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Deconstructing the Contact-Induced Morphophonological Change in Medicines' Names in Algeria: Evidence from the Speech of Pharmacists and Patients in Tiaret.

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

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In loving memory of my grandfather.

To my parents, the two pillars of my life, who planted the seed of knowledge in my mind and nurtured it.

To my brother Farouk and my sister Yamina, the everlasting source of love and warmth.

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To my dearest cousins, Imane and Maliko.

To the friends who became family, Rania, Sihem and Fahima.

I dedicate this modest work

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Dedications

In the memory of my mother, the highest example of my life may Allah have mercy on her soul, hoping she is proud of what I have achieved.

To my father the light of my life who played the role of both parents.

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To my dear husband, my other half Sahraoui.

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To the beautiful gift from Allah, my soulmate my daughter Celine.

To my dear friends Halima, Fahima and Wissal my trail companions.

To all my family.

I dedicate my success

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Abstract

This study examines the contact-induced change in the names of medicines amongst the pharmacies' community of practice at Tiaret Speech Community (hereafter TSC). The study endeavours to unravel the phonological, morphological, and orthographic modifications that take place in medicines' names by investigating the factors influencing or leading to the changes, such as patient perceptions, pharmacist practices, sociocultural associations, etc. To offer a robust framework for examining the morphophonological adaptation, a mixedmethods approach was employed. The research combined 80 patient questionnaires and interviews with 10 members of the community of practice, including pharmacists, delegates, and pharmacy sales assistants, besides observations at Tiaret's most known pharmacies, to investigate how medications' names have been adapted and transformed to suit the local linguistic and cultural context. The findings show that the morphophonological changes in medicines' names have become prevalent linguistic features in the speech of the Algerians as a whole and in particular in our respondents' daily life speech due to the co-existence of a lot of language varieties in Algeria. This study sets the stage for subsequent studies on language variation and change in nicknaming medications and drugs since the standardization of medicines' names has become a must.

Keywords: contact-induced changes, Tiaret speech community, Pharmacies' community of practice, language change, language variation

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LIST OF ACRONYMS

ADA: Algerian Dialectal Arabic

CA: Classical Arabic

CM: Code Mixing

CofP: Community of Practice

CS: Code Switching

DCI: International Non-Proprietary Name of Medicines

MSA: Modern Standard Arabic

SC: Speech Community

TSC:Tiaret Speech Community

Key to Phonemic Transcriptions

Arabic Script Consonants	IPA Symbol/ Numbers	Arabic Script Vowels	IPA Symbol
ب	/b/	1	a.'
ت	/t/	ي	iː, eː
ث	/Θ/	و	uː, oː
٣	/3/	َ′′ قَحَة	a
۲	/ħ/	´´` _ه کسرهٔ	i
		′′′ضمة	u
Ċ	/x/	أ - الممزة	\3\
7	/d/		
ż	/Ð/		
J	/ r /		
j	/ z /		
m	/s/		
ů	/S/		
m	/ʧ/		
ص	/s ^ç /		
ط	/t ^c /		
ض	/d ^ç /		
ظ	/ð ^ç /		
ع	/ʕ/		
غ	/ɣ/		
ف	/f/		
ق	/Q/		
ك	/k/		
g	/g/		
J	/1/		
م	/m/		
ن	/n/		
٥	/h/		
9	/w/		
ي	/J /		

Language plays a central role in human society, serving as a key medium for expressing identity, culture, beliefs, and social dynamics. It reflects and embodies societal power structures and hierarchies. As a result, language is a major focus for various academic disciplines linguistics, sociolinguistics, sociology, anthropology, such as and psycholinguistics. These fields explore language itself and its complex relationship with social, cultural, and psychological aspects of human experience. Linguistic analysis involves studying structural components like morphology, syntax, phonology, and phonetics, offering insights into human communication and expression. Undeniably, language exhibits substantial variations across geographical boundaries, as well as within the confines of a single nation or region. These local and individual linguistic varieties are manifested in diverse modes of expression for conveying similar conceptual content, Undeniably, language exhibits substantial variations across geographical boundaries, as well as within the confines of a single nation or region. These local and individual linguistic varieties, manifested in diverse modes of expression for conveying similar conceptual content, which sociolinguistics examines.

The scholarly discipline of sociolinguistics has emerged and evolved since the 1960s and beyond, partially in response to the perceived shortcomings of earlier approaches to the study of linguistic dialects, as well as a reaction to the Chomskyan theoretical emphasis on the study of language largely divorced from its social context. A central tenet within the field of sociolinguistics is the concept of language variety. Sociolinguistic inquiries examine whether the variations observed within a language are attributable to differences in the social characteristics of the speakers, as well as the role of contextual linguistic factors that either facilitate or impede the use of specific linguistic structures. Consequently, the sociolinguistic study of language variations has enabled linguists to identify and analyse the multitude of varieties that exist within a language and to discern how language undergoes transformations influenced by social, contextual, and regional factors.

It is widely acknowledged that individual languages often encompass a multitude of distinct varieties. Arabic, for instance, is characterized by numerous colloquial forms that vary considerably across national boundaries, with even localized differences observed within a single country, such as Algeria, where the Arabic spoken in one city may exhibit marked distinctions from the dialects of other cities, each possessing unique linguistic features. In the

Algerian context, the primary means of communication are the Algerian dialectal Arabic and French. Consequently, as researchers, we have undertaken a study in the western Algerian region of Tiaret to investigate the effects of Fr and ADA on language variation, focusing specifically on how these linguistic influences manifest in the naming and categorization of medicines within a particular community of practice comprising pharmacists, delegates, pharmacy assistants, and the general public in Tiaret.

Based on primary observational evidence, we have noted the emergence of distinct changes adopted by the people of Tiaret in the naming and labelling of medicinal products. To better understand the nature and extent of these changes, particularly as manifested among those individuals knowledgeable about pharmaceuticals, we have undertaken a focused investigation into the phenomena of language variation and the role it plays in shaping this process of medicines nomenclature. Specifically, we aim to elucidate how the influences of French and Algerian dialectal Arabic contribute to and facilitate these evolving patterns of linguistic change within the targeted community.

In the context of this research endeavour, and with consideration of the specific area of investigation, the targeted sample population, and the overarching objectives of the study, we have formulated the following research questions:

- 1) How far can the medicines' names in the Community of Practice (CofP) of Pharmacies at Tiaret Speech Community (TSC) be affected and/or subjected to change?
- 2) What linguistic aspects can be influenced by such linguistic practices in medicines' names?
- 3) To what extent can this change re/shape communication in the Pharmacies' CofP at TSC?

To uncover substantive and well-founded answers to the aforementioned research questions, the following hypotheses have been put forward:

H1: The medicines' names in the Community of Practice (CofP) of Pharmacies at the Tiaret Speech Community (TSC) can be significantly affected and/or subjected to phonological, morphological, and orthographic changes. This can include using language that is easily understood by the TSC members and ensuring that medicine names are accessible to them in terms of pronunciation, comprehension, and cultural relevance.

H2: The linguistic practices in medicines' name changes can influence various aspects of language, such as lexical, semantic, and pragmatic features, within the Pharmacies' CofP at

TSC. It is assumed that the changes in medicines' names are due to interaction with other language varieties and differences in the linguistic and cultural background of individuals.

H3: The changes in medicines' names can significantly re/shape the communication patterns and dynamics within the Pharmacies' CofP at TSC, impacting both verbal and written exchanges. It is believed that changes in medicines' names have become an integral part of, not only in TSC but also in the ordinary life of the members of CofP and serve to perform different communicative functions/intents.

Like other scholarly works, this study encountered certain limitations. Firstly, we were unable to obtain the desired number of respondents to complete the questionnaires, managing to distribute only 80 out of the planned 100. Furthermore, the process of data collection and assessment proved challenging for both us and the respondents, with some respondents exhibiting hesitation in providing their responses. Additionally, seven respondents failed to return their completed questionnaires, which may have had a consequential impact on the overall results of the study. Moreover, the participants exhibited a degree of suspicion, perceiving the study as an investigation into their legal compliance or potentially having ulterior motives, such as tricking them into signing documents or using their voices for malicious purposes during the interview process, presenting an obstacle in our ability to gather comprehensive and reliable data.

The purpose of the study is to attain the following objectives:

- **A.** To perceive the way the pronunciation and orthography in medicines' names are affected by language variation.
- **B.** To give awareness and concerns about the utilisation of Fr and ADA in the naming of medicines and to help simplify certain ambiguous meanings.
- **C.** Provide practical reasons behind the morpho-phonological change as something phenomenal.

Subsequently, our research paper was divided as such; the first chapter introduces the study's framework by covering Algeria's linguistic profile within the coexistence of many languages, historical background and sociolinguistic situation t, as well as, the country's favourable geographic location, and the context of the study Tiaret. The second chapter, provides an overview about language change, language variation, communities of practice and morpho-phonological change in medicines' names in Algeria. The methodology, as well as

the primary methods and procedures involved, are discussed in Chapter three. It will show data gathered from speakers in the Tiaret speech community and community of pharmaceutical Practice to investigate and interpret them.

CHAPTER ONE: EXPLORING THE SOCIOLINGUISTIC

LANDSCAPE OF ALGERIA

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1.1 Introduction

The first chapter of this dissertation is intended to explore the evolution of the sociolinguistic landscape of Algeria, which is widely acknowledged by its complexity and richness, It is a melting pot of various origins and cultures, characterized by the coexistence of numerous language varieties as a result of different historical events and invasions which have given rise to these varieties, namely CA (Classical Arabic), MSA (Modern Standard Arabic), ADA (Algerian Dialectal Arabic), French (French) and English (English). Furthermore, the present chapter shed light on the outcomes of language contact, including Diglossia, Borrowing, CS (code switching) and CM (code mixing). Hence, attention will be directed towards the state of Tiaret, which is the context of this study, concerning its etymology and historical background.

1.2 The Algerian Sociolinguistic Profile

The linguistic landscape of Algeria is widely acknowledged to be intricate and multifaceted, posing challenges in definitively characterizing its nature. Algerian speakers often demonstrate a propensity for code-switching and code-mixing, fluidly transitioning between a repertoire of linguistic varieties that encompasses Arabic, Fr, Eng, Tamazight, as well as the formal MSA and the colloquial Algerian dialectal Arabic (ADA), depending on the particular communicative context. This linguistic diversity can be attributed primarily to the successive historical conquests and occupations that have shaped the Algerian landscape over time, resulting in the coexistence and interplay of multiple languages among the Algerian population.

1.2.1 The Historical Background

The People's Democratic Republic of Algeria is the official name given to Algeria. in Berber (AXoSO). Its history dates back to nearly 30,000 BC, Algeria, a country in northwest Africa, holds the distinction of being the largest country on the African continent as well as

the tenth largest globally, encompassing a land area of 2,381,741 square km. Its geographical location grants it strategic significance and positions it as a maritime gateway to Africa, with a coastline spanning 1,200 km which overlooks of the Mediterranean Sea (cf., Map1). Despite its vast expanse, the country maintains a relatively modest and diverse population of just over 46 million individuals. This diversity is reflected in the linguistic realm, where Algeria boasts multiple languages. The linguistic plurality of varieties spoken in Algeria has returned to the huge number of civilizations and invasions. Arabic and Berber function as the two official languages, but the Algerian dialect serves as the predominant first language for nearly 98 percent of the population due to the country's informal context. The Algerian dialect, a fusion of Arabic, Berber, French, Spanish and Turkish elements, coexists with other native languages such as Ber, which attained official recognition only in February 2016. Berber serves as the native tongue of the Tamazight people, who possess their own distinct customs and traditions, primarily residing in the northwestern regions of the country. Furthermore, Algeria's history includes a notable period of French dominance spanning 132 years, dating from 1830. During this period, France made concerted efforts to eradicate Algeria's identity and origins, with French serving as the prevailing official language. Even after achieving independence in 1962 and subsequent endeavours to arabize the cultural landscape, the former colonial language continues to exert significant influence across Algerian politics, economy, and various other spheres. It remains predominantly employed in formal settings by the country's elites and government officials.

Smith (2019) revealed that:

Language is the battleground of identity, and nowhere is this more evident than in post-colonial Algeria, where the status of the French language remains a contentious issue. As Algerians grapple with the legacy of colonialism, the question of whether to embrace or reject French as a language of power and privilege continues to shape the country's sociopolitical landscape (P. p 45)

Additionally, Algeria is predominantly an Islamic nation that embraces diversity in terms of religion, race, and gender. This diversity can be attributed to its rich historical legacy as a land that has hosted numerous civilizations in the past, including the Numidians, Phoenicians, Punic people, Romans, Vandals, and Byzantines. Following the Islamic conquest, Algeria witnessed the rule of various dynasties and powers, such as the Umayyads, Abbasids, Idrisids, Aghlabids, Rustumites, Fatimids, Zirids, Hammadids, Almoravids, Almohads, Hafsids and Ottomans.

Throughout its rich history, Algeria has been ruled by various dynasties and powers, each leaving their indelible mark on the land. From the ancient Berber kingdoms to the Roman Empire, and from the Byzantine Empire to the Ottoman Empire, Algeria's rulers have shaped its culture, architecture, and traditions, creating a vibrant tapestry of influences. (Algerian Ministry of Culture, 2008).

1.2.2 Post Colonial Era

Algeria gained independence from over 130 years of French colonial rule on July 5, 1962. The colonial period left the country in an economically, politically, and socially devastated state, with millions of casualties, widespread poverty, and high illiteracy rates, with only 10% of Algerians being literate at the time of independence. Despite the scars left by colonialism, the post-colonial era in Algeria has become a testament to the resilience and spirit of its people. As the influential post-colonial theorist and activist Frantz (1961) wrote: "Decolonization is always a violent phenomenon," (p. 27). And this was certainly the case in Algeria, where the struggle for independence was marked by a brutal war of liberation. The Algerian people endured immense suffering and made tremendous sacrifices to reclaim their sovereignty and cultural identity. The post-colonial experience in Algeria stands as a powerful reminder of the indomitable human spirit and the unwavering desire for freedom.

After gaining independence in 1962, Algeria faced the immense challenge of rebuilding the country in the aftermath of French colonial rule. This task was initially taken

up by the first president of independent Algeria, Ahmed Ben Bella, and later by his successor, Mohamed Boukharouba, also known as Houari Boumediene, who rose to governmental authority in 1976. Boumediene's primary policy objective was to undertake a process of "Arabization" – a language education reform aimed at withdrawing the influence of the French language. This linguistic policy sought to reconstruct the Algerian education system based on the Arabic language, which was seen as more reflective of the country's national identity. The Arabization project was viewed as a suitable measure to curtail the continued prevalence of French within Algerian society. Algerian leaders adopted the slogan "L'Islam est notre religion, l'Algerie est notre patrie, et l'Arabe est notre langue," emphasizing the importance of Arabic as the language of Arabo-Islamic identity. Linguistically, they have tried to regain the status of Arabic in Algerian society, replacing French, the language of the colonizer, with Arabic as the primary language.

In the early years of Algerian independence, from 1962 to 1963, the Algerian state continued to operate in French across administrative and economic bodies. This was because the first president, Ahmed Ben Bella, and many state officials had been educated in the French system and did not know Arabic. It was not until the 1963 constitution that Arabic was formally designated as the official language of the country. The first concrete policy measures to implement this were issued through a presidential decree on April 26, 1968, which mandated that state employees must possess knowledge of the Arabic language. This prompted Francophones to enrol in Arabic literacy courses to retain their positions. However, as a scholar, Bachiri (2017) argued in his book that "the law did not compel the administration to conduct its affairs exclusively in Arabic. Despite the push for Arabization, the influence of French remained prevalent in the Algerian state apparatus" (p.75).

The post-colonial era in Algeria witnessed a profound transformation in the role of language as a tool of resistance and cultural revival.

