p>صباح الخير </p> <p>/sʕba:h ʔlxjr/</p> <p>صباح نور بب راكي جاية  /sʕba:h nwr bb ra:kj dʒa:j/</p>	22	18/ 82%	0	0	2/ 9%	2/ 9%	4/ 18% ADA/En 2/ 9% ADA/Fr 2/ 9%	Arabic 2/ 9%	En 1/ 5%	12

<p><b>E.g. 4:</b> Really so everythin is cool ? / How its happened ? He was like can I talk to u I was like yeah sure and then he asked about wth happened and I told him in details / And we were cool after all</p>	40	0	0	0	40/ 100%	0	0	0	En 1/ 2.5%	0
<p><b>E.g. 5:</b> Independent variable independent هو الي بيدله الباحث dependent هو الي يعتمد تغيره على independent على حسابها ind يتبعه.. اذا تبديل راه عاطيك مثال.. The effect of instructions in students reading scores /hwa: ?lj jbdlh ?lba:hθ hwa: lj jʕtmd tyjrɁ ʕla ʕla: jtbdl ʕla hsa:bh jtbfh@@ ?ða: tbdl/ /ra:h ʕa:tʕjk mθa:l/</p>	35	15/ 43%	5/ 14%	0	15/ 43%	0	4 (7 words) ADA/En 7/ 20%	0	En 2/ 6%	0
<p><b>E.g. 6:</b> Cv Chilling clima hayla lyoum 🧊 / kli:ma: ha:ʕla lju:m/ Great/ Yeah it's so nice today/ My fav climate/ Koun ghir tb9alna nfawtoug exams hka 🙌😂/ Wah wlh /ku:n yir tbqa:lna: hkða://wa:h walh</p>	22	10/ 45%	0	0	11/ 50%	1/ 5%	2 ADA/En 2/ 9%	Latin 10/ 45%	3/ 14% ADA/ 5% En 1/ 5% Fr 1/ 5%	3
<p><b>E.g. 7:</b> Mouhim rani 3a9la bli fiha personal questions, vocational, favourites za3ma what do students like diriha bah t3rfi f wach ysh9ou anglais/ Après diri diagnostic test to know their level/ Thanks a lot I really appreciate it 🙌❤️/ Any time 😊</p>	38	13/ 34%	0	0	24/ 63%	1/ 3%	5 (15 words) ADA/En 13/ 34% ADA/Fr 2/ 5%	Latin 13/ 34%	0	3
<p><b>E.g. 8:</b> Rani bla telephone besa7 dok nsawarlak les cours nta3 l3am li fat tefahmi menhoum /ra:ni bla:/bsaħ duk nsʕwrlk/ /nta:ʕ lʕa:m lj fa:t tfhmi mnhum/ Madabiiiiik stppp wlh la rani hasla / ma:ða: bik/ /wa:lh la ra:ni ھا:sla/ Esubri dok nsawarlak /esubri dok nsawarlk/ Oook jatt /ja:t/</p>	25	21/ 84%	0	0	0	4/ 16%	2 (3 words) ADA/Fr 3/ 12%	Latin 21/ 84%	2/ 8%	0

<p><b>E.g. 9:</b> U'll kill me tmrw bsh had l hadra mnhdhrhach en face lik nhchm 😊😊</p> <p>/besah had lhadra: ma:nahdrha: f/ /li:k nh fem/</p> <p>Hhhhhhhhhhhhh</p> <p>Farida donji</p> <p>Hadil donji</p> <p>😊😊😊😊😊😊😊😊</p>	17	9/ 52%	0	0	4/ 24%	4/ 24%	4 (8 words) ADA/En 4/ 24% ADA/Fr 4/ 24%	Latin 9/ 52%	2/ 12%	8
<p><b>E.g. 10:</b> Instructions are independent variable...</p> <p>Reading scores are dependent variable</p> <p>يعني تغير تحصيل التلاميذ يعتمد على حسب التعليمات كل ماتتبدل التعليمات يتبدل التحصيل بطبيعة الحال</p> <p>/jʃnj tyjr thsʃjl ʔltla:mjð jʃtmd ʃla hsb ʔltʃljma:t/</p> <p>/kl ma:ttbdl ʔltʃljma:t jtbdl ʔltʃsʃjl btʃbjʃ ʔlha:l/</p>	24	2/ 8%	13/ 54%	0	9/ 38%	0	0	0	0	0
<p>Total number of examples: 10</p>	291	129/ 44.3%	18/ 6.1%	0%	114/ 39.1%	30/ 10.3%	54/ 18.5%	96/ 32.9%	17/ 5.8%	26 or 3 for every 97 words

