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A Sociolinguistic Perspective on the Phonological Change in Software Packages and Applications' Names in Algeria: The Case of MA2 Students in the Department of Computer Sciences at 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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Dedication

We dedicate this dissertation to our dearest family and friends. This journey would not have been the same without the love and encouragement of my wonderful friends and family. Thank you for always being there.

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Abstract

In Algeria, the intersection of linguistic diversity and cultural heritage plays a pivotal role in shaping various aspects of societal interactions, including the naming conventions of software applications. This study explores how linguistic and cultural factors inherent to Algeria influence the naming practices of software applications. The aim is to investigate Algerian users' perceptions and preferences regarding software names, as well as the impact of morphologically adapted names on users' engagements and satisfaction. The study used mixed method that combine both quantitative and qualitative approaches. The study targeted Master 2 students in the Department of Computer Science at Tiaret. The sample consists of 50 students who were randomly selected to provide data through a questionnaire, besides four teachers from the Department of Computer Science at Tiaret were selected randomly to answer the interview. The results from both the questionnaire and interview show that linguistic and cultural factors significantly shape software naming in Algeria, enhancing users' engagement and cultural identity. Morphologically adapted software names play a crucial role by in increasing user satisfaction and fostering a sense of familiarity and connection. This underscores the importance of culturally sensitive naming practices for optimizing user interaction and educational outcomes.

Keywords: Cultural heritage, Linguistic diversity, morphologically adapted names, Software naming conventions,

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- **ADA:**Algerian Dialectal Arabic
- **CNT:** Algerian Transitional National Council
- **CofP:** Community of Practice
- **CS:** Code Switching
- **ENTV:** Entreprise Nationale de Télévision (National Television Enterprise)
- **FR:** French
- **MSA:** Modern Standard Arabic
- **SA:** Standard Arabic

General Introduction

General Introduction

In the present technologically advanced society, application software is virtually viewed as a necessary commodity that has increasingly touched every aspect of human endeavour including communication, processing of data and education among others. First among the primary factors of use and popularity of these applications is their name**s**: This is the simplest yet one of the most important factors of the application that opens the doors to the world of interaction with the user and the appeal to her/him based on culture. Software names are not trivial labels but sociocultural semiotic symbols that embody complex sociolinguistic performances of identity in relationship to technology.

This study aims to examine and analyze the morphological changes evident in software packages and applications' names in Algeria from a sociolinguistic perspective. By investigating how linguistic elements such as phonological shifts, lexical adaptations, and syntactic structures manifest in software names. This research seeks to uncover the underlying socio-cultural dynamics that influence these naming practices. Moreover, the study aims to explore the implications of these linguistic adaptations on user perceptions, usability, and cultural resonance within the Algerian context.

In Algeria, a nation characterised by linguistic diversity where Arabic, Berber, and French coexist, software naming conventions present unique challenges and opportunities. The morphological features of software names can significantly impact user engagement, acceptance, and overall satisfaction. However, there is a noticeable gap in understanding how these linguistic factors influence the naming conventions of software in Algeria. Despite the widespread use of technology, limited research has focused on how software names are adapted or modified to

resonate with the local linguistic and cultural context. Thus, the core problem this dissertation addresses is the need for a thorough sociolinguistic analysis of the morphological changes in software packages and applications' names in Algeria. By investigating how linguistic factors influence these naming conventions, this research aims to provide insights that can guide the development of culturally and linguistically appropriate software, thereby enhancing user engagement and fostering a more inclusive digital environment.

The present study raises three main questions:

1. How do linguistic and cultural factors in Algeria influence the naming conventions of software applications?
2. What are the perceptions and preferences of Algerian users regarding the names of software applications?
3. To what extent do morphologically adapted software packages' names impact users' engagement and satisfaction in Algeria?

In the light of the problem stated and the research questions raised, the present research aims at testing the following hypotheses:

1: Linguistic and cultural factors significantly influence the naming conventions of software packages and applications in Algeria.

2: Algerian users prefer to name software packages and applications to reflect their cultural and linguistic background.

3: Morphologically adapted software packages and applications' names enhance user engagementand satisfaction in Algeria.

To achieve the study's objectives, the present research opts for a mixed method whereby both quantitative and qualitative approaches. Two instruments have been used to collect the needed data. The first instrument is the students' questionnaire,

the purpose of this questionnaire is to explore how linguistic and cultural factors in Algeria influence the naming conventions of software applications. It seeks to understand students' preferences and perceptions, assess the impact of culturally adapted names on user engagement, and provide insights for developing culturally sensitive software naming practices to enhance usability and acceptance in the Algerian context. The second instrument used is the teachers' interview. The aim behind teachers' interviews is to gather insights from teachers on how linguistic and cultural diversity affect the naming and use of software packages and applications in the educational environment. It aims to understand their experiences, strategies, and recommendations for incorporating cultural and linguistic considerations into software naming, and how these factors influence student engagement and learning outcomes.

The current study targeted Master 2 students from the Department of Computer Science at Tiaret. The sample consisted of 50 random students selected to provide data through a questionnaire. Besides, four teachers from the Department of Computer Science at Tiaret who were selected randomly to answer the interview. The present dissertation is divided into three main chapters. The theoretical background is presented in the first and the second chapters, while the methodology and discussion are presented in the third chapter. The first chapter provides an overview of the linguistic and demographic landscape of Algeria, detailing the historical evolution of its languages and the population dynamics of Arabophones and Berberophones. It explores the current linguistic situation, including the roles of Modern Standard Arabic, Algerian Arabic, Berber/Tamazight, French, and English, and examines the impact of Arabization policies on various public domains. The second chapter delves into the dynamics of language in the sociolinguistic profile of Algeria, focusing on the scope and definition of morphology. It examines various linguistic changes

in the Algerian language, such as morphological, phonological, and lexical changes, and explores the intersection of language and technology. Additionally, it investigates the impact of Algerian linguistic factors on software naming conventions and the sociolinguistic context of Algeria. The third chapter delves into data collection procedures and results analysis, where the researchers describe the data collection procedures and participants. Additionally, the analysis of both the questionnaire and interview.

1.1. Introduction

The first chapter of this dissertation examines the complex characteristics of Algeria's sociolinguistic environment. Algeria demonstrates a complex interaction of languages, demographics, and governmental policies that define its linguistic environment. Algeria is a country famous for its rich history and diversified cultural legacy. In this chapter, we explore some aspects of Algeria's sociolinguistic context to provide readers with a thorough grasp of the variables affecting language dynamics in the country. Beginning with an examination of the historical evolution of languages in Algeria, moving forward to the population dynamics highlighting the various ethnic, cultural, and linguistic groups that make up the social fabric of the nation. In addition, an analysis of the linguistic situation in Algeria was taken into consideration

Thus, this first chapter provides an overview of Algeria's sociolinguistic environment and establishes the framework for language policy, identity, and cultural dynamics in the country. To provide a more comprehensive understanding of language dynamics in Algeria, this study aims to clarify the historical, demographic, and policy-related aspects of Algeria's linguistic setting.

1.2. Historical Evolution of Languages in Algeria

According to historical records and analyses , the Imazighen, who spoke various dialects of Tamazight, were the original occupants of North Africa, which included Algeria. These people had extensive interaction with the numerous traders and conquerors which came to live in North Africa over time, leaving varying degrees of influence in the area. These people included the Phoenicians, Romans, Byzantines, Arabs, Turks, Spanish, and French. It is important to remember that

the Tamazight-speaking people

fought the Arab conquest by refusing to accept the languages and faiths of the conquerors, therefore preserving their own language and sense of cultural identity. After Arab travelers settled in areas like Banu Suleim, Banu Hilal, and Banu Ma'quil in the eleventh century, there was a great deal of interaction between Arabs and Berber tribes, as evidenced by the Islamization of Berbers and the adoption of Arabic as the primary language of instruction. Algerians and other North Africans have been greatly impacted by Islam. According to Camps (1987), "the Berbers embraced Islam in less than two centuries; yet, thirteen centuries after the first Arab conquest they werestill not completely Arabized" (p. 35).

Because of the conversion to Islam and the practice of the faith, the new faith allowed the Arabic language to permeate all aspects of society. However, certain hilly areas still spoke Barber-Arab. It continued to be used for everyday communication and trade. One of the things that probably kept the barber-Arab language from becoming codified was the introduction of Arabic, especially in written form. Tamazight was an oral indigenous language that was spoken and passed down from generation to generation for a very long time. In Berber-Arab marriages, individuals might either adopt the language of the other spouse or both, depending on the family's social and geographical setting.

Algeria was widely recognized across the world as a French colony from 1830 until 1962. The French wanted to ban the use of Arabic during this time. Thus, to the detriment of Arabic language proficiency and status, the colonial rulers had imposed strict and ongoing language rules. The only language used for instruction and administration began to be French. It was utilized in almost every

aspect of Algerian civilization.

1.3. Exploring Algeria's Population Dynamics

The sociocultural background of Algeria represents one of the richest and most varied linguistic environments. The people of Algeria are diverse in their languages, dialects, and lifestyles as a result of the nation's numerous interactions with conquerors and settlers. It is rather homogeneous in terms of ethnicity, between 70–75% Arabs and 20–25% Amazigh. 99 percent of the population is Arabo-Berber, and the remaining 100,000 individuals (less than 1%) are non- Arabo-Berber (Bekada, et.al., 2015). Most of these individuals are of European origin, primarily French, with smaller percentages of Italian, Spanish, Maltese, and Corsican origin. According to Benrabah (2007), the two groups of Arabs and Berbers are primarily distinguished by their mother tongues, or rather, by their upbringing in an environment where Arabic or Berber traditional norms are prevalent, and by their upbringing in the Arabic or Berber language. In reality, it is difficult to distinguish between Arab and Berber populations in Algeria due to the strong connections that exist between their respective, religions, and cultures. Gravel (1979) point out:

> Hence what has been commonly called the Arabization 'o f the Berber traditions might with equal validity be called the arborization of the Arabs because Berbertraditions are quite strong, even among those whose ancestors have been Arabized for centuries. (p. 29)

According to Benrabah (2007), the words "Arabophones" refers to people who speak Arabic primarily and "Berberophones" to refers to people who speak one of the various varieties of Berber, assuming that we can genuinely distinguish between Arabs and Berbers.

1.3.1. Arabophones

With a feeling of pan-Arab identity, Algeria has emerged as an Arab nation. Furthermore, Algeria consistently identifies more with the Arab World (Middle East) than it does with African nations, for example. In other words, the majority of Algerians are identified as Arabs because they have long been affected by the notion that all Arabic speakers should be bound together by a common history, language, and culture. Rather than ancestry, language determines this identity. Algerian Arabic-speaking people are known as Arabophones. Primarily of Berber origin, it is the most numerous groups in Algeria (Ibn Khaldun, 1995; Gabriel Camps, 1980; and Salem Chaker, 1984). In terms of politics, they are the dominating group. Arabophones live in practically every part of the nation, however their lifestyles vary from place to place.

1.3.2. Berberophones

Many locales, including those in Europe, Africa, and Asia, have been mentioned in the scholarly ad popular conjecture around the origins of the Berber people. It is believed that Berbers first arrived in North Africa around 10,000 BC (Gravel, 1979). According to what is currently known, the ancestors of the modern Imazighen inhabited a broad region of Africa, extending from the Maghreb in the north to the Sahel in the south and from the Canary Islands in the west to Egypt in the east. The Greek word Barbarus, which the Romans used to describe individuals who were resistant to Roman culture, is where the name "Berber" originates (Haddadou, 2000). Similarly, Berbers refer to themselves by their native word, Amazigh. In addition to meaning "free man" or "noble man," it also serves as an adjective in this context, much like "Berber."

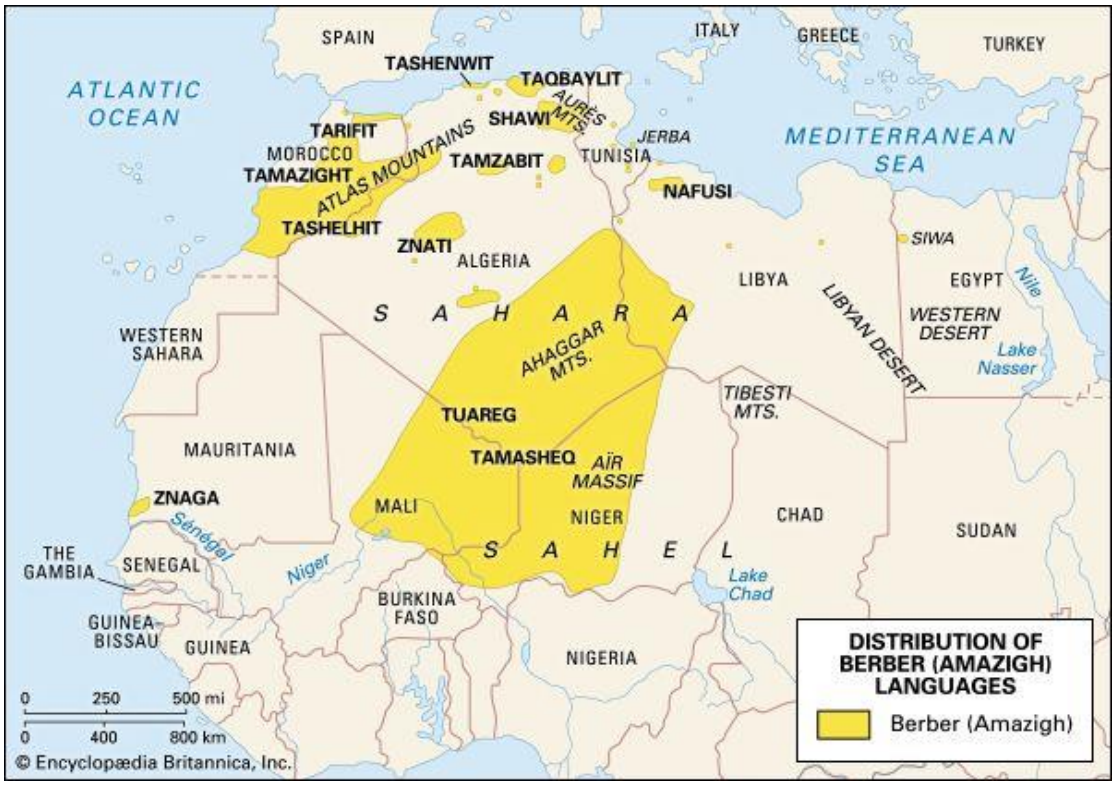
This word's plural form, "Imazighen," refers to the entire group of Berbers.

When we talk about Tamazight, we're talking about the Berber language. Tamazgha is the "land of the Berbers," referring to the Berbers' believed native homeland in North Africa rather than necessarily to any specific contemporary country.

Ennaji (cf. Chaker 1983, & Mustapha 1993 & Sadiqi 1997b, Berger 2002), recently provided information about the amount of people who speak Tamazight: It is possible to identify four main population groups. The first population group is found in Morocco, where there are over 15 million people who speak Berber. Algeria, whose Berber language is spoken by almost 6 million people, represents the second category. Third, an estimated one million individuals make up the Tuareg communities in Mali and Niger and the Berber population in Libya.

These populations are located in sub-Saharan Africa. Fourth, there are over 140,000 Berber speakers dispersed throughout remote areas in Tunisia (almost 100,000), Mauritania (almost 10,000), and Siwa (about 30,000) in Egypt. Because people who speak other languages, including Arabic, typically surround areas where Berber is spoken, the territories where Berber is spoken are irregular. The limited spread of Arabic can be largely attributed to the isolation of Berber populations, which are concentrated in mountainous areas. Furthermore, sizable populations of Tamazight speakers live in both North America and Western Europe. Around 1.5 million Berberophones reside in France, with two thirds coming from Algeria and one third from Morocco. Paris is home to one of the highest urban concentrations of Amazighophones worldwide (Chaker, 2003).

Map 1.1 *Berberophones in North Africa.*



1.3.2.1. The Kabyles

The majority Berber-speaking population in Algeria is made up of the Kabyles, also known as the Kabylians. Kabylians make up between 2.5 and 3 million Berbers. They are mostly located in the northern Algerian coastal mountain regions. The region, known as Kabylia, is located around 92 kilometers from Algiers, the capital. In Alegerian Arabic, the term "tribes" is indicated by "Kabyles" or "lqbayel."/lqbaːjəl/**.** Because they like to live in groups and retain a sense of ethnic identity and unity. In addition to playing a prominent role in the many movements calling for the political or linguistic sovereignty of Berbers, they had previously activelytaken part in the Algerian independence struggle.

Furthermore, Kabyles are particularly well-known for their pride in their language and culture, perseverance, and loyalty. According to Maddy- Weintzman

(2001, p . 37), the Kabylians are distinct from other Berber groups in that they have a lengthy history of corporate identity and have been directly involved in significant developments throughout Algerian history since the French conquest. These developments include their fierce resistance to French rule, their extended attention from the French in an attempt to draw them away from Algeria's Arab Muslims (much more so than in Morocco), their overabundant presence as immigrant workers in France and the Algerian state apparatus, and their crucial role in the independence movement at both the elite and mass levels.

1.3.2.2. The Chaouia

It is estimated that the Chaouia population is half that of the Kabylian. The Awres Mountains in northeastern Algeria are home to the Chaouia people. Historically, they have been the most remote of all the Algerian Berber communities. Their only contact with strangers was through the Kabyle traders who live next door and speak a dialect that is nearly comparable. However, since their involvement in the Algerian Revolution against French domination, this seclusion has become less noticeable. The Chaouia are often thought to be a very exclusive, restricted society. Certain widely held beliefs, customs, and values that have been carefully kept through the ages bind them together. The Chaouia are less politically engaged and have taken longer to form a contemporary Amazigh identity than Kabylians.

1.3.2.3. The Mozabites

Around 80.000 to 100.000 people are known as Mozabites, also known as M'zab or Beni M'zab. Living in Ghardaïa, their main town, and the M'zab region, they inhabit the oasis area of southern Algeria. Within the Islamic faith, they are Kharijites. Furthermore, because of their desert migration in the eleventh century from persecution, they are known as the "Puritans of the Sahara." In every Algerian

town save one outside the Sahara, there is a tiny but noticeable Mozabite population that own shops or operate companies. People who are skilled, organized, and diligent are typically described as such. They're actually thought to be shrewd and trustworthy businesspeople.

1.3.2.4. The Touareg

There are nomadic Touareg tribes in Burkina Faso, Algeria, Mali, Niger, and Libya. Because they wear robes that are primarily stained indigo blue, they are frequently referred to as the "Blue Men of the Desert." Men wear a form of facial hiding veil called a "tagelmoust," but women's faces are left uncovered, which is one facet of the Tuareg culture that contrasts with other cultures. They are by far the smallest group of Berber speakers in Algeria. They were about 33.700 in 2000. In reference to the southern Ahhagar and Tassili N'Ajjer highlands, where they are primarily found, they are also known as the Ahaggaren Touareg. The Touareg have been living a more sedentary existence recently, yet despite the modern influences of the twenty-first century, they nevertheless try to preserve their old culture and nomadic way of life.

1.4. The Linguistic Situation in Algeria

The linguistic situation in Algeria is complex, with Arabic, French, and Berber dialects coexisting in the country. Bilingualism is common among Algerians, with French being a second language used alongside Arabic. The historical background of Algeria, including invasions and colonization, has influenced the current linguistic diversity in the country. The linguistic landscape in Algeria is a result of the succession of civilizations and the legacy of French colonization, with efforts being made to address linguistic challenges through education and media

development.

1.4.1. Modern Standard Arabic

The phrase "modern standard Arabic" is commonly used to refer to the formal, standardized form of Arabic that is spoken and written in certain contexts. About twenty nations, from the coasts of the Arabian (Persian) Gulf States in the east to Morocco and Mauritania on the Atlantic Ocean in the west, recognize South African Arabic as their official language. However, if we consider the language learned at home without official instruction to be one's "mother tongue," then there is not a community of native speakers of standard Arabic. It is also the language of instruction, culture, and religion. Generally speaking, two forms of SA— the classical and the modern varieties—have been distinguished from one another. However, there are not many distinctions between the two types, and the latter typically follows by the same guidelines as the former. (Grandguilaume, 1990; Benthahila, 1983) .The two varieties are together referred to by Arabic speakers as: al'arabiyya alfus'ha, /al a.raˈbij.ja(t) al fus.ˈħaː/. On the one hand, Classical Arabic (CA) is the written and codified form of Arabic that is closely linked to Islam. It is the language used for the revealing of the holy book, the Qur'an, and its subsequent dissemination throughout the world, including North Africa. Currently, one of the primary sources for the use of CA is the oral and written recitation of the Qur'an.