As Kateb Yacine (1956), the Algerian playwright and novelist, astutely observed:

Language is our only homeland.' In the wake of colonial oppression, Algerians recognized the power of reclaiming their native language, Arabic, as a means of asserting their cultural heritage and challenging the linguistic dominance of the colonizers. Language became a potent symbol of resistance, a vehicle for expressing the aspirations, struggles, and collective memory of the Algerian people. The post-colonial era in Algeria stands as a testament to the indomitable spirit of a nation that found liberation and identity through the words they spoke and the stories they shared (p.65)

In the 1970s, Algerian President Boumediene pushed forward the country's Arabization agenda. He issued decrees to replace French with Arabic in civil documents, records, and official seals. Boumediene also established a National Committee to oversee Arabization across public sectors, culminating in the 1976 Basic School Order that enshrined an Arab-Islamic orientation in the education system. However, French movement resisted Arabization, leading to student protests. In 1980, the ruling National Liberation Front party intervened, mandating universal Arabic use and requiring ministers to implement and report on the Arabization process. This underscores the political significance of language in Algeria's post-independence nation-building.

Algeria has made efforts to implement Arabization policies across its public institutions, including recognizing Ber "Tamazight" as a national and then official language in the constitution in 2002 and 2016 respectively. However, French nevertheless remains influential within central and local administrative institutions, as well as in economic, financial, and diplomatic spheres, with the public environment in major Algerian urban centres reflecting the persistent penetration of French, despite private schools and kindergartens being found to impose the use of French in contravention of the law. Recently, government directives emphasizing the obligation to use the official language of Arabic have

brought the issue of Arabization back to the forefront of public discourse in Algeria, particularly significant as the promotion of Arabization was a central demand of the 2019 Hirak protest movement.

1.3 The Current Sociolinguistic Situation in Algeria

Since the onset of the Hirak protest movement in 2019, the sociolinguistic and sociopolitical landscape of Algeria has undergone significant transformations, with the Hirak movement underscoring the country's diverse linguistic composition, where Arabic, Ber, and French coexist and interact, often in a complex and contested manner; this has brought to the forefront issues related to linguistic identity, particularly among the Berber community, which has long sought greater recognition and rights for its language and cultural heritage, with the Algerian government's attempts to address the Amazigh cause yielding mixed results and at times leading to further tensions and negotiations. Despite the government's continued efforts to promote Arabization policies, the linguistic situation in Algeria remains a complex and evolving landscape, as the influence of French persists, particularly in administrative, economic, and diplomatic spheres, with French continuing to be widely utilized in central and local government institutions, as well as in the private sector, and the public environment in major Algerian cities still reflecting the prominent presence of French; notably, private schools and kindergartens have been found to defy government directives emphasizing the use of the official languages by imposing Fr in their curricula, leading to ongoing tensions and concerted efforts by the authorities to enforce the use of Arabic in educational settings, underscoring the multifaceted and politically charged nature of language policies in post-Hirak Algeria, as the government's Arabization agenda continues to encounter persistent challenges in the face of the country's diverse linguistic realities.

Efforts to increase the use of English in Algeria, such as through educational reforms and initiatives to attract foreign investment, have met with some progress, but the language

has not yet achieved a significant foothold in the country's multilingual ecosystem. The continued dominance of French, coupled with the primacy of Arabic, ADA, MSA, and Berber, has posed challenges to the more widespread adoption of English in Algeria. Many Algerians view English as a gateway to better career opportunities and global knowledge, and there is a growing cultural integration of English, with many young people adopting Eng phrases and expressions in everyday conversation, especially in urban areas. English media, including television shows, movies, music, and news, are widely consumed, which helps increase exposure to the language and influences linguistic trends. In the public sector, the use of English is primarily confined to specific domains, such as higher education, research, and some international business and diplomatic contexts, but even in these areas, English is often overshadowed by the continued prominence of French. In the private sector, the use of English is more prevalent, especially in multinational companies, the industry, and certain tourist-oriented businesses, but the majority of commercial and consumer-facing activities still prioritize the use of French and Arabic. The public environment, including signage, advertisements, and government-issued materials, remains largely dominated by Arabic and French, with a minimal presence of English, and the average Algerian citizen's exposure to and proficiency in English is generally lower than their command of the country's official and national languages.

President of the Republic Al Madjid Tebboune recently gave the green light to teach English at the primary level for the first time in the country's history, coinciding with Algeria's celebration of six decades of independence and the end of the French occupation(2022), the move did not go unnoticed but sparked controversy and opened many debates as the language is one of the focal points of what many consider to be an ideological and identity struggle between the Francophone and Arabisation movements in the country.

After the success of the first experiment in the history of Algerian schools, with the inclusion of English language teaching at the primary school level, President of the Republic Abdelmadjid Tebboune approved the official "formalisation" of the subject without cancellation or reversal, with the opening of the English language primary education teacher specialisation in higher schools, in order to end the "recruitment crisis" in the medium and long term. In 2024 Algeria's sociolinguistic landscape reflects a dynamic interplay between Arabic, Berber, French, and a growing interest in English. Algeria's identity continues to shape its evolving linguistic landscape.

1.3.1 Classical Arabic (CA)

"Classical Arabic, the language of the Qur'an and early Islamic literature, served as a unifying linguistic standard across the vast and culturally diverse Islamic empire." (Versteegh, 2014).

Classical Arabic, also known as Quranic Arabic (the Holy Book), is the standardized literary form of the Arabic language that predates the sixth century. It maintains a prestigious status as the highest form of Arabic, which is characterized by a highly developed and complex grammatical structure as well as a rich and extensive vocabulary. Since it is the language of Islam, it represents the identity, customs, traditions, beliefs and civilization of the Arab people; however, it is classified as a dead language, implying that it is no longer in use as a living means of communication. Furthermore, CA is the register of the Arabic language on which MSA is based but it is logical that disparities exist between this particular variety and other Arabic varieties that currently exist.

"Despite the dialectical variations across the Arab world, classical Arabic maintained its role as the lingua franca for intellectual and religious discourse" (Holes, 2004)

CA continues to hold a significant role in various domains. While regional dialects are commonly used in everyday communication, CA remains essential in formal and religious contexts like mosques. It serves as the language of religious texts, scholarly discourse, legal

documents, and other formal written materials. Although its everyday spoken use may be limited, CA maintains its importance as a prestigious and influential language in contemporary Arab society.

1.3.2 Berber and its Varieties

It is pertinent to note that Berber comprises diverse linguistic variants that exhibit localized distribution within the country, primarily concentrated in mountainous regions.

These variants are classified by geographical and traditional differences as follows:

Kabyle: (Taqbaylit / +₀Z⊖₀≶N≤+) predominantly spoken in the northern regions of Algeria across four provinces (Tizi-Ouzou, Béjaia, Bouira, and Boumerdes), hold the distinction of being the most prevalent variant of Berber in Algeria. In fact, it is estimated that the number of individuals proficient in Kabyle surpasses the combined total of speakers of all other Ber dialects in the country.

Chaoui: (**GO₀Uξ**) serving as the second most widely spoken variant of the Berber language in Algeria, exhibits a limited geographical distribution primarily confined to the southeastern region of Constantine, specifically within the Aures Mountains. It is predominantly spoken in areas such as "Batna, Khenchla, and Oum El-Bouaghi."

Mzabi: (MoX₀⊖≼+%) predominantly spoken in the region of "Ghardaïa" and its surrounding environs, is primarily associated with a minority group. Despite their numerical representation, Mzabi speakers constitute an essential and integral component within the broader Berber population, as well as the Algerian community at large.

Targui/Tamashek: (+•OX\$\$) which is spoken by the Touareg minority group, is relatively lesser known compared to other Berber dialects. It finds its usage in isolated regions of the Saharan desert, notably in places such as Ahaggar. Significantly, the Targui dialect has been recognized for its exceptional preservation, distinguishing it as one of the dialects within the Berber language family that has maintained its linguistic integrity to a significant extent.

Chenwi: (€Φ፥1⊔€) representing another minority variant, is spoken in select northwestern regions of Algeria, including Tipaza and Cherchel and a small part of the wilaya of Aïn Defla and Chlef.

1.3.3 Modern Standard Arabic (MSA)

Modern Standard Arabic (MSA) emerged as a lingua franca during the early 19th and 20th centuries in the northwest o the Arabian Peninsula, It is the standardized and simplified variety of Classical Arabic that is utilized across the Arab world including Algeria where it serves as the official and national language This form of Arabic is employed in formal settings, such as government, official communication, official documentation, media and radio, furthermore MSA is the variety of Arabic taught in Algerian schools and universities and it is more useful and understandable than CA

Ennaji (1990) stated that:

MSA is standardized and codified to the extent that it can be understood by different Arabic speakers in the Maghreb and in the Arab World at large, it has the characteristics of a modern language serving as the vehicle of a universal culture (p.287)

1.3.4Algerian Dialectal Arabic (ADA): El Ammiya' or 'Eddaridja'

In terms of the spoken variety used in daily life one may argue that Arabs are not linguistically unified and they have different dialects almost without similarity, even though Arabic is their official language which represents their identity and their religions. ADA is the most commonly used variety among Algerian speakers; what is called Daridja or El Ammiya, is an informal spoken language that is not used in official settings but in casual everyday situations. ADA is the mother tongue of the majority of Algerians, while it shares many features with MSA due to their common history, there are sufficient differences in vocabulary, phonology, morphology, and syntax to classify them as distinct varieties, ADA vocabulary is mainly composed of an important number of French words and also few from the Turkish and Spanish languages as well. These borrowings are considered a part of the Algerian dialects.

Table1.1 The Language Varieties Mixed in ADA

Sentence in ADA	Meaning
Le week-end obligé nrouh nvisitiha /lə 'wiːkɛnd ɒblɪʒeɪ nru: ħ nvisitihæ/	I have to visit her in week-end
Semana hadi nechri balto /sɪmænæ hædɪ nɛʃrɪ bæltʊ/	This week-end I will buy a coat

1.3.5Spanish

From the early 16th century until the late 18th century, various regions of Algeria, including Oran, were under Spanish colonial rule, The timeframe in question saw the influx of Spanish settlers, merchants, and military personnel into Algerian territories, this resulted in linguistic and cultural exchanges as well as meetings and marriages and this interaction has left a clear impact on language, especially in ADA.

Table1.2 Some Spanish Loanwords in Algeria

Borrowing words	Meaning
Semana /sımænæ/	One Week
Sebat (Zepato) /sebæt/	Shoes
Lejía /leˈxia/	Bleach Water
Fishta (la fiesta) /fεʃtæ/	Party

1.3.6Turkish

Algeria's integration into the Ottoman Empire occurred in response to the country's request for assistance from the dominant Islamic power of that era in order to confront the challenges posed by colonialism and European aggression. During the Ottoman rule, which began in 1504 and was administered by the Ottoman ruler known as the "Dey, Algerians were exposed to the influence of the Turkish language as a consequence of cultural and social exchanges with the Ottomans. The prolonged three-century period of Turkish hegemony in Algeria exerted a considerable impact on the linguistic patterns of Algerian speech This interaction resulted in the incorporation of Turkish-origin words into the Algerian dialect, a linguistic phenomenon that can still be observed to this day.

Table1.3 Some Turkish Loanwords in Algeria

Loan words	Phonemic	Meaning
	transcription	
طابونة	/ Tabonæ/	Oven
زوالي	/zæwæli:/	Poor man
شاربات	/ʃærbæt/	Juice

1.3.7 French

Gordon (1964) declared that "when the Portuguese colonized, they built churches; when the British colonized, they built trading stations; when the French colonized, they built schools" (p. 7).

Throughout and after colonization, the French had a profound impact on Algeria's sociolinguistics, politics, economy, and culture due to historical factors. During this temporal phase (from 1830 to 1962), the French was imposed as the administrative language following Arabic, thus, Algerian people started combining the two languages in their everyday conversations, both intentionally and unintentionally, in formal and informal settings, and this is one of the reasons for failing to reduce the use of French in the nation; the project of Arabization was the main one, and it was unsuccessful.

1.3.8English

The Algerian population exhibits a distinct inclination towards the Fr, surpassing other languages, despite the prominence of English as the language of science and technology and the official language of numerous influential nations, including the United States of America and 66 other countries. A few years ago, the English was employed in Algerian primary schools After being taught in the first year of middle school, the population had not expressed opposition towards it; the language in question could have been supplanted by the year 1990, Benrabah (1999) hypothesized that "A potential factor contributing to parents; refusal to adopt English as a language of instruction in Algeria was their perception that acquiring French was comparatively easier and held greater socio-economic utility."

Learning it as a foreign language has the potential to improve Algerian educational standards and promote social progress, but it is almost impossible for it to have the same impact as French on society. In light of the fact that the language contact was different, the

interaction with Fr was direct due to colonization, in contrast to the interaction with Eng, which was indirect. It had just recently been introduced in the nation through education and media. With a history of 132 years of colonization followed by 62 years of independence, during which the French language has become deeply ingrained in our culture, it raises the question of how the English language could supplant it.

1.3.9 German

The German language, a member of the West Germanic language family, boasts a global speaker base exceeding 100 million individuals. It holds the status of official language in Germany, Austria, and Liechtenstein, while also being recognized as an official language in Switzerland, Luxembourg, and Belgium. The usage of German in Algeria is comparatively less common when compared to languages like Arabic, French, and English. Although the general population does not widely speak German, some individuals have acquired it through educational institutions or personal interests.

"German language education in Algeria has seen a steady increase, particularly in higher education institutions where German is taught as part of language and translation studies programs." (Morsly,2018)

German education in Algeria is primarily available in specific universities, high schools, and language institutes, which offer courses and programs for students interested in learning German as a foreign language. In summary, while this language learning does exist in Algeria, it is not as widespread as Arabic and French, nor as prominent as English in certain professional domains.

1.4 Outcomes of Language Contact in Algeria

Thomason (2011) has suggested that "language contact is the use of more than one language in the same place at the same time" (p.1) Contact-induced change refers to the interaction and influence between distinguished languages that occurs when speakers of one language come into contact with speakers of another language. The contact between speakers of various linguistic and cultural backgrounds throughout centuries has led to the creation of this linguistic act. This linguistic act may lead to different linguistic outcomes such as:

1.4.1 Diglossia

Ferguson (1959) has defined it as:

Diglossia is a relatively stable language situation in which, in addition to the primary dialects of the language (which may include a standard or regional standard), there is a very divergent, highly codified (often grammatically more complex) superposed variety, the vehicle of a large and respected body of written literature, either of an early period or in another speech community, which learned largely by formal education and is used for most written and formal spoken purposes but it is not used by any sector of the community for ordinary conversation (as cited in Schiffman, 1998, pp.1-2)

Based on this definition, Diglossia is a sociolinguistic situation in which two different varieties of language are used by a community or an individual, these two varieties are represented in "high" and "low" varieties. The high varieties in Algeria are the CA and the MSA known as the "prestige" or "formal" varieties the MSA is used in education, official documents, formal speech and literature, however the low known as "Darja" the "vernacular" or "informal" variety, it is utilized in less formal context casual talks, daily speech and it may include regional dialects.

1.4.2 Borrowing

Gumperz (1982) defined borrowings as:

The introduction of single words or short, frozen, idiomatic phrases from one variety into the other. The items in question are incorporated into the grammatical system of the borrowing language. They are treated as part of its lexicon, take on its morphological characteristics and enter into its syntactic structures (p.66) (Benyelles, 2011, p.19)

In the field of linguistics borrowing is the process by which a language incorporates words, phrases, or linguistic elements from another language into its grammar or lexicon, upon borrowing, it either stays in its original form or is modified to conform to the phonological, morphological, and syntactic rules of the language it is being borrowed into. Borrowing can occur due to diverse factors such as cultural contact, colonization and this was the case in Algeria, the 132 years of colonization had a significant impact on language, people customs and even their food without forgetting that many words in the Algerian dialect are borrowed from the Turkish language, Spanish and even the Italian.

1.4.3 Code Switching (CS)

Code-switching is a common linguistic phenomenon where individuals fluent in multiple languages or dialects alternate between them within a single conversation consciously or unconsciously. This practice of shifting between different linguistic varieties is prevalent among bilingual and multilingual speakers. Poplack (1980) classified codeswitching into three categories, which are as follows:

Extrasentential code-switching: Switching languages between sentences for instance: I consumed all my drugs. Suis-je obligé de faire un autre rendez-vous chez le medçin?