As it was anticipated in the former interpretations of the questionnaire, most of the responses attained mirrored the contents involved within the 10 compiled samples of table 3.11. Recalling the numerical figures of graph 3.3, similar results were conferred by ADA for the most commonly used language variety, which scored a ratio of 44.3%, or 129 words in a total count. Obviously as previously stated, ADA is the mother tongue of the majority of students, granting it an incontestable status as the most frequently used variety. Having a close-up observation on both samples 3 and 8, a percentage of more than 80% for ADA is inferred, followed by an aggregate of 73% (22w) in sample 1; 50% (19w) in sample 2; 43%

(15w) for sample 5; 52% (9w) in sample 9; and 34% (13w) in sample 7; along with a 45% (10w) in sample 6.

English, again, attained the second-largest average of 39.1% (114w) per total. Certainly, the targeted population of students learning English as a specialty had a pivotal influence on the nature of language they use; therefore, one purely English example was detected in sample 4, as well as minimum proportions of 50% (11w) and 63% (24w) for both samples 6 and 7, respectively, while the remaining samples were marked as follows: 10% (4w) in sample 1, 17% (5w) in sample 2, 9% (2w) in sample 3, 43% (15w) in sample 5, 24% (4w) in sample 9, and 38% (9w) in sample 10, with the exception of sample 8, which had a null proportion.

Ranked third, the French language obtained an aggregate of 10.3% (30w) overall. Up until now, the leftovers of colonialism resonated with even the latest generation of students marking the existence of French in the following results: 40% (15w) in sample 1; 10% (3) in sample 2; 9% (2w) in sample 3; 0% (0w) in samples 4, 5, and 10; 5% (1w) in sample 6; 3% (1w) in sample 7; 16% (4w) and 24% (4w) in both samples 8 and 9, respectively.

Subsequently, MSA attained a modest sum of 6.1% (18w), thus it occurred in only two samples: 14% (5w) in sample 5 and 54% (13w) in the tenth one. Still, the above samples unveiled no attendance of Berber; thus, harking back to the third item of the questionnaire, both MSA and Berber scored no more than 5%, contradicting what has been stipulated in the 4th and 5th articles of the Algerian constitution.

Corresponding to what was elaborated in table 3.2, the notion of code-switching was observed on more than one occasion, and hence a total of 18.5% (54w) was realized. Resembling with the contents above, a number of 8 samples included the use of more than

one code. The first sample conversation incorporated three cases of code-switching: ADA/En 18% (17w), ADA/Fr 13% (5w), and Fr/En 2% (1w). The second sample witnessed two: ADA/En 27% (8w) and ADA/Fr 10% (3w); similarly, the third one marked both, yet with different averages of 18% (4w) for ADA/En and 9% (2w) in ADA/Fr.

However, the fifth and sixth samples observed one case of language alternation in the form of ADA/En, with a minimum of 20% (7w) and 9% (2w) per each. Following that, sample number 7 realized the code shifting of ADA/En 34% (13) and ADA/Fr 5% (2); the same applies for sample 9, which scored 24% (4) for ADA/En and ADA/Fr, respectively. That said, samples 4 and 10 were limited to one code, and in turn, they both scored 0% (0).

In the process of linking the results above to what the respondents evinced in the course of the survey, a great extent of similarities is to be inferred. Once reflecting on graph 3.4, it is deduced that most of respondents opted for the process of code-switching, thus the samples assembled proved to be valid since CS was involved in most cases.

While inspecting the nature of conversations in the former samples, one can deduce the motives behind the use of CS within students' interactions via Messenger, which are similar to the proposed options of the questionnaire as follows: '*topic-specific interactions*', '*information sharing/exchanging*', and to '*communicate more effectively*'.

While addressing the process of transliteration, it is absolutely confirmed that Latin script is the most commonly used alphabet within students' Messenger interactions. It falls into the form of mimicking the phonological properties of ADA, thus being regularly realized as follows: 50% (19w) in sample 1, 73% (22w) in sample 2, 45% (10w) in sample 6, 34% (13w) in sample 7, 84% (21w) in sample 8, and 53% (9w) in sample 10. For further details, mark the following instances taken from table 3.11: '*Zaema*', '*nbdaw*', '*lyoum*', '*Li*

*dernah*’, ‘*hayla*’, ‘*tb9alna nfawtou*’, ‘*wach ysh9ou*’, ‘*nta3 l3am li fat*’, and ‘*mnhdrhach*’. This prevalence of the Latin alphabet could qualify the reasons that respondents are inclined to it, particularly its properties of allowing them access to a vast number of letters that sound similar to those in their own language, along with its legitimate reputation for academic heritage.