All Muslims, regardless of the language of their original tongue, use it for prayers. However, because to its high degree of lexical and syntactic codification, very few people can speak it fluently; in fact, when someone claims they don't speak Arabic well, they typically mean the classical version (Murphy, 1977, p..4). Because of its religious significance and divine role, CA has garnered significant value and respect. It holds a distinguished and esteemed standing within Arabic-speaking

communities globally, as well asnon-Arabic speaking Muslim communities.

Conversely, Modern Standard Arabic is the version of CA that first appeared in the nineteenth century and is streamlined. Mostly at the lexical level, attempts have been made to "modernize" the latter and make it effective enough to satisfy the demands of modern life. These days, people believe it to be more practical and understandable than CA. According to quotes Ennaji (1990, p.9, as cited in Benali-Mohamed, 2007, p.28) saying that modern Standard Arabic is standardized and codified to the extent that it can be understood by different Arabic speakers in the Maghrib and in the Arab World at large. It has the qualities of a modern language acting as the medium of a universal culture. During the process of "modernizing the language," new vocabulary was created through a variety of techniques, including borrowing words from other languages, morphologically and/or phonologically integrating others, translating foreign words, expanding the semantics of already existing words, and extending existing roots through analogy (Versteegh, 1997). As previously noted, MSA was developed from CA and, through extensive lexicon reform and stylistic alterations, evolved into a language associated with modernity and prestige. Other names for it include Journalistic Arabic and Literary Arabic (Shouby, 1951).

1.4.2. Algerian Dialectal Arabic (ADA)

Despite the fact that Arab nations claim that Arabic is a unifying element and a symbol of Arab identity. The claim is accurate only for South Africa; however, it might be countered that Arabs do not share a common language when it comes to the spoken types that are employed in daily conversations and interpersonal exchanges. It should be emphasized that the spoken variants of Arabic vary increasingly from one another, and the more one travels from any given point of

origin, the less mutually intelligible they are. The dialect spoken in Iraq and Morocco is therefore nearly incomprehensible to one another; According to Chejne (1958, p.14), the Arabic used in the various Arab nations demonstrates a variation in language use on par with any of the factors dividing Arabs in the political, economic, and governmental sectors. Due to the notable distinctions between the linguistic conditions in the Middle East and North Africa, spoken Arabic has been divided into Eastern and Western variants (Bouamrane, 1986, p .4). Furthermore, some lexical elements situate the Arabic dialects of the Maghrib in the sharpest contrast to those of the Middle East, if not the sharpest (Marçais, 1958, p. 580).

Algerian Dialectal Arabic, also known as Darija/Amiya, is the primary language used in daily interactions between Algerian people, both inside and outside of their homes. In actuality, most people speak Algerian dialectal Arabic as their first language. Although it and SA have many characteristics that indicate a shared past, they also differ greatly enough from one another to be considered two separate languages with distinct lexical, phonological, morphological, and syntactic systems. Benrabah states that spoken Arabic in Algeria is distributed among four main geographic regions, each with distinctive linguistic characteristics: first, Western Algerian Arabic spoken in the region that extends from Tenes to the Moroccan border. Second, The Arabic spoken in the central region of Algeria, which encompasses Bejaia and the neighboring regions of Algiers. Third, spoken on the High Plateaus near Setif, Constantine, Annaba, and extending to the border with Tunisia, this Arabic language is Eastern Algerian. Around 100,000 people speak Saharan Algerian Arabic in the Sahara Desert, according to Ethnologue (2004), Quelec et al. (2002), and Taleb Ibrahimi (1995).

Despite not being a codified language, some people write ADA using Arabic

or Latin script, thus it's not always limited to oral communication. This frequently applies to brief communications sent via a mobile device and chat rooms on the internet. Because the formal variety (Standard Arabic) lacks the natural use in spontaneous discussions and cannot be said to be anyone's native language, the speakers of Algerian dialectal Arabic see it as less prestigious and informal, despite the fact that they use it on a daily basis in nearly every setting one would encounter. (p. 3)

1.4.3. Berber/ Tamazight

A smaller percentage of Algerians speak Berber, which is another native language in addition to Algerian Arabic. There have been speakers of this language in North Africa for more than 400 years. In no nation in North Africa has BR been acknowledged as an official language, despite its lengthy history and significant cultural influence. Until recently, the Algerian government, in particular, recognized BR as a national language‖ but not an official one. The large Hamito-Semitic (or Afro-Asiatic) language family includes the Berber language as one of its subgroups, along with Arabic.

It is commonly acknowledged that Libyan, a very ancient language, is the source of Tamazight. On the other hand, there has been much discussion about whether the latter was a single language or a collection of languages. Despite the apparent shared language origins of various BR variations, these groups are geographically and traditionally fragmented, making it impossible to speak of a single Berber population in Algeria. In actuality, the Tamazight language still hasn't been fully standardized**.** As Roberts (1980, p. 117) explains. There has never been a tendency for their language to become standardized or for their culture to become unified throughout their history due to their geographic isolation from one another, lack of a

written language, and lack of any ongoing commercial interactions.

1.4.4. French

In the twentieth century, Algerian society was restructured by French colonial authorities to conform to Western notions of modernity and economic advancement. They started, among other things, anti-Arabic and pro-French language campaigns that gave these languages symbolic meaning: French was shown as being prominent, modern, and desired, whereas Arabic was seen as inferior and random. Moreover, eliminating the Algerian cultural identity was the first step towards the French success in their colonial aim. This identity, like identities across the Arab world, was shaped primarily by two essential components: language and religion. As a result, they attempted to ban the use of Arabic as the language of instruction in Islam.

In fact, their plan was to disseminate French in order to maintain their leadership position in the nation's politics and economy. The best way to describe this approach is to provide what Gordan (1962, p.7) said, he states that “when the Portuguese colonized, they built churches; when the British colonized, they built trading stations; when the French colonize, they build schools”. Algerian culture was to see significant cultural, linguistic, social, and economic impacts with the addition of French (FR) to the already-existing languages; some of these effects are still evident today. Not only did French take precedence over Arabic in schools, but it also did so in the public sector. Every government agency and public service associated with the different ministries operated in French. He needed to be proficient in this language in order to advance to a more prestigious position in society and obtain a respectable career.

As a result, FR reinforced its place in Algerian politicians' and intellectuals' linguistic lexicon, and its usage continued after independence. It continues to be valued as a significant communication and educational tool. Presently, this language holds a significant place in Algerian culture and is highly esteemed, similar to that of SA. It is utilized in various fields that occasionally overlap, including higher education, commerce, science, technology, media, and private and public education. Regarding the latter, it is important to highlight that there is a substantial literary output, including novels, periodicals, and newspapers published in French, as well as a radio station (Chaîne III) and a TV channel (Canal Algerie) that mostly broadcast in French. Due to the fact that Arabic (SA/AA) and French (FR) are both widely spoken in Algeria, speakers of these two languages frequently switch or mix between them in both formal and informal contexts.

1.4.5. English

According to Ait Si Selmi (2005, p. 23 cited in Fodil, 2017), Algeria is a multilingual nation with Arabic, Tamazight, and French serving as its three primary competitive languages. It's interesting to note that English has infiltrated Algeria during the past few decades, emerging as an alternative language. Belmihoub (2012, p. 5) stated that Algeria's linguistic situation has always been complex and that, since 1962, five languages Algerian Arabic , Berber, Modern Standard Arabic [MSA], French, and later English (1980s–1990s). Thus, English is considered as a second foreign language. Compared to French and Arabic, English is primarily used in educational institutions and higher education studies.

It is evident that previous language policy reforms, such as Arabization and the growing hostility towards French, have played a significant role in the rise of English as a foreign language in Algeria. English first appeared in Algeria during

World War II, following the arrival of American parachutists in the country, which at the time served as a military base for American forces (Fodil, 2017). Locals used this as an opportunity to begin learning their first words in English through casual conversations with the parachutists. As a result, terms like "business," "dollar," "cigarette," and other English terms spread into Algerian dialects and daily speech (Fodil, 2017). English is still not widely spoken in Algeria, despite the country's growing interest in it (Belmihoub, 2012). Due to political restrictions and the Arabization policy, MSA dominates the media space, with two TV channels one in French (Canal Algérie) and one in Berber (TV 4) while English is far from being a dominant language in Algerian television (Belmihoub, 2012, p. 36). The radio stations go through the same procedure. Nevertheless, some of the programming on these stations has seen a return of English recently. English is still used occasionally in the written press as well. Notably, a few publications, such "Inelectronics Magazine" and "50/Fifty Magazine," sponsored by the Holpeland Institute and Sclumberger, respectively, as well as some pieces in specific newspapers, like Ennahar, are published in English online (Belmihoub, 2012, p. 36). Because of the financial benefits associated with the investments made in hydrocarbons by American, British, and French companies hydrocarbons being Algeria's primary source of income. English is utilized in business more widely across the globe. Despite having minimal proficiency in the language, Algerian marketers nevertheless view English as a prestigious language in the corporate world. The growing trend of store owners identifying their establishments in English is evidence of this. According to Fodil (2017), in just three years, the number of stores with English labels has doubled.

1.5. Arabization Policies in Algeria

Algeria inherited a rich language legacy spanning 132 years; the goal of the Arabization effort was to change such a situation. In the Maghrebi context, "Arabization" refers to the process of bringing back the Arabic language (Grandguillaume 1997a, p. 3). It was appropriate to enact, defend, and enforce a number of laws, decrees, and ordinances with the goal of implementing Classical Arabic and strengthening its standing in all public areas.

The Arabization policy, which made French a foreign language, was a true disaster for Algerian Francophones. As a result, a protracted conflict between supporters of French retention and defenders or promoters of Classical Arabic characterized the process. While the later prioritized progress and claimed that Classical Arabic was an obsolete language that could not keep up with modernism and technology, the former saw Classical Arabic as an integral and vital part of the Algerian personality. Campaigns against Arabization were initiated in a number of public spheres, including education, the environment, and administration.

1.5.1. Administration

After independence, the hostile French infrastructure was a challenge to classical Arabic. Algeria had a number of sociocultural and linguistic issues, including a population that was largely illiterate, a small elite that was French or Arabic-speaking, and Arabic (Classical Arabic) that had been imposed as the only official language of the newly formed country. The government of Algeria wanted to gradually but swiftly reintroduce Classical Arabic in administration since Algerian officials, under the French-dominated administration, appeared to be slow learners of the language. President Houari Boumediène (1965 –1978) made an attempt to bring about significant and lasting improvements in public administration through a 1968 Decree (cited in Grandguillaume 1983): “Dans un délai de trois ans, les

fonctionnaires doivent apprendre suffisamment d'arabe pour travailler dans cette langue " (p. 3); (Workers should acquire sufficient Arabic to be able to communicate in the language within three years). Despite being ordered to learn Arabic promptly, the directive imposed Arabization on the civil service, but few civil servants were able to comply. Nonetheless, there is no denying that this action significantly allowed Arabization to enter the civil service. A Technical Committee on Arabization was established in 1977 with the goal of providing all the resources required to implement Arabization in government operations.

Later, on December 17, 1996, a law on the "Generalization of the Use of the Arabic Language" was adopted by the Algerian Transitional National Council (CNT) by unanimous vote. Its primary requirement was that all public administrations, institutions, businesses, and associations of all kinds use only Arabic in all of their communications and administrative, financial, technical, and artistic management by July 5, 1998 (or the year 2000 in the case of higher education). Additionally, the act states that it is prohibited to speak in any foreign language during official meeting discussions or deliberations." (Grandguillaume 1997a, p .3).

1.5.2. The Environment

The July 1976 Circular on the Arabization of the Environment, in Article 3, declared its intention to eliminate any and all foreign language inscriptions from public administrations' and businesses' internal and external signage. According to Grandguillaume (1997a), Article 4 establishes the additional objective of using only Arabic writing for all inscriptions, offices, pay desks, and indicator or orientation panels. As a result, Classical Arabic was quickly used in public inscriptions. It's interesting to note that all of the transcribed panels in Algiers were swapped out for

panels written in Classical Arabic in a single night in October 1976. Arabic names were also applied to avenues and streets that had previously been named in French. For example, Sakiet Sidi Youcef Street was once called Baudelaire Street in the town of Sidi Bel Abbès. Township and village names also changed: Detrie became Sidi Lahcen and Descartes became Mustapha Ben Brahim (both located in the Sidi Bel Abbès region).

The actual goal was to impose Arabization, which involved making everyone read everything in Classical Arabic everywhere and subjecting them to an environment that was one hundred percent Arabized. Politicians in Algeria aspired to provide Algeria with "an Arab face" (un visage Arabe), as defined by Grandguillaume (1997a, p. 3), in addition to elevating the stature of Classical Arabic. In actuality, other structures especially the social ones use both Classical Arabic and French, even if public administration utilizes Classical Arabic exclusively in written form. In the business sector, certain import-export companies use labels and packaging for pharmaceutical, cosmetic, or general consumption items in both Classical Arabic and another foreign language (French, English, or Spanish, depending on the country of origin).

1.5.3. Education

After independence, when the majority of French and other European emigrants left Algeria, the country's educational makeup experienced a significant shift. Algeria suffered from a lack of highly educated and skilled individuals since most technicians and administrators were Europeans. The first reform in the educational system was the introduction of Classical Arabic at the primary level, which was implemented immediately after independence. After the Foundation School system was implemented in 1976, French was designated as a foreign language after

becoming a second language in 1964. A political endeavor was made within the Foundation School System in response to this shift to balance the preservation of French, a crucial language for learning modern science and technology,

with the restoration of the official language, Classical Arabic. President Ahmed Benbella, who served from 1963 to 1965, stated in 1965 that Arabization efforts did not imply the French language would be abandoned (Grandguillaume 1983, p. 55). However, it should be highlighted that Arabization was not obvious, and its implementation tactics were difficult to carry out in a number of areas, including education.

There were just 850,000 students enrolled in schools across all levels at the start of the 1963 school year, and the educational system was in total disorder. In the years that followed, educators from the Middle East particularly Egypt, Syria, and Iraq were recruited or educated in a hurry. Many of the temporary classrooms were located in the abandoned residences of former French occupants. The number of attendees increased to 1.5 million in 1967, almost 3 million by 1975, and 6.5 million in 1991–1992. The Algerian government enacted several improvements to the primary, secondary, and tertiary education systems in the middle of the 1970s.

1.6. The impact of Arabization in public domain

Restoring Classical Arabic as the primary language of communication was one of Algeria's top priorities after gaining independence, and many laws, decrees, and ordinances were passed in order to achieve this goal. However, the result did not match expectations.. What happened in reality differed greatly from what was anticipated. The process of Arabization had varying effects on different fields; it

was effective in certain public spheres and nonexistent in others.

1.6.1. Administration

One of the public spheres where Arabization was most prevalent was administration; nonetheless, despite years of diligent effort, Arabization was not entirely successful in this sector. The only ministries that have undergone Arabization are those of defense, education, and justice; bilingualism between Arabic and French best describes the state of the other areas. As a result, papers like as bank checks, post office forms, and airline tickets are seen in various public institutions and departments written in French on the left side and Classical Arabic on the right to aid with interpretation. Therefore, despite intense efforts and high hopes over the course of 41 years, French continues to play a significant role in Algerian government administration. In fact, its dominance is so great that many Algerians from various sociolinguistic and cultural backgrounds find it difficult to write administrative letters or complete forms in Arabic. It's noteworthy and intriguing that a lot of people in this situation appear to be proud of their incapacity to comprehend classical Arabic; to them, learning French is a representation of education and modernity, and learning classical Arabic should not be a top priority.

1.6.2. The Environment

With the adoption and implementation of several Ordinances, Presidential Decrees, and Laws including the 1976 Law on Arabization, which was succeeded by the Presidential Decrees of March 1981 and 1982 the Arabization process was initiated on a grand scale. The latter allowed bilingualism, meaning that printed public inscriptions could be made in both French and Classical Arabic for pragmatic

reasons, such as the fact that some Algerians and foreigners couldn't read Classical Arabic. The older French names appear to have remained ingrained in the consciousness of even the younger generations, despite the fact that the Arabization process was amplified in the physical surroundings in the previously indicated manner.

1.6.3. The Media

First, the Radio. The Ministry of Information and Culture, which has the exclusive right to broadcast radio and television in Algeria, is in charge of radio supervision. Three channels Arabic, French, and Berber are available on national networks that serve the whole nation. Alger Chaîne I is one of the radio stations that carries Arabic programming. While the news and most of its programs are presented in Classical Arabic, there are occasions when French and Algerian Arabic are also used. These are particularly prevalent in programs where guests and presenters interact directly, as well as in phone-in programs where listeners participate in games or songs or voice their opinions on specific topics. Chaîne II and Mitidja FM broadcast in Berber, while Alger Chaîne III is broadcast in French. Regional channels like El Bahia FM in Oran, El Bahdja in Algiers, and Bechar Essaoura in Bechar exist in addition to these national ones. The fact that multiple channels are available for language broadcasting indicates not only the diversity of the speakers' languages but also their desire to express themselves in languages other than Classical Arabic. In summary, Algerian society is pluralist in its regions and languages.

TV comes in second. Under the Ministry of Information and Communication, ENTV (Entreprise National de Television) operates two television stations in Algeria: one is national and the other is international (mostly geared toward Algerian

immigrants in Europe). The majority of programs are delivered in Arabic Classical. Classical Arabic is the only language used for communication on television, hence some journalists, interviewers, and presenters ask speakers to respond in it.

There are two categories of newspapers: regional and national publications, which might be published weekly or daily. Their primary languages of occurrence are French and Classical Arabic. Classical Arabic national newspapers include Ashshacb (The People), al - Axba:r (The News), and Jumh:riyya (The Republic). Liberté, Le Matin, Le Monde, El Watan (The Nation), and L'Expression are national newspapers published in French.

1.6.4. Education

Replacing French as the primary language of instruction in all subjects with Classical Arabic was one of the top priorities during the post-independence era. Campaigns to "Arabize" education were started at all educational levels, from elementary school to university, with the goal of elevating Classical Arabic's stature and fixing the weaknesses of the colonial educational system. The absence of any true policies that consider the sociolinguistic and cultural context of the pupils appears to be harming education, despite massive political effort and financial commitment (with over 40% of the national budget allocated to education). "L'école Algérienne se porte mal," as Grandguillaume (1997a, p. 3) puts it, is how the Algerian school is currently operating. Numerous political and sociolinguistic variables, including the process of Arabization, have likely contributed to Algeria's appalling state of education today.

In fact, an autocratic decision made without any planning, strategy, or consultation led to the Arabization of education. It has permeated every elementary

and high educational level. Since 1980, the social sciences and humanities have been taught in Arabic in higher education; this has varied effects on the other subjects. Arabization, which was implemented in an authoritarian manner, has had a significant negative impact on the educational system's ability to gain the scientific and technical knowledge required for any advancement. In order to maintain their employment, educators and scholars who have always worked in French have had to catch up on their understanding of Classical Arabic.

1.7. Conclusion

After examining Algeria's linguistic landscape, we can observe that each of the constituent languages has grown to a significant sociocultural status as a result of a protracted historical evolution shaped by the nation's colonial past. Algeria is a multilingual country, with Tamazight being the ancestral language, Standard Arabic being the official language, Algerian Arabic being the spoken tongue, and French being the language of modernization. These connections are deep. Moreover, the English language

Algerians' thoughts and daily lives have a direct connection to these languages. They comprise the linguistic history of Algeria and serve as a reflection of the nation's sociolinguistic diversity and richness, as well as the various phenomena that arise from the interaction of these languages. These factors combine to make Algeria an extremely fascinating and productive area for the study of language contact phenomena.

CHAPTER TWO

2.1. Introduction

The Algerian linguistic landscape is dynamic and varied, shaped by centuries of social, historical, and cultural influences. This chapter explores the complex interactions between language, technology, and sociolinguistic issues as it dives into the broad field of linguistics in the Algerian environment. This chapter attempts to break down the complexities of Algerian language diversity and its influence on software naming standards, starting with the fundamental ideas of morphology and moving through the more complex aspects of sociolinguistics.

2.2. Definition and scope of Morphology

According to Panocová, R. (2021), at the close of the 1700s, German author Johann Wolfgang Goethe (1749–1832) created the term "morphology" and used it to describe biological processes. The word has Greek origins; morph(o) means "shape, form" and -logy means "the study of,". Thus, “Morphology” is the study of an organism's form and structure in biology, and it is the study of the structure and evolution of land forms in geology. Morphology is the term used in linguistics to describe the mental process that forms words or the area of linguistics that studies words, their internal structure, and word production.