Intrasentential code-switching: Switching languages within a single sentence for Example: The patient asked me si je peux lui donner ce medicament sans ordonnance

Tag-switching: Inserting a tag or short phrase from one language into a sentence in another language for example: I need this medication en urgence

As we previously said, French has never left the tongues of Algerian people so they switch between Fr an ADA in their conversations and sometimes they switch between French, ADA and MSA. For some linguists, code-switching may be seen as a weakness in fully mastering a language, while for others it could be considered a sign of linguistic creativity.

1.4.4 Code Mixing (CM)

Another well-known form of language contact that is common in bilingual populations is code mixing whereby they fluidly shift back and forth between the use of two or more languages within a single utterance or discourse. The prevalence of code-mixing behaviour among Algerian speakers is influenced by the complex linguistic landscape of the country, which encompasses the co-existence and historical interplay of diverse language varieties. This includes MSA, various ADA, Ber, as well as Fr and other foreign languages which has a legacy as a colonial language. The strategic employment of code mixing allows bilingual and multilingual Algerian speakers to dynamically draw from their full linguistic repertoire in order to enhance communicative effectiveness, express their multifaceted social and cultural identities and navigate fluidly between distinct sociolinguistic contexts.

Table1.4 Code Mixing in Algeria

Examples	Translation
traitement خصني نشرب /xæsnɪ nɛʃrɒb trɛt. mã/	I need to take the treatment
La pharmacie ما حلتش بكري /læ færmæsı mæ ħɛltʃ bɛkrı/	The pharmacy did not open early
Mon rendez-vous راني روطار على /rænɪ rɒtær Slæ mɔ̃ κäde.vɒ/	I am late for my appointment
weekend ما يخدموش الطبة / mæ ˈjɛˈxdmuːʃ ˈwiːkɛnd/	Doctors do not work at weekends

1.5 The Context of The Current Investigation (Tiaret)

This section is dedicated to elucidating the contextual framework of this research, wherein we provide a concise exposition concerning the geographical attributes, etymological origins, and historical background of Tiaret.

1.5.1 Etymology and Historical Background of Tiaret

Tiaret (aka Tahart or Tihert), an urban centre situated in Algeria, was historically recognized as Tagdemptt (+.OfO+), a name rooted in the Tamazight language. The etymology of Tiaret can be traced back to the indigenous Berber language, wherein it symbolizes the majestic "lioness" and denotes the presence of the notable Barbary lions that once inhabited the surrounding vicinity.

Indeed, the historical timeline of Tiaret's administrative division encompasses a period ranging from the pre-Islamic era, specifically the Stone Age, to the seventh century when Islam arrived in Algeria. The Berber population migrated to North Africa, establishing themselves as the initial inhabitants of the region. They christened the area "Tahert" in their native Berber dialect, signifying a "station" due to its role as a strategic location for traders, travellers, and military forces seeking respite during the Roman era.

Moreover, Tahert served as the prominent capital city of the Rustamid Dynasty, adherents of the Ibadhite sect, from 761 to 909 AD in the Middle Maghreb, specifically within the boundaries of modern-day Algeria. The city was founded by Imam Abderrahmane Ibn Rostom (776-784), a Kharedjit religious leader of Persian descent. Fleeing from Kairaouan in Tunisia, Abderrahmane, accompanied by his son Abdel Ouahab, sought refuge in the Middle Maghreb (Algeria) and commenced the consolidation of his forces and devoted followers to establish a city governed by the principles of Ibadhite doctrine. This marked a significant milestone in Algerian history, as it was recognized as the inaugural Ibadhite Islamic state in the region. Tahert experienced substantial economic growth and prosperity during this period, particularly in agriculture, owing to its advantageous geographical location.

Regrettably, the Rustamid Dynasty met its demise when it was completely eradicated by the forces of the Islamic Fatimid Caliphate, led by El Hussein Abu Abd Allah Ash-Shi'I, in 909. This destroyed the final Rustamid Imam and his family. Subsequently, they departed from Tahert and sought refuge in Sedrata, located in the Algerian desert, before eventually settling in the M'zab valley within Ghardaïa. According to certain historians, Tahert came under the governance of El Ziri Ibn Manad Sanhaji in 952. Later on, it became integrated into the Almohads Dynasty (Al Muwahhidin) in 1153. Following this, the region fell under the jurisdiction of the Ziyani state in 1253, which incorporated Tiaret into their capital city of Tlemcen. Throughout this period, Tiaret gained renown for its advancements in industry, agriculture, trade, and culture. In the sixteenth century, after the decline of the Ziyani state in 1518, the Turkish brothers Aruj and Kheireddine (known as Barbarossa), notorious for their acts of piracy in the Mediterranean Sea, assumed control over the region. Tiaret remained under the domination of the Ottoman Empire for 318 years, governed by the Bey of Mascara during that era.

Lastly, it is pertinent to mention the period of French colonization, which commenced in 1843, when the French forces successfully overpowered El Amir Abdel Kader El Djazairi. In response to this defeat, El Amir Abdel Kader El Djazairi relocated his capital from Mascara to El Zemala, specifically the commune of Zmalat El Emir Abdelkader, commonly referred to as Taghine. Subsequently, in 1843, the capital was shifted once again to Tagdamet. The arrival of the French brought a sense of stability to Tiaret, accompanied by a significant Influx of settlers who erected numerous grand edifices in the European architectural style. However, with the attainment of Algerian independence in 1962, a substantial portion of the French and other European inhabitants, commonly known as "pieds noirs" or "black feet," departed from the city that had been their home for several generations.

1.5.2 Tiaret: A Geographical Outline

Tiaret is a significant Algerian province characterized by its expansive domestic agricultural and pastoral activities. Geographically, it is situated in the northwestern region of Algeria. (cf., Map2). The province occupies a strategic position within the western expanse of the high plains and elevated terrains of the Tell Atlas Mountain range, boasting an approximate altitude of 1000 meters above sea level. Tiaret is located at a considerable distance of approximately 360 kilometres from the capital city, Algiers. Encompassing a vast land area of approximately 20,050 square kilometres, it holds the distinction of being the largest province in the western quadrant of the country. Tiaret shares its borders with Tissemsilet and Relizane to the north, Laghouat and El Bayad to the south, Mascara and Saida to the west, and El Djelfa to the east.

As per the official ranking of Algerian provinces, Tiaret is designated as the fourteenth province in Algeria. The population of Tiaret comprises individuals of Arab and Berber descent with a majority of Muslims. The estimated total population of Tiaret is approximately

1,000,755 inhabitants. Notably, the province is equipped with an airport, named the Abdelhafid Boussouf Airport at Bouchekif, in honour of the martyr.

The region has historically exhibited a warm and humid climate, fostering favourable conditions for various activities. Positioned at the convergence of two major natural thoroughfares in the country, this remarkable location is commonly referred to as the "Balcony of the South" or the "Gate of the Sahara." Sersou, along with the mountain ranges to the south and north, constitutes a part of the central Maghreb, with the highest peak being Ouarensenis. The northern segment of this undulating region is crisscrossed by deep valleys, nourished by numerous wadis, and exceptionally conducive to diverse forms of cultivation. Moreover, it offers extensive pastures suitable for the rearing of numerous herds in the southern reaches. Hence, it is unsurprising that this town has consistently been a focal point for the aspirations and claims of diverse groups, each vying for control over the territory of North Africa.

The province is subdivided into 14 administrative districts known as "Daira's," which are further organized into communes or "Baladiyate". This division is explicitly depicted in the ensuing table:

Table 1.5 Dairas and Communes of Tiaret

	Dairas	N of communes	Communes	
1	AinDeheb	3	AinDeheb / Chehaima / Naima	
2	Ain Kermes	5	AïnKermes / Madna / Medrissa/ Djebilet Rosfa / SidiAbderrahmane	
3	Dahmouni	2	Dahmouni / AïnBouchekif	
4	Frenda	3	Frenda / Aïn El Hadid / Takhemaret	
5	Hamadia	3	Hamadia / Bougara / Rechaiga	
6	KsarChellala	3	Ksar Chellala / Serghine / Zmalet El Emir Abdelkader	
7	Mahdia	4	Mahdia / AïnZarit / Nadorah / Sebaïne	
8	MechraaSfa	3	MechraaSafa / Djillali Ben Amar / Tagdemt	
9	Medroussa	3	Medroussa / SidiBakhti / Mellakou	
10	Meghila	3	Meghila / Sebt / Sidi Hosni	
11	Oued Lilli	3	Oued Lilli / Sidi Ali Mellal / Tidda	
12	Rahouia	2	Guertoufa / Rahouia	
13	Sougueur	4	Faidja / Si Abdelghani / Sougueur /Tousnina	
14	Tiaret	1	Tiaret	

It is important to mention that "KsarChellalah" has been promoted to a mandated state, with Governor Daoudi Toufik appointed as its head, following the recent decree by the President of the Republic.

1.6 Conclusion

In this chapter, a detailed analysis of the linguistic landscape in Algeria was presented, with references to its historical background that has significantly shaped the sociolinguistic situation of the country. In addition, we have examined the language contact in Algeria that is characterized by several features as Diglossia, Borrowing, code switching and code mixing. Additionally, we have provided a focused discussion on the specific context of Tiaret, including its etymology, historical background, geographical location, and a historical overview. The next chapter is devoted for the literature review of this research.

CHAPTER TWO:

Sociolinguistic Perspectives on Morphophonological Change in Medicines' Names in Algeria

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2.1 Introduction

The second chapter of this dissertation endeavours to provide a comprehensive review of the seminal literature about the central theme under investigation. Additionally, the current chapter seeks to elucidate the phenomena of language change and language variation as manifested in the Algerian context, underscoring the paramount importance of referencing competing theoretical frameworks that delineate the distinction between these two linguistic concepts. Furthermore, the chapter sheds light on the morphophonological changes in medicines' names within Algeria. Finally, the chapter will introduce the theoretical construct of the community of practice, with a specific focus on the pharmaceutical community of practice in the city of Tiaret.

2.2 Language Change

One of the fundamental facts about living languages is that they are always changing. New words, new pronunciations, new grammatical forms and structures, and new meanings for existing words are always coming into existence, while older ones are always dropping out of use Trask (1999 p.99).

Accordingly, linguistic change refers to the process by which languages evolve. This process includes changes in the phonological, morphology, syntax, semantics, and vocabulary as languages naturally shift and diversify with the contribution of many factors "trying to stop languages from changing is like trying to stop the wind from blowing (Trask,1999, p. 100).

Therefore, it is confirmed that the language change can never stop due to various reasons like language contact, it may lead speakers to incorporate elements, such as words or grammatical structures, from other languages or dialects into their speech, also it may result from the introduction of new concepts, vocabulary, ideas and cultural practices in addition to other reasons like social, cultural, and cognitive factors.

Words used in CA	Words used in MSA
الورى	الناس
/æl'wæra:/	/ælˈnæs/
جدلانا	فرحا
/dʒædæˈlænɑː/	fæ'raħa/
البرايا	لمخلوقات
/æl. bæˈræː. jɑː/	/læmaxlu:'qa:t/
الكرى	النوم
/ælˈkuːrɑː/	/æˈnæʊm/

Table2.1 Language Change from CA to MSA

2.2.1 Language Change in Algeria

According to the previous definition, Language change is a linguistic phenomenon that affects every existing human language.it can vary from one language to another or even from one dialect to another, as well. The factors and reasons behind this language change can differ and Since the Algerian people had contact with the Spanish, Turks, and French, this diverse cultural interaction was a factor that contributed to changes in the Algerian dialects with its varieties.

The current study is an attempt to investigate language change in two speech communities in Algeria; one is small and highly conservative, and the other is considerably larger and less conservative. In general, it is concluded that the two dialects of Berber (Mzabi and Kabyle) are highly influenced by French and Arabic. This influence shows the dynamic nature of human language. Moreover, the study concludes that change has affected both dialects almost equally inasmuch as the percentage of the changed words is almost identical in the two dialects. The study plumbs the depth of language change as a social and linguistic phenomenon. That is, language change is both language-internal and language external. The study shows that some aspects of change are purely linguistic, some are purely social, and others show the interrelatedness of the social and linguistic factors. Moreover, it should be noted that not all language change is contact-induced. In other words, some aspects of language change are bound to change regardless of contact. Language is a living entity that adapts to the external conditions where it is spoken. Despite the fact that the Mzabi speech community is a highly conservative and

closely-knit speech community, it has shown high levels of change and variation among male and female individuals" Language change and stability in Algeria: A case study of Mzabi and Kabyle Berber authors (Al Rousan & Ibrik, 2018).

Table 2.2 Language Change in Algeria (Al Rousan & Ibrir (2018). Language change and stability in Algeria10(2), 177-198.)

Words in Mzab	Phonemic Transcription	Meaning	Words in Kabyle	Phonemic transcription	Meaning
Λ { Θ \$ Ο	/ddiss3: r/	fruits	≶8+∏IIN。	/jetkɒnʒla/	Freeze
≶E∘Ή₹	/jt ^ç afi/	Turn off	.Ø፥⊖.∃	/as ^c ebba:ð ^c /	Shoes
≶8+8XN ₀Ø。	/jetəgla: s ^ç a/	glaze	И∆₀∆О	/lvavo:r/	ship

One lexical item can be affected differently by the same language in different dialects and the outcomes may be also different. This is illustrated in the table (2.2) (example of to freeze and glaze) hence the linguistic changes observed do not necessarily have a direct relation between the changed word and the influential language as a result The changes can manifest differently across dialects even for the same lexical item. Additionally, in the examples in table (2.2), it is shown that even if the community is small and highly conservative its language is not far from the change because the elements that contribute to change in language are numerous and many as we have mentioned previously.

2.3 Language Variation

"Language variation is a subject that has been analysed not only in the field of sociolinguistics but also in psycholinguistics and linguistics" (Krug &Schluter, 2013)

Language variation means that language is not uniform or static, but rather changes and differs depending on the location, social group, and specific context or situation in which it is used. The manner in which a language is spoken in various geographical places varies widely. Additionally, there are several ways the language is utilized and expressed in each of these unique settings which means individuals who speak the same language variation may pronounce words differently or have distinct words for the same item within the same time and place.

According to Trask (1999/2005), linguistic variation refers to the differences in how a language is used based on regional, social, or contextual factors. Despite the many variations in language considering Algeria, it can be noted that there are language varieties such as MSA and ADA, this proves that one language has distinct varieties in addition to French which is included in their speech so this table shows the different meanings and pronunciations of same words in Algeria's dialects:

Table 2.3 Language Variation in ADA (Al Rousan & Ibrir (2018). Language change and stability in Algeria)

Word pronounced in Tiaret	Meaning	Same word pronounced in Mechria (Naama)	Meaning
Zagi /zægɪ/	Speak up/ scream	Zagilha /zægɪlhæ/	Call her
Word in ADA	Meaning	Same word in MSA	Meaning
Khlefha /'xlfɛhæ/	Revenge	Khlefha /'xælfɛhæ/	Behind her
Word pronounced in Tiaret	Meaning	Word pronounced in Algiers	Meaning
Raki Aakla /rækı ʕæklæ/	Do you remember	Raki Aakla /rækı \$æklæ/	You are quite

2.3.1 Language Change vs. Language Variation

In linguistics, language change and language variation are two different but related phenomena: The term language change describes how a language changes over time as a result of social, cultural and technological factors; hence this change can be seen in vocabulary, syntax, pronunciation, semantics, and other elements, and it occurs over the long term in the sense; the language used in the 10th century is significantly different from the language used in the 21st century. In contrast, the language variation does not necessarily imply a change in the language itself rather it represents the coexistence of several ways in using the same language within a community at a particular moment. In addition, it refers to the differences in the way a language is used by different speakers, groups, or communities, and this variation may be a result of factors like geographic location, socioeconomic status, ethnicity, age, gender, and social context.

The long-standing question of whether language change can be directly observed as it is occurring, has been debated in sociolinguistics and the answer was

emphatically negative following the influential views of Saussure (1959) and Bloomfield (1933) hence the prevailing perspective has been that linguists can only observe the consequences of language change, not the change process itself (Fuller & Wardhaugh,2014)

Accordingly, language variation is always apparent and evident at the same moment since it is the diversity of linguistic forms that exist simultaneously, whereas language change takes time to manifest its effects because it is the historical progression and transformation of a language over generations.