However, one sample did not restrict his/her writing system on Latin alphabet only, but adopted the use of the Arabic one as well in an attempt to reach the equivalent sounds of words in French such as ‘*رافاي افون*’ (*avant/réveil*), thus indicating his/her ‘*preference to use the Arabic alphabet while messaging in different language varieties*’.

Similar to graph 3. 7, English was the average language with the most cases of shortened words, as demonstrated in the following samples: 8% (3w) in sample 1, 10% (3w) in sample 2, 5% (1w) in sample 3, 2.5% (1w) in sample 4, 6% (2w) in sample 5, 5% (1w) in sample 6, and 12% (2w) in sample 9. For example: ‘*esp*’, ‘*ling*’, ‘*thank*’, ‘*wth*’, ‘*fav*’, ‘*lik*’, and ‘*tmrw*’.


Along the same lines, a considerable number of French contracted words were perceived in more than one sample: 3% (1w) in sample 1, % (1w) in sample 2, 5% (1w) in sample 6, and 8% (2w) in sample 8. For instance: ‘*psq*’, ‘*nrmlm*’, ‘*CV*’, and ‘*stppp*’.


Shortening words was not confined to foreign languages only, but ADA was the alternative for students to apply the process of abbreviation to it, as was marked in sample number 6 (14%) for the words ‘*wlh*’ and ‘*hka*’.


Exploiting the use of shortened words harks back to a variety of reasons. Some of them are meant for reducing letter count to suit smaller or shrunken spaces, or making the

most of them is less time-consuming and thus more straightforward. Nevertheless, refraining from the use of those words is bound by the facts that they are less formal and may affect spelling negatively.

With an aggregate of 26 or 3 for every 97 words, emoticons were detected in more than one sample, particularly (12) in sample 3, (3) in both samples 6 and 7, and a sum of (8) emoticons in sample 9. It helps them display facial expressions, tone of voice, and human gestures in Messenger interactions. Mark some of the emoticons used and their connotations:

 Face with tears of joy emoji: denoting that the sender is laughing so hard that tears are streaming down his/her face.

 Smiley emoji: denotes happiness and positive feelings

 'Being in love with' emoji: conveys warm and fuzzy feelings, especially feeling loved or being in love with someone or something.

 Heart emoji: to express gratitude, love, happiness, and hope.



Table 3.12 Analysis of Provided Email Samples

Examples	Word count	Language varieties					Code-switching	Transliteration	Shortened words	Emoticons
		ADA	MSA	Ber	En	Fr				
<p><b>E.g. 1:</b> No problem, I understand.                      My linguistic exam on wednesday may 24 inch'allah.                      This is my num if there will be anything</p> <p>والله وحتى اذا ماقدر تيش قاع تلقاي وقت معليش عزيزتي ماتنويش روحك وشكرا 🌹</p> <p>/ wa:llh whta ?ða: ma:qdr tɪʃ @a:f tlqa:j wqt mʃlɪʃ ʃzɪzti ma:tnwɪʃ rwhk w]kra:/</p>	32	12/ 37.5%	0	0	20/ 62.5%	0	ADA/En 1/ 3.1%	1/ 3.1%	1/ 3.1%	1
<p><b>E.g. 2:</b> I am good, thanks for asking.</p> <p>We cannot start the introduction with the statement “there is a debate”. Introduce your topic to the audience by using a hook, if possible. You can define, you can talk about woman’s situation in the world and how they suffered throughout generations. Then you start narrowing down your topic till you reach your thesis. For instance,the word debate comes after the opening and the background information. In other words, your first sentence should be the thesis; however, you have to mention both sides or opinions. Finally, AVOID the statement” in this essay, I will do this and that”, I have already told not to use the first person, (hidden). I hope you have understood. Good luck with your exams.</p>	126	0	0	0	126/ 100%	0	0	0	0	0
<p><b>E.g. 3:</b> Thank you very much miss , I really appreciate it</p>	9	0	0	0	9/ 100%	0	0	0	0	0