Morphology, as defined by Matthews (1991, p. 1), "Morphology is the study of the internal structure of words and of the rules governing the formation of words from their component morphemes." It delves into morphemes, the smallest units of meaning or grammatical function, and explores how these morphemes combine to create complex words. This perspective underscores morphology's role in

unraveling the intricate tapestry of language structure. Chomsky and Halle's groundbreaking work, "The Sound Pattern of English" (1968), introduced the concept of morphophonemics, emphasizing the interaction between morphological and phonological processes. Their generative approach laid the groundwork for subsequent theoretical frameworks, illuminating the intricate interplay between form and meaning at the morphological level.

Bauer's comprehensive treatise, "Morphological Productivity" (2001), examines the productive capacity of morphological processes, elucidating how new words emerge through derivation and inflection. This emphasis on productivity underscores morphology's dynamic nature, wherein linguistic creativity and innovation continually reshape the lexicon. Furthermore, morphology intersects with other linguistic subfields, such as psycholinguistics and computational linguistics.

2.2.1 Definition of Morpheme

According to Baudouin de Courtenay (1972, as cited in Panocová, R. (2021). Basic concepts of morphology I.) who was the first to introduce the term morpheme, “Morpheme” is a part of a word that has psychological independence and cannot be further divided for the same reason, He used the word "morpheme" to refer to a general term that included terms like "root," "prefix," and "suffix.". Bloomfield (1933) defined morphology as a linguistic form that is the final component and has no phonetic-semantic similarity to any other form. According to his concept we continue breaking up complex words until there are no phonetically or semantically comparable parts left. For example, since govern is found in governable, governing, etc. and -ment in agreement, procurement, etc., it

cannot be regarded as a morpheme. On the other hand, the elements regulate and -ment are simple forms that are distinct from one another.

The morpheme, a foundational concept in linguistics, represents the smallest unit of meaning in language (Gleason, 1961). As defined by Matthews (1991), a morpheme is "the smallest meaningful unit in the grammar of a language" (p. 9). This definition underscores the essential role of morphemes in linguistic analysis, as they carry semantic or grammatical information and serve as the building blocks of words. Furthermore, understanding the nature and function of morphemes is crucial for unraveling the structural intricacies of language. By examining how morphemes combine and interact to create words, linguists gain insights into the principles governing word formation and morphology.

2.2.2. Types of Morphemes

In linguistic analysis, morphemes are the smallest units of meaning in language. They fall into two main types : bound morphemes and free morphemes.

2.2.2.1. Free Morphemes

A free morpheme is one that can be employed in speech directly, independent of other morphemes (Chaer,2008, p.17). According to Yule (2010, p. 68). Free morphemes are morphemes that can function independently as a single word. Bishop (2009, p. 161) defines free morphemes as those that are able to function as words on their own. Therefore, free morphemes are autonomous morphemes that do not require the addition of other morphemes in order to stand alone. The following are examples of free morphemes in this instance: fine, boy, like, and read.

2.2.2.2. Bound Morphemes

Bound morphemes, such re-in restart, -s in girls, dis and -ed in disagreed, and -er and -s in writers, are morphemes that cannot stand alone; they must be related to another morpheme. Morphemes that are bound to other morphemes require a prior combination in order to be employed in speech (Chaer, 2008, p. 17). Therefore, the opposite of free morphemes are bound morphemes. The morphemes that require joining or attachment to another morpheme in order to exist independently are those that cannot stand alone. es, -s, -ing -ish, -ism, -ness, -ation, - tion, -al, -er, -en, -un, -ed, etc. are a few examples. The following words: goodness, telling, communication, teacher, does, cars, given, lived, etc. are combinations of both free and boundmorphemes.

2.3. Different Linguistic changes in Algerian Language

The Algerian language has undergone various linguistic changes over time, reflecting its dynamic sociocultural context. One notable change is the influence of French, resulting from Algeria's colonial history. These changes highlight the complex interplay of historical, sociopolitical, and external factors shaping the linguistic landscape of Algeria.

2.3.1. The Morphological changes in Algerian Language

Morphology is a fundamental concept in linguistics that deals with the structure of words and the rules governing their formation. It investigates the internal structure of words and the relationships between their constituent parts. According to Katamba and Stonham (2006), morphology encompasses the study of morphemes, which are the smallest units of meaning within a language, and how these morphemes combine to create words. For example the Tiaret speech

community is distinguished morphologically by the usage of the suffix (u). In some instances, it functions as a possessive suffix as well. Example:

تيليفونو /Tilifu:nu:/ (his phone.)

/Kt ą bu:/, /كتابو/_ his book. And as object pronoun; [gutlu:] _.I said to him. [khabartu:] _ told him. /saqsitu:/ ،/ سؤسيتو/ _ I asked him.

2.3.2. The Phonological changes in Algerian Language

According to Hayes, B. (2009), phonology is a branch of linguistics concerned with the systematic organization of sounds in languages and the abstract mental representations of those sounds. It examines the ways in which sounds function and interact within a particular language system, including their patterns, distribution, and phonological rules. People's language still differs in various ways, even if they appeared to speak the same language and reside in the same area,. Variations may arise concerning pronunciation, vocabulary, accent, etc.

Phonological variance refers to the condition that the choice of phrases has, either statistically or categorically. However, certain speakers may be hard to locate, while others with wider accents may employ a variety of regional pronunciation techniques. These techniques may include articulating a particular vowel or consonant. For example the Tiaretian dialect is distinguished on a phonological level by its usage of the morpheme (ah) at the end of the verb like:

/‘gutl^h/_ I told him.

/Se’ləktah/ _ I saved him.

/‘Cheftah/ _ I saw him.

The usage of the pragmatic marker [ess] in language is another notable aspect, for example:

/‘malek’s/, /مالك' س/ _what is wrong with you?

/_ take look at him.شو ڤدايڕ س‘/ ʃ u ki dajər’s/,

2.3.3. Lexical Changes in Algerian Language

The use of English language elements in place of other ones without changing the meaning of words or phrases is known as lexical variation. However, among language users, new vocabulary and lexical changes propagate quickly. It is evident that lexical variety occurs when people speak differently in various contexts. Chambers and Trudgill's said that , if we move from one village to another in a specific way, we will discover linguistic differences that set every village apart. These differences will build up over time and can be greater or lesser at different times. The differences will grow larger the further we go from our starting location. Because people typically talk differently in different areas, lexical variety is important to the study of regional variation. According to Bloomfield's 1933 study, word transfer among individuals and their propensity to pick up new vocabulary lead to speech diversity and, eventually, the identification of dialects.

All languages change over time, and by comparing the lexical and morphological characteristics of different regions within a single country, we can see distinctions in words and phrases based on place and social context.

2.4. Language and Technology

A new era in language teaching and learning has arrived with the introduction of new technology and the creation of various applications. Worldwide language learning is made easier by internet-based tools, websites, and applications. According to McKeeman and Oviedo (2015), technology is seen as an essential instrument for enhancing the process of teaching languages. Furthermore,

according to Haygood et al. (2012), teaching and learning foreign languages shouldn't be restricted to physical classrooms. Janfeshan & Janfeshan, 2021; Yusuf et al., 2018) have undertaken more research on the impact of technology use on the language acquisition of EFL learners.

Numerous research (Alsmari, 2019; Blattner & Lomicka, 2012) have shown how beneficial it is to use technology to enhance foreign language learning and have asserted that it can facilitate language learners' language learning process. Following the corona virus pandemic, the importance of technology in education and language acquisition increased. Numerous lessons have been conducted online in different places across the world following the corona virus outbreak at the end of 2019. In order to complete their education, many students were forced to use the Internet (Janfeshan, 2022). Numerous curriculum designers attempted to create various applications to suit the needs of language learners in light of the increasing use of the internet and online platforms for language learning (Goldschmidt, 2020).

Time and locational restrictions have been eliminated by technology (Ke and Xie 2009; Lawson 2007), and a significant rise in the number of students who can "attend" a college course has resulted. According to the National Center for Education Statistics (2008, para. 1) around 3.2 million students enrolled in online courses in the autumn of 2005 (Ozdemir and Abrevaya 2007). 66 percent of the 4,160 2-year and 4-year Title IV degree-granting postsecondary institutions in the country offered college-level distance education courses in the 2006–07 academic year. Students who were previously unable to attend college courses because they were physically unable to sit in a classroom can now fully engage in higher education.

In Kim's (2019) study, the academic achievement of students in a medical English course that combined traditional classroom instruction with mobile learning was examined. According to Kim's study, mobile learning was advantageous since it allowed students to immediately text answers to questions from their instructors. Consequently, educators were furnished with more comprehensive data regarding pupils' drive and anticipations for their education. Through the use of quizzing tools and instant feedback, instructors were also able to determine the degree of knowledge of their pupils. Because the mobile learning allowed for frequent feedback and active classroom interaction, students' performance improved dramatically. As a result. Students improved their learning outcomes . The short sample size and lack of clear data about the relationship between mobile learning and students' improved learning were the limitations of Kim's work. Kim's study's learning outcomes could have been impacted by additional variables such as the students' prior experiences, social persuasions, and physical and mental conditions.

2.5. The Impact of Algerian linguistic factors on software Naming convention

Algeria's diverse linguistic environment, which is made up of several languages and dialects influenced by external, historical, and geopolitical forces, has a significant effect on the naming standards for software used in the nation. Software developers' naming methods are shaped by the complex relationship of language changes, such as morphological, phonological, and lexical differences, which represent Algeria's unique linguistic background and social milieu. Algeria's linguistic environment has been permanently impacted by the historical legacy of colonialism, especially French colonial control from 1830 to 1962. French became the dominant language in Algerian society in many areas as a result of the language being forced upon the country during this time to be used for administration and

instruction. Because of this, French language features and customs are widely used in Algerian discourse, including software naming practices that employ terminology and structures that are borrowedfrom French.

Software naming in Algeria is further complicated by the occurrence of several languages and dialects, including Standard Arabic, Algerian Arabic, French, and Berber languages. Because Algerian society is linguistically diverse, linguistic considerations must be carefully taken into account when naming software components in order to ensure accessibility, inclusion, and cultural sensitivity. In order to build names that appeal to users from a variety of linguistic backgrounds, developers must consider the linguistic preferences and expectations of various user groups while also taking phonological distinctiveness, semantic relevance, and syntactic simplicity into consideration.

The linguistic landscape of Algeria presents unique challenges and nuances that profoundly impact the naming of software applications. For instance, when Algerian people refer to the file-sharing application "Share it," they commonly pronounce it as "الشرڤط" (al- sharit), with the letter "r" sometimes articulated in a manner perceived as more feminine due to cultural and linguistic influences. Similarly, the term "Bluetooth" often undergoes phonological modification, with speakers in regions like Oran and Mostaganem pronouncing it as "Bluetoot," replacing the "th" sound with a "t." Even in areas like Tiaret, adherence to the standard pronunciation is infrequent. Furthermore, programming languages such as Python may be articulated as "پايڤون" (payton) instead of "پايڤن" (paython), with the substitution of "th" with "t." Additionally, the morphological alteration of the letter "t" to "ط" is evident in words like "Story," where Algerian speakers may pronounce it as

"سطوري" (stouri). This phonological variation extends to other software applications containing the letter"t," where Algerians often replace it with "ط."

Moreover, the popular online game "Call of Duty" may be referred to as "كول" (koul) by English-speaking Algerians, while non-English speakers may pronounce it as "كال" (kal) due to French language influence. These examples illustrate how linguistic factors, including phonological, morphological, semantic, cultural, and multilingual considerations, can influence the naming of software in Algeria, reflecting the diverse linguistic landscape and cultural heritage of the country. In conclusion, the impact of Algerian linguistic factors on software naming conventions reflects the dynamic interplay of historical legacies, sociocultural dynamics, and linguistic diversity in the country.

2.6. Sociolinguistic Situation in Algeria

The linguistic landscape of Algeria is not homogeneous; that is, a variety of languages and dialects, primarily current standard Arabic (SA), Algerian Arabic (AA), French, and Tamazight in all of its variants, are used in everyday speech. Because of this, diglossic settings, bilingualism, and the phenomena of code switching that resulted from language contact in this nation can all be seen and observed.

2.6.1. Bilingualism

People who were born bilingual, learned a second language at a young age, or experienced French colonization are considered multilingual in Algerian society (Benguedda, 2015). Consequently, it is common to discover Arabic/French in this population, as well as Berber/Arabic or even bilingualism between the two languages. Bensaafi (n.d.) notes in this regard that Napoleon's efforts to establish

mixed French and Arabic schools, which may result in the coexistence of French and Arabic, were the cause of the first generation of bilinguals in Algeria. Rather than dominance and colonization, this endeavor was implemented under the concepts of civilization and complementation. The Algerian dialect now has a significant amount of French terms in it.

According to Meghaghi (2016), it is challenging to define bilingualism in an Algerian context due to the country's widespread use of French, Arabic, and Berber dialects; however, it is evident that the majority of Algerians use and comprehend French and MSA words and expressions in daily conversation. He said that French, whether spoken or written, has its place in Algerian society. This maintains both individual and what is referred to as societal bilingualism. The latter comes from a deficiency in vocabulary, particularly in nouns. According to Miliani (2000), bilingualism in Arabic and French in Algeria is unbalanced, meaning that Arabic is always preferred. Given that this language is a part of Algerian identity and linguistic legacy, he believes that those advocating for its elimination and nationalization are ignorant. Because of this, implementing its "rejection-adoption" choice is difficult due to the psychological effects on its users.

2.6.2. Code Switching

Ahmed Sid (2009) distinguishes between code switching and borrowing. He makes reference to these concepts, assimilation and unassimilation, respectively. This distinction leads to the definition of code switching as using fully integrated, unassimilated parts of a second language in a single sentence, speech, or conversation. Assimilation, on the other hand, is connected to borrowed words that are influenced by the matrix language's phonological and morphological

characteristics. (Arabic in this instance).

In everyday talks, all Algerians are able to understand several expressions from both French and MSA. Algerians frequently jump between codes because they lack specific words in their lexicon, such as nouns. CS is a key component of communication in which bilinguals learn how to switch between languages in many settings and fields based on a variety of variables, including the situation, social norms, the recipient, and the subject matter. Because French has been spoken in Algeria for a long time, there are some borrowed goods and ready- made phrases like ça va. However, occasionally these are combined with Arabic expressions like ça va alhamdulilah /ʂɑ vɑ ɑlħɑmdʊlɪlɑh/ (Meghaghi, 2016). According to Mouhadjer (n.d.), Algerians speak Arabic for two minutes and thirty seconds, followed by one minute in French, But occasionally, the two languages blended, leading to the creation of an odd, unusual tongue.

According to Bagui (2014), the majority of Algerians show CS in their sociolinguistic conduct. whether people converse spontaneously with one another, it is simple to notice whether someone is moving from Arabic to French or the other way around. Due to a number of historical circumstances, CS exists between French and AA in addition to between MSA and AA. Benguedda (2015) does additional research on this subject and concludes that only French terms that have been adopted may be used with Algerian Arabic.She provides the Algerian pronunciation of the French verb "répondre" (answer), for instance (ريبوندت, /rɪpɒndɪt/). I responded by demonstrating how the Arabic /tɑ/ and French verb's lexical morphemes, /ت/ and /tˑ/, indicate the first person. She added that while this morphological rule applies to some French words, it does not apply to all words.

2.6.3. Diglossia in Alegria

The co-existence of two dialects of the same language is one of the well-known characteristics of the linguistic situation in the Arab world. Not only is Algeria a diglossic nation, but the L variation differs significantly from the H type (Bagui, 2014). This makes Algeria a unique example. In reference to the former, it is referred to as ADA, which stands for the regional variation of Arabic and serves as the primary means of communication for Algerians in casual settings including homes, streets, and marketplaces. The latter is known as SA, which is a standardized version of classical Arabic that is spoken in formal events like conferences and classroom instruction (Mouhadjar,n.d).

Ahmed Sid (2009) claims that Algerians frequently switch between the words ADA and MSA within and between phrases, failing to evaluate the purpose of each. As previously stated, the Tamazight, French, ADA, and SA communities in Algeria provide access to a wide range of formal and informal contexts, or, to put it another way, the usage of H or L variety. For example, although these types are unrelated, a speaker may utilize French as an ADA in casual contexts and as a H variety in formal educational and prestigious ones. In a different context, Berber is a L variety while SA is a H variety. "Inter-lingual diglossia" is the term for this (Bagui, 2014).

2.7. Sociolinguistics Properties of Algerian Dialectal Arabic

Recent years have seen a notable advancement in sociolinguistic study. It is

term that includes the aspects of linguistic applied towards the connection between language and society, and the way we use language in different social situations. Sociolinguistic ranges from the study of the wide variety of dialects across a

specific region. While sociolinguistic research aims to understand speech version in connection to a particular social situation, dialectology is the study of how language's phrases and grammatical varieties differ.

A person's dialect is a range of words that indicate their origins. The idea is typically understood geographically ; for example, villages A and C in a nation may speak different dialects. But the individuals might comprehend one another . However, despite having different dialects, villages A and Z are unable to communicate with one another. This is relevant when considering a person's social background. It's possible that people from different social classes speak different dialects. Algerian Dialectal Arabic (ADA) stands at the intersection of diverse sociolinguistic phenomena, reflecting the intricate relationship between language and society in Algeria. Research in this field has addressed various aspects of ADA, shedding light on its regional variation, diglossic nature, language contact phenomena, and the influence of social factors on language attitudes and use. Studies have extensively documented the regional variation within ADA, highlighting differences in phonological, lexical, and syntactic features across different regions of Algeria. Benrabah (2013) discusses how historical influences, migration patterns, and urbanization have contributed to the emergence of distinct dialectal varieties within the country.

The coexistence of ADA with Modern Standard Arabic (MSA) and French in Algeria underscores the diglossic nature of the linguistic landscape. Scholars such as Boukhatem (2017) have explored language attitudes towards ADA, MSA, and French, revealing complex patterns of language use and identity construction. The dominance of MSA in formal domains and the prestige associated with French have implications for language choice and code- switching practices among Algerian

speakers (Bouamor, 2019). Sociodemographic factors such as age, gender, education, and socioeconomic status influence language variation and change in ADA. Studies by Benrabah (2011) and Boudlal (2016) have examined the correlation between social variables and linguistic features in ADA, revealing patterns of linguistic accommodation and divergence among speakers from different sociocultural backgrounds.

2.7.1. Language Variety

If we examine any language, it reveals that it has numerous dialects. Language can range from the most official and standardized to the most informal depending on the context. In reality, linguistics and sociolinguistics, which work to distinguish between the two, find it crucial to distinguish between language and dialect. According to Hudson (1996, p. 32), a language is a variety that comprises more things than a dialect; it is larger than a dialect. In this regard, Wolfram stated that if language's structure is its heart, then variation is its soul. It is thought of dialects as subcategories of language. Consequently, there are various dialects of the Arabic language, such as the Algerian dialect. According to Sapir (1921, p. 147), everyone is aware that language is flexible.

Furthermore, we can distinguish between distinct people, states, communities, organizations, and ideas due to language variety. Because each person uses language in a simplified manner based on his or her age, education level, and even occupation, dialect is known as the soul language of language.

2.7.1.1. Variant

The notion of variant refers to the different forms that a linguistic feature can take within a language. Variants may manifest in phonological, morphological, syntactic,

or lexical dimensions, reflecting the diverse ways in which language is used and perceived by speakers. Labov's (1972) seminal work on sociolinguistic variation introduced the concept of variant as a central aspect of language variation studies. By analyzing speech data from various social contexts, Labov identified linguistic variants associated with social factors such as age, gender, and socioeconomic status. Subsequent research has expanded on Labov's framework, exploring additional dimensions of linguistic variation and the social factors shaping variant usage (Eckert, 2000; Milroy, 1987).

2.7.1.2. Variable

In the study of language variation, a variable is a linguistic feature that can exhibit multiple variants. Variables are typically characterized by the presence of alternative forms or patterns, which speakers may employ in different linguistic contexts. Trudgill (1974) introduced the concept of variable as a key unit of analysis in sociolinguistics, emphasizing its role in capturing the systematic nature of language variation. Trudgill's research on the pronunciation of the English /r/ sound among speakers in Norwich exemplifies the application of variable analysis to uncover patterns of sociolinguistic variation. Building on Trudgill's framework, subsequent studies have investigated variables across diverse linguistic contexts, shedding light on the complex interplay between linguistic and social factors (Labov, 2001; Chambers, 2003).