2.3.2 Types of Language Variation

Wardhaugh (1986) acknowledged that "language has variations and these variations are influenced by social factors like the speaker's social group and geographic location, in addition, occupation, age, sex, class, context and ethnicity may lead to the language variation too" (p.251)

More details about types are expressed in the following lines:

2.3.3 Geographical / Regional Variation

This refers to differences in language use based on geographical location, such as dialects or accents and this can differ from one area to another in terms of its vocabulary and pronunciation. Given that Algeria is nicknamed the continent due to its numerous states The disparities in speech patterns between eastern and western, or northern and southern regions can engender a perception of having entered a completely different country because of the Variations in accent and dialects, for example some Algerians call their wives "lmra/marti" others say "lmadam"/"eyali" or "الدار" and this in MSA mean "house".

Table 2.4 Examples of Language Variation in Algeria

Word	Language variation in ADA		
Couscous	Taam in Tiaret, kosksi in Tebessa, berboucha in Annaba		
/ˈkuːs. kuːs/	/tʕæm/ in Tiaret /kɒsksɪ/ in Tbessa /bɛrbu:∫æ/ in Annaba		
A dress	Abaya in Tiaret, gandoura in Annaba, jeba in Algiers, bediaa in Oran		
/ə ˈdres/	/Sbæyæ/ in Tiaret /gændu:ræ/ in Annaba /dʒɛbæ/ in Algiers /bɛdSiyæ/ in Oran		
Car Loto in Tiaret, karouusa in Blida, tonobil in Algiers			
/ka:/	/lɒtɒ/ in Tiaret /'kæru:sæ/ in Blida /tɒnɒbi:l/ in Algiers		
He said	Galek in Tiaret, alek in Tlemcen, kalek in Algiers		
/hɪˈsed/	/gælɛk/ in Tiaret /ælɛk/ in Tlemcen /qælɛk/ in Algiers		

2.3.4 Social Variation

Men do not speak like women; older people do not speak like younger people. Moreover, even the speech of a single person is not homogeneous: you don't speak in the same way when you're chatting to friends in a bar and when you're being interviewed for a job (Trask, 1999, p. 121)

Accordingly, social variation refers to differences in language use based on social factors like age, and gender, which play a role in language variation as well it is not uncommon to notice differences in an adolescent's and adult's speech repertoire, same case for gender, women tend to use more cutesy and polite language than men do.

 Table 2.5 Language Variation Between Young and Old Generations in Algeria

Words said by adults	Words said by adolescents	Meaning
Djeredti /dʒerɛdti/	Inscriti /Anskri:ti:/	Sign up
Mrag /mræg/	khrodj /xrɒdʒ/	Go out
Khochi /xɒtʃi:/	Dokhli /dɒxli/	Enter

2.3.5 Register/ Contextual Variation

The process in which people utilize language differently depending on the context and situation, in formal or informal settings according to the vocabulary used in high or low verities in addition to grammar and way of speaking: is known as the register which includes all forms of speech such as written or spoken. When conversing with a friend or member of the family, the act is considerably different than when speaking with an administrator or in a job interview therefore speech is determined by various contextual factors such as the social setting, purpose, and intended audience.

According to Halliday (1978), "Register is language variations that appear in specific fields distinguished by vocabularies or terminologies used by individuals depend on the context as well as it serves to differentiate the language's purposes."

2.4 Community of Practice

The concept of community of practice was first introduced in 1991 by Eytan Wenger, who is widely recognized as an authority on the topic of communities of practice.

Lave and Wenger (1991) described a CofP as:

An aggregate of people who come together around mutual engagement in an endeavour. Ways of doing things, ways of talking, beliefs, values, and power relations — in short, practices — emerge in the course of this mutual endeavour. As a social construct, a community of practice is different from the traditional community, primarily because it is defined simultaneously by its membership and by the practice in which that membership engages.

According to (Wenger & McDermott & Snyder,2000) "a community of practice (CofP) is a group of people with a shared concern, interest or passion, who deepen their knowledge and expertise in this area by interacting on an ongoing basis." (p.211)

Communities of practice are groups of individuals who share a concern, a set of problems, or a passion about a topic and who deepen their understanding and knowledge of this area by cooperating on an ongoing basis. These people do not necessarily work together on a routine, but they get together because they find value in their interactions. As they spend time together, they typically share information, insight, and advice. They solve problems. They help each other. They discuss their situation, their aspirations, and their needs. They think about common issues. They explore ideas and act as sounding boards to each other. They may create tools, standards, generic designs, manuals, and other documents, or they may just keep what they know as an implicit understanding they share. Over time, they develop a unique perspective on their topic as well as a body of common knowledge, practices, and approaches. They also develop personal relationships and establish ways of interacting. They may even develop a common sense of identity. A growing number of people and organizations in various sectors are now focusing on CofP as a key to improving their performance.

According to Etienne Wenger, a CofP has three main characteristics; A domain of knowledge, a community of people and a shared set of tools and practices. The combination of these three elements creates a CofP, and by developing these three elements in parallel one cultivates such a community.

- **2.4.1 The domain:** A CofP is not simply a social club or network of casual connections, but rather an entity defined by a shared area of interest or concern. Membership signifies a commitment to this domain and a shared proficiency that sets members apart from non-members. Even if two people belong to the same network, they may be unaware of each other's involvement. The domain need not be recognized as formal expertise outside the boundaries of the community itself.
- **2.4.2** Community: Merely sharing the same job or title does not constitute a CofP; the key is that members interact and learn together. Conversely, members of a CofP need not work together on a day-to-day basis for the community to exist and thrive.
- **2.4.3The practice:** A CofP is illustrious by its members being active practitioners in a shared domain, not simply a community of shared interests, like movie preferences. Over time, through sustained interaction, members develop a collective repertoire of resources experiences, stories, tools, and approaches to recurring problems that constitute their shared practice. This shared practice may emerge organically, without members fully realizing it.

Communities of practice come in diverse forms, even though they all share the three core elements of a domain, community and practice. The size and scope of these communities can vary greatly – some are small, others very large with core and minor members; some are local, others global; some interact primarily in-person, others mainly online; some are limited within a single organization, while others span multiple organizations; and some are formally recognized and resourced, while others are informal and invisible. Despite this diversity, the common threads are the three foundational elements that define a CofP.

Communities of practice have been a part of human society for as long as people have learned and worked together. We all belong to multiple such communities, whether in our homes, workplaces, schools, or hobbies. Our level of involvement varies and throughout our lives, we move through and belong to numerous communities of practice as our interests, activities, and affiliations evolve.

This study sheds light on the "pharmaceutical community of practice in Tiaret" which includes "Pharmacists", "delegates" and "pharmacies' sales assistants." There are 321 pharmacies in Tiaret and its suburbs. As a pharmaceutical CofP, it is responsible for the dispensing of prescription and over-the-counter medicines to patients, reviewing prescriptions from doctors to ensure accuracy and suitability for the patient, including the dosage, and ingredients required, and correctly and safely labelled. Pharmacists also liaise with doctors,

delegates, and other healthcare professionals to monitor, review, and evaluate the effectiveness of medicines. They advise the public on medicines, the side effects of medicines, and the treatment of minor ailments. Additionally, pharmacists manage, supervise, educate, and train pharmacy support staff. They also order, purchase, and sell pharmaceutical and medical supplies, handling them correctly.

2.5 Language Change in Medicines' Names in Algeria (Morphophonological Change in Medicines' Names)

The ongoing exploration of the field of linguistics serves as a continued reminder that language is not a static or fixed entity, but rather a living, dynamic, and ever-evolving system. Language reflects and embodies the rich diversity inherent in human experience and modes of expression. By delving into the intricacies of phonetics and morphophonology, we unlock a deeper understanding of the very foundations of language, empowering us to navigate the ever-changing landscape of communication with greater clarity and appreciation, morphophonology offers a captivating glimpse into the intricate workings of language, revealing the fundamental building blocks and the dynamic processes that shape the words we use. From the nuanced distinctions between phonemes to the morphological transformations that occur across languages, this field of study invites us to appreciate the remarkable complexity and adaptability of human communication.

When morphemes combine, they influence each other's sound structure (whether analysed at a phonetic or phonemic level), resulting in different variant pronunciations for the same morpheme. Morphophonology attempts to analyse these processes. A language's morphophonological structure is generally described with a series of rules which, ideally, can predict every morphophonological alternation that takes place in the language. https://wikipedia.org/wiki/Morphophonology.

Morphophonology represents the convergence of the realms of morphology and phonology within the study of linguistics, examining how the underlying morphemic structures of a language can undergo sound changes or morphophonological processes when they interact with one another; for instance, the morpheme "in-," denoting the meaning "not," can manifest in variable phonological realizations depending on the specific sound that follows it, transforming into "im-" before bilabial sounds such as "b" or "p" as in "imperfect," becoming "in-" when preceding velar sounds as in "ingrate," and remaining as the base form

"in-" in other environments as illustrated by words like "insufficient" or "infinite," with these subtle yet systematic transformations highlighting the dynamic interplay between morphemic structures and the phonological forces that shape them, offering valuable insights into the intricate mechanisms governing the relationship between the morphological and phonological components of language and revealing the complex and adaptive nature of linguistic systems.

The Insights gained from the study of morphophonology have far-reaching implications. In language teaching and learning, an understanding of morphophonological processes can aid in the development of more effective strategies for pronunciation, spelling, and vocabulary acquisition. By recognizing the intricate relationships between morphemes and phonemes, educators can help students navigate the nuances of language more effectively. Additionally, morphophonological analysis is crucial in the field of speech and language pathology, where professionals work to diagnose and treat communication disorders. By identifying the underlying morphophonological patterns that may be disrupted, clinicians can develop targeted interventions to support individuals with speech and language challenges.

Morphophonology (also morphophonemics or morphonology) is the branch of linguistics that studies the interaction between morphological and phonological or phonetic processes. Its chief focus is the sound changes that take place in morphemes (minimal meaningful units) when they combine to form words https://en.wikipedia.org/wiki/Morphophonology.

As we delve deeper into the realm of morphophonology, we uncover the remarkable complexity that underpins the way we communicate. The interplay between morphemes and phonemes is a testament to the richness and dynamism of language, a testament to the ingenuity of the human mind.

Morphophonological changes in medicines' names in Algeria are significantly influenced by the linguistic practices of the speech community, these changes occur to make foreign medications' names more compatible, with the phonological and morphological rules of ADA and French, the primary spoken languages in Algeria

https://academic.oup.com/book

Because of that, the changes in the names of medicines in Algeria reflect a complex interplay between the linguistic needs of the language and the adaptations driven by the local

community. These adaptations are widespread and driven by the desire for clarity, brand recognition, and ease of communication. The local speech community plays a vital role in shaping these changes. Pharmacists, delegates, and pharmacy call assistants often modify the names based on how easy they are to pronounce and remember. This grassroots-level adaptation guarantees that the names of medicines are practical for everyday use and communication.

In the context of the self-medication which is common in Algeria, these adaptations are even more critical. Non-prescription, medicines are named in ways that are inherent and easily recognizable to confirm safe and affective self-administration.

Some morphophonological changes observed in Algerian medicines' names comprise:

2.5.1 Phonological adaptations

Vowel Insertion and Deletion: To make foreign names easier to pronounce, speakers might insert vowels into consonant clusters or delete unstressed vowels. For instance, "Panadol" /pænədol/ becoming "panadoul" /pænədaol/.

Consonant substitutions: "Augmentin" /ɔ:g'mɛntɪn/ becoming "Ogmantin" /ɒg'mæntɪn/.

Syllabe structure modifications: "Ibuprofen" /aɪbju: 'prəufen/ becoming "Ibuprufin" / ɪbju: 'profin/.

Phonemes that do not exist in Arabic are often substituted with the closest native phonemes. For example, the "p" /p/ sound, which is not present in Arabic, might be replaced with a "b" /b/ sound, leading to names like "Paracetamol" /pærəˈsɛtəmɒl/ being pronounced more like "Paracetamol."/bærəˈsɛtəmɒl/.

Consonant clusters that are difficult to pronounce in Arabic are simplified. A medicine like "Acetaminophen" /əsiːtəˈmɪnəfɛn/ might be locally referred to as "Paracetamol," /pærəˈsɛtəmɒl/ which is easier to pronounce and more familiar due to its use in French-speaking regions.

2.5.2 Morphological adaptations

Affixation: The community might add Arabic or French morphological affixes to medication names to make them more familiar. This can include adding definite articles or possessive suffixes, prefixes and infixes.

Root and pattern changes: "Amoxicillin" /əˌmɒksɪˈsɪlɪn/ becoming "Amoksisilin" /əmɒksɪˈsɪlɪn/.

Compounding and Reduplication: Some medication names may be adapted by compounding them with Arabic words that describe their function or use. For instance; a headache relief medication "Panadol" /pænədɒl/ becoming "كاشي تاع الراس".

These morphophonological alterations often reflect the combination of foreign medicines' names into the local linguistic and cultural context of Algeria and may vary across different regions or healthcare settings as local dialects and pharmaceutical practices can influence the precise adaptations observed.

2.6 Conclusion

The existing body of scholarly work in the field of sociolinguistics has revealed that language is not a static construct, but rather a dynamic entity subject to ongoing change and variation across multiple elements. Researchers have documented the evolving status and functional roles of CA, MSA, ADA, French, Berber and other varieties over time. Importantly, the current chapter also highlights the heterogeneity within each of these broad language varieties, with substantial regional and social variation. Which exhibit diverse phonological and morphological features that reflect the country's cultural and geographic diversity. The following chapter is devoted for the discussion of the context of this study which is sociolinguistic analysis of contact-induced morphophonological change in medicines' names in Tiaret.

CHAPTER THREE:

Sociolinguistic Analysis of Contact-Induced Morphophonological Change in Medicines' Names in Tiaret

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3.1 Introduction

The third chapter of this dissertation bears the title: "Sociolinguistic analysis of contact-induced morpho-phonological change in medicines' names in Tiaret". The current chapter endeavours to establish a cohesive link between the theoretical framework and the practical side, thereby aiming to reconcile the existing gap between them. It stands on presenting the main findings the analysis, and the interpretation of data gathered through questionnaires, interviews, and observations. Additionally, in conclusion, recommendations will be put forth to encourage further exploration of the matter.

3.2 Research Methodology

The primary objective of this study is to investigate the different specific features of morphological, phonological and semantic changes in medicines' names, and what role ADA and French play in that. Furthermore, this research seeks to identify and elucidate both the social and internal factors that govern the linguistic transformations within the speech community. Given the dedicated focus of the present chapter on data analysis and interpretations, it is imperative to provide a succinct talk regarding the adopted methodology as a means to address the research inquiries effectively. In this regard, the triangulation method approach was embraced, which integrates both quantitative and qualitative research elements. Employing the triangulation method aims to enhance the validity, reliability, and comprehensiveness of the analysis, resulting in a more robust understanding of the research topic.

3.3 Research Instruments

As research instruments, a semi-structured questionnaire and interview were employed which encompassed a diverse range of question formats, including closed, open-ended, and contingency-based inquiries. To ensure methodological triangulation, careful observation was deemed necessary. The questions were meticulously prepared and printed in both Arabic and French, as these languages hold prominence in Tiaret and serve as the official languages of Algeria.

3.4 Target sample population:

To establish a comprehensive dataset, in support of the interview, we opted to target the most relevant sample that closely represents the Community of Practice (CofP) and whose members are typically required to utilize medicine-related terminology, including medicines' names. Accordingly, the sample comprises 10 participants, each of whom fulfils one of the following positions: "Pharmacist", "Pharmacy sales assistant" or "Medical Delegate". Additionally, participants must either be employed in Tiaret or be a member of the general public within the state community. Patients in Tiaret represent the population used in the questionnaire, Thus, the sample consists of ten participants. The observation was carried out specifically within the most renowned pharmacies located in Tiaret.

3.4.1 The Questionnaire

Invented by Sir Francis Galton, a questionnaire is widely acknowledged as a research instrument encompassing a series of questions aimed at gathering pertinent data from respondents.