<b>E.g. 4:</b> Dear Ms. (hidden),  I hope this email finds you well. I sincerely apologize for not submitting my work on time or rather earlier. I understand if you do not grade my work. However, I will be submitting it later on after the exams and I would really appreciate it if you provide me with your honest feedback since that is what truly matters.	63	0	0	0	63/ 100%	0	0	0	0	
<b>E.g. 5:</b> Miss please ana li kont 3andek drwek w man9derch njik 11.30 please miss chofili  /ʔna: lʝ knt ʃndk dʁwk wma:nqdrʃ ndʒjk/ /ʃu:fi:li/	13	9/ 69%	0	0	4/ 31%	0	En/ADA 4/ 31%	9/ 69%	0	
<b>E.g. 6:</b> By the way, in the pictures I sent, you'll find "e.g." Instead of "example", but in the actual exam, we do not use contractions.	24	0	0	0	24/ 100%	0	0	0	1/ 4.16%	
<b>E.g. 7:</b> Salam, dear  Unfortunately, we will not be able to meet tomorrow, for I've been informed that we will have a teachers' meeting. I apologize for the inconvenience. I will try to make it up for you. When's your linguistics exam?  Kind regards.  /sala:m/	42	1/ 2.3%	0	0	41/ 97.7%	0	ADA/En 1/ 2.3%	1/ 2.3%	0	
<b>E.g. 8:</b> Hello Mr. (hidden) I really appreciate your email, and it's okay exceptions are made for excellent students. I would like to read your composition. Salam ^^.	25	0	0	0	25/ 100%	0	0	0	1	
<b>E.g. 9:</b> Dear miss (hidden),  thank you for your correction. I will take all your advices in my consideration  Best regards	19	0	0	0	19/ 100%	0	0	0	0	
<b>E.g. 10:</b> Hello miss, hope you are doing well. i wrote an introduction of an argumentative essay , can you please tell me if it true please . I'm waiting for your answer ❤️	29	0	0	0	29/ 100%	0	0	0	1	
Total number of examples: 10	382	22/ 5.8%	0/ 0%	0/ 0%	360/ 94.3%	0/ 0%	4/ 1%	11/ 2.9%	2/ 0.5%	2 or 1 for every 191 words

Table 3.12 unveils striking similarities between total percentages and the answers provided by informants. Such similarities reach great extents with the exclusion of slight differences, which are to be justified in the course of the interpretation. As a matter of fact, it is all the more important to signal that some of the provided samples, specifically 1; 3; 4; 5; 9; and 10, are emails sent by students.

As for the employed language varieties in the above examples, English is the main and most dominant language with 94.3% followed by ADA only with a portion of 5.8% among the four remaining language varieties. With the exception of one word in example 7, the whole usage of ADA appears to be included in example 1 and 5 which are, as mentioned above, students' emails. And while English usage signals the to-be-expected behaviour of both EFL students and teachers, the inclusion of ADA in emails by students has already been referred to and described as '*informal*' by one informant in table 3.10. This '*informal*' use of ADA generates two extra phenomena: code-switching and transliteration.

Code-switching, as such, takes the form of ADA words insertion into English sentences or vice versa. Table 1.12 shows that there are 4 instances (1%) of code switching in the same examples wherein ADA is used (1, 5, and 7), and these instances involve the following words: '*inch'allah*', '*miss please*', '*please miss*', '*salam*'. This marginal presence of code-switching is attributed chiefly to teachers keeping emails formal as well as using the email interface to teach students, as the gist of emails 2 and 6 suggest, and, conversely, because students focus less on formality of their emails as three informants testified in table 3.10.

Concerning transliteration, the recurring examples (1, 5, and 7) comprise the whole use of Latin script to represent ADA sounds in emails so that 50% of total words in ADA are transliterated lowering the total percentage of transliteration to 2.8% only. Again, this phenomenon is also referred to in table 3.10 by one informant who had observed that the decreasing use of transliteration in emails is mainly due to the availability of different keyboards.

On a different note, shortened words and emoticons totalled the lowest positive percentage of 0.5% for each. The shortened form ‘*e.g.*’ in example 5 was written only to explain the abbreviated word; this could stand as justification for the near non–existence of shortenings given that one informant, as seen in question 5, refrained from shortened words for the same reason: misspellings. And while spelling mistakes could stand as justification for the lack of shortenings only, the reduced formality, another reason for why other informants prefer not to use shortened forms, could well account for the insignificant ratio of 1 emoticon per 191 words.

### **3.3 Conclusion**

Chapter three, as opposed to the first two chapters, was devoted to the practical side of this dissertation. As such, the framework of this study was outlined so as to specify the population sampling as well as the methodological triangulation that comprised both qualitative and quantitative data collection instruments, namely the questionnaire, interview, and content analysis approach. This chapter also covered the description and interpretation of the gathered data to reach findings that either confirm or disprove the suggested hypotheses. Finally, content analysis approach was employed for gathered samples to calculate the frequencies at which the phenomena occur and validate the obtained responses.

## General Conclusion

Contact-induced language change in computer-mediated communication has proved to be quite the engrossing area of investigation for linguists over the years for the innumerable dimensions as well as the constant and novel phenomena to explore. Truly, the ever-growing web with its social media has subjected language to numerable changes that go beyond the virtual world as to impact how people use language in their daily lives; likewise, there remains no doubt that the constant need for and use of social media begs for on-going research to track and keep up with the changes whose sources are traced to CMC.