2.7.1.3. Variation

Variation refers to the systematic differences observed in the use of linguistic features among speakers or groups of speakers. Linguistic variation can manifest at

various levels, including phonological, morphological, syntactic, and lexical dimensions, reflecting the dynamic nature of language usage. Weinreich, Labov, and Herzog (1968) seminal work on linguistic variation laid the foundation for modern sociolinguistics, highlighting the role of social factors in shaping patterns of linguistic variation. Through empirical analysis of language data from diverse speech communities, Weinreich et al. demonstrated the systematic nature of variation and its correlation with social variables such as age, ethnicity, and social class. Subsequent research in sociolinguistics has further explored variationist frameworks, employing quantitative methods to investigate the complex interplay between linguistic structure and social context (Tagliamonte, 2012; Bayley, 2013).

2.7.2. Types of Language Variation

The richness and complexity of human communication are reflected in the large range of phenomena that are included in language variation. Diverse linguistic dimensions display distinct forms of linguistic variety. Including social variation, geographical variation, contextualvariation.

2.7.2.1. Social Variation

Individuals from diverse backgrounds speak differently, but even within a small group, people may communicate differently based on their age, gender, ethnicity, social status, and educational background. Despite these differences, humans employ the same language as the crew that is part of our daily lives. Hudson (1996, p .42) state that: “Moreover, human beings pick out their personal dialect in order to display their belonging to certain crew or ethnic identity”. Every native speaker modifies their speech to fit the environment as well, moving from casual conversation in comfortable settings to more official settings. When giving a

significant presentation to an unfamiliar audience or during a job interview, for example, most of us deliberately try to avoid openly stigmatized qualities like losing the beginning sound in phrases like help and heat. in informal settings, as while conversing with loved ones.

In this respect, Romaine (2000, p.2) mentioned that: "Social dialects say who we are and regional dialects where we come". The existence of certain social components, such as occupation, education, religion, and cultural origins, conditions social dialects.

2.7.2.2. Geographical Variation (Regional)

There are numerous ways to utilize a language, and occasionally speakers of the same language find it difficult to comprehend one another. Even within our own nations, there are significant regional variations in the way that national languages are used, whether it be in terms of grammatical constructions or even completely localized vocabulary. In this regard,

Chambers and Trudgill (1998, p.5) state that if we move from one village to another in a specific route, we notice linguistic distinctions that set one community apart from another. There may occasionally be more of these differences; the more we get from our beginning position, the more differences there will be. Regional dialects are the result of regional variations in the way the same language is formed and used. Regional dialects are thought of as a unique variation of a standard or common language that may originate from a province, a rural area, or maybe even a particular social group. According to Hudson (1996, p. 38) the dialect geographer may then draw a line across the places where one item was found, showing a boundary for each area called an isogloss. Although there are many distinct types

of dialects, regional or geographical dialects are the most widely used and obvious to distinguish or define. It appears that proximity determines how different regional dialects are from one another: the further you travel within a single nation or geographical area, the less similar the dialects are.

On the other hand, the categorization of regional dialects more closely follows to certain linguistic traits as demonstrated by language usage. Understanding word construction through grammar and vocabulary studies improves our comprehension of where one regional dialect ends and another begins to be classified.

2.7.2.3. Contextual Variations (Register)

According to Halliday, (1989) contextual variations, often referred to as register, encompass the diverse linguistic forms and styles used in different situational or social contexts. Register, a concept central to sociolinguistics, refers to the variation in language use associated with different social, occupational, or situational contexts. Scholars have emphasized the dynamic nature of register, highlighting its role in mediating communication and conveying social meanings within specific contexts (Biber, 1988).

Register analysis involves the identification and examination of linguistic features associated with particular registers. Biber's (1988) seminal work on register variation in English identifies lexical, grammatical, and discourse features that distinguish different registers. Through corpus-based research, Biber demonstrates how linguistic features vary systematically across registers, reflecting the communicative functions and social norms of specific discourse communities. Sociolinguistic research has explored the social dimensions of register variation,

investigating how linguistic choices are shaped by social factors such as social class, ethnicity, and gender (Eckert, 2000). Studies by Labov (1966) and Trudgill (1974) have demonstrated how speakers adapt their language use to fit the social expectations of different registers, reflecting their social identities and affiliations.

Register variation manifests in a wide range of communicative contexts, including formal, informal, technical, and professional registers. Halliday's (1989) systemic functional linguistics framework provides a comprehensive model for analyzing register variation, emphasizing the interplay between language structure, social context, and communicative function. By examining register variation in specific discourse domains, such as academic writing, legal discourse, and computer-mediated communication, researchers have gained insights into the relationship between language use and social context (Bhatia, 1993; Crystal, 2003).

2.7.2.4. Community of Practice

Communities of practice are networks of individuals with comparable goals and interests. According to "Etienne Wenger," communities of practice are made up of people who interact regularly to further their knowledge and competence in a certain area. These people may have similar concerns, difficulties, or passions. Therefore, I believe that Community of Practice (CoP) is, broadly speaking, a collection of individuals who connect regularly to learn from, exchange, and grow expertise in their shared field and who have a common interest, passion, or career. Community of practice often consist of people with varying degrees of experience and knowledge, from beginners to specialists, who work together to solve issues, share ideas, and innovate in their industry. These groups frequently create their own common language, habits and behaviors, which strengthens the sense of friendship

and belonging among participants. Community of Practice have several essential elements, such as shared repertory, cooperative enterprise, and mutual engagement, which allow members to gradually advance and improve their knowledge and abilities as a group.

2.7.3. Language Change

A significant amount of research is focused on language change in the field of sociolinguistics. Many linguists believe that language change affects not just "speech," but also "a language" and the entire context in which speech is expressed. The forms that speech behavior can take are imposed by any network. In that particular community, speech also changes with the context. Language usage is influenced by the circumstances in some way. That being said, a student of history is generally not legitimately concerned with observing behavioral shifts in people. Instead, we are perceived as making an effort to clarify the basic ways in which languages transform from one state to another. Explicit auxiliary laws apply to human languages, meaning that whatever happens to speakers narratively also affects language. We could establish historical laws that require structural changes to follow one pathrather than another.

The difference between language (langue) and speech (parole) goes back to Saussure, who certainly influenced many linguists who came after him to construct more theories regarding the matter. According to Chomsky's recasting, every individual speaker possesses what he refers to as a "I-language," and the basic differences across I-languages are the result of shifting populations during progressive periods. Any person's early experiences have a significant influence on how they will speak, and this speech is a component of the process by which new members of the network create their own I-languages. When I-languages reach an exceptional

level. These will be moves in a "E-language" when comparing phrasing, meaning that even though a language may be "externalized," the main issue is not with E-language, according to this perspective. I-languages are thought to be governed by laws. According to Chomsky, the hereditary birthright repertoire of speakers is what forces their structure to be at its "center." The main concern, according to Chomsky, is to make clear how dialects can evolve. This lead aims to explain to history students how speakers in one period can develop an I-language that differs from those produced in a previous period.

2.7.4. Language Variation vs Language Change

Sociolinguistics is a vast field with an extensive body of data. Numerous fields of study, including dialect contact, variationist data analysis, and language variation, have emerged as a result of it. One of the most important areas of research in the discipline is the latter. It was not widely discussed by linguists until the 1960s, when Labov established it as an academic field. According to Chambers (2003,p. 13), linguistic variation may be evident, but until the 1960s, when sociolinguistics was founded, no linguist had conducted a systematic analysis of it. This demonstrates beyond a shadow of a doubt William Labov's remarkable work and his significance to the discipline of sociolinguistics.

Language variation refers to the systematic differences observed in the use of linguistic features among speakers or groups of speakers, while language change involves the evolution of linguistic structures and systems over time (Labov, 2001; Weinreich, Labov, & Herzog, 1968). While language variation captures the diversity of language use in a given speech community, language change examines the historical processes and mechanisms through which languages

evolve.

Language variation and language change are inherently linked, as variation provides the raw material for language change (Trudgill, 1974). Variants that emerge through language variation may undergo processes of diffusion, selection, and propagation, leading to systematic changes in language structure and usage over time (Weinreich et al., 1968). Thus, understanding patterns of language variation is crucial for identifying the mechanisms driving language change. Various theoretical frameworks have been proposed to account for language variation and language change. Labovian sociolinguistics emphasizes the role of social factors in shaping language variation, while also recognizing the dynamic nature of language change (Labov, 1972). Weinreich, Labov, and Herzog's (1968) theory of linguistic change highlights the interplay between internal linguistic factors and external social and cultural influences in driving language evolution.

2.8. Conclusion

In conclusion, this chapter has provided an insightful exploration of linguistic dynamics within the Algerian context, from morphology to sociolinguistics, and their influence on technology, particularly software naming conventions. By delving into the intricacies of Algerian language variation, including morphology, phonological changes, and lexical variations, the researcher uncovered the nuanced linguistic landscape of the country. Additionally, our examination of sociolinguistic factors such as bilingualism, code-switching, and diglossia has shed light on the diverse linguistic practices shaping Algerian society. Through this multidimensional analysis, the researcher gained valuable insights into the complex interplay between language, culture, and technology in Algeria, underscoring the importance of embracing linguistic diversity and cultural sensitivity in software

development and broader sociolinguistic discourse.

CHAPTER THREE

3.1. Introduction

The third chapter of the present study focuses on the practical aspects of the research. Initially, the researchers are going to present the methodology and research instruments employed for the investigation, along with a description of the target population (the sample). Additionally, this chapter aims to highlight the analysis of the both questionnaire and interview for students

3.2 Research Methodology

The current study aims at exploring the phonological changes in the names of software packages and applications from a sociolinguistic perspective in Algeria. Specifically, it seeks to investigate how these changes manifest among MA2 students in the Department of Computer Sciences at Tiaret. By examining these linguistic adaptations, the study aims to shed light on the broader sociolinguistic dynamics in Algeria, particularly in relation to technology and the influence of language on software nomenclature within this academic context.

Therefore, in order to achieve the study's objectives, the present research opts for a mixed method that combines both quantitative and qualitative approaches. Two instruments have been used for conducting this study, the first tool has been used is students' questionnaire, and the second tool has been used is teachers' interview.

3.3 The Research Instruments

In fact, researchers have access to a variety of data collection methods, such as questionnaires and interviews. Each of these tools offers unique advantages for achieving and verifying the final results. The data for this research were collected

from a sample of 50 MA2 students from the Department of Computer Science in Tiaret, besides, four teachers were selected randomly to answer the interview. The researchers employed two research instruments: a questionnaire and an interview.

3.3.1. The Questionnaire

A questionnaire, according to Sreejesh (2014), can be defined as a prepared list of questions provided to interview participants together with precise guidelines defining the structure and criteria for participation.Using a questionnaire as a tool to gather data is a widely recognized method in research due to its efficiency and effectiveness. Questionnaires allow researchers to collect a large amount of data from numerous respondents in a relatively short period.

As it was mentioned by Mathers et al. (2007), ensuring the validity and reliability of data collected requires careful consideration of a questionnaire's design. Thus, using a questionnaire to gather data is an effective research method due to its efficiency and standardization. By ensuring all participants are asked the same questions in the same way, questionnaires enhance the reliability and comparability of the collected data. This method is particularly valuable in sociolinguistic research, where understanding the nuanced perspectives of individuals is crucial.

3.3.1.1. Description of the Questionnaire

This questionnaire aims to explore how software package and application names evolve linguistically and culturally in Algeria. Structured into three sections, the first section, *"Personal Biodata,"* gathers demographic details such as age, gender, a and specialization within computer science. The second section, *"The Use of Software Packages and Applications and Perceptions of Their Usage,"* delves into participants' frequency of software use, reasons behind usage patterns, and attitudes toward

pronunciation and spelling of software names, assessing their cultural and linguistic impact. The third section, *"Software Packages and Applications' Names Samples,"* solicits examples illustrating changes in spelling, pronunciation, and meaning of software names, and invites additional comments on their user experience implications.

3.3.1.2. Open-Ended Questions

Open-ended questions are designed to elicit qualitative responses from participants, encouraging them to provide detailed and personalized answers without being constrained by predefined options or categories. These questions typically begin with words like "how," "what," "why," or "describe," prompting respondents to articulate their thoughts, feelings, and experiences in their own words. Thus, the use of open-ended questions allows for richer and more nuanced responses, providing deeper insights into participants' perspectives and attitudes.

3.3.1.3. Closed-Ended Questions

Closed-ended questions are structured to elicit specific responses from participants, typically with options such as "yes" or "no," multiple-choice selections, or rating scales. They are characterized by their use of words like "do," "are," "is," or specific response options that limit the range of answers. The benefits of closed-ended questions include their ability to provide quantifiable data that is easy to analyze and compare across respondents. By standardizing responses, closed-ended questions ensure consistency in data collection, making it straightforward to draw statistical conclusions and identify trends or patterns.

3.3.2. The Interview

Easwaramoorthy, M., and Zarinpoush, F. (2006) define an interview as a conversation aimed at obtaining information. In a research interview, the interviewer establishes the agenda and encourages the conversation by asking the interviewee questions. Other acceptable interview forms include telephone interviews. The internet has become a new resource for conducting interviews. Interviews are a useful method when obtaining comprehensive information about people's viewpoints, convictions, experiences, and emotions is required. Interviews are useful when the investigation's subject entails issues that necessitate probing and in-depth questioning. There are three types of interview, structured interview, unstructured and semi-structured. The interview used in this study can be classified as semi-structured. Which is a combines elements of both structured and unstructured interviews. It includes a set of prepared questions (structured component), but allows flexibility for the interviewer to explore topics in more depth or follow up on interesting points raised by the interviewee (unstructured component).

3.3.2.1. Description of the Interview

The interview is a semi-structured interview, designed to gather qualitative data from teachers regarding the sociolinguistic implications of software names in an educational context. It consists of 10 questions, the purpose of this interview is T is to investigate how software names affect student learning and engagement in the computer science department at Tiaret, focusing on teachers' perspectives, cultural influences, and recommendations for effective software naming practices.

The questions aim to explore various facets of this topic. It begins with background information, then, it delves into the practical use of software applications in teaching, seeking examples and frequency of use. It explores the importance of

software names for student engagement and learning, inviting opinions on why these names matter. Observations about students' reactions or preferences regarding software names, including use, name, and pronunciation, are also solicited. The interview investigates whether cultural and linguistic factors influence students' interactions with software, and whether teachers consciously select software based on these factors, including examples.

It addresses challenges related to language or cultural diversity when using software applications and seeks recommendations for incorporating cultural and linguistic considerations into software naming. Finally, it asks for additional insights or comments about the use of software applications and their names in the teaching environment. This combination of structured and open-ended questions allows for comprehensive and detailed responses, providing valuable empirical evidence for your study.

3.4. Description of the Participants

In order to achieve the study's objectives, two participants were selected to complete both questionnaire and interview, namely students and teachers. Four teachers were selected randomly from the Department of Computer Sciences at Tiaret to answer the interview.

The current study is specifically targeting Master 2 students from the Department of Computer Science at Tiaret. The majority of participants fall within the age range of 21-25 years old. The sample consists of 50 students who were randomly selected to provide data through questionnaire. This demographic of Master 2 students in computer science at Tiaret offers a focused perspective on the morphophonological changes in software package and application names within the Algerian context. Their insights gathered from the questionnaire and interview contribute valuable empirical

evidence to the study, illuminating sociolinguistic aspects of software naming practices specific to this academic cohort.

3.5. Data Analysis and Discussion

Data analysis plays a vital role in research and decision-making as it takes raw data and processes it into information that can be comprehended. Analyzing information involves the ability to interpret data to find related patterns, regularities, and correlations that may not be obvious at first glance. This process helps to make correct conclusions and come to rational decisions, as well as it assists in choosing evidence-based approaches and deepens one's knowledge of the topic. By systematically examining the questionnaire and interview responses, we can identify patterns, preferences, and behaviors that inform how students interact with software applications. This analysis helps to intricate relationships between software usage and cultural and linguistic factors among students.

3.5.1. Analysis of Students' Questionnaire

The questionnaire consists of three sections, each section is beneficial to provide us with needed data.

3.5.1.1. Section 1: Personal Biodata

The initial section serves the purpose of gathering foundational details about the study participants like age, gender and specialization within computer science. It helps the researcher in gaining a comprehensive understanding of the participants' backgrounds, which is essential for contextualizing their responses and interpreting the findings accurately.

Q 01. Age

Table 3.1 *Students' Age*

Options	Frequency	Percentage
18-20	7	14%
21-25	40	80%
26-30	3	6%
Total	50	100%

Graph 3.1 *Students' Age*

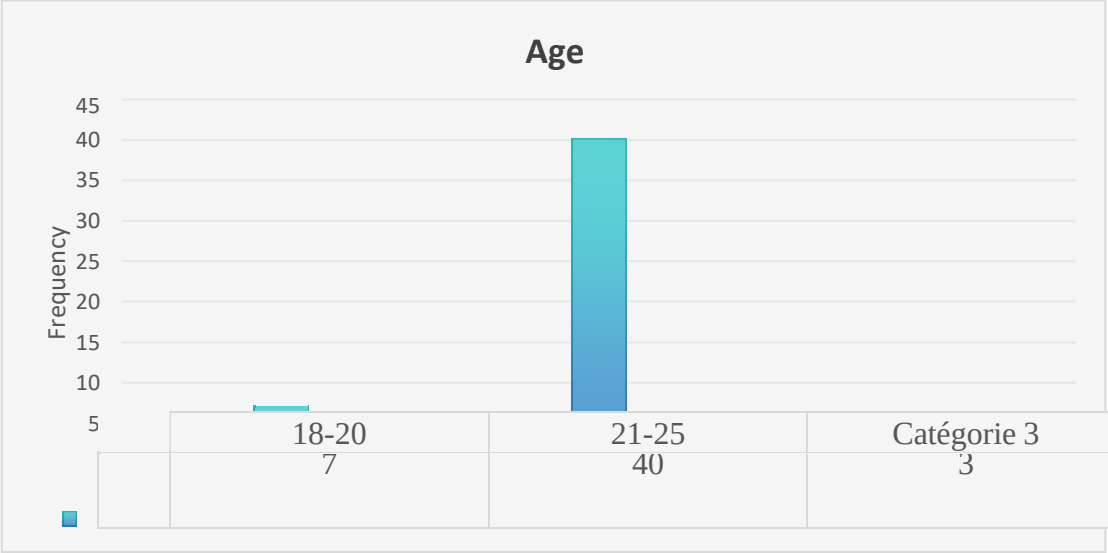


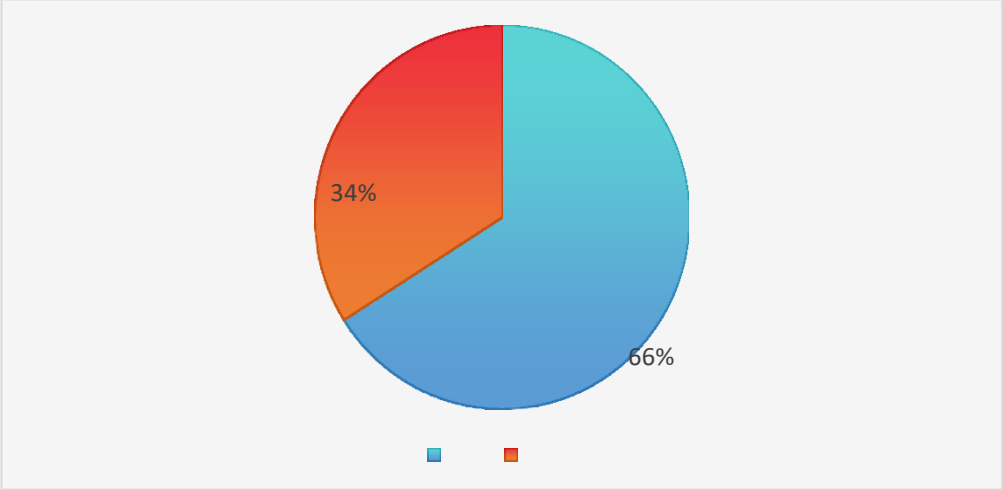
Table 1 and graph 1 provide a breakdown of the age distribution among a sample of 50 students. The age group of 21-25 years is the most prevalent, with 40 students, making up 80% of the total. The 18-20 age group follows, comprising 7 students, which corresponds to 14% of the sample. Lastly, the 26-30 age group is the least represented, with only 3 students, accounting for 6%. This distribution indicates that the majority of students fall within the 21-25 age range.