In April 2024, we distributed a printed questionnaire to 80 respondents at different pharmacies in Tiaret, questionnaire was primarily written in English then it was translated into Arabic and French and divided into five sections, encompassing a total of nine questions. The four initial sections focused on gathering information regarding the participants (Linguistic background and awareness, attitudes and perceptions, language preference and usage in the phenomenon under investigation and the awareness of standardization efforts). These sections consisted primarily of multiple-choice and optional questions and dichotomous questions the final section was dedicated to participants to state their own medicines' names examples.

3.4.2 The Observation

Milroy and Gordon (2003) claimed that "the principal benefits of participant observation are (a) the amount and quality of the data collected, and (b) the familiarity with community practices gained by the investigator" (p.68).

Hence, observation is a methodical and unbiased approach to gathering data through close and direct observation of phenomena, events, behaviours, or characteristics. It relies on the use of sensory perception to systematically document empirical information, aiming to generate knowledge and gain insights.

The selection of this method as the initial step in the research process is justified by the fact that we are members of the community under investigation, this instrument proved to be valuable due to its ability to capture natural interactions between individuals and pharmacists during medication ordering and communication. The observation encompassed not only the patients' behaviour but also extended to how pharmacy sales staff and delegates navigate the challenges posed by the varying medicines' names when interacting with different individuals, the duration of the observation spanned 5 days, commencing from April

4th to April 9, 2024, with a daily commitment of 3 hours. The observation was conducted at five prominently frequented pharmacies in the region of Tiaret including (Ilyes Pharmacy, Benchohra Pharmacy, Er-Rahmane Pharmacy, CNAS Tiaret Pharmacy, El Aoufi Pharmacy).

3.4.3 The Interview

"In the context of academic research an interview is a formal technique whereby a researcher solicits verbal evidence or data from a knowledgeable informant." (Remenyi, 2013).

Recognized as a valuable technique to enhance the feasibility and credibility of findings, the interview was utilized as an additional research method to ensure the utmost reliability in this study. This instrument encompasses a series of 13 questions, focusing on various aspects such as the participants' profession, their gender, their length of employment, their own experience, personal encounters, and perceptions of the phenomenon under examination. The recorded face-to-face interview was directed to ten (10) members of the CoP including "Pharmacists, medical delegates, and pharmacies' sales staff" who had been selected randomly to get extensive views about the contact-induced morpho-phonological changes in medicines' names.

3.4.4 Data Gathering Procedures

The data for this study was gathered through a random sampling approach, wherein printed questionnaires were distributed to participants. They were politely requested to complete the questionnaires to the best of their ability. However, due to various reasons, such as time constraints, some participants chose to verbally narrate their responses, while others did not return the completed questionnaires. It should be noted that the questions posed to participants were non-sensitive and directly related to the topic under investigation, without any intent to harm or cause discomfort. Additionally, observational notes were taken during visits to pharmacies, documenting the arguments, explanations, and thoughts encountered, which were subsequently linked to the research topic.

Nevertheless, the data collection process encountered several challenges. Firstly, participants exhibited a degree of suspicion, perceiving the study as an investigation into their legal compliance or potentially having ulterior motives, such as tricking them into signing documents or using their voices while interviewing them for malicious purposes. Consequently, a significant number of individuals declined to participate in the study. However, despite these obstacles, a satisfactory amount of data was successfully collected.

3.5 Data Analysis and Interpretations

Our chosen analytical approach draws upon the perspective articulated by Njobe (1992), who stated that "analysis based on statistical computations is seen as being more objective. In the latter, the researcher is being more guided by the outcome of the statistical computations even against [his or her] own wishes and beliefs" (p. 23).

Accordingly, we structured our analysis by systematically organizing the research instruments and subjecting them to quantitative and qualitative assessments employing mathematical statistics. The presentation of the data prominently featured graphical representations such as graphs, tables, and pie charts. These visual aids effectively convey the participants' choices, percentages, and numerical data that reflect their responses. Additionally, we provided concise interpretations and comments to elucidate and offer insights into the data generation process. Regarding the qualitative responses, we employed a meticulous coding and transcription approach to identify recurring themes. We focused on selecting the most frequently encountered and captivating responses, aiming to capture the essence and diversity of the qualitative data. Through this rigorous process, we discerned and analysed the underlying thematic patterns that emerged from the dataset.

Questionnaire Analysis and Interpretation

I. PART ONE: Linguistic Background and Awareness of Contact-Induced Morpho Phonological Change in Medicines' Names

Q01: Which language variety (ies) do you speak?

Figure 3.1 The Respondents' Spoken Language

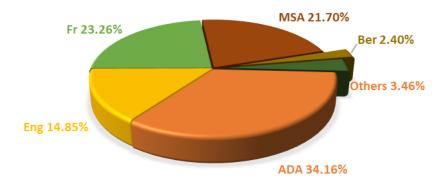


Figure 3.1 illustrates the spoken language varieties of the respondents. The majority of the participants (34.16%) speak ADA, this was expected owing to its status as their native language, besides French with the rate of 23.26% as it serves as the secondary official language. In contrast to Berber, which constitutes a minority with a rate of 2.40%, its representation among the population of Tiaret is limited due to the small number of individuals belonging to the Berber community in the region. English holds a proportion of 14.85% of the sample because of its presence in formal settings. The participants exhibit a scarcity of speaking other languages, such as Spanish, Turkish, Russian, and German.

Q02: Are you aware of the concept of changes in medicines' names?

Figure 3.2 Awareness of Participants of the Change in Medicines' Names

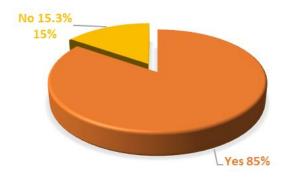
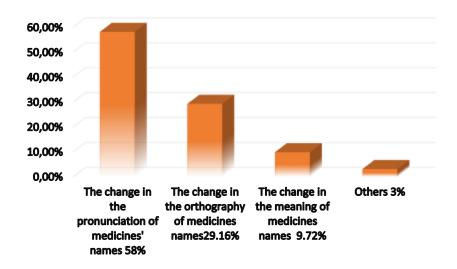


Figure 3.2 depicts a substantial majority of the sample, specifically 85%, demonstrating awareness regarding the morphophonological change in medicines' names, suggesting that this occurrence is pervasive and this is what justified the minority who said No. Due to the extensive prevalence of the altered and localized names, a prevailing belief among the majority of the respondents was that no substantive change had taken place.

If yes, how would you define this change?

Graph 3.1 Definition of the Change in Medicines' Names



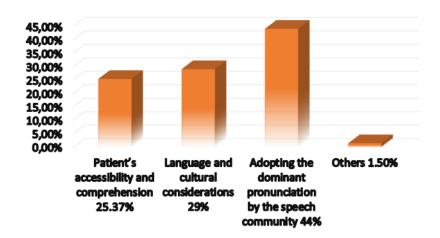
Graph 3.1 visually represents a significant portion, specifically 58%, of the sample perceived alterations in medicines' names primarily as change in phonology. Furthermore, an intermediate proportion of the sample, amounting to 29.16%, regarded the change in the morphology, given the influence of the French language on TSC, it was observed that the pronunciation of medicines' names followed a predominantly French pronunciation regardless

of the origin or language of the medication in question. Conversely, a minority of respondents with rate of 9.72% viewed such changes as indicative of shifts in the semantic content of medicines' names, when modifying a name often entails a corresponding change in its meaning, and in certain instances it becomes meaningless. A minority of the respondents held a divergent viewpoint, seeing this change as a change in generics.

II. PART TWO: Attitudes and Perceptions of Contact-Induced Morpho-Phonological Change in Medicines Names

Q01. What factors contribute to the adoption of the change in pronunciation or orthography of medicines' names?

Graph 3.2 Factors Leading to the Adoption of Altering Medicines' Names



As shown in Figure 3.2, the primary determinant for a substantial proportion (44%) resided in adopting the dominant pronunciation within the speech community, owing to its heightened familiarity, prevalence, and popularity. Certain even thought that the dominant medicine name is the original one, while others contended that linguistic and cultural considerations also exert influence because the name of the medication is often foreign to the language or culture of the patients. A minority subset of participants (25.37%) maintained that the patient's accessibility and comprehension contribute to the adoption of alterations in the pronunciation and spelling of medication names, whereas an exceptional case posited that the facilitation of communication and workflow for pharmacists constitute a contributing factor.

Q02: Do you believe that contact with other languages has influenced the change in pronunciation or orthography of medicine's names in Algeria?

Yes 94.52%

Figure 3.3 The Influence of Language Contact

In chart 3.3, we can notice that the biggest piece in the brown is estimated by an overwhelming majority of the sample 94.52% attributed the change of the medicines' names to the impact of language contact because most members of the CofP were formed and have studied in a language other than their native one, not to mention that patients speak more than one language varieties. However, the remaining participants did not believe that other languages have a significant influence, as each field has its considerations.

If yes, which language variety do you think has had the most significant influence?

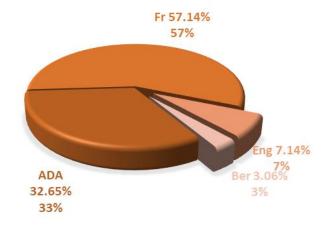
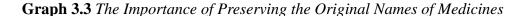


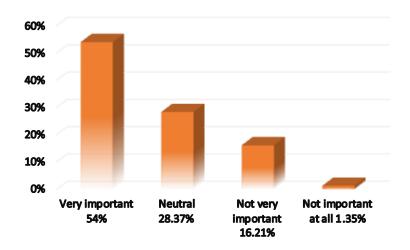
Figure 3.4 *The Most Influential Language*

Figure 3.4 presents the languages that have the most significant influence, revealing that French has emerged as the foremost influential language, accounting for 57.14%. This can be attributed to the direct contact with French resulting from the enduring colonial

presence in Algeria spanning no less than 132 years. Furthermore, even after independence, French remains the second official language and is widely adopted in educational and administrative establishments. Conversely, English has been identified as one of the least influential languages, constituting a mere 7%, primarily due to the indirect contact with English, through its presence within educational institutions. Lastly, Berber holds a marginal influence at 3%.

Q03: How important is it to preserve the original pronunciation or orthography of medicines' names in Algeria?





More than half estimated by 54% of respondents believed that retaining the original names of medicines is very important to avoid confusion, maintain credibility, and ease of recognition, and that the original names should be retained to maintain international similarity and ease of understanding. Additionally, a noteworthy proportion of 28.38% held the perception that maintaining the original nomenclature of medicines is neutral in its effect, as they argued that they comprehend the medicines even in the event of change.

Furthermore, respondents occasionally exhibited a preference for seeking direct consultation from pharmacists. Others believed that keeping the original name of the medicine is not very important because they considered that the effectiveness of the medicine is more important than its name and that the pharmacist can understand the patient, and they represent a small percentage (16.21%). The minority of 1.35% believed that keeping the original names of the medicines is not important at all, as long as the CofP understands the information.

III. PART THREE: Language Preference and Usage in Medicines Names and its Impact on Mis/Communication

Q01: When communicating about medicines, do you prefer using the original pronunciation or the locally adapted pronunciation of medicines' names?

Figure 3.5 Respondents' Language Preference and Usage in Communicating About

Medicines

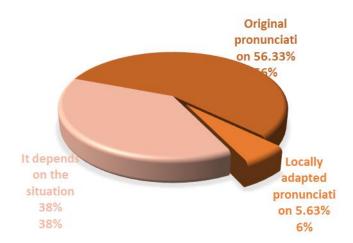


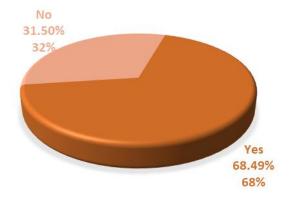
Figure 3.5 provides evidence indicating that a substantial majority of participants (56.33%) expressed a preference for adhering to the original pronunciation of medicines' names. This preference stems from their desire to facilitate the identification of medicines, ensure effective communication across different languages, streamline the purchasing process, and establish clear lines of communication with pharmacists. Moreover, the preservation of the prescribed and original name of the medicine is regarded as essential for maintaining its credibility, particularly given the existence of medicines sharing identical names but varying in terms of efficacy and formulation. A minority subset, comprising 6% of the sample, demonstrated a preference for locally adapted pronunciations.

This inclination arose from a variety of reasons, including a lack of recollection of the original name among certain individuals, a limited familiarity restricted to the local pronunciation in others, and a belief that adopting the local pronunciation facilitates effective communication with pharmacists due to its widespread acceptance within the community as a whole. The remaining 38% of respondents exhibited a variable approach to pronouncing medicine names, depending on the situation. This behaviour stems from the recognition that their mode of communication differs depending on the interlocutor. Specifically, some individuals communicate with patients employing locally adapted names, while engaging with the CoP using either the original name or a generic term. Additionally, a subset of respondents

appeared unaware of the reasons for their oscillation between pronouncing the original and locally modified names, possibly attributable to habituation or a lack of comprehensive knowledge regarding all original names.

Q02. Have you encountered any challenges or difficulties in understanding or communicating medicines' names due to the changes?

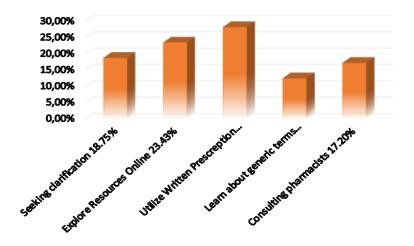
Figure 3.5 *Difficulties and Challenges in Communicating About Medicines*



As is demonstrated, 68% of the sample faced difficulties and obstacles when communicating about medicines or placing orders to pharmacists, which was attributed to a lack of knowledge and familiarity with the original pronunciation of the medicines as previously mentioned or the utilization of languages other than their native tongue in the pharmaceutical names. In contrast, the remaining 32% reported not facing difficulties, prompting further inquiry into how individuals who are not from the community of practice could not face such an issue. An exploration is elucidated in Graph 3.5.

If yes, how can you cope with these challenges?

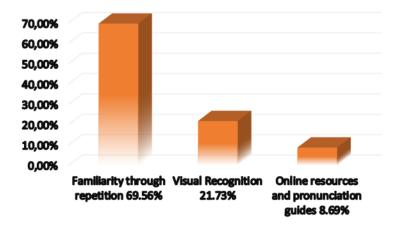
Graph 3.4 Solutions to Cope with Challenges in Communicating Medicines



Graph 3.4 shows how participants addressed the challenges and complexities they encountered when communicating medicnes' names. The majority (28.12%) of participants utilized written prescriptions, as they believed that pharmacists possess a better understanding of medical professionals' handwriting compared to their pronunciation of medicines' names. Subsequently, some participants relied on exploring resources online, considering them as the most suitable solution due to the visual and auditory accessibility they provide. The two solutions with the most similar proportions are seeking clarification (18.75%) and consulting pharmacists (17.20%). Additionally, 12.50% of respondents viewed learning about generic terms as a means to confront such difficulties, as generic names serve as standardized and universally recognized alternatives.

If no, why not?

Graph 3.5 Reasons Behind the Lack of Difficulty in Communicating About Medicines



32% of the sample did not face any challenges and difficulties in understanding and communicating medicines despite the morpho-phonological changes. The prevailing belief from the majority of the participants (69.56%) was that this proficiency stems from familiarity through repetition. Specifically, they ordered the same medicine for a long time until they achieved familiarity, this may explain the subset of respondents (21.73%) who relied on visual recognition, while others utilized online resources and pronunciation guides to assist in accurately pronouncing the medicines' names after writing them down. Notably, this letter approach was adopted by a relatively small proportion (8.69%).

IV. PART FOUR: Awareness of Standardization Efforts

Q01: Do you think standardizing medicine names in Algeria would be beneficial in addressing the impact of changes of medicine names?

Figure 3.6 Participants' Viewpoint of Standardizing Medicines' Names

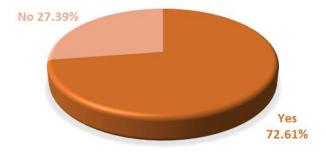
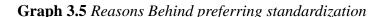
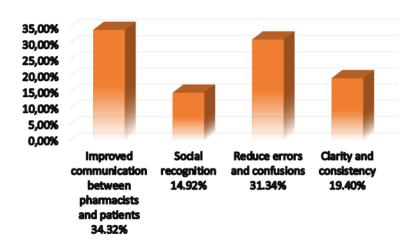


Figure 3.6 provides a depiction of the respondents' perspectives regarding the potential benefits of standardizing medicines' names as a mean to mitigate the impact of the morphophonological changes. Notably, an overwhelming majority of participants, accounting for 72.61%, expressed their conviction in the standardization. Conversely, a notable minority of the sample, comprising 27.39%, held a differing viewpoint.