Even so, CMC in Algeria is a thorny subject to go over as it is still considered to be in its infancy. The linguistic research in CMC calls for investigating only state of the art developments in effect. Accordingly, CILC in CMC requires constant polishing as the changes belong to diachronic criteria.

The study has investigated CILC and features of texting amongst students in two inherently different platforms; that is, email and Messenger are respectively referred to as asynchronous and synchronous media of interaction. The main aim of this study was to find whether synchronous and asynchronous interactions among third year EFL students in Tiaret differ and match in some basic linguistic aspects. As such, the findings reveal that the differing points are by and large more apparent than the matching linguistic aspects by reason of the different language varieties used and the miniscule presence of code-switching, transliteration, shortened words, and emoticons in email samples compared to Messenger samples. Accordingly, the results of the questionnaire and interview show that the choices opted for by the participants are relatively comparable to those of the samples.

The linguistic practices exhibit a similar case to the linguistic aspects in view of the fact that emails remain formal and conservative in comparison to Messenger interactions.

Hence, it is safe to assume that the linguistic practices are predominantly found in Messenger. Yet, however insignificant the percentages may be for emails, the linguistic choices appear to frame in discourse to a large extent both in email and Messenger interactions for those who opt to code-switch, transliterate, shorten words, and use emoticons. This is mainly due to the fact that the choices serve functional purposes as specified by participants.

At last, the presence of CILC in Messenger and its absence in email indicate a rather generalised view of synchronous and asynchronous means of interaction. On the one hand, synchronous social media may continue to contain and generate diachronic changes for two obvious reasons; the target audience of those media enclose the whole speech community and their usage extends over a variety of purposes including casual interactions that do not require specific language and register. On the other hand, asynchronous platforms show little prospect for comprehending diachronic changes in future due to the formal and limited purposes these platforms serve; likewise, the user base therein is expected to perform in a professional way and, in the case of university, display academic etiquette.

Unfortunately, this work was hindered from the insertion of an extended number of samples as well as the implication of further types of parameters such as age and gender due to time constraints. As such, the focus was chiefly targeted at randomly selected participants sharing the same educational level, belonging to different genders, and possibly having an average age of no more than 25 years. Concerning the phase of the survey, the research aimed to collect 100 answered online questionnaires, but only 72 of them were returned. In a similar vein, a number of 10 online forms of interviews were apportioned to 10 teachers; however, 9 of them were submitted back.

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**Appendix 1:****Online Questionnaire**

Dear Respondents,

The questionnaire, in between your hands, is a part of our ongoing MA dissertation that is meant to collect data about the linguistic features that are characteristic of Messenger interactions. The collected data will be used to spot differences and similarities between the way speakers interact within emails and Messenger accounts.

**N.B:** Please! Tick (✓) the right box(es) that fit(s) to your viewpoint or use the provided space.

**Abbreviations and Acronyms:**

Algerian Dialectal Arabic (ADA), Modern Standard Arabic (MSA), Berber & its varieties (Ber), French (Fr), English (Eng)

**Section one: Attitudes Towards Language Use in Messenger**

1. Do you use Messenger? Yes  No

2. How often do you use messenger to interact with other students?

Always  Often  Sometimes  Rarely  Never

3. Which language variety/ies do you use while interacting via Messenger?

ADA  MSA  Ber  En  Fr

Others (specify).....

**Section Two: Language Alternation Among Participants in Messenger**

1. Do you switch between languages or language varieties in the course of Messenger interactions?

Yes  No

2. Which languages do you switch to and from while interacting with other students via Messenger?

ADA  MSA  Ber  En  Fr

Others (specify).....

**3. For what purpose/s do you switch between language varieties in Messenger interactions?**

Address different audiences  Attract attention  Communicate more effectively

Convey precise meaning  Express emotions  Use as technical terms

Add comic/funny effect  Lack of equivalent terms in a language

Others (specify).....

**4. In which cases or contexts do you feel that you are obliged to switch between languages while interacting with other students via Messenger?**

Topic-specific interactions  Simplification for other students

Information sharing/exchanging  Cases that require specific terms

Others (specify).....

**Section Three: Messaging Features in Messenger**

**1. Do you use shortened words while interacting with other students in Messenger?**

Yes  No

**2. If yes, why?**

Easier and quicker to type  Appear less formal/more casual

Shortened words take less screen space

Do not know the correct spelling of the shortened word/s

Others (specify).....

**3. If no, why not?**Shortened words are lack formality Unfamiliarity with shortened words others may not understand the shortened words Use of shortened words may affect spelling negatively 

Others (specify).....