Q 02 Gender

Table 3.2 *Students' Gender*

Options	Frequency	Percentage
Male	33	66
Female	17	34
Total	50	100

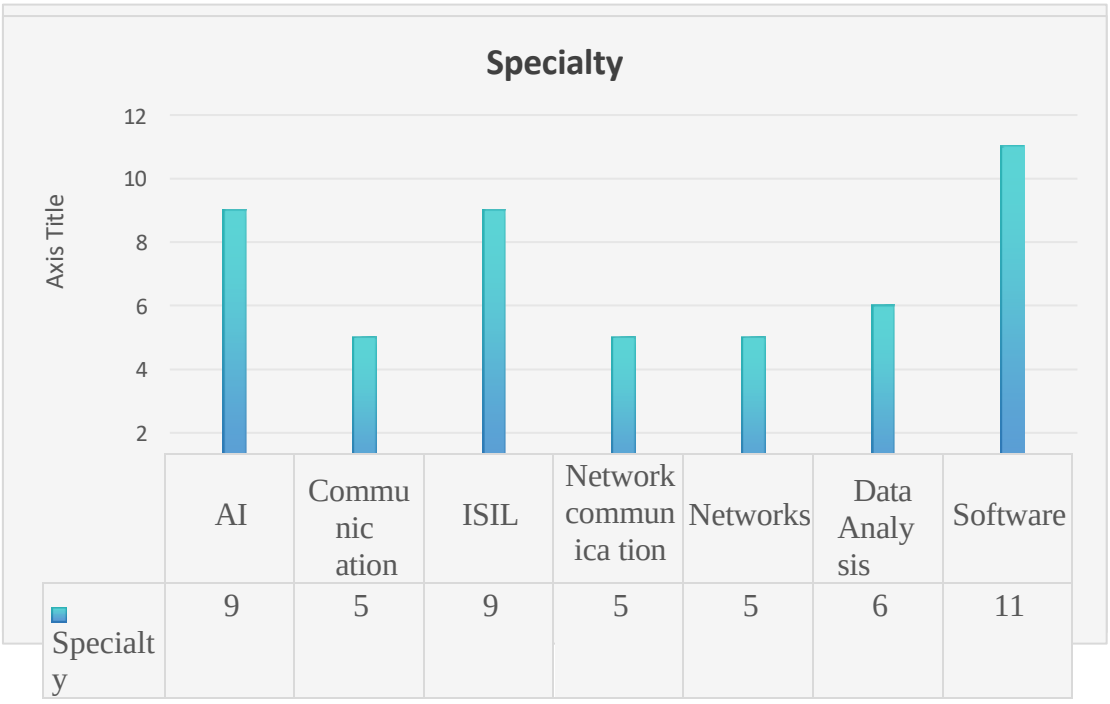
Graph 3.2 *Students' Gender*



The data provided in table 2 and graph 2, show a breakdown of gender distribution among a sample of 50 students. The majority of students, 66% (33 students), are male, while 34% (17 students) are female. This distribution indicates a higher representation of male students within the sample. The data from the table suggest that there is a higher level of interest among male students to participate in this research compared to female students.

Q 03 What is your specialty of study within the computer science department?

Graph 3.3 *Students' Specialty*



The data from graph 3 explores the specialty of study within the computer science department among the respondents, reveals a diverse distribution across various fields. The majority of students, comprising 22% of the sample, specialize in software. Following closely behind are AI (Artificial Intelligence) and ISIL (Information Systems and Libraries), each accounting for 18% of the respondents. Data analysis is the focus for 12% of students, while communication, network communication, and networks each represent 10% of the sample. This distribution underscores a broad spectrum of academic interests within the department, ranging from foundational software development to specialized fields such as AI and ISIL

3.5.1.2. Section 2: The Use of Software Packages and Applications and Perceptions of Their Usage

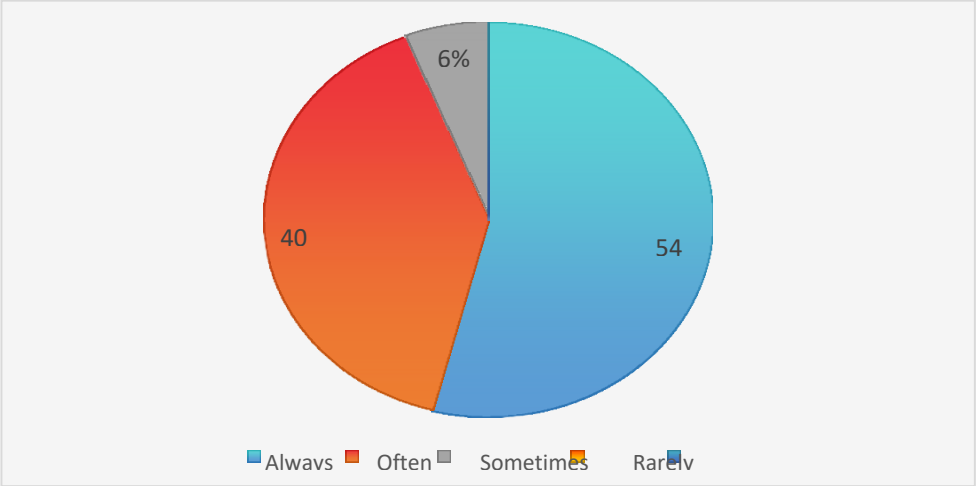
The second section of the questionnaire, titled "Software Packages and Applications Usage and Perceptions," explores how frequently participants use software packages and applications, their motivations for usage, and their perspectives on the pronunciation and spelling of software names. This section aims to analyze how cultural and linguistic factors influence these perceptions and behaviors related to software usage.

Q 01 How often do you use software applications on your devices?

Table 3.3 *Frequency of Software Application Usage Among Respondents*

Options	Frequency	Percentage
Always	27	54
Often	20	40
Sometimes	3	6
Rarely	0	0
Never	0	0
Total	50	100

Graph 3.4 *Frequency of Software Application Usage Among Respondents*



The table depicts the frequency of software application usage among the respondents, revealing a pattern of high engagement with technology. A significant majority, 54% of students, reported using software applications always, while 40% indicated they use them often. A smaller proportion, 6%, reported using software sometimes. Importantly, none of the respondents reported rarely or never using software applications. This data underscores a pervasive reliance on software for various tasks among the surveyed students, emphasizing its integral role in both academic pursuits and daily activities.

Q 02 If 'Yes,' why? Is it because or to:

Table 3.4 *Reasons for Frequent Software Application Usage Among Respondents*

Options	Frequency	Percentage
Personal interest or hobby	4	8
Communication or social networking purposes	19	38
Academic or professional requirements	27	54

Health and Wellness purposes	0	0
Others (specify)	0	0
Total	50	100

Graph 3.5 *Reasons for Frequent Software Application Usage Among Respondents*

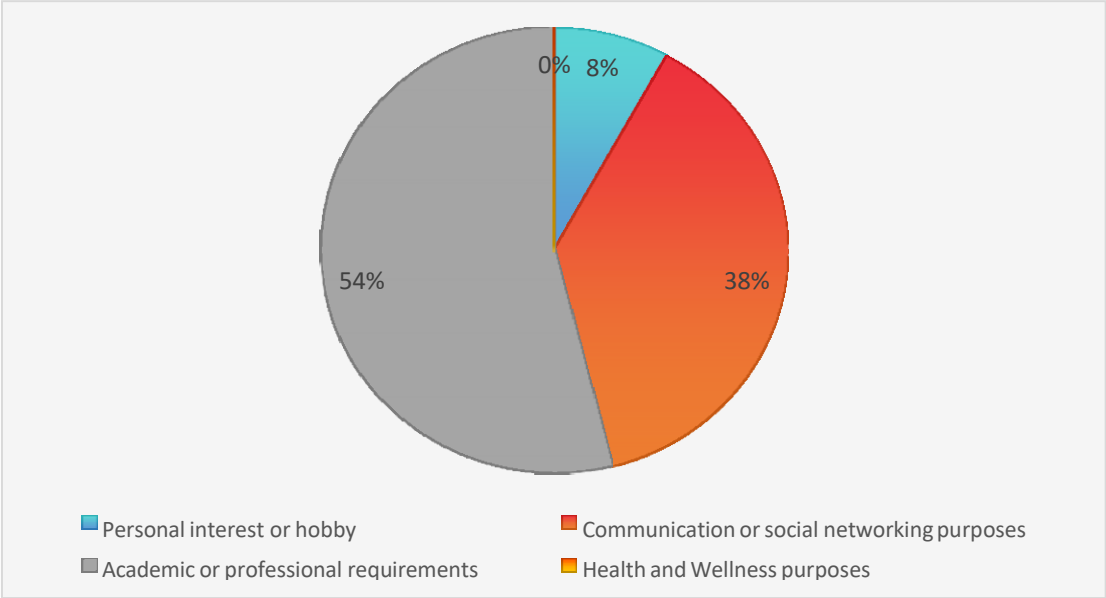


Table 4 and graph 5 provide insights into the reasons behind the frequent use of software applications among the respondents. The primary reason, cited by 54% of the respondents, is for academic or professional requirements. Communication or social networking purposes are also significant, accounting for 38% of the responses. Additionally, 8% of students use software applications for personal interest or hobbies. Notably, no respondents indicated using software for health and wellness purposes or other reasons. This data suggests that the main drivers for software usage among the surveyed students are their academic and professional needs, with social networking also playing a considerable role.

Q 03 If No, why not?

Since the majority of students indicated regular use of software applications in response to the first question and none of them said 'No'. Therefore, none of them reported reasons for abstaining from software usage

Q 04 If yes, at which level?

Table 3.5 *Levels of Engagement with Software Applications Among Respondents*

Options	Frequency	Percentage
Spelling	3	6
Pronunciation	1	2
Meaning	6	12
Use	41	82
Total	50	100

Graph 3.6 *Levels of Engagement with Software Applications Among Respondents*

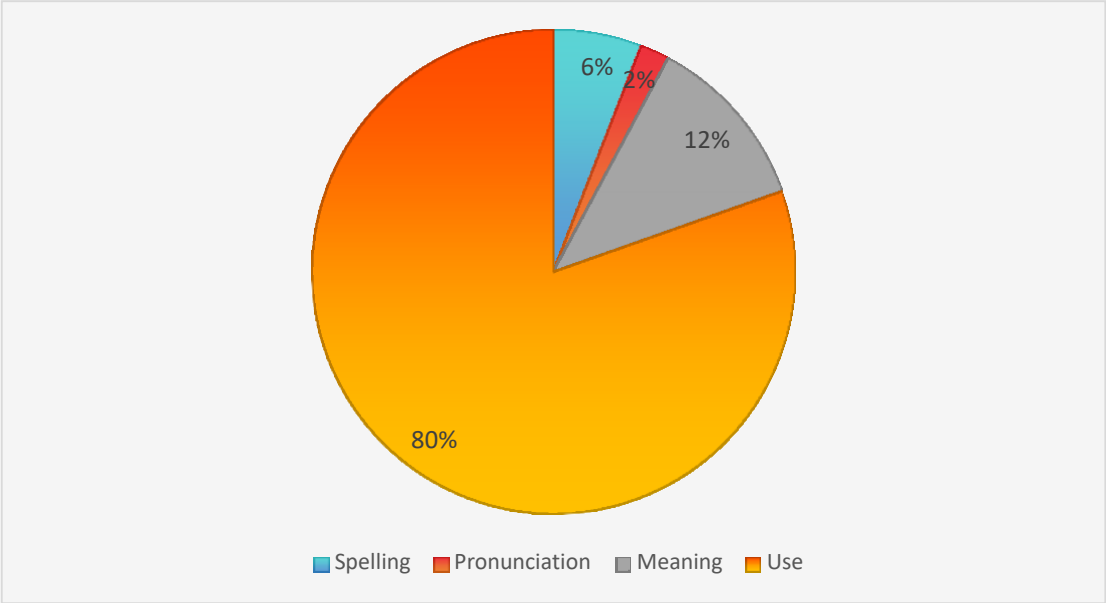
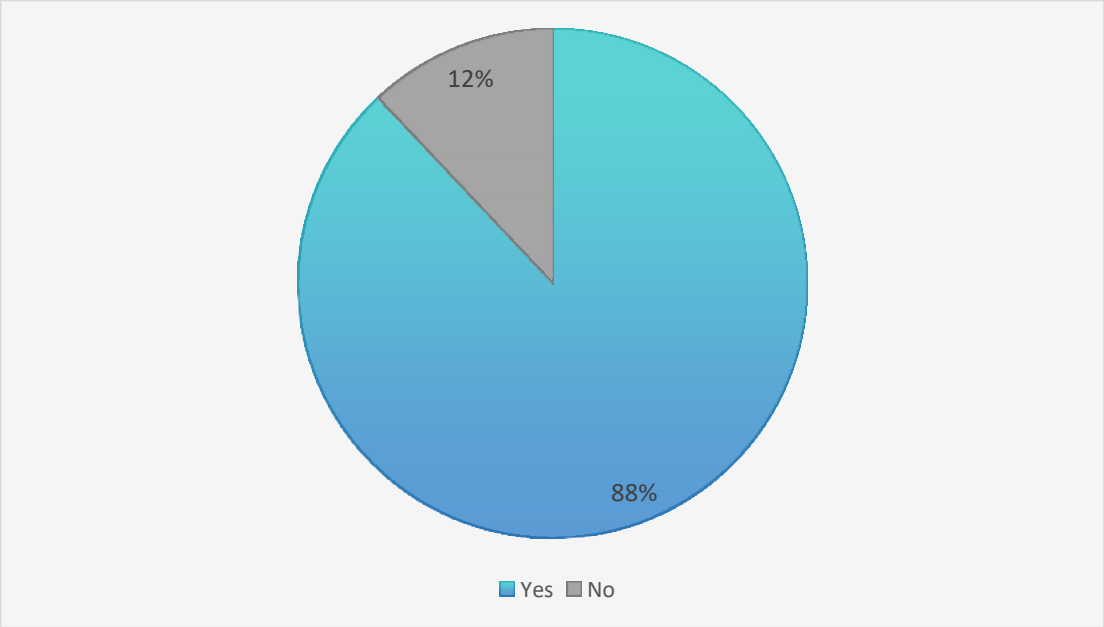


Table 6 and graph 6 examine the specific aspects at which respondents engage with software applications. It reveals that the overwhelming majority of respondents

(82%) engage with software primarily at the level of use, highlighting a focus on practical functionality. A smaller portion (12%) engages with software at the level of meaning, indicating an interest in the context or purpose of the applications. Very few respondents focus on spelling (6%) or pronunciation (2%), suggesting that these aspects are less significant in their overall interaction with the software. This data underscores that practical usage is the most critical factor for the majority of students when interacting with software applications.

Q 05 Do you WRITE and PRONOUNCE those software packages and applications astheir original requires?

Graph 3.7 *Adherence to Original Spelling and Pronunciation of Software NamesAmong Respondents*



The data from graph 7 assesses whether respondents write and pronounce software packages and applications as their original names require. The vast majority, 88%, indicated that they do adhere to the original spelling and pronunciation of software names. In contrast, only 12% of respondents do not follow the original

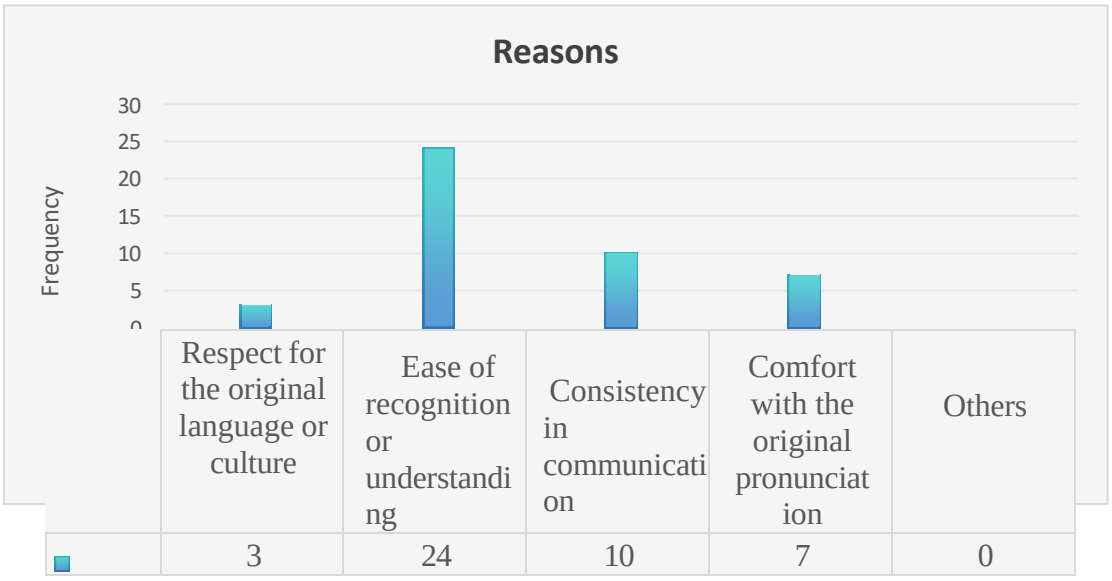
naming conventions. This suggests that most students prefer to maintain the integrity of the original names, reflecting a respect for the original language and accuracy in communication

Q 06 If 'Yes' why? Is it because or to:

Table 3.6 *Reasons for Adhering to Original Spelling and Pronunciation of Software Names*

Options	Frequency	Percentage
Respect for the original language or culture	3	6
Ease of recognition or understanding	24	48
Consistency in communication	10	20
Comfort with the original pronunciation	7	14
Others (specify)	0	0
Total	44	100

Graph 3.8 *Reasons for Adhering to Original Spelling and Pronunciation of Software Names*

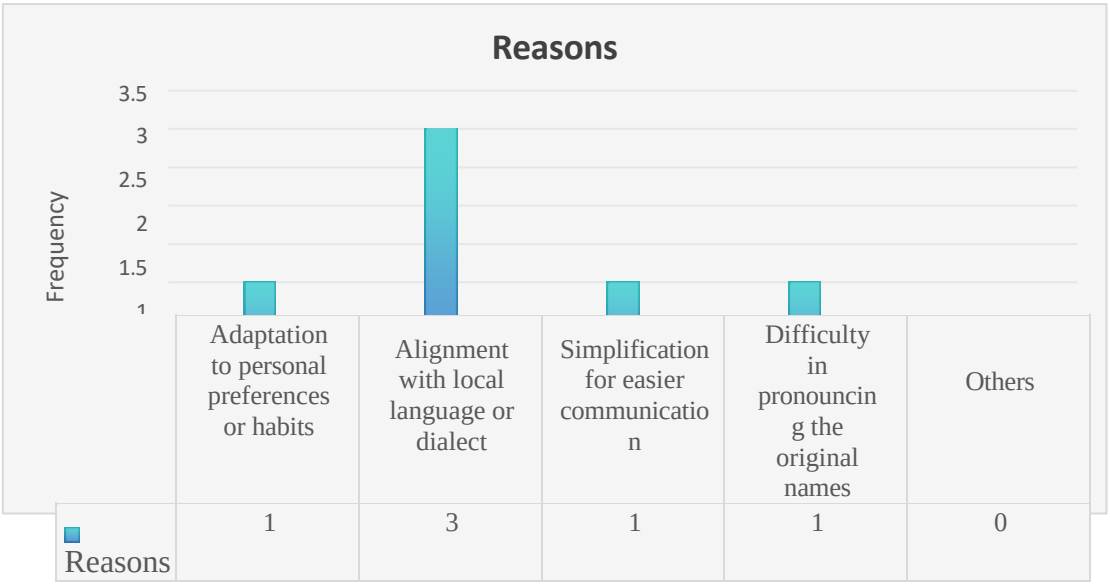


Reasons					

The table reveals the reasons why respondents adhere to the original spelling and pronunciation of software names, with 44 out of 50 respondents answering "Yes" to the previous question (Q 05). Among those who affirmed adherence, 48% cited ease of recognition or understanding as their primary motivation, highlighting the importance of clarity in communication. Additionally, 20% mentioned consistency in communication, emphasizing the desire for uniformity in naming conventions. A smaller proportion (14%) expressed comfort with the original pronunciation, while 6% indicated respect for the original language or culture as their reason for adherence. Importantly, none of the respondents specified other reasons. This data underscores that practical considerations, particularly ease of recognition and consistency in communication, are pivotal factors influencing respondents' decisions to adhere to the original spelling and pronunciation of software names.