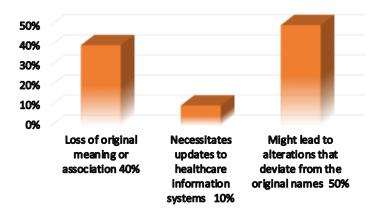
If yes, why?





Graph 3.5 presents the reasons why 72.61% of respondents believed that standardizing medicines' names would help mitigate the impact of the morpho-phonological changes. A significant proportion of respondents (34.32%) perceived standardized medicinal names improve communication between pharmacists and patients, this group believed that greater standardization facilitates the identification and ordering of medicines. Consequently, the reduction of errors and confusion was seen as a direct outcome of the widespread familiarity with standardized names, as it minimized the likelihood of incorrect or incomplete orders. Additionally, some respondents argued that the standardization of medicines names contributes to ensuring clarity and consistency in the healthcare domain. Another segment of respondents (14.92%) highlighted the pivotal role of standardization in social cognition. Notably, certain respondents endorsed multiple perspectives, as they perceived these viewpoints to be complementary.

Graph 3.6 Reasons Behind Rejecting Standardization



Graph 3.6 shows the reasons why 27.39% of the sample believed that standardizing medicines' names would not be beneficial in mitigating the impact of the morphophonological changes. 50% of the sample viewed that standardizing medicines' names might lead to alterations that deviate from the original names because they may prioritize the preservation of the original names of medicines, considering them to be integral to maintaining historical, cultural, or professional authenticity. In contrast, 10% of the sample held the perception that standardization may not effectively mitigate the impact of the morpho-phonological changes, particularly as they anticipated that the standardization process would require updates to healthcare information systems. Overall, these individuals perceived the potential challenges and requirements associated with updating healthcare information systems as a barrier to the effective implementation and benefits of standardization in mitigating the impact of changes in medicine' names.

V. PART FIVE: Medicines' Names sample

Q01: Please, could you provide us with samples of changes in pronunciation or orthography in medicines names (at least <u>02</u>)?

Table 3.1 *Medicines 'Names Sample*

The Original Name	The Adapted Name
Moov /mu:v/	Mauve/ Mofe /mov/ /mo:f/
Lovenox /'lavinoks/	Levenox /levenoks/
Diclofenac /daɪˈklɒfɪnæk/	Declofenal /dɛklɒfɛnæl/
Aspegic /ˈæspɪgɪk/	Katajin /kætæʒɪn/
Nozinan /ˈnɒzɪnæn/	Lozino /lʊzɪnʊ/
D-three /di: 'θri:/	Dtrois /dtrwa:/
Upsa /ˈʌpsə/	Ipssa /i: p's'/
Diclor / darklo:/	Ticlor /ti: klɒr/
Sowela /səˈweɪlə/	Sowel/spwel/
Pénicilline /pɛnɪˈsɪliːn/	Pilissiline /p'ılısıli;n/
Zecuf / zeknf/	Zikof/ Zokof /zıkɒf/ /zɒkɒf/
Globul /ˈglɒbjuːl/	Glibil/glɪbɪl/
Amaril /ˈæməˌrɪl/	Amiral /æmɪræl/
Amoclan /ˈæməˌklæn/	Amoxiline /æmɒksɪlɪn/
Ibuprofen /ˌaɪbjuːˈprəʊfɪn/	Profen /p'rofen/

Participants were asked to provide 2 examples or more of morpho-phonological changes in medicine's names, respondents were kind enough to provide us with multiple examples most examples were given in ADA or Fr except a few of them were in Eng.

3.7 Interview Analysis and Interpretation

Q01: Are you: a pharmacist / Medical delegate / Pharmacy sales assistant?

 Table 3.2 Participants' Profession

Profession	Member	Proportion
Pharmacist	3	30%
Delegate	3	30%
Assistant	4	40%

The following tabulated data presents an overview of the sample composition, comprising delegates, pharmacists, and pharmacies' sales assistants. Notably, assistants constituted the predominant proportion (40%) within the sample, owing to their direct contact with patients and greater prevalence and presence within pharmacies when compared to pharmacists.

Q02: Gender?

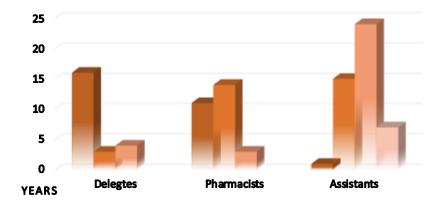
Figure 3.7 Participants' Gender



Figure 3.7 illustrates that within the sample, females constitute the highest proportion (70%), whereas males account for 40% of the total. The adoption of this question was motivated by multiple factors, which will be elucidated in the responses to question number 9.

Q03: How long have you been working?

Graph 3.7 Participants' Work Experience



The available data reveals notable diversity in terms of the participants' professional experience and duration of work. The range of experience varies across different roles. For delegates, the length of their work spans from 3 years to 16 years. Among pharmacists, the minimum duration of work reported is 3 years, while the maximum extends to 14 years. Similarly, for assistants, the duration of their work ranges from 1 year, representing the least experienced individual in the sample, to 24 years, representing the participant with the most extensive work history. The wide variation observed in participants' professional experience and tenure provides valuable insights into the prevalence of morphological changes in medicinal names over time and sheds light on how individuals deal with this phenomenon based on their experiences.

Q04: Have you noticed any change in the pronunciation and orthography of medicines names in recent years? If so, can you provide examples?

Following the interrogation of the participants, it was determined that a unanimous observation was made regarding the morpho-phonological changes in medicines' names. The consensus among the participants was that this transformation has been ongoing for an extended period, although opinions diverged concerning the magnitude of the change. This change was commonly observed among the elderly and patients with diverse linguistic backgrounds, for instance they changed the suffix (Care /kær/) with (Car /kɑ:/) or (Feet /fi:t/) with (Fet /fæt/) and the prefix (No /nəʊ/) with (No /nɔ:/), sometimes they also replaced (Baby /beɪbi/) by (babi /bɑ:bi/) and sometimes the letter (F /f/) by (V/v/) and the letter (P /p/) by (B

/b/) and (I /ai/) by (I /i /) and (X) by (XZ), sometimes they changed the whole name by describing the colour or the effect of this medication.

Q05: In your opinion, what factors have contributed to pronunciation and orthography changes in medicines names?

Upon conducting questions regarding the factors influencing the morpho-phonological changes in medicines' names, it was ascertained that the paramount factor exerting influence is educational and cultural level, as they affected the ability of comprehending, pronouncing, and orthographically representing medication names.

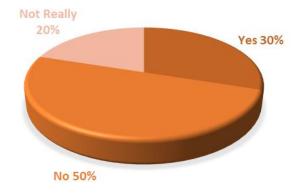
Furthermore, a subset of participants expressed the belief that language itself plays a pivotal role, as certain individuals tended to either arabize or pronounce medicines' names in French, perceiving such modifications as extraneous intrusions upon their native tongue. Specifically, delegates tended to favour the notion that the spread and availability of generics have been the driving factor behind both patients changing medicines' names and pharmacists relying on the dominant and altered names as a means to facilitate effective communication.

Q06: How do you think the interaction between different languages (Arabic, French, and Berber) has influenced the pronunciation and spelling of medicines' names in Algeria?

The CofP perceived that language interaction significantly impacts the pronunciation and spelling of medicines' names. The majority of participants observed that the SC has been influenced by the French language due to the enduring colonial legacy and the presence of the ADA, which incorporates several French loanwords. Conversely, others contended that some individuals were influenced by the English, as it is now being taught to a minority. However, a few respondents believed that language interaction has minimal discernible effects, as most patients reverted to their native language. When ordering medicines.

Q07: Have these changes in medicines' names affected your communication with pharmacists/patients or delegates?

Figure 3.8 The Effect of Morphophonological Changes on Participants' Communication



If yes, in what ways?

Statistical data indicates that 50% of the participants were not significantly affected in their communication with patients or colleagues by the morpho-phonological changes in medicines' names owing to their extensive experience. Their primary concern in their work was ensuring that the patient received the correct medication, regardless of the communication method employed. Conversely, others were minimally affected by these changes in their communication with patients or pharmacists, as they have adapted to the situation and it has become familiar to them. As for the remaining 30%, they held a different viewpoint, perceiving that the changes had an impact on their communication, particularly with less experienced pharmacists or new delegates.

Some respondents, despite their awareness of the original names, referred to use the locally modified names for the sake of facilitating communication. Additionally, they sometimes find it necessary to request written prescriptions from physicians. Furthermore, some believed that communication becomes difficult for both patients and CoP members in light of this phenomenon.

Q08: Do you perceive the change as positive, negative, or neutral?

Figure 3.9 Perception of the Impact of Morphophonological Changes

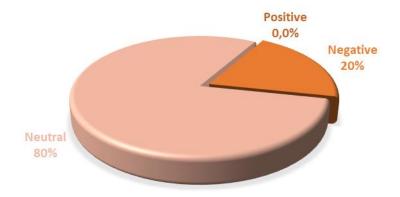


Figure 3.9 indicates that the minority of participants, comprising only 20% of the sample, viewed the changes in the pronunciation and orthography of medicines' names as negative. They perceived these alterations as potentially leading to serious errors that could result in fatalities, and they also undermined the credibility of the medicines. Conversely, the majority (80%) considered these changes as neutral, as their mode of communication varied from one patient to another due to the limited comprehension abilities of some patients. Furthermore, the phenomenon of changes in the pronunciation of medicines' names has become familiar even within their households, and they were able to adapt to it. Nevertheless, none of the participants in the sample viewed these changes as positive, as they believed that reverting to the original form remains the preferable option.

Q09: Have you observed any differences in the perception and usage of medicines names among different age groups or linguistic backgrounds?

All participants unanimously agreed that the perception and utilization of medicines' names vary depending on the age group, linguistic background, and even gender of the patients. The majority of participants found it challenging to communicate with the older generation and elderly individuals because they either speak French or have never received any formal education, which can be attributed to the colonial era and the resulting illiteracy. However, the current generation includes a significant proportion of individuals who are proficient in English, French, Arabic, and even other languages, especially when it comes to medicines from foreign countries. This can be attributed to the availability of resources for studying such languages and conducting research through the Internet.

All of the above ideas were emphasized by a pharmacist with 24 years of experience working at Rahman Pharmacy in Tiaret. She said: "Since I started working in 2000 when the elderly were the ones who bought medicines the most, it was difficult to communicate and interact with them. Sometimes, we had to refuse their requests for medicines for fear of making a mistake that could endanger their lives. But nowadays, especially with the new generation, this phenomenon has gradually diminished due to their access to information about medicines and their proficiency in various languages. They sometimes correct our pronunciation of certain medications' names."

As observed by the participants, women tend to utilize French and English languages to a greater extent. This preference is primarily driven by the fact that many of them employed these languages as a means of ostentation and prestige, rather than for practical necessity.

Q10: In your interactions with patients/pharmacists or delegates, have you noticed any variations in the pronunciation or understanding of medicines names based on regional dialects?

Figure 3.10 Regional Dialectal Variations in Pronunciation and Comprehension of Medicines' Names

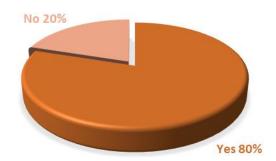


Figure 3.10 demonstrates that the majority of participants observed variations in the pronunciation and spelling of medication names across different dialects, solely in terms of their morphology and phonology, not their comprehension or meaning. As indicated by 80% of the participants, despite having no direct or personal connection with the patients and customers, they can discern whether someone is from Tiaret or its surrounding areas. Moreover, those who speak Berber and the Malian residents in Tiaret are particularly distinguishable by their dialect. All of these differences become apparent solely through the pronunciation of medication names. Conversely, the remaining 20% believed that it was either

impossible or extremely unlikely to determine the customer's dialect purely based on the pronunciation or spelling of the medicines. Instead, they believed that engaging in conversation with the customer is necessary to ascertain their dialect.

Q11. Have you come across any instances where the changes in the pronunciation and spelling of medicines' names have caused confusion or misunderstanding among healthcare professionals and patients?

Figure3.11 Implications for Confusion and Misunderstanding Within the Community of Practice



60% of the sample confirmed that they have encountered situations in their professional journey where morpho-phonological changes in medicines names have led to confusion and misunderstandings. They attributed the cause to the similarity of medicines names, sometimes differing by just one letter or having their letters rearranged. In other cases, patients were unaware of the correct pronunciation. On the other hand, 40% have not encountered such situations due to their extensive experience or because patients understood the medicines after seeing the packaging or taking it home. Some respondents avoided the responsibility of the serious consequences resulting from errors thus they requested a written prescription. Many customers were unaware that even some written prescriptions are not comprehensible, which is why participants seek assistance from the doctor. Consequently, they are now witnessing prescriptions being written using computers.

If yes, can you provide examples?

Table 3.3 Common Errors in Medicines 'Names



The medicine (Solupred) is an anti-inflammatory; patients often pronounce it (Sulpiride) the name of a neuroleptic antipsychotic medicine. The same case for (Aldomet)a centrally acting antihypertensive medication, often pronounces (Indomet) an anti-inflammatory and the case of (Upsa) a source of vitamin C and (Pepsane) stomach medication.

Q12: Based on your experiences and observations, do you believe that further research or studies are needed to explore the implications and consequences of pronunciation and orthography changes in medicines names in Algeria?

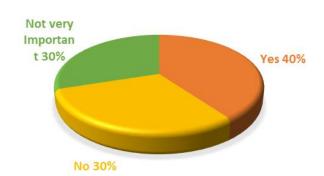


Figure 3.12 A Call for Further Research and Studies

As depicted in figure 3.12 the majority of participants 40% considered that there was little value in conducting further studies or research on morpho-phonological changes in medicines' names. They believed that the most important aspect is understanding the medicine and its benefits. They viewed such studies as less important compared to recommending and raising awareness among people about the dangers of consuming medicines without consulting a doctor. However, the remaining participants were divided into two groups. 30% considered studies on this phenomenon to be highly necessary due to the significant diversity and evolution of medicines. They argued that such studies are essential for understanding the consequences associated with this phenomenon and identifying the original names of medicines. They believed that this is easily achievable, thanks to the availability of the internet. On the other hand, the other group saw studies like these as of little importance, suggesting that their presence is beneficial but their absence does not cause harm.

Q13: In your view, what potential advantages could come from standardizing the names of medicines in Algeria? This could help address the impact of these changes?

The majority of members within the community of practice perceived the idea of standardizing medicines' names as a commendable concept if implemented. They believed that such standardization would lead to improved communication, healthcare efficiency, and diminished language barriers while adhering to international standards. For instance, if there is a desire to standardize any globally shared medicines name, such as "Ibuprofen," it would suffice to mention only the name of the manufacturing company, such as "ibuprofen Saidal" or "ibuprofen Sanofi." This approach would effectively address the issue of medicines

homogeneity and the variation among manufacturers, which currently imposes the obligation on doctors, delegates and pharmacists to mention both the company name alongside the medicine name. However, a minority viewpoint exists, wherein they perceive little utility in standardization, contending that it primarily benefits pharmacists. Consequently, the confusion persists.

3.8 Observation Phase

Given that we are members of TSC, and based on our extensive observation of pharmaceutical settings, it has come to our attention that the method of communication between pharmacists and patients varies from one person to another, depending on their ages, linguistic backgrounds, cultures, genders, and educational levels. Additionally, we have observed that communication among members of the CoP exhibited notable disparities, as it integrated specific symbols denoted as "DCI" which means the International non-proprietary name of medicine, "Princeps" referring to the first medicine to contain a new substance for a health problem.