**4. Do you shorten words that belong to:**ADA MSA Ber En Fr 

Others (specify).....

**5. Which alphabet/s do you rely on while interacting in Messenger?**Arabic alphabet Latin alphabet Both **6. Why do you prefer to use the Arabic alphabet in Messenger interactions?**Arabic keyboard is easier to type with Arabic alphabet offers letters that lack in Latin alphabet Addressees may not understand Latin alphabet Preference to use Arabic alphabet while messaging in Arabic Preference to use Arabic alphabet while messaging in different language varieties 

Others (specify).....

**7. Why do you prefer to use the Latin alphabet in Messenger interactions?**Latin keyboard is easier to type with Latin alphabet is convenient for interactions related to academia Type many language varieties using Latin alphabet Latin alphabet is more preferable to use with others

Others (specify).....

**8. How often do you write messages in one language or language variety using letters of another language in Messenger?**

Always     Often     Sometimes     Rarely     Never

**9. If you do, why?**

It is easier and/or faster to type using certain alphabet/s

The used alphabet adds emphasis to messages

The used alphabet is well displayed and organized on screen

Replicate sounds of words that are difficult to write

Address different audiences

Others (specify).....

**10. If you do not, why not?**

Writing a language variety using another alphabet can be challenging for certain addressees to understand

It is less formal and authentic than using the original alphabet

There is no need for writing this way

Meaning of message may be lost or misunderstood

Others (specify).....

**11. Do you use emoticons in your Messenger interactions with other students?**

Yes     No

**12. Why do you use emoticons in such cases?**

Add emotional context (mood of message)  Avoid misunderstandings

Enhance social connections  Express needs or physical states

Add humour  Display facial expressions, tone of voice, and human gestures

Others (specify).....

**13. If no, why not?**

Appear more professional/academic

Unfamiliar with emoticons use

Lack of familiarity with others

Emoticons sometimes mislead

Others (specify).....

**Section Four: Samples of Messages**

**1. Please! Could you provide us with some samples of your messages in Messenger?**

1.....

.....

2.....

.....

3.....

.....

4.....

.....

5.....

**Thank you very much for your cooperation**

**Appendix 2:****Interview**

Dear Informant,

This interview is part of our ongoing MA dissertation that is meant to collect data about the linguistic features that are characteristic of email interactions. The collected data will be used to spot differences and similarities between the way speakers interact within emails and Messenger accounts.

**Abbreviations and Acronyms:**

Algerian Dialectal Arabic (ADA), Modern Standard Arabic (MSA), Berber & its varieties (Ber), French (Fr), English (Eng)

**Q1** Do you use email as a medium of interaction?

Yes       No

**Q2** If yes, how often do you use email to interact with students?

Always       Often       Sometimes       Rarely       Never

**Q3** With whom do you generally exchange emails?

.....  
 .....

**Q4** Which language varieties do you use to interact with students through emails?

ADA       MSA       Ber       En       Fr

Others (specify) .....



**Q5** Do you switch between codes in your email interactions?

Yes       No

**Q6** Why or why not?

.....  
.....

**Q7** Do you incorporate shortened forms of words in your email interactions with students? If yes, why do you do so? If no, why not?

.....  
.....  
.....

**Q8** Do you think that language use in emails has changed over the last decade in terms of form and content? How?

.....  
.....  
.....