Q 07 If 'No' why not?

Graph 9 *Reasons for Not Adhering to Original Spelling and Pronunciation of Software Names*



The table illustrates the reasons why a minority of respondents, totaling 6 out of 50 who answered "No" to the previous question (Q 05), do not adhere to the original spelling and pronunciation of software names. Among these respondents, adaptation to personal preferences or habits was cited by 1 student, while 3 students mentioned alignment with local language or dialect. Additionally, 1 student each indicated simplification for easier communication and difficulty in pronouncing the original names as reasons for not adhering. Notably, none of the respondents specified other reasons. This data indicates that while the majority maintain original naming conventions, a small group modifies pronunciation or spelling based on local dialect or personal preference.

Q 08 When using software, how important do you find the names of applications?

Table 3.7 *Perceived Importance of Software Application Names Among Respondents*

Options	Frequency	Percentage
Not important at all	4	8
Somewhat important	13	26
Moderately important	25	50
Very important	8	16
Total	50	100

Graph 3.10 *Perceived Importance of Software Application Names Among Respondents*

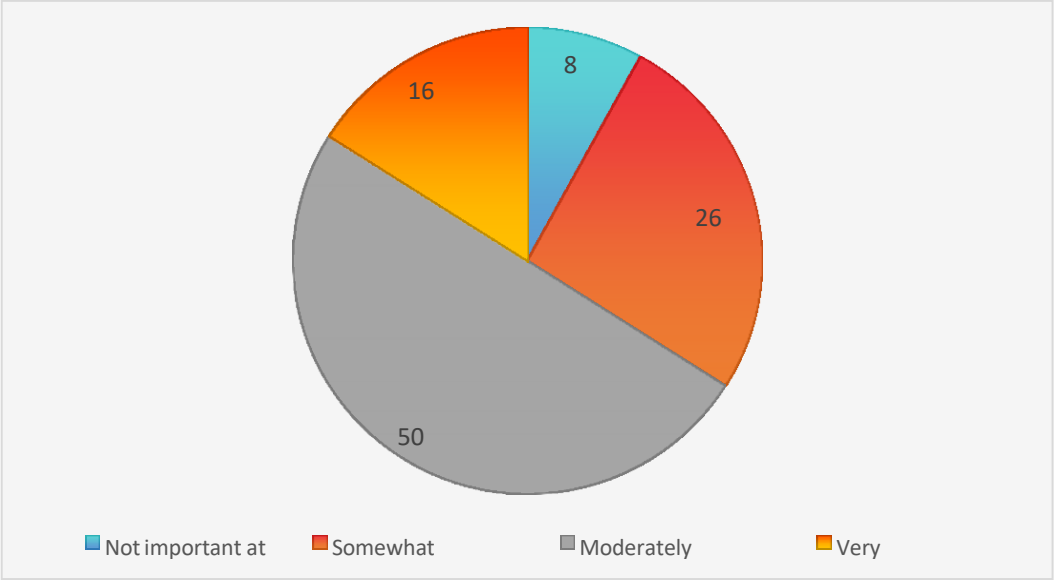


Table 7 and graph 10 examine the perceived importance of software application names among respondents. The data shows that a significant portion of respondents find the names moderately important, with 50% indicating so. Additionally, 26% consider the names somewhat important, while 16% find them very important. A smaller group, 8%, believe that software names are not important at all. This distribution suggests varying degrees of significance placed on application names, highlighting that a majority find them at least moderately important for their software usage experiences. Understanding these perspectives can provide insights into how software naming impacts user perceptions and interactions.

Q 09 How do you think the language or cultural aspects of software names affect your choice to use an application?

Table 3.8 *Impact of Language and Cultural Aspects on Software Application Usage Decisions*

Options	Frequency	Percentage
Not at all	6	12
Slightly	16	32
Moderately	25	50
Very much	3	6
Total	50	100

Graph 3.11 *Impact of Language and Cultural Aspects on Software Application Usage Decisions*

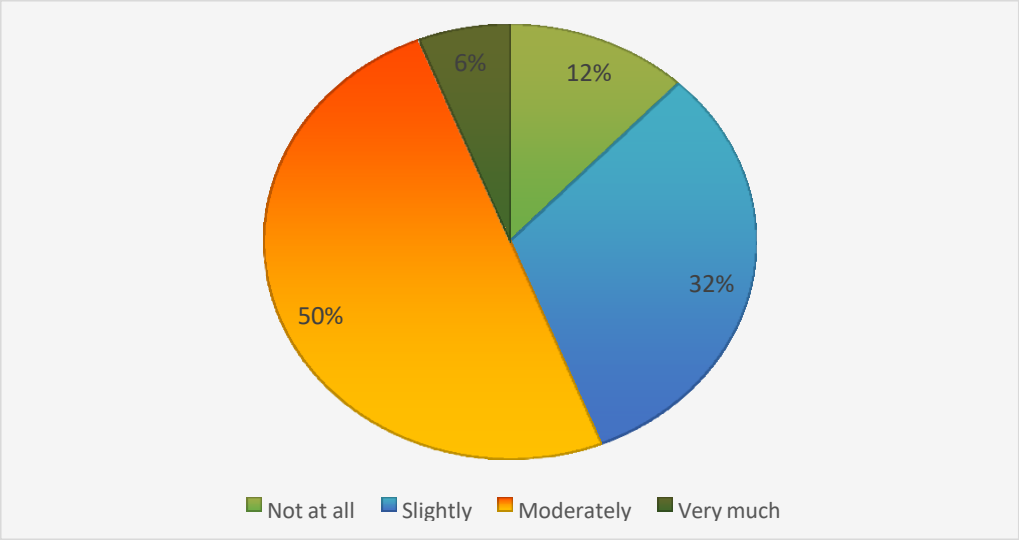


Table 8 and graph 11 illustrate respondents' perspectives on how language or cultural aspects of software names influence their decision to use an application. A significant majority of respondents, totaling 56%, perceive these aspects as influential, with 50% indicating a moderate impact and 6% stating a very strong impact. Additionally, 32% believe these factors have a slight influence, while 12% feel they have no influence at all. This data highlights the varying degrees of importance placed on language and cultural elements in software naming, suggesting that for many users, these aspects significantly shape their decisions regarding software usage. Understanding these perceptions provides valuable insights into how

software developers can align naming strategies with user preferences and cultural sensitivities to enhance user engagement and satisfaction.

Q 10 To what extent do you think software names should reflect the cultural and linguistic diversity of the user base?

Table 3.9 *Perceptions on Cultural and Linguistic Diversity in Software Naming*

Options	Frequency	Percentage
Strongly disagree	1	2
Disagree	4	8
Neutral	21	42
Agree	22	44
Strongly Agree	2	4
Total	50	100

Graph 3.12 *Perceptions on Cultural and Linguistic Diversity in Software Naming*

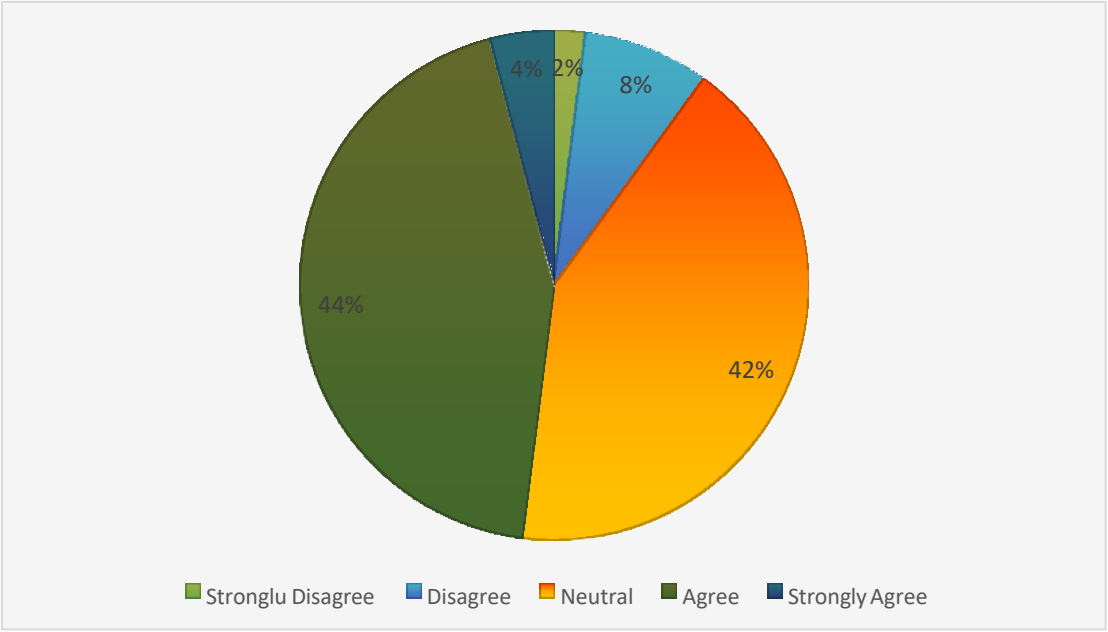


Table 9 and graph 12 examine respondents' opinions on the extent to which software names should reflect the cultural and linguistic diversity of the user base.

According to the data, a significant portion of respondents hold favorable views towards cultural and linguistic diversity in software naming practices, with 44% agreeing and 4% strongly agreeing. In contrast, 8% disagree and 2% strongly disagree with this idea. A sizable proportion, 42%, remains neutral on the issue. These findings suggest a divided stance among respondents regarding the importance of cultural and linguistic representation in software names. The results underscore the complexity and diversity of opinions within the user base regarding the incorporation of cultural and linguistic diversity in software naming strategies.

Q 11 How would you feel if a software application's name changed to better align with your cultural or linguistic preferences?

Table 3.10 *Attitudes Towards Software Name Alignment with Cultural and Linguistic Preferences*

Options	Frequency	Percentage
Positive	24	48
Neutral	26	52
Negative	0	0
Total	50	100

Graph 3.13 *Attitudes Towards Software Name Alignment with Cultural and Linguistic Preferences*

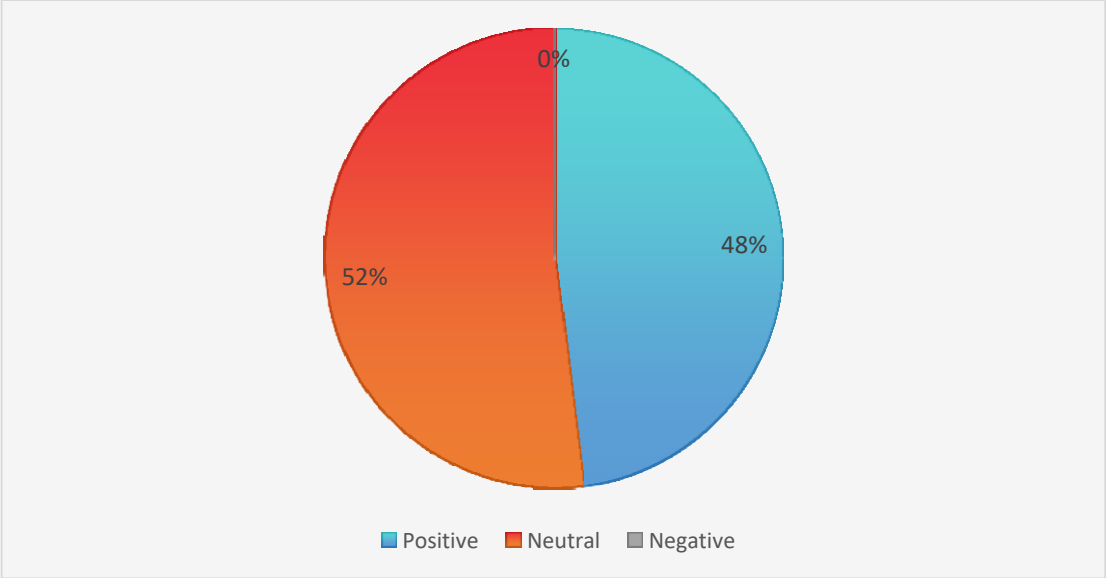
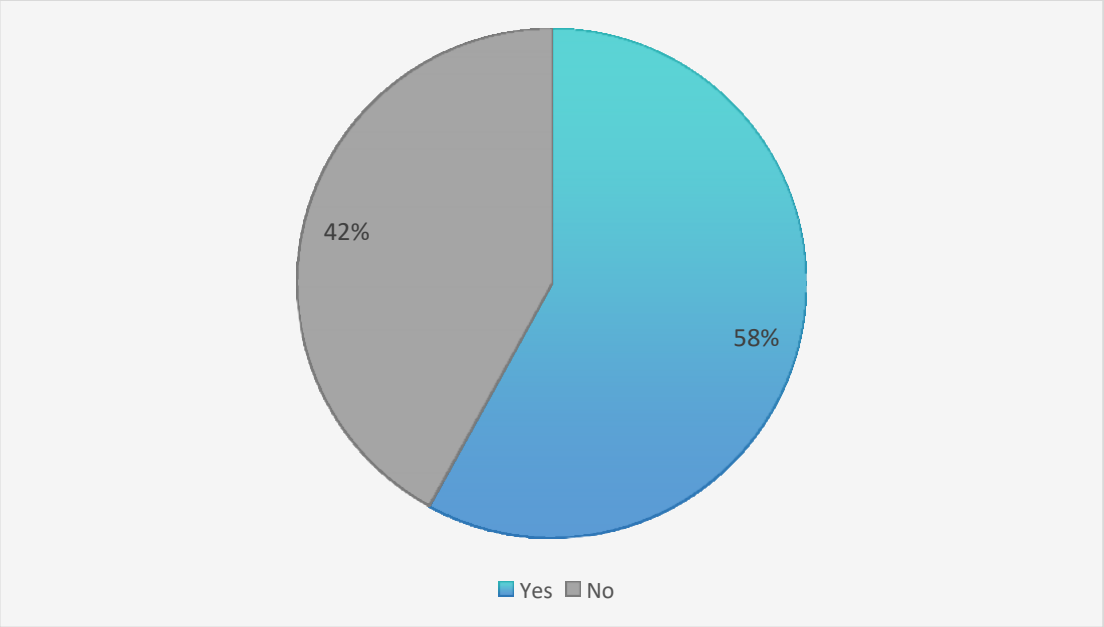


Table 10 and graph 13 examine respondents' attitudes towards potential changes in software application names to better align with their cultural or linguistic preferences. A slight majority of respondents, totaling 52%, expressed neutrality towards such changes, indicating that they neither strongly oppose nor strongly support them. Conversely, 48% of respondents viewed these potential name changes positively, indicating an openness to software names that better reflect their cultural or linguistic backgrounds. Notably, none of the respondents expressed negative feelings towards these adaptations. This data suggests a generally favorable reception towards culturally and linguistically aligned software names among the surveyed individuals, highlighting an opportunity for developers to enhance user satisfaction and inclusivity through thoughtful naming practices.

Q 12 Would you be more inclined to use a software application if its name reflects a specific cultural or linguistic aspect that resonates with you?

Graph 3.14 *Impact of Cultural and Linguistic Alignment in Software Names on User Inclination*



The data from figure 14 indicates that a majority of respondents, 58%, would be more inclined to use a software application if its name reflects a specific cultural or linguistic aspect that resonates with them. In contrast, 42% of respondents indicated they would not be more inclined under these circumstances. This suggests that for a significant portion of users, software names that align with their cultural or linguistic preferences can positively influence their decision to use an application. Understanding this preference can guide developers in enhancing user engagement and satisfaction by considering cultural and linguistic factors in their naming strategies.

Q 13 If 'Yes' why? Is it because or to:

Table 3.11 *Motivations for Inclination Towards Software Applications Reflecting Cultural and Linguistic Aspects*

Options	Frequency	Percentage
It strengthens my cultural identity and connection with the application	2	6.9

It reflects my appreciation for diversity and inclusivity in software	13	44.8
It enhances my perception of the Application's authenticity and relevance	13	44.8
It fosters a sense of belonging and familiarity with the application's community	1	3,4
Others	0	0
Total	29	100

Table 11 examines the reasons why respondents would be more inclined to use a software application if its name aligns with their cultural or linguistic preferences. Out of the 50 respondents surveyed, 29 (58%) answered "Yes" to the previous question (Q 12). Among those who responded affirmatively, the data shows that 44.8% mentioned that such alignment reflects their appreciation for diversity and inclusivity in software, while another 44.8% stated that it enhances their perception of the application's authenticity and relevance. Additionally, 6.9% indicated that it strengthens their cultural identity and connection with the application, and 3.4% felt it fosters a sense of belonging and familiarity with the application's community. Notably, none of the respondents specified other reasons. These findings underscore the significant role that cultural and inclusive considerations play in influencing users' decisions to engage with software applications.

Q 14 If 'No' why not?

Table 3.12 *Reasons for Lack of Inclination Towards Culturally Aligned Software Application Names*

Options	Frequency	Percentage
The name of the application does not significantly impact my usage decision	6	28.6
I prioritize functionality and features over cultural alignment in names	11	52.4
I prefer universally recognizable names for ease of understanding	3	14.3
I might actually find culturally aligned names irrelevant or distracting	1	4.7
Others	0	0
Total	21	100

Table 12 provides insights into why 21 out of 50 respondents (42%) indicated they would not be more inclined to use a software application if its name reflects a specific cultural or linguistic aspect. Among these respondents, 52.4% prioritize functionality and features over cultural alignment in names, suggesting that practical aspects of the application outweigh considerations of cultural resonance in their decision-making. Additionally, 28.6% indicated that the name of the application does not significantly impact their usage decision, highlighting a preference for other factors in software selection. A smaller proportion, 14.3%, stated a preference for universally recognizable names for ease of understanding, while 4.7% mentioned finding culturally aligned names irrelevant or distracting. Notably, none of the respondents specified other reasons. These findings underscore varying user preferences and priorities regarding software naming strategies, emphasizing the importance of balancing cultural considerations with functional attributes to cater to diverse user needs and preferences effectively.

3.5.1.2. Section 3: Software Packages and Applications' Names Samples

The third section seeks examples that demonstrate changes in the spelling, pronunciation, and meaning of software names. It also invites comments on how these changes affect user experience.

Q 01 Please, could you provide us with samples of Changes in Software Packages and Applications' Names in spelling, pronunciation, meaning, etc. (at least 02)?

NB: write them, their pronunciations or meanings, if possible, the way they you use them.

Students' Answers

-I have seen lot of people pronounce 'Shareit' as it is an Arabic word (شرنط)

-Vue.js, originally spelled "Vue.js," its pronunciation has changed among developers. Many now say "view.js" instead of "voo.js." This change makes it easier to understand that it's a tool for building user interfaces with JavaScript.

-MySQL: The spelling hasn't changed, but people pronounce it differently. Some say "My Sequel" and others say "My S-Q-L." Both are accepted, but "My S-Q-L" is the official way.

-Facebook Messenger → Messenger: The messaging feature was separated from the Facebook app into its own app called "Messenger." People usually just call it "Messenger," not "Facebook Messenger."

-**Instagram**: many people prefer to pronounce it in French as "Insta" the T is pronounced ط

- I have noticed that people in Algeria have difficulties in pronouncing 'Youtube' some people pronounce it 'Yo-tob' , some people pronounce the T as ط and some others say 'YouTup'

Based on the provided student responses regarding changes in software packages and applications' names. The responses illustrate various alterations in the spelling, pronunciation, and usage of software names, reflecting linguistic and cultural adaptations among users. For instance, "Shareit" is pronounced similarly to the Arabic

word "شريط" (sharit), showcasing a cultural influence on pronunciation. Another example is "Vue.js," where developers have adopted "view.js" over the original "voo.js," aiming for clarity in understanding its purpose. "MySQL" demonstrates divergent pronunciation options ("My Sequel" versus "My S-Q-L"). The transformation of "Facebook Messenger" to simply "Messenger" highlights a shift towards informal, abbreviated naming conventions in everyday usage. Additionally, the pronunciation of "Instagram" in French ("Insta") shows preferences for linguistic familiarity. Lastly, the variation in pronouncing "Youtube" among Algerians ("Yo-tob," "YouTup," and the use of ط for 'T') underscores regional phonetic challenges and adaptations. These examples illustrate how users interpret and adapt software names to suit linguistic preferences and cultural contexts, reflecting a dynamic interplay between global technology and local language practices.

3.5.2. Analysis of the Interview

The interview was designed to gather qualitative data from teachers regarding the sociolinguistic implications of software names in an educational context. It consists of 10 questions, the purpose of this interview is to investigate how software names affect student learning and engagement in the computer science department at Tiaret, focusing on teachers' perspectives, cultural influences, and recommendations for effective software naming practices.