"Generics" refers to a medicine that several companies are authorized to manufacture and market themselves. Furthermore, it has been observed that the prevailing language in pharmacies was French beside ADA. This is primarily because the pharmaceutical field, along with several other domains, is primarily taught in the French language. Additionally, a significant portion of pharmaceutical products was labelled and documented in the French language as well. A near absence of the English language has been observed, as well as a notable prevalence of morpho-phonological changes in the pronunciation of medicines' names among the elderly population, particularly due to their inclination towards Arabization or using French. Furthermore, it has also been noted that some patients convey medicines' names through written means, often utilizing young children as intermediaries. This method was frequently deemed the easiest approach for them to convey accurate information.

The following table encompasses the accurate names of medicines and how they are altered by the participants, based on our observations:

Table 3.4 Variations Between Original and Imitative Medicines' Names

Original Medicines' Names	Phonemic Transcription	The Imitative Medicines' Names	Phonemic Transcription
Pro feet	/proʊ fiːt/	profet	/pxə. fɛt/
Leadermax	/ˈliːdər mæks/	Ladermax	/lædəymæks/
Nopain	/nov pein/	Nopain	/nopæn/
Nobac	/noʊ ˈbæk/	Nobak	/nɒbæk/
Xycare	/gzikɛər/	Xykar	/gzikæɣ/
Babygaz	/ˈbeɪbi gæz/	Babigaz	/bæbɪgæz/
Stop-check	/stap tsek/	Stopshek	/stapsek/
Moov	/mu:v/	Mauve	/moov/
Aqua Soft	/ˈaːkwə sɒft/	Akasoft	/ ækæsɒft /
Marvelon	/ˈmɑːrvəlɒn/	Marvelon	/mæyvəlɒ/
Bio Mag	/ˈbaɪoʊ mæg/	Biomag /bjpmæg/	
Glycerine Irrigation	/ˈglaɪsirːn ɪrɪˈgeɪʃən/	Glycerine Irrigation	/glisiy:n ıyıgæsjv/
Glucose	/ˈgluːkoʊs/	Glucoze	/glɪkɒz/
Glucare	/ˈgluːkɛər/	Glukar	/glukæy/
Bionine	/ˈbaɪoʊ naɪn/	Bionine	/bonin/
Grape Seed	/greɪp siːd/	Geapsid	/gyæpsi:d/
Greeny	/ˈgriːni/	Greni	/gɣɪnɪ/
Gain Plus	/gein plas/	Gain plus	/gænplos/
Gastro Biotic	/ˈgæstroʊ baɪˈɒtɪk/	Gastro biotik	/ˈgæstxobjʊtɪk/
Abilify	/əˈbɪləfaɪ/	Abilifi	/əˈbɪləfɪ/
Genta Cure	/ˈdʒɛntə kjʊr/	Gontakure	/gɒnt ^s ækuy/
Strip-Check	/strɪp tʃɛk/	Strip shek	/stxɪp∫ɛk/
Atopi cream	/əˈtoʊpi kriːm/	Atopikreme	/ætɒpɪ kyæm/
Ezilax	/ˈiːzi læks/	Izzilax	/ɪzɪlæks/

3.9 Discussion

Language exhibits a dynamic and vibrant nature due to its perpetual state of flux and transformation. Consequently, certain languages flourish while others decline. Thus, the survival of a language is contingent upon its capacity to adapt, and the alterations that transpire within a language can be discerned and documented through the examination of temporal and spatial disparities between languages. For instance, Arabic, spoken in approximately 25 distinct Arab nations, manifests numerous regional dialects that diverge from one country to another. Moreover, as previously elucidated, linguistic diversity manifests not only across national borders but also within them. For instance, within Algeria, Arabic employment encompasses three categories: MSA, CA, and ADA, alongside other foreign language variants.

We initiated a discussion concerning the variables that provide a clear demographic perspective on the sample at hand. The sample consisted of 83 participants, with 73 of them being patients for whom the questionnaire was designated, while 10 of them were engaged in face-to-face oral interviews. Furthermore, these 10 participants shared a common interest, as they were part of the pharmaceutical practice community, indicating their practical involvement with medications, their names and their formulations.

The principal objective Is to examine the participants' level of awareness regarding morpho-phonological changes in medicines' names. This investigation initiates with questionnaire Q 2, which aims to determine if our sample possesses an understanding of the concept of changes in medicine names. The results indicate that 85% of the participants confirmed their awareness of this phenomenon. Subsequently, we directed our attention towards exploring potential language variations among the patients, with a particular focus on identifying the predominant language or variety affected by these variations. Q 1 inquired about the language spoken by the participants, revealing that 34.16% chose Algerian dialectal Arabic, while 23.26% opted for French. Furthermore, we established a connection between these statistics and the outcomes obtained from Q 4. It was observed that 57.14% of the respondents indicated that French had the most significant influence on their communication about medicines, whereas 32.65% claimed that Algerian dialectal Arabic played a similar role.

These findings suggest that Algerian dialectal Arabic constitutes the dominant language variety, while French exerts the greatest influence on this particular sample, and this was confirmed by the CoP in Q 6. Moreover, to ascertain the presence of language contact influencing the pronunciation or orthography of medicine names in the Tiaret region, participants were directly asked in Q 4. The responses revealed that 57.14% of the

respondents agreed that Fr is most likely involved in the naming of medications, as confirmed by sub-question 4.1. When coming to the first question of our study "How far can Tiaret Speech Community (TSC) affect the Community of Practice (CofP) in naming medicines?" it has been hypothesized that it can include using language that is easily understood by the TSC members and ensuring that medicine names are accessible to them in terms of pronunciation, comprehension, and cultural relevance.

Furthermore, for our second research question "What linguistic aspects can be influenced by such linguistic practices in medicines' names?" We can state that our second hypothesis was correct because several results have proven, illustrated from the analysis above within Q 5 in the interview and Q 3 in the questionnaire answers that indicate that change occurred within older generations and francophones and individuals with different educational levels in the third question of the survey, 29% and 44% said that language, cultural considerations, and pronunciation are the two most influential factors. While some participants believe that generics are the main factor of such a change.

Additionally, when speaking about the outcomes of the morpho-phonological changes in medicines' names the majority of the sample with proportions 60% agreed that they encountered confusion in communicating about medicines, other members of the CofP (40%) stated that due to their large experiences in this field, they did not face such challenges.

Furthermore, we suggested standardizing medicines' names as the solution for these morpho-phonological changes in Q 8 of the questionnaire, 72.61% of patients were with it because they view it as a means to improve communication between TSC and CofP, and to reduce errors and confusion. Moreover, the majority of members within the CofP perceive the idea of standardization as a commendable concept if implemented.

Concerning our third research question "To what extent can this change re/shape communication in the Pharmacies' CofP at TSC?". We can say that our third hypothesis is somehow correct and confirmed in Q 8 where pharmacists view the phenomenon of changes in the pronunciation and orthography of medication names as becoming familiar even within their households, and they can adapt to it.

As we have determined through asking patients and interviewing pharmacists, Patients, particularly the elderly do not change the pronunciation or spelling of medicines' names, but rather colloquially refer to them based on their effects for example they call "Doliprane" كاشي الراس" meaning of "head medicine" in ADA, due to its efficacy in treating

headaches, or they call the ointment "Differine" by "بومادة الحرق" due to their use in treating burn pain.

Patients also sometimes name medicines based on their colour or the colour of their packaging, such as calling "Eosine Aquese" "الدوا لحمر" due to its red colour, and the ointment "Moov" by "Mauve" after the French word for the packaging colour. Additionally, consumers may nickname medicines based on pictorial representations on the packaging such as calling a medication "الفراس" due to an image on the box, or إلا المهراس" after the bee illustration. There are many other such examples, including " أقطرة"، "قطرة"، "قطرة"، "قطرة"، "دواء الشداد". "الفار الباردة "and"، "«بومادة"، «دواء الشداد".

3.10 Conclusion

To recapitulate, this chapter focuses on the research design and methodology,

employing both quantitative and qualitative approaches. The quantitative method involves the distribution of a comprehensive questionnaire to 80 randomly selected patients from TSC, while the qualitative method entails observation and interviews with pharmacists, delegates, and assistants. The primary objective of this chapter is to analyse and interpret the gathered data from an empirical standpoint. Furthermore, the chapter demonstrates that the phenomenon of morpho-phonological changes in medicines' names is prevalent within the Tiaret CoP and the Tiaret speech community. Individuals within this community exhibit a tendency to modify medicine names based on their understanding, linguistic background, and cultural influences. Therefore, the chapter strives to provide comprehensive insights into this contemporary phenomenon, encompassing factors contributing to the changes, their impacts, and potential avenues for further research. Moreover, given the novelty of this research perspective, this chapter introduces a fresh outlook that may prove beneficial for future investigations in this field.

General Conclusion

General Conclusion

On the whole, the study of contact-induced changes in medicines' names in Algeria has revealed the complex linguistic processes that occur when two or more languages interact over an extended period, when speakers incorporate lexical items from other languages they work to integrate them into their phonological and morphological structures and they attempt to make those elements more familiar and accessible within their native language whereas the latter can evolve and adapt to new influences while still preserving their fundamental linguistic identity, this phenomenon named language contact highlights the broader sociolinguistic and cultural factors inducing language change and language variation.

Algeria is an illustrative prototype of a diglossia speech community where two language varieties ADA as the low variety and CA as the high variety coexisting with the use of many languages such as French, English, Spanish and Turkish, these various languages are clearly evident in the morphophonological change in medicines' names in addition to their nicknaming which is the focus of the current study that is being carried out in western Algeria, Tiaret. The differences observed in the use of adapted medicine names between pharmacists, delegates and pharmacies' sales assistants (CofP) as well patients (SC) suggest that sociolinguistic factors, such as educational background, professional domain, in addition to language and cultural consideration play a significant role in changing the morphophonological of medicines' names, furthermore we have effectively answered all of our research questions.

The study has a number of objectives, such as identifying the factors that have contributed to this change and finding solutions to this linguistic phenomenon, perhaps by unifying the names of medicines, Moreover The research we conducted provides a new perspective hoping to contribute to future research in this area that requires more empirical investigation, generalization, and a larger sample size across Algeria to enhance its value.

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Appendices, maps And illustrations

Appendix 01:

The Questionnaire

Dear participant,

This questionnaire is an integral part of our Master's dissertation in Linguistics, focusing on the topic of Morpho-phonological Change in Medicines Names in Algeria. The primary aim of this research is to investigate the impact of language contact on medicine names in Algeria, specifically exploring the morpho-phonological changes that have occurred due to the interaction between languages such as Arabic, French, and English. This study seeks to uncover the underlying linguistic processes and their implications for communication, understanding, and cultural identity. The findings of this research will contribute to a deeper understanding of language dynamics, contact phenomena, and the preservation of linguistic heritage in Algeria. The insights gained from this study will not only enrich the field of linguistics but also have practical implications for healthcare professionals and policymakers involved in the standardization of medicine names.

N.B: Please! Tick ($\sqrt{}$) or cross (X) the right box (es) that fit (s) to your viewpoint or use the provided space.

Abbreviation and Acronym: Berber (**Ber**), French (**Fr**), English (**Eng**), Algerian Dialectal Arabic (**ADA**), Modern Standard Arabic (**MSA**).

I. <u>Linguistic Background and Awareness of Contact-Induced Morpho-phonological</u> <u>Change in Medicines Names:</u>

1. Which language	variety (ies) do yo	ou speak?		
ADA	Eng	Fr	MSA	Ber
Others (Specify):	•••••		•••••	•••••
2. Are you aware of	the concept of ch	ange in medicines	names?	
	Yes		No	
If yes, how would yo	ou define this cha	nge in medicines ı	names?	
The change in the pro	onunciation of med	dicines names		
The change in the ort	hography of medic	cines names		
The change in the me	eaning of medicine	es names		
Others (Specify):	•••••	•••••	• • • • • • • • • • • • • • • • • • • •	•••••

II. <u>Attitudes and Perceptions of Contact-Induced Morpho-phonological Change in</u> Medicines Names:

1. What factors contribute to the adoption of change in pronunciation or orthography of
medicines names?
Patient's accessibility and comprehension
Language and cultural considerations
Adopting the dominant pronunciation by the speech community
Others (Specify):
2. Do you believe that contact with other languages has influenced the change in
pronunciation or orthography of medicines names in Algeria?
Yes No
If yes, which language variety do you think have had the most significant influence?
Fr ADA Eng Ber
Others (Specify):
3. How important is it to preserve the original pronunciation or orthography of
medicines names in Algeria?
Very important Neutral Not very important Not at all important
Others (Specify):
Why or why not?
•
III. Language Preference and Usage in Medicines Names and its Impact on
Mis/Communication:
1. When communicating about medicines, do you prefer using the original
pronunciation or the locally adapted pronunciation of medicines names?
Original pronunciation Locally adapted pronunciation
It depends on the situation
Others (Specify):
Why or why not?
2. Have you encountered any challenges or difficulties in understanding or
communicating medicines names due to the changes?
Yes No
If yes, how can you cope with these challenges?

Seeking clarification Explore resources online utilize written
prescriptions
Consult pharmacists Learn about generic terms
Others (Specify):
If no, why not?
Familiarity through repetition Visual recognition
Online resources and pronunciation guides
Others (Specify):
IV. Awareness of Standardization Efforts
1. Do you think standardizing medicine names in Algeria would be beneficial in
addressing the impact of changes of medicine names?
Yes No No
If yes, why?
Improved communication between pharmacists and patients social recognition
Reduce errors and confusions Clarity and consistency
Others (Specify):
If no, why not?
Loss of original meaning or association
Necessitates updates to healthcare information systems
Might lead to alterations that deviate from the original names
Others (Specify):
V. Medicines Names sample:
Please, could you provide us with samples of changes in pronunciation or orthography
in
Medicines Names (at least <u>02</u>)?
NB: write them the way they are.
1
2
3
4

لماذا؟ أو لم لا؟

Thank you very much for your assistance and support

Questionnaire in Arabic

هذا الاستبيان جزء لا يتجزأ من أطروحة الماستر الخاصة بنا في علم اللسانيات، يركز على موضوع التغيرات الصرفية الصوتية في أسماء الأدوية في الجزائر، الهدف الأساسي من هذه الدراسة التحقيق في تأثير الاتصال اللغوي على أسماء الأدوية في الجزائر, خاصة استكشاف التغير الصرفي والصوتي في أسماء الأدوية الذي حدث بسبب الاحتكاك بين اللغات مثل العربية والفرنسية والإنجليزية تسعى هذه الدراسة إلى الكشف عن العمليات اللغوية الأساسية وآثارها على التواصل التفاهم و الهوية الأقافي ستسهم نتائج هذا البحث في فهم أعمق لديناميكيات اللغة, ظواهر الاتصال و الحفاظ على التراث اللغوي في الجزائر لن تثري الرؤى المكتسبة من هذه الدراسة مجال اللغويات فحسب، بل سيكون لها أيضًا آثار عملية على أخصائي الرعاية الصحية وصانعي السياسات المشاركين في توحيد أسماء الأدوية.