**Q9** Please! Could you provide us with some screenshots of your teacher-to-student emails?

**Thank you for your corroboration**

**Appendix 3: Maps**

**Map 1.1: Algeria Physical Map**



**MAP 1.2: The Divison of Tiaret According to Dairas and Communes**



## Appendix 4: Messenger Samples

### Messenger sample 01



### Messenger sample 02



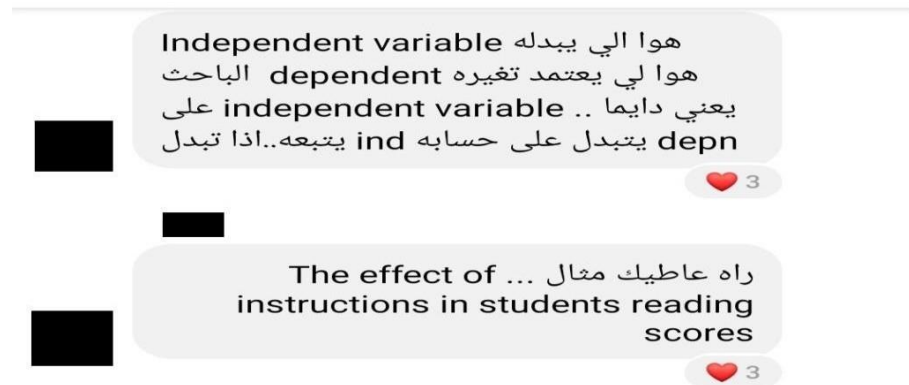
### Messenger sample 03



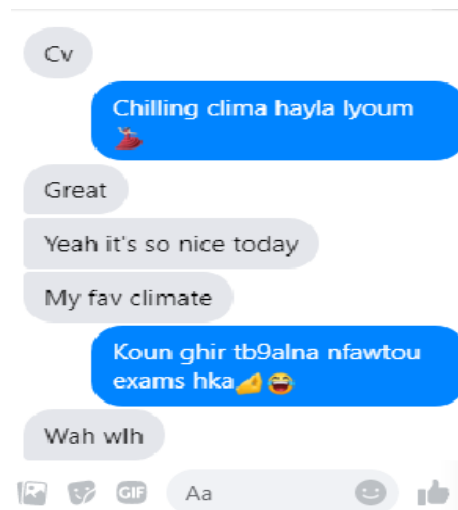
### Messenger sample 04



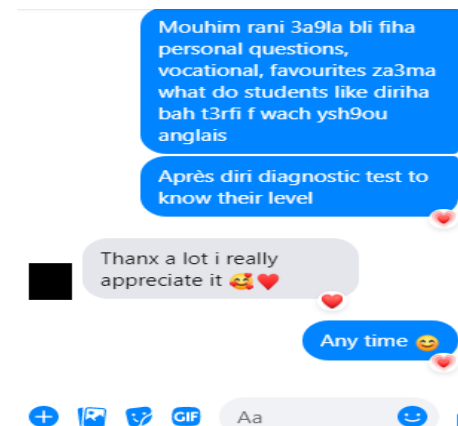
### Messenger sample 05



### Messenger sample 06



### Messenger sample 07



### Messenger sample 08



### Messenger sample 09

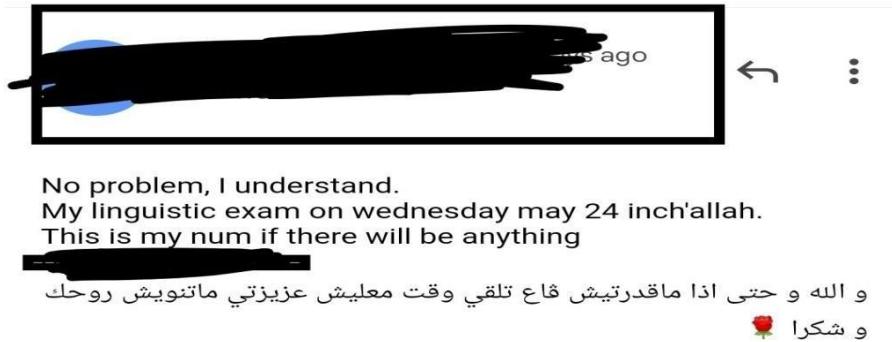


### Messenger Sample 10

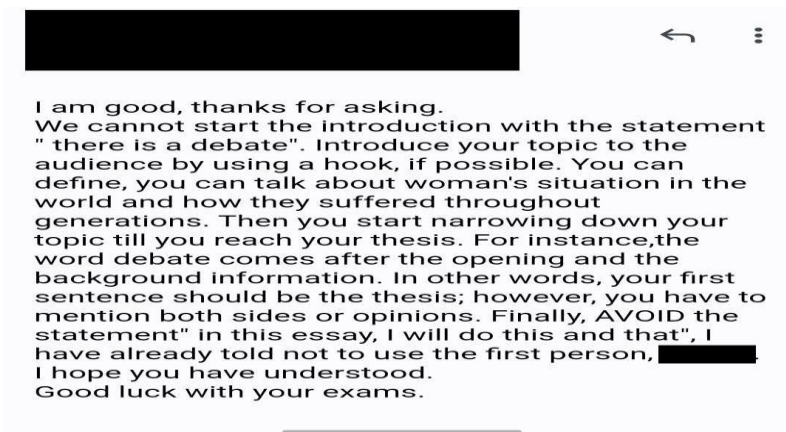


## Appendix 5: Email Samples

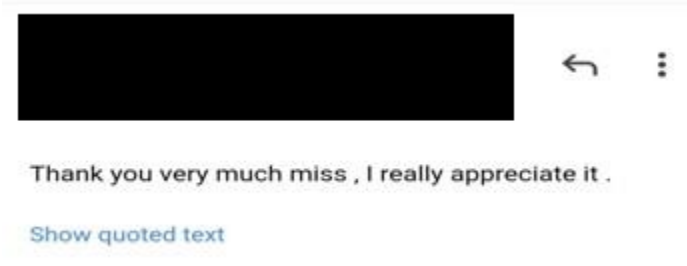
### Email sample 01



### Email sample 02



### Email sample 03



## Email sample 04

By the way, in the pictures I sent, you'll find "e.g." instead of "example", but in the actual exam, we do not use contractions.