Q 01: How long have you been teaching in the computer science department at Tiaret? \\

Graph 3.16 *Teaching Experience Distribution in the Computer Science* Department at Tiaret

Graph 16 presents data from responses who are teachers. It shows that out of the four respondents, each represents a different length of teaching experience: 11 years, 12 years, 13 years, and 15 years. Each option is chosen by exactly one respondent, indicating a uniform distribution across the range of provided options. This distribution suggests a diverse range of experience levels among the teachers interviewed.

Q2 How often do you incorporate software applications into your teaching? Could you provide or name some?

Teachers' Answers

-Software1-SAP2000 and ETABS are computer programs used for computation

-Always python jibitter ,prolog ….

-Always , longage c , java

The data from the teachers' responses regarding the frequency and specific software applications used in teaching illustrates a diverse approach to incorporating

technology into education. One respondent mentions using SAP2000 and ETABS, specialized programs for structural analysis and design, indicating a focus on technical fields such as engineering. Another respondent cites consistently using Python, Jibitter, Prolog, along with languages like C and Java, emphasizing a robust integration of programming languages across different educational contexts. These responses highlight not only the frequency of software use but also the variety of applications employed to enhance teaching effectiveness and student engagement in technical subjects and programming. Such insights are valuable for understanding how educators leverage technology to enrich learning experiences and prepare students for modern challenges in their respective fields.

Q 03 In your opinion, how important is the naming of software applications for students' engagement and learning? Why or why not?

Teachers' Answers

-Clear and descriptive names help students understand the purpose and functionality of the software. When the name accurately reflects what the software does, students can quickly grasp its intended use and relevance to their studies. A well-chosen name makes it easier for students to find and discover the software they need. Whether they are searching online, browsing through a list of available applications, or asking for recommendations, a clear and memorable name increases the chances of students identifying the right tool for their needs. An engaging name can spark curiosity and interest in students, motivating them to explore the software further and learn how to use it effectively. Conversely, a bland or uninspiring name may fail to capture students' attention and interest, leading to disengagement.

-No because names are just to indentify the app We Focus on the use more then the name Maybe they focus on the the way how it written not spelling

-The naming of software applications plays a significant role in students' engagement and learning because Clear and engaging names can attract students to explore the software, promoting curiosity and active participation in learning activities.

-Motivation: Engaging and descriptive names can spark students' interest and motivation to interact with the software, fostering a positive attitude towards learning

The responses from teachers regarding the importance of software application naming for students' engagement and learning highlight varying perspectives on its impact. Several respondents emphasize that clear and descriptive names are crucial as they facilitate understanding of the software's purpose and functionality. A well-chosen name aids students in quickly identifying and selecting the appropriate tools for their educational needs, whether through online searches, browsing, or recommendations. Such names can also stimulate curiosity and interest among students, encouraging them to explore and effectively utilize the software. Conversely, one respondent suggests that while names serve the purpose of identification, the focus should primarily be on the functionality rather than the name itself. Nonetheless, overall consensus underscores that engaging, descriptive names play a significant role in enhancing students' motivation and fostering a positive learning environment by attracting them to interact actively with educational software.

Q 04 Have you observed any specific reactions or preferences among students regarding the names of software applications? How? Is it in their use/name/pronunciation, etc.?

Teachers' Answers

-Students may be influenced by the reputation or perceived quality of the brand behind the software. If a software developer is well-known for producing high-quality tools, students may be more inclined to try out their software regardless of the name.

-No , there's no specific preference because users(student) focus on the use The preference in the use maybe

-students tend to respond better to software application names that are culturally appropriate and resonate with their backgrounds . Names that are inclusive and reflective of diverse cultural references can foster a greater sense of belonging and engagement among students.

-Yes , for example, we've in software new mentality , naming the app with animal names like python(the big snake that will eat all snakes that he'll be dominants and exists) and weka(woodpecker), when you give the semantic meaning of this names to student they'll attracts with this app and use it.

The responses from teachers regarding students' reactions and preferences towards software application names reveal diverse observations. Some teachers note that students may be influenced by the reputation or perceived quality of the software developer, suggesting that a strong brand can drive student interest irrespective of the name. Others emphasize that students primarily prioritize the functionality and utility of the software over its name, indicating that practicality outweighs naming conventions in their decision-making. However, there is also recognition that culturally appropriate and inclusive names can resonate more with students, fostering a sense of belonging and engagement. An example provided

highlights how naming software after animals like Python and Weka, with explanations of their symbolic meanings, can attract students and enhance their

willingness to use the applications. These insights underscore the importance of both functional utility and cultural resonance in shaping students' reactions and preferences towards software application names.

Q 05 Do you believe cultural and linguistic factors influence students' interactions with software applications? Why or why not?

Teachers' Answers

-Cultural context can influence students' understanding of certain concepts, terminology, and user interface design elements within the software. Software that incorporates culturally relevant examples, images, or scenarios may resonate more with students and enhance their engagement and learning experience. Cultural differences in communication styles and norms can affect how students interact with the software, including how they interpret instructions, provide feedback, and collaborate with peers. Software that accommodates diverse communication styles and preferences can foster more inclusive and effective learning environments.

-Not applicable in our filed of study

-Yes, sometimes may and sometimes may not

-Yes , because this generation called with Generation that have the principle of comprehensiveness and more attached in what happen in world ,since they spend more in social media and mobile they think like one in United States .

The teachers' responses to whether cultural and linguistic factors influence students' interactions with software applications reveal varied perspectives. Some educators emphasize that cultural context significantly impacts how students understand software features, terminology, and user interfaces. They argue that incorporating culturally relevant elements can enhance engagement and learning by

resonating more effectively with students. Others, however, indicate that cultural and linguistic factors may not be applicable or universally influential in their specific field of study. Despite differing opinions, there is recognition that today's generation, heavily engaged in global social media and mobile platforms, tends to adopt a more comprehensive worldview. This broader perspective influences their interactions with software, as they seek applications that align with global trends and communication norms. This data highlights the complex interplay between cultural context and student engagement in software usage, suggesting the importance of considering diverse cultural perspectives in educational software design and implementation.

Q 06 Do you consciously select software applications with certain names to align with the cultural or linguistic background of your students? Could you provide or name some? Why or why not?

Teachers' Answers

-I think that selecting software with specific names to match the cultural or linguistic context of students can be beneficial in certain situations. For example, if I'm working in an environment where cultural diversity is significant, it may be wise to choose software with names that reflect this diversity or are available in multiple languages. This can help make students feel more comfortable and engaged in their learning. However, I also believe that it's essential to prioritize the quality, functionality, and pedagogical suitability of the software, rather than focusing solely on their name. The key is to strike the right balance between cultural and linguistic relevance and the educational needs of students.

-No, because their is a specific teaching programme we follow it

-The selection of software applications based on the app if is it free or paid to access on it

-Yes , Exemple (yosr)(يسر) is a chatboot that helps the administration to write and answer questions So when you hear that name, it comes to your mind that he'll help you

The teachers' responses regarding whether they consciously select software applications with specific names to align with the cultural or linguistic background of their students reflect diverse considerations. Some educators acknowledge the potential benefits of choosing software that resonates culturally, especially in environments with significant cultural diversity. They argue that such choices can enhance students' comfort and engagement in learning activities. However, others prioritize adherence to specific teaching programs or consider practical factors such as accessibility (free vs. paid) when selecting software. One teacher provided an example of selecting a chatbot named "Yosr" (يسر), which translates to "ease" or "facilitate" in Arabic, suggesting that the name itself conveys the software's function and purpose effectively.

While cultural and linguistic alignment is recognized as potentially advantageous in enhancing student engagement, educators emphasize the importance of balancing these considerations with the software's quality, functionality, and educational suitability.

Q 07 How do you address any challenges or issues related to language or cultural diversity when using software applications in your teaching?

Teachers' Answers

-When addressing challenges or issues related to language or cultural diversity when

using software applications in teaching, several strategies can be helpful (Choose Culturally Responsive Software,Provide Multilingual Support and Encourage Collaboration and Peer Learning)

-I try to be as understanding and accommodating as possible. I know that not all students come from the same background or have the same level of access to technology, so I make an effort to ensure that everyone can participate fully

-I try to be very aware of cultural differences and how they might impact the way students engage with the software and the class. I'm mindful of things like communication styles, expectations around teacher-student interactions, and cultural references that might not translate. I do my best to adapt my teaching style to make everyone feel welcome and respected

-For example, in our speciality, sometimes we find things that are contrary to our religion , and when we want to talk about it, we take to consider the cultural and religious background

The teachers' responses regarding how they address challenges or issues related to language or cultural diversity when using software applications in teaching demonstrate a thoughtful and varied approach. Several educators emphasize the importance of choosing culturally responsive software that accommodates diverse backgrounds and provides multilingual support. They highlight the significance of encouraging collaboration and peer learning to foster inclusivity and engagement among students. Other teachers underscore their efforts to be understanding and accommodating, acknowledging that students may have varying levels of access to technology and different cultural backgrounds. They strive to adapt their teaching styles to respect cultural differences, considering communication styles, teacher-student interactions, and cultural references that may impact students' engagement.

Additionally, one teacher mentioned the sensitivity required when addressing topics that may conflict with students' religious or cultural beliefs. These strategies reflect a proactive approach to creating inclusive learning environments that cater to the diverse linguistic and cultural needs of students.

Q 08 Based on your experiences, do you have any recommendations for incorporating cultural and linguistic considerations into the naming of software applications?

Teachers' Answers

-Based on my experiences and understanding, here are some recommendations for incorporating cultural and linguistic considerations into the naming of software applications(Research Cultural Norms and Preferences and Consider Global Accessibility)

-Avoid Literal Translations: Direct translations of names from one language to another can often result in awkward or nonsensical names. Instead, focus on

capturing the intended meaning and essence of the name in a culturally appropriate way. Research Local Conventions: Understand the naming conventions, linguistic nuances, and cultural sensitivities of the target markets. Avoid using words, phrases, or references that may have unintended or offensive meanings in different cultural contexts.

-Be prepared to modify or adapt the name if necessary based on user feedback or changing cultural dynamics. Flexibility is key when navigating diverse linguistic and cultural landscapes.

-Collaborate with native speakers, linguists, and cultural experts to ensure the name

is appropriate, meaningful, and resonates with the local audience. They can provide valuable insights to avoid potential pitfalls.

The teachers' responses provide valuable recommendations for incorporating cultural and linguistic considerations into the naming of software applications. They emphasize the importance of researching cultural norms, preferences, and linguistic nuances to ensure that names resonate effectively with diverse audiences. Suggestions include avoiding direct translations that may lead to awkward or inappropriate names, and instead focusing on capturing the intended meaning in a culturally appropriate manner. They also stress the need to understand local naming conventions and sensitivities to avoid unintentionally offensive references. Flexibility is highlighted as crucial, allowing for modifications based on user feedback and evolving cultural dynamics. Collaborating with native speakers, linguists, and cultural experts is recommended to gain deeper insights and ensure the names are meaningful and well-received within specific cultural contexts. These recommendations underscore the significance of thoughtful and inclusive naming strategies to enhance user engagement and promote cultural sensitivity in software applications.

Q 09 In your view, how can the alignment between software names and cultural diversity positively impact the learning environment for students?

Table 3.13 *Teachers' Answers*

Teachers	Answers
1	Improved Accessibility and Engagement: Software names that are culturally appropriate and linguistically accessible can help students from diverse backgrounds feel more comfortable and engaged with the technology. This can encourage greater participation and reduce barriers to using the educational software. Enhanced Inclusivity and Representation: Culturally-aligned software names signal that the learning environment values diversity and is inclusive of different cultural backgrounds. This can foster a sense of belonging and validation for students, creating a more welcoming and supportive learning atmosphere.
2	impact the learning environment for students: Improved Accessibility and Engagement: Software names that are culturally appropriate and linguistically accessible can help students from diverse backgrounds feel more comfortable and engaged with the technology.
3	Aligning software names with cultural diversity can positively impact the learning environment for students in several ways (Engagement and Interest , Language Learning and Empowerment and Identity , Seeing their cultural identity reflected in the software they use can empower students and strengthen their sense of identity and

	pride)
4	Software names that are culturally appropriate and linguistically accessible can help students from diverse backgrounds feel more comfortable and engaged with the technology. This can encourage greater participation and reduce barriers to using the educational software

The table presents a range of responses from teachers regarding how alignment between software names and cultural diversity can positively impact the learning environment for students. Across the responses, a common theme emerges: culturally appropriate and linguistically accessible software names contribute significantly to improving accessibility and engagement among students from diverse backgrounds. Such names can make students feel more comfortable using the technology, thereby encouraging greater participation and reducing barriers to learning. Moreover, culturally-aligned software names signal inclusivity and respect for diversity within the learning environment, fostering a sense of belonging and validation among students. This inclusive approach not only enhances engagement and interest but also supports language learning and empowers students by reflecting their cultural identities. Aligning software names with cultural diversity is viewed as pivotal in creating a supportive and inclusive educational atmosphere that values and respects students' backgrounds.

Q 10 Is there anything else you would like to share regarding the use of software applications and their names in the teaching environment?

Teachers' Answers

-In the teaching environment, thoughtful consideration of software applications and their names can enhance inclusivity, engagement, and cultural relevance. By choosing software that aligns with students' cultural and linguistic backgrounds, educators of SAP2000 and ETABS can create a more supportive and effective learning environment that empowers all students to succeed.

-Software applications with culturally sensitive names can facilitate better communication and collaboration among students, teachers, and parents, fostering a more connected learning community.

Personalized Learning Experience:

Tailoring software names to resonate with diverse cultural backgrounds can contribute to a more personalized learning experience for students, catering to their individual needs and preferences

-Software applications with culturally aligned names can streamline classroom management tasks, such as assignment tracking, progress monitoring, and communication, making it easier for teachers to organize and deliver lessons effectively

-Enhanced Communication and Collaboration:

Software applications with culturally sensitive names can facilitate better communication and collaboration among students, teachers, and parents, fostering a

more connected learning community.

The responses from teachers highlight several key benefits and considerations regarding the use of software applications and their names in the teaching environment. Firstly, aligning software names with students' cultural and linguistic backgrounds is emphasized as a means to enhance inclusivity, engagement, and cultural relevance in the classroom. This approach not only fosters a more supportive learning environment but also contributes to a personalized learning experience by catering to diverse needs and preferences. Furthermore, culturally sensitive software names are seen as promoting better communication and collaboration among students, teachers, and parents, thereby creating a more connected learning community. Teachers also recognize the practical benefits of such alignment, including streamlined classroom management tasks like assignment tracking and progress monitoring.

3.6. The Impact of Algerian Linguistic Factors on Software Naming Conventions

The impact of Algerian linguistic factors on software naming conventions is significant, as evidenced by insights from both teachers' interviews and students' questionnaire responses. In Algeria, like in many diverse cultural contexts, the choice of software names can influence student engagement, learning outcomes, and overall educational experience. From the teachers' perspective, there is a recognition that culturally and linguistically appropriate software names can enhance students' comfort and engagement with educational tools. Teachers highlighted the importance of clear and descriptive names that align with the functionalities of software, facilitating easier understanding and navigation for students. Moreover, they emphasized the role of culturally resonant names in fostering inclusivity and a supportive learning

environment. This aligns with the findings that students tend to respond positively to software names that reflect their cultural backgrounds, which can enhance their sense of belonging and motivation to interact with the technology.

The students' responses further underscored the importance of cultural sensitivity in software naming. They indicated a preference for software names that are not only functional but also culturally appropriate, suggesting that such names contribute to a more meaningful educational experience. Additionally, the recognition of cultural and linguistic factors influencing software interactions aligns with broader societal trends towards inclusivity and cultural diversity in educational settings. Thus, the data from students' questionnaire and teachers' interview indicate that integrating Algerian linguistic factors into software naming conventions can significantly impact educational practices by promoting engagement, inclusivity, and cultural relevance. By considering local linguistic nuances and cultural sensitivities, educators can create a more conducive learning environment that supports diverse student needs and enhances overall educational outcomes in Algeria.

3.7. General Discussion

The analysis of both the interview and questionnaire data provides a comprehensive understanding of the sociolinguistic implications of software names within the computer science department at Tiaret. The data from the questionnaire revealed diverse perspectives among students regarding the impact of software names on their learning and engagement. Students highlighted the importance of clear and descriptive software names, noting that such names facilitate easier identification and usage of the software, thereby enhancing their learning experience. This aligns with the interview findings where teachers also emphasized the role of descriptive names in helping students grasp the purpose and functionality of the software. Both students

and teachers recognized that engaging and culturally resonant names could spark curiosity and interest, motivating further exploration and effective use of the software.

From the interviews, it became evident that teachers integrate a variety of software applications, such as SAP2000, ETABS, Python, and Java, into their curricula, reflecting a robust technological integration aimed at enhancing educational outcomes. The questionnaire responses corroborated this, with students frequently mentioning these applications and expressing varied levels of engagement based on the software names and their perceived relevance. Furthermore, both data sets highlighted the influence of cultural and linguistic factors on students' interactions with software. Teachers noted that culturally relevant software names could enhance student engagement and create a more inclusive learning environment. Similarly, students indicated a preference for software names that resonate with their cultural backgrounds, suggesting that such names contribute to a sense of belonging and validation within the educational context.

Challenges related to language and cultural diversity were addressed through various strategies, as mentioned by teachers, such as choosing culturally responsive software, providing multilingual support, and fostering collaborative learning environments. These strategies were echoed in the questionnaire responses, where students appreciated efforts to accommodate diverse cultural and linguistic needs, highlighting the importance of inclusivity in educational tools.

Based on the analysis of both the questionnaire and interview data, the findings reveal insights into the hypotheses regarding naming conventions of software applications in Algeria. Hypothesis H1, which posits that linguistic and cultural factors significantly influence naming conventions, is approved by the data. Respondents indicated a preference for software names that resonate with Algerian

cultural and linguistic contexts, suggesting that these factors play a crucial role in shaping naming choices. Hypothesis H2, which suggests that Algerian users prefer software names reflecting their cultural and linguistic background, is also approved. Participants expressed a strong inclination towards software names that are familiar and meaningful within their cultural framework, highlighting a preference for localized naming conventions. Conversely, Hypothesis 3, proposing that morphologically adapted software names enhance user engagement and satisfaction, is rejected based on the findings. While participants valued culturally adapted names, the direct impact on user engagement and satisfaction was less conclusive, indicating a nuanced relationship that requires further investigation. Overall, the data underscore the significance of cultural and linguistic alignment in software naming conventions among Algerian users, supporting hypotheses 1 and 2 while suggesting a more complex interpretation for 3.

The recommendations for naming practices from both interviews and questionnaires emphasized the need for thorough research into cultural norms and preferences, avoiding direct translations that might lead to awkward or inappropriate names, and collaborating with cultural experts to ensure meaningful and resonant names. Both sets of data underscored the positive impact of aligning software names with cultural diversity, noting that this alignment improves accessibility, engagement, and inclusivity, and fosters a supportive learning environment.

In conclusion, the integration of insights from both interviews and questionnaires provides a holistic view of the significance of software names in the educational context of the computer science department at Tiaret. The findings underscore the critical role of culturally and linguistically sensitive naming practices in enhancing student engagement, fostering inclusivity, and creating an effective and supportive

educational environment. By balancing cultural relevance with functionality, educators can significantly improve the learning experiences and outcomes for their students.

3.8. Limitations of the Study

This study has several limitations that should be considered when interpreting the results. Firstly, while the sample included 50 students and four teachers, it may not fully represent the broader population of the computer science department or other academic settings. The relatively small and specific sample size limits the generalization of the findings.

Additionally, the study focused primarily on a limited range of software applications, which might overlook other tools that could offer further insights into the sociolinguistic implications of software names. The diversity within the sample might not fully capture the wide range of cultural and linguistic backgrounds present in the larger population, potentially skewing the results.

Furthermore, the findings are specific to the context of the computer science department at Tiaret and may not be applicable to other disciplines or educational institutions. Temporal factors were also not considered, meaning that the results may not reflect evolving trends in software usage or naming conventions.

3.9. Conclusion

This chapter has provided a comprehensive overview of the methodology employed in this study, encompassing the research methods, instruments, participants, and data analysis procedures. The primary aim of this research was to investigate the impact of Algerian linguistic factors on software naming conventions, a topic situated at the intersection of linguistics and technology. The research methods utilized

included both quantitative and qualitative approaches to gather robust data. A structured questionnaire was administered to a diverse sample of teachers and students within the Algerian educational context. This instrument aimed to elicit insights into perceptions and preferences regarding software application names. Additionally, in-depth interviews with selected teachers provided nuanced perspectives and enriched the understanding of how cultural and linguistic factors influence software naming practices.