الفراغ	ِ إِذَا أَمكن في	وقدم اقتراح آخر	ً تناسب اقتراحك ر	خانات التي	ي الخانة أو ال	ر علامة (√) ف	ً فضلك ضع	ملاحظة هامة: من
	ī.	أ أسام الأدم	Marall to salt	ti taatia	التشديل المستقالة	l. Callaã.	الشاغرة اللاث	المقدم.
	<u>*</u>	<u>کی اسماع الادو :</u>	ناجم ع <i>ن الاتصال</i>	ے و الصوبی ا	التغير الصارقو			را 1.ما هي اللغة (ا
	الأمازيغية	عاصرة	اللغة العربية المع		الفرنسية (ä	الإنجليزي	الدارجة
•••••	•••••••	•••••••••	•••••••	•	ماء الأدوية؟	لتغيير في أس	ية بمفهوم اا	،ــری(ــــ) 2.هل أنت على درا
		(\frac{1}{2}			نعم 🔲	,	إذا كانت إجابتك بنع
								ہے۔ ۔۔۔ ہبب ب تغییر علی مستوی
						= .		تغییر علی مستوی
					(الأدوية		تغییر علی مستوی
•••••	، الأده سة	نصال في أسما:	ي الناجم عن الا	ف والصوة	و بالتغب الص	ر ات المتعلقة		اخرى(حدد): ب المه ا
								ب بـــر 1.ما هي العوامل ال
						ِفْهم 📗	للمريضُ و	إمكانية الوصول إلـــــــــــــــــــــــــــــــــــ
						_	_	اعتماد النطق السائد
								أخرى(حدد):
	 ائر؟	الأدوية في الجز	املاء في أسماء	النطق أو الإ	أثر في تغيير	ن الأخرى قد أ	صال باللغات	2. هل تعتقد أن الات
				1		عم 🗌	ن	
		٤						إذا كانت اجابتك بنع
	يغية 🔃	الأماز	ب ليزية	الإنـ		الدارجة		
		t:					حفاظ على ا	اخرى (حدد): 3. ما مدى أهمية اا
	ى الإطلاق [عير مهم عد	جدا ا	لیس بمهم		حيادي		مهم جدا أ خرى (حدد):
	•••••		•••••	•••••	•••••	•••••		•••••

ت. تفضيل اللغة واستخدامها في أسماء الأدوية وأثره على سوء التواصل
لماذا؟ ولم لا؟
2. هل واجهت أي عراقيل أو صعوبات في فهم أو توصيل أسماء الأدوية بسبب التغييرات؟ نعم
ذا كانت إجابتك بلا، لم لا؟ لتآلف من خلال التكرار الله الإدراك البصري المصادر والأدلة الإرشادية للنطق فرى (حدد):
ج. الوعي بجهود توحيد أسماء الأدوية في الجزائر سيكون مفيداً في معالجة تأثير تغيير أسماء الأدوية؟ نعم العمر الماذا؟ ذا كانت إجابتك بنعم، لماذا؟ يحسن التواصل بين الصيادلة والمرضى الوضوح والاتساق الوضوح والاتساق المري المرين.
ذا كانت إجابتك بلا، لم لا؟ فقدان المعاني أو الارتباطات الأصلية يستلزم اجراء تحديثات على نظام معلومات الصيادلة وقدان المعاني أو الارتباطات الأصلية وقد يؤدي إلى تغييرات تنحرف عن الأسماء الأصلية المحلية أخرى (حدد):
<u>د. عينة لأسماء الأدوية</u> [.من فضلك هل يمكنك تزويدنا بنماذج من التغييرات في النطق أو الإملاء في أسماء الأدوية؟ (2 على الأقل) <u>لاحظة مهمة:</u> أكتبها كما هي. 1.

شكراً جزيلاً لك على مساعدتك ودعمك
Questionnaire in French
Ce questionnaire fait partie intégrante de notre mémoire de Master en linguistique, qui porte sur les changements morphologiques et phonologiques dans les noms de médicaments en Algérie. L'objectif principal de cette étude est d'étudier l'impact du contact linguistique sur les noms de médicaments en Algérie, en explorant en particulier les changements morphologiques et phonologiques dans les noms de médicaments qui se sont produits en raison de la friction entre des langues telles que l'arabe, le français et l'anglais. Cette étude cherche à découvrir les processus linguistiques et leurs effets sur la communication, la compréhension et l'identité culturelle. Les résultats de cette recherche contribueront à une meilleure compréhension de la dynamique linguistique, des phénomènes de communication et de la préservation du patrimoine linguistique en Algérie. Les connaissances acquises grâce à cette étude n'enrichiront pas seulement le domaine de la linguistique, mais auront également des implications pratiques pour les professionnels de la santé et les décideurs politiques impliqués dans l'unification des noms de médicaments. **Remarque Importante**: Veuillez cocher (\forall) la ou les case(s) correspondant à votre suggestion et fournir une autre suggestion si possible dans l'espace prévu à cet effet. **Abréviations et Acronymes**: Berbère (Ber), Arabe Moderne standard (AMS), Français (Fr), Anglais (Ang), Dialecte Algérien (DA).
I. Contexte Linguistique et Sensibilisation aux Changements Morphophonologiques
Induits par le Contact dans les Noms de Médicaments :
1. Quelle variété(s) de langue parlez-vous ?
DA Ang Fr ASM Ber
Autres (Précisez):
2. Connaissez-vous le concept de changement des noms des médicaments ? Oui Non
Si oui, Comment définiriez-vous ce changement ?
Le changement de prononciation des noms de médicaments
Le changement dans l'orthographe des noms de médicaments
Le changement de signification des noms de médicaments
Autres (Précisez):
II. Attitudes et Perceptions des Changements Morphophonologiques Induits par le
Contact dans les Noms de Médicaments:
1. Quels sont les facteurs qui contribuent à l'adoption de changements dans la
prononciation ou l'orthographe des noms de médicaments?
Accessibilité et compréhension du patient
Considérations linguistiques et culturelles
Adoption de la prononciation dominante par la communauté linguistique
Autres (Précisez):
2. Pensez-vous que le contact avec d'autres langues a influencé le changement de
-
prononciation ou d'orthographe des noms de médicaments en Algérie?

Oui Non Si oui, quelle variété de langue a eu, selon vous, l'influence la plus importante? Fr DA Ang Ber Autres (Précisez): 3.Quelle est l'importance de préserver la prononciation ou l'orthographe originale des noms de médicaments en Algérie? Très important Pas très important Pas du tout important Autres (Précisez):
Pourquoi ou pourquoi pas ?
III. Les Préférences Linguistiques et L'utilisation des Noms de Médicaments et Leur
Impact sur la Communication :
1. Lorsque vous communiquez sur les médicaments, préférez-vous utiliser la prononciation originale ou la prononciation adaptée localement de leur nom ? Prononciation originale Prononciation adaptée localement Cela dépend de la situation
Autres (Précisez) :
2. Avez-vous rencontré des difficultés pour comprendre ou communiquer les noms des médicaments en raison de ces changements ? Oui Non Si oui, comment pouvez-vous faire face à ces difficultés ?
Demander des clarifications Explorer les ressources en ligne Utiliser des ordonnances écrites Consulter les pharmaciens Se renseigner sur les termes génériques Autres (Précisez):
Si ce n'est pas le cas, pourquoi ?
Familiarisation par la répétition Reconnaissance visuelle Ressources en ligne et guides de prononciation
Autres (Précisez) :
1. Pensez-vous que l'unification des noms de médicaments en Algérie permettrait de
remédier à l'impact des changements de noms de médicaments ?
Oui Non
Si oui, pourquoi ? Amélioration de la communication entre les pharmaciens et les patients
Reconnaissance sociale Réduction des erreurs et des confusions Clarté et cohérence
Autres (Précisez): Si non, pourquoi pas? Perte de la signification ou de l'association d'origine Nécessite des mises à jour des systèmes d'information sur les soins de santé Peut conduire à des modifications qui s'écartent des noms originaux Autres (Précisez):

V. <u>Exemples de Noms de Médicaments :</u> Pourriez-vous nous fournir des exemples de changements dans la prononciation ou l'orthographe de Noms de médicaments (au moins 02) ?

	rque Importante: Écrivez-les tels quels.
2.	•
3.	•
4.	
	. Merci beaucoup pour votre aide et votre soutien.

Appendix 02:

The Interview

- 1. Are you? pharmacist / Delegate
- 2. Gender?
- 3. How long have you been working as Pharmacist or Delegate?
- 4. Have you noticed any change in the pronunciation and orthography of medicines names in recent years? if so, can you provide examples?
- 5. In your opinion, what factors have contributed to pronunciation and orthography changes in medicines names?
- 6. How do you think the interaction between different languages (ADA, French, Berber) has influenced the pronunciation and spelling of medicines names in Algeria?
- 7. Have these changes in medicines names affected your communication with pharmacist/patients? If yes in what ways?
- 8. Do you perceive the change as: positive, negative, or neutral?
- 9. Have you observed any differences in the perception and usage of medicines names among different age groups or linguistic backgrounds?
- 10. In your interactions with patients/pharmacists, have you noticed any variations in the pronunciation or understanding of medicines names based on regional dialects?
- 11. Have you come across any instances where the changes in the pronunciation and spelling of medicines names have caused confusion or misunderstanding among healthcare professionals and patients? If yes, can you provide examples?
- 12. Based on your experiences and observations, do you believe that further research or studies are needed to explore the implications and consequences of pronunciation and orthography changes in medicines names in Algeria?
- 13. In your view, what potential advantages could come from standardizing the names of medicines in Algeria? This could help address the impact of these changes?

The interview in Arabic

- 1. هل أنت صيدلاني أو مندوب أدوية؟
 - 2. الجنس؟
- 3. منذ متى تعمل كصيدلاني أو مندوب أدوية؟
- 4. هل لاحظت مؤخرا أي تغيير على مستوى نطق أو إملاء أسماء الأدوية؟ إن كان كذلك، هل يمكنك تقديم أمثلة؟
 - 5. حسب رأيك، ما هي العوامل التي ساهمت في التغيير في نطق وإملاء أسماء الأدوية؟

- 6. كيف نظن أن الاحتكاك بين اللغات (العربية، الفرنسية، الأمازيغية) أثر على نطق وإملاء أسماء الأدوية في الجزائر؟
 - 7. هل أثرت هذه التغييرات على تواصلك مع المرضى أو الصيادلة الآخرين؟ إن كان كذلك فبأي طريقة؟
 - 8. هل ترى هذا التغيير: إيجابي، سلبي أم حيادي؟
 - 9. هل لاحظت أي اختلافات في إدراك واستخدام أسماء الأدوية بين مختلف الفئات العمرية والخلفية اللغوية؟
 - 10. من خلال تعاملك مع المرضى أو الصيادلة، هل لاحظت أي اختلاف في نطق أو فهم أسماء الأدوية بناءً على اللهجات الأصلية؟
- 11. هل صادفتك أي حالات تسببت فيها التغييرات في نطق أسماء الأدوية وتهجئة حروفها في حدوث ارتباك أو سوء فهم بين أخصائي الرعاية الصحية والمرضى؟ إذا كانت الإجابة بنعم، هل يمكنك تقديم أمثلة؟
 - 12. استناداً إلى تجاربك وملاحظاتك، هل تعتقد أن هناك حاجة إلى مزيد من البحوث أو الدراسات لاستكشاف الآثار والنتائج المترتبة على تغيرات النطق والهجاء في أسماء الأدوية في الجزائر؟
 - 13. من وجهة نظرك، ما هي المزايا المحتملة التي يمكن أن تتحقق من توحيد أسماء الأدوية في الجزائر؟ يمكن أن يساعد ذلك في معالجة تأثير هذه التغييرات

The interview in French

- 1. Êtes-vous ? pharmacien / délégué
- 2. Sexe ?
- 3. Depuis combien de temps travaillez-vous en tant que pharmacien ou délégué?
- 4. Avez-vous remarqué un changement dans la prononciation et l'orthographe des noms de médicaments au cours des dernières années ? si oui, pouvez-vous donner des exemples ?
- 5. Selon vous, quels sont les facteurs qui ont contribué aux changements de prononciation et d'orthographe des noms de médicaments ?
- 6. Comment pensez-vous que l'interaction entre les différentes langues (arabe, français, berbère) a influencé la prononciation et l'orthographe des noms de médicaments en Algérie ?
- 7. Ces changements dans les noms des médicaments ont-ils affecté votre communication avec les pharmaciens/patients ? Si oui, de quelle manière ?
- 8. Percevez-vous ce changement comme positif, négatif ou neutre ?
- 9. Avez-vous observé des différences dans la perception et l'utilisation des noms de médicaments entre les différents groupes d'âge ou les différents milieux linguistiques ?
- 10. Lors de vos interactions avec les patients/pharmaciens, avez-vous remarqué des variations dans la prononciation ou la compréhension des noms de médicaments en fonction des dialectes régionaux ?

- 11. Avez-vous rencontré des cas où les changements dans la prononciation et l'orthographe des noms de médicaments ont provoqué des confusions ou des malentendus parmi les professionnels de la santé et les patients ? si oui, pouvez-vous fournir des exemples ?
- 12. Selon vos expériences et vos observations, pensez-vous que des recherches ou des études supplémentaires sont nécessaires pour explorer les implications et les conséquences des changements de prononciation et d'orthographe dans les noms de médicaments en Algérie ?
- 13. Selon vous, quels sont les avantages potentiels de la normalisation des noms des médicaments en Algérie ? Cela pourrait contribuer à atténuer l'impact de ces changements ?

Maps and Illustrations

Map 1 Algeria's Map (source: https://www.pinterest.fr/pin/700802392040138761/)

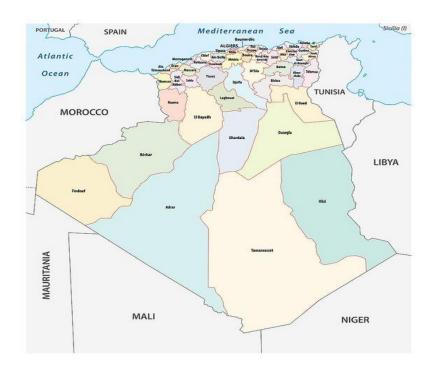
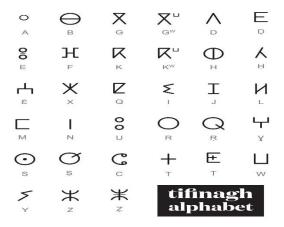
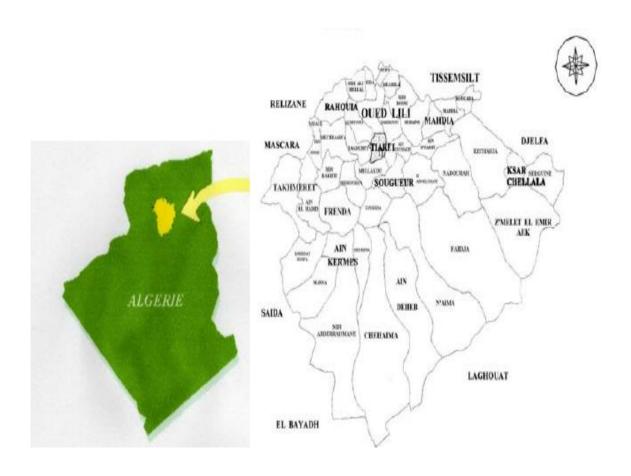


Illustration1 Tifinagh (source: https://www.pinterest.fr/pin/656540451960140887/)



Map 2 The Geographical Localization of Tiaret (source: https://www.researchgate.net/figure/)



Summary

This study investigates the contact-induced morphophonological changes that occur in the naming of medicines in Algeria, with a specific focus on the pharmaceutical community of practice and the Tiaret speech community. The primary purpose of this research is to explore the various existing changes in the names of medicines, to investigate the triggers of these alterations, and to uncover the linguistic mechanisms behind the transformations in medicines' names. The study would contribute to the understanding of language contact phenomena, morphophonological adaptations, and the sociolinguistic dynamics involved in the naming of pharmaceutical products in the Algerian context.

ملخص

تهدف هذه الدراسة إلى استقصاء التغيرات الصرفية والصوتية المترتبة عن التغير اللغوي الناجم عن الاحتكاك اللغوي تحدث في تسمية الأدوية في الجزائر، مع التركيز بشكل خاص على مجتمع الممارسة الصيدلانية ومجتمع الكلام في تيارت. والغرض الأساسي من هذا البحث هو استكشاف التغييرات المختلفة الحالية في أسماء الأدوية، والتحقيق في مسبباتها، والكشف عن الأليات اللغوية الكامنة وراء التحولات التي تطرأ على أسماء الأدوية. اسهمت الدراسة المقترحة في فهم ظواهر الاتصال اللغوي، والتكيفات الصرفية والصوتية، والديناميكيات الاجتماعية اللغوية التي تنطوي عليها تسمية المنتجات الصيدلانية في السياق الجزائري.

Résumé

Cette étude examine les changements morphophonologiques induits par le contact qui se produisent dans la dénomination des médicaments en Algérie, avec un accent particulier sur la communauté de pratique pharmaceutique et la communauté linguistique de Tiaret. L'objectif principal de cette recherche est d'explorer les différents changements existants dans les noms des médicaments, d'enquêter sur les déclencheurs de ces altérations et de découvrir les mécanismes linguistiques derrière les transformations des noms des médicaments. L'étude proposée contribuerait à la compréhension des phénomènes de contact des langues, des adaptations morphophonologiques et des dynamiques sociolinguistiques impliquées dans la dénomination des produits pharmaceutiques dans le contexte algérien.