On Fri, 13 Jan 2023, 22:09, [REDACTED] wrote:

[Show quoted text](#)

## Email sample 05

Salam, dear  
Unfortunately, we will not be able to meet tomorrow, for I've been informed that we will have a teachers' meeting. I apologize for the inconvenience.  
I will try to make it up for you. When's your linguistics exam?  
Kind regards.

[Show quoted text](#)

## Email sample 06

By the way, in the pictures I sent, you'll find "e.g." instead of "example", but in the actual exam, we do not use contractions.

On Fri, 13 Jan 2023, 22:09, [REDACTED] wrote:

[Show quoted text](#)

## Email sample 07

Salam, dear  
Unfortunately, we will not be able to meet tomorrow, for I've been informed that we will have a teachers' meeting. I apologize for the inconvenience.  
I will try to make it up for you. When's your linguistics exam?  
Kind regards.

[Show quoted text](#)

## Email sample 08

[REDACTED] ← ⋮

Hello [REDACTED]  
I really appreciate your email, and it's okay exceptions are made for excellent students. I would like to read your composition.  
Salam ^^.



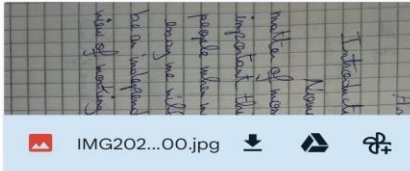
## Email sample 09



Dear miss [REDACTED]  
thank you for your correction. I will take all your  
advices in my consideration  
Best regards

## Email sample 10

Hello miss, hope you are doing well. i wrote an  
introduction of an argumentative essay , can you  
please tell me if it is true please .  
I'm waiting for your answer ❤️



### ملخص

تهدف هذه الدراسة إلى التحقيق في التغيير اللغوي الناجم عن الاحتكاك اللغوي عبر وسائل التواصل الاجتماعي، وتحديدًا بين وسائل التفاعل المتزامنة وغير المتزامنة التي تم تمثيلها بواسطة المسنجر والبريد الإلكتروني على التوالي، كان الغرض الرئيسي من هذه الدراسة هو اكتشاف التغييرات غير المتزامنة المختلفة الموجودة في المسنجر والبريد الإلكتروني وأظهرت النتائج تغييرات كبيرة بالنسبة للنظير المتزامن المسنجر؛ على النقيض من ذلك، فإن النسب المنوية للبريد الإلكتروني تشير إلى عدم وجود تغييرات أو استثناءات، يُظهر وجود التغيير اللغوي الناجم عن الاحتكاك اللغوي عبر المسنجر وعدم وجوده في البريد الإلكتروني أن اللغة في وسائل التفاعل المتزامنة قد تستمر في التغيير، بينما يمكن أن تظل اللغة في وسائل التفاعل غير المتزامنة جامدة لأن كلاهما يختلفان بطبيعتهما حسب غرض الاستخدام و الجمهور المستهدف.

### SUMMARY

This study attempted to investigate contact-induced language change in computer-mediated communication, specifically between synchronous and asynchronous means of interaction that were respectively represented by Messenger and email. The main purpose of this study was to explore the different existing diachronic changes in Messenger and email. The results demonstrated significant changes for the synchronous counterpart Messenger; by contrast, the marginal percentages for email suggested rather no changes and exceptions only. The overall presence of contact-induced language change in Messenger and the lack thereof in email shows that language in synchronous media of interaction may continue to change while asynchronous ones could remain frozen as the two differ inherently in target audience and purposes.

### RÉSUMÉ

Cette étude a tenté d'explorer le changement de langage induit par contact dans la communication par ordinateur, en particulier entre les moyens d'interaction synchrones et asynchrones qui étaient représentés respectivement par Messenger et par email. L'objectif principal de cette étude était d'étudier les différents changements diachroniques existants dans Messenger et l'email. Les résultats ont montré des changements significatifs pour la contrepartie synchrone Messenger. En revanche, les pourcentages marginaux pour l'email suggèrent plutôt pas de changements et des exceptions seulement. La présence globale de changements de langage induits par le contact dans Messenger et l'absence de tels changements dans le courrier électronique montrent que le langage dans les médias synchrones d'interaction peut continuer à changer alors que les médias asynchrones pourraient rester figés car les deux diffèrent intrinsèquement en termes d'audience et d'objectifs cibles.