The participants in this study were carefully selected to represent a range of experiences and viewpoints relevant to the research questions. Teachers from the computer science department at Tiaret and students across various educational levels contributed their perspectives, offering valuable insights into their interactions with software applications and their naming conventions. In conclusion, this chapter has laid the groundwork for a thorough investigation into the impact of Algerian linguistic dynamics on software naming conventions. The findings from this study are expected to contribute significantly to both linguistic studies and practical applications in software development, particularly in culturally diverse contexts such as Algeria.

General Conclusion

In contemporary Algeria, the intersection of language, technology, and sociolinguistics presents a rich tapestry of linguistic dynamics. This dissertation explores these intricate relationships through a sociolinguistic lens, focusing specifically on the morphological evolution and naming conventions of software applications in Algeria. The aim is to investigate how linguistic factors influence the naming practices of software packages and applications, reflecting the diverse linguistic landscape of the country. By examining the impact of these factors on software naming conventions, this study seeks to provide insights into how language shapes technology use and perception among Algerian users. Through a detailed exploration of morphological changes, language variation, and sociolinguistic contexts, this research aims to contribute to our understanding of the complex interplay between language dynamics and technological advancements in Algeria.

The study is specifically targeting Master 2 students from the Department of Computer Science at Tiaret. The sample consists of 50 students who were randomly selected to answer questionnaire. Besides four teachers from the Department of Computer Science at Tiaret who were selected randomly to answer the interview.The study opts for a mixed method that combines both quantitative and qualitative approaches. Two instruments have been used for conducting the needed data. The first instrument is students' questionnaire, The second instrument has been used is teachers' interview.

The researchers answered the first question which aimed at examining the ways in which linguistic and cultural factors inherent to Algeria impact the naming conventions used for software applications. The results reveal that linguistic and cultural factors significantly influence the naming conventions of software

applications in Algeria. Specifically, it was found that incorporating culturally appropriate and linguistically accessible names enhances user engagement and facilitates better communication among students, teachers, and parents.The second question aimed to investigate how Algerian users perceive and prefer software application names. The results reveal that Algerian students have varied perceptions and preferences regarding the names of software applications. Some students prioritize the functionality and usability of the software over its name, indicating that practicality is their primary concern. However, there is also a significant group of students who value culturally and linguistically appropriate names. They believe that such names enhance their engagement with the software and make it more relatable to their cultural identity. Moreover, students appreciate software names that are easy to pronounce and remember, which they find helpful in their learning and usage of the applications.

The third question aimed to assess the influence of software names that are adapted to Algerian linguistic morphology on user engagement and satisfaction. The results reveal that that morphologically adapted software names have a significant impact on user engagement and satisfaction in Algeria. Users generally perceive these names as more accessible and culturally relevant, which enhances their engagement with the software. The alignment of software names with Algerian linguistic morphology contributes to a sense of familiarity and identity among users, thereby positively influencing their satisfaction with the software. Teachers also recognize the importance of culturally sensitive naming conventions in educational settings, suggesting that such names can promote student motivation and active participation in learning activities.

The study found that linguistic and cultural factors strongly influence software

naming conventions in Algeria, enhancing user engagement and communication among stakeholders. Algerian users show varied preferences: some prioritize software functionality, while others value culturally relevant names that aid usability and cultural identity. Morphologically adapted software names were particularly impactful, increasing user engagement and satisfaction by fostering familiarity and identity. These findings emphasize the importance of culturally sensitive naming practices to optimize user interaction and educational outcomes in Algeria.

List of References

Books:

Bauer, L. (2001). *Morphological productivity*. Cambridge University Press.

Benrabah, M. (2013). *Arabic sociolinguistics: Issues and perspectives*. Routledge.

Bentahila, A. (1983). *Language attitudes among Arabic-French bilinguals in Morocco*. Clevedon: Multilingual Matters.

Bayley, R. (2013). *Quantitative methods in sociolinguistics*. John Wiley & Sons.

Bhatia, V. K. (1993). *Analyzing genre: Language use in professional settings*. Routledge.

Biber, D. (1988). *Variation across speech and writing*. Cambridge University Press.

Bishop, A. (2009). *Vocabulary instruction for academic success*. Shell Education.

Bloomfield, L. (1933). *Language* (1st British ed. 1935). London: Allen & Unwin.

Chomsky, N., & Halle, M. (1968). *The sound pattern of English*. Harper & Row.

Chaer, A. (2008). *Sintaksis Bahasa Indonesia. Pendekatan Proses*. Jakarta: PT Rineka Cipta.

Chambers, J. K. (2003). *Sociolinguistic theory: Linguistic variation and its social significance*. Blackwell Publishing.

Chambers, J. K. (2003). *Sociolinguistic theory* (2nd ed.). Blackwell Publishing.

Crystal, D. (2003). *English as a global language*. Cambridge University Press.

Eckert, P. (2000). *Linguistic variation as social practice: The linguistic construction of identity in Belten High*. Blackwell Publishing.

Camps, G. (1987). *Les Berbères. Mémoire et identité [Berbers. Past and identity]*. Paris: Errance.

Camps, G. (1980). *Berbères aux marges de l'histoire*. Éditions des Hiferides.

Chaker, S. (1984). *Textes en linguistique berbère. Introduction au domaine berbère*. Paris: Editions du CNRS.

Ennaji, M. (2005). *Multilingualism, cultural identity, and education in Morocco*. Springer.

Gordon, D. C. (1962). *Africa's French legacy 1954–1962*. Cambridge, MA: Harvard University Press.

Grandguillaume, G. (1983). *Arabisation et politique linguistique au Maghreb*. Paris: Maisonneuve et Larose.

Gleason, H. A. (1961). *An introduction to descriptive linguistics*. Holt, Rinehart and Winston.

Halliday, M. A. K. (1989). *Spoken and written language*. Oxford University Press.

Hayes, B. (2009). *Introductory phonology*. John Wiley & Sons.

Hudson, R. (1996). *Sociolinguistics*. Cambridge University Press.

Haddadou, M. A. (2000). *Le guide de la culture berbère*. Paris: Edition Paris-Méditerranée.

Ibn Khaldoun. (1995). *Histoire des Berbères et des dynasties musulmanes de l'Afrique septentrionale* (G. de Slane, Trans.). Geuthner.

Katamba, F., & Stonham, J. (2006). *Morphology*. Macmillan International Higher Education.

Matthews, P. H. (1991). *Morphology*. Cambridge University Press.

Romaine, S. (2000). *Language in Society: An Introduction to Sociolinguistics*. Oxford University Press.

Tagliamonte, S. A. (2012). *Variationist Sociolinguistics: Change, Observation, Interpretation*. John Wiley & Sons.

Trudgill, P. (1974). *Linguistic Change and Diffusion: Description and Explanation in Sociolinguistic Dialect*. University of Pennsylvania Press.

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

Versteegh, K. (1997). *The Arabic language*. Edinburgh: Edinburgh University Press.

Yule, G. (2010). *The study of language: Fourth Edition*. New York: Cambridge University Press.

Journal Articles:

Ahmed Sid, H. (2009). Code switching and borrowing in Algeria. *Revue Sciences Humaines*, A, 97-107.

Astuti, N., Nufus, Z., Ifadloh, N., & Prasetya, L. T. (2021). An analysis of free and bound morphemes in William Shakespeare's poetries. *SKETCH JOURNAL: Journal of English Teaching, Literature and Linguistics*, 1(1), 33-47.

Alsmari, N. A. (2019). Fostering EFL students' paragraph writing using Edmodo. *English Language Teaching*, 12(10), 44-54.

Abbassia, B. (2021). Development of the Algerian sociolinguistic landscape: Preliminary observations. *International Journal of Language and Linguistics*, 9(3), 80.

Baya Essayahi, M. L., & Kerras, N. (2016). A sociolinguistic study of the Algerian language. *Arab World English Journal (AWEJ) Special Issue on CALL*, (3).

Benrabah, M. (2002, October 2). Urgence d‘une réforme scolaire en Algérie [Urgency for a school reform]. *Libération*, 7.

Benrabah, M. (2007). The language situation in Algeria. In R. B. Kaplan & R. B. Baldauf (Eds.), *Language Planning and Policy in Africa: Algeria, Cote d'Ivoire, Nigeria and Tunisia* (Vol. 2, pp. 25-148). Clevedon: Multilingual Matters.

Benrabah, M. (2014). Competition between four "world" languages in Algeria. *Journal of World Languages*, 1(1), 38-59.

Bagui, H. (2014). Aspects of diglossic code switching situations: A sociolinguistic interpretation. *European Journal of Research in Social Sciences*, 2(4), 86-92.

Beguedda, A. (2015). Consequences of language contact: Case of social factors affecting code switching. *Bulletin Suisse de Linguistique Appliqué*, 3, 13-19.

Benrabah, M. (2011). Sociolinguistic variation in Algerian Arabic: Pharyngealization and gender. In A. Gabriel & D. M. Singleton (Eds.), *Language contact in times of globalization* (pp. 215-230). John Benjamins Publishing.

Bentahila, A., & Davies, E. (2013). Language mixing in a jocular context in Algeria. *International Journal of Bilingualism*, 17(4), 485-501.

Bouamor, H. (2016). Code-switching in Tunisian hip hop: A sociolinguistic analysis. *Journal of Multilingual and Multicultural Development*, 37(9), 911-924.

Bouamor, H. (2019). Attitudes towards Arabic dialects in the Maghreb: The case of Tunisian and Algerian youth. *Journal of Multilingual and Multicultural Development*, 40(5), 382-395.

Bouamor, H. (2020). Language policy and planning in Algeria: A sociolinguistic overview. *Current Issues in Language Planning*, 21(2), 169-184.

Boukhatem, M. (2017). Language choice and attitudes among Algerian students: The case of English. *International Journal of Bilingual Education and Bilingualism*, 20(6), 661-677.

Boudlal, A. (2016). Sociolinguistic variation in Algerian Arabic: A gender-based analysis. *Lingua*, 179, 77-90.

Blattner, G., & Lomicka, L. (2012). Facebooking and the social generation: A new era of language learning. *Alsic. Apprentissage des Langues et Systèmes d'Information et de Communication*, 15(1).

Djité, P. G. (1992). The Arabization of Algeria: Linguistic and sociopolitical motivations.

Grandguillaume, G. (1990). Language and legitimacy in the Maghreb. In B. Weinstein (Ed.), *Language policy and political development* (pp. 150–166). Norwood, NJ: Ablex.

Grandguillaume, G. (1997). L'arabisation confronté à l'islamisme: Arabisation et démagogie en Algérie. *Le Monde Diplomatique*, February 1997, 3.

Hadjarab, M. (2000). L'Algérie au péril de l'arabisation. *Lettres sur la Loi de la Généralisation de l'Arabisation*. Retrieved from http://www.legisnet.com (cited 2003).

Janfeshan, K. (2022). The effect of Edmodo social learning network on Iraqi EFL learners' vocabulary learning. *Computer Assisted Language Learning Electronic Journal (CALL-EJ)*, 23(1), 347-373.

Janfeshan, K., & Janfeshan, M. M. (2021). The effect of Otus social educational network on English achievement and attitudes of Iranian high school EFL learners. *Cogent Arts & Humanities*, 8(2).

Ke, F., & Xie, K. (2009). Toward deep learning for adult students in online courses. *Internet and Higher Education*, 12(1), 136–145. https://doi.org/10.1016/j.iheduc.2009.08.001

Kim, K. J. (2019). Enhancing students' active learning and self-efficacy using mobile technology in medical English classes. *Korean Journal of Medical Education*, 31(1), 51-60. https://doi.org/10.3946/kjme.2019.118

Lawson, N. (2007). Questions students ask about distance education. *Distance Learning*, 4(1), 61–65.

Le Roux, C. S. (2017). Language in education in Algeria: A historical vignette of a 'most severe' sociolinguistic problem. *Language & History*, 60(2), 112-128.

Mehiri, R. (2022). Investigating language diversity and language evolution in Algeria: The case of Biskra region. *International Journal of Research Pedagogy and Technology in Education and Movement Sciences*, 11(01), 29-53.

Mostari, H. A. (2004). A sociolinguistic perspective on Arabisation and language use in Algeria. *Language Problems and Language Planning*, 28(1), 25-43.

Meghaghi, S. (2016). Language contact in Algeria. *European Journal of English Language, Linguistics and Literature*, 3(2), 29-31.

Marçais, W. (1958). The western dialects. *Encyclopedia of Islam*, 1958, 578-583.

Labov, W. (1966). *The Social Stratification of English in New York City*. Center for Applied Linguistics.

Labov, W. (1972). *Sociolinguistic Patterns*. University of Pennsylvania Press.

Labov, W. (2001). *Principles of Linguistic Change: Social Factors*. John Wiley & Sons.

Milroy, L. (1987). *Language and Social Networks*. Blackwell Publishing.

Hadjarab, M. (2000). L'Algérie au péril de l'arabisation. *Lettres sur la Loi de la Généralisation de l'Arabisation*. Retrieved from http://www.legisnet.com (cited 2003).

McKeeman, L., & Oviedo, B. (2015). 21st Century world language classrooms: Technology tools supporting communicative competence. *CSCTFL Report*, 65-82.

Murphy, D. F. (1977). Colonial and post colonial language policies in the Maghreb. *Maghreb Review, 2*(2), 1-9.

Mouhadjar, N. (n.d.). Algeria: An intricate bilingual and diglossic situation. Retrieved from http://ssl.webs.uvigo.es/actas2002/04/12.%20Mouhadjer%20Noureddine.pdf

Rouabah, S. (2023). Language shift: Gender differences in Chaouia use in Algeria. *International Journal of the Sociology of Language, 2023*(281), 23-49.

Saadane, H., & Habash, N. (2015). A conventional orthography for Algerian Arabic. In *Second Workshop on Arabic Natural Language Processing* (pp. 69-79).

Sahraoui, S. (2020). English and the languages of Algeria: Suggestions towards a new language policy.

Shouby, E. (1951). The influence of the Arabic language on the psychology of the Arabs. *Middle East Journal, 5*, 284-302.

Soulimane-Benhabib, N. Y. (n.d.). The complexity of sociolinguistic situation in Algeria: Case study of Superior School of Applied Sciences-Tlemcen.

Ozdemir, Z. D., & Abrevaya, J. (2007). Adoption of technology-mediated distance education: A longitudinal analysis. *Information & Management, 44*(5), 467–479. https://doi.org/10.1016/j.im.2007.04.006

Panocová, R. (2021). Basic concepts of morphology I.

Taleb-Ibrahimi, K. (1997). *Les Algériens et leur(s) langue(s): Éléments pour une approche sociolinguistique de la société algérienne*. Les éditions El Hikma, Alger.

These references should now be correctly formatted according to APA style.

Weinreich, U., Labov, W., & Herzog, M. I. (1968). Empirical foundations for a theory of language change. *Mouton*.

Yusuf, Q., Yusuf, Y. Q., Erdiana, N., & Pratama, A. R. (2018). Engaging with Edmodo to teach English writing of narrative texts to EFL students. *Problems of Education in the 21st Century, 76*(3), 333-356.

Zerrouki, N., Kadi, S. A., Lebas, F., & Bolet, G. (2007). Characterisation of a Kabyle population of rabbits in Algeria: Birth to weaning growth performance. *World Rabbit Science, 15*(2).

Thesis:

Belmihoub, K. (2012). *A framework for the study of the spread of English in Algeria: A peaceful transition to a better linguistic environment* (Ph.D. thesis). University of Toledo, USA.

Bouamrane, A. (1988). *Aspects of the sociolinguistic situation in Algeria* (Unpublished Ph.D. thesis). Aberdeen University, Scotland.

Gravel, L. (1979). A sociolinguistic investigation of multilingualism in Morocco (Unpublished Ph.D. thesis). Columbia University Teachers College.

Conference Papers:

Fodil, M. S. (2017). English in the Algerian street today: The naming of shops. Paper presented at the International Conference on Linguistic Landscaping, University of Shilong, India.

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Appendix

Appendix A

Questionnaire

Dear Master 1 and Master 2 Students,

The questionnaire, in-between your hands, is a part of our ongoing MA dissertation that is meant to collect data about the issue of the Morpho-phonological Change in Software Packages and Applications' names. Your insights as Master 1 and Master 2 students in the Department of Computer Science are crucial to the success of this research. Your responses to the questionnaire will serve as valuable empirical evidence, contributing to our understanding of the sociolinguistic aspects of software naming practices in Algeria. Please be assured that your participation is confidential, and your anonymity is guaranteed. Thank you for your time and cooperation. Your perspectives are highly appreciated.

N.B: Please! Tick (√) the right box (es) that fit (s) to your viewpoint or use the providedspace.

Abbreviations and Acronyms:

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

  English (Eng)

Section 1: Personal Biodata

1. Age: □ 18-20 □ 21-25 □ 26-30

2. Gender: □ Male □ Female

3. What is your typical grade or score in your studies?

□ Very good (A) □ Good (B) □ Average (C) □ Poor (F)

4. What is your specialty of study within the computer science department?

……

Section 2: The Use of Software Packages and Applications and Perceptions of TheirUsage

1. How often do you use software applications on your devices?

□ Always □ Often □ Sometimes □ Rarely □ Never

2. If "Yes," why? Is it because or to:

□ Personal interest or hobby □ Communication or social networking purposes

□ Academic or professional requirements □ Health and Wellness purposes

□ Others (specify) ……..

3. If No, why not?

□ Lack of interest or need □ Complexity or difficulty in using software

□ Limited access to devices or technology □ Privacy or security concerns

□ Others (specify) …….

4. If yes, at which level?

□ Spelling □ Pronunciation □ Meaning □ Use

5. Do you WRITE and PRONOUNCE those software packages and applications as theiroriginal requires?

□ Yes □ No

6. If "Yes," why? Is it because or to:

□ Respect for the original language or culture □ Ease of recognition or understanding

□ Consistency in communication □ Comfort with the original pronunciation

□ Others (specify) …….

7. If "No," why not?

□ Adaptation to personal preferences or habits □ Alignment with local language or dialect

□ Simplification for easier communication □ Difficulty in pronouncing the original names

□ Others (specify) …….

8. When using software, how important do you find the names of applications?

□ Not important at all □ Somewhat important Moderately important Very important

9. How do you think the language or cultural aspects of software names affect your choice touse an application?

□ Not at all □ Slightly □ Moderately □ Very much

10. To what extent do you think software names should reflect the cultural and linguisticdiversity of the user base?

□ Strongly disagree □ Disagree Neutral Agree Strongly agree

11. How would you feel if a software application's name changed to better align with yourcultural or linguistic preferences?

□ Positive □ Neutral □ Negative

12. Would you be more inclined to use a software application if its name reflects a specificcultural or linguistic aspect that resonates with you?

□ Yes □ No

13. If "Yes," why? Is it because or to:

□ It strengthens my cultural identity and connection with the application

- It reflects my appreciation for diversity and inclusivity in software
- It enhances my perception of the application's authenticity and relevance
- It fosters a sense of belonging and familiarity with the application's community
- Others (specify) …….

14. If "No," why not?

- The name of the application does not significantly impact my usage decision
- I prioritize functionality and features over cultural alignment in names
- I prefer universally recognizable names for ease of understanding
- I might actually find culturally aligned names irrelevant or distracting
- Others (specify) …….

Section 3: Software Packages and Applications' Names Samples:

Please, could you provide us with samples of Changes in Software Packages and Applications' Names in spelling, pronunciation, meaning, etc. (at least 02)?

NB: write them, their pronunciations or meanings, if possible, the way they you use them.

1……
……..

2……..……
……

3…….....
.....

.....

4……
……

Additional Comments

9. Do you have any additional comments or thoughts regarding software names and theirimpact on user experience?

……
……

……
……

…….

Thank you very much for your assistance and support

Appendix B

INTERVIEW

Dear teachers,

You are kindly invited to take part in the interview about "A Sociolinguistics Perspective on the Morphological Change in Software Packages and Applications. Names in Algeria". The collected data will only serve as empirical evidence in this study. Your help will be gratefully welcome. Thank you in advance for your generous cooperation.

1. 1. How long have you been teaching in the computer science department at Tiaret?
2. How often do you incorporate software applications into your teaching? Could you provideor name some?
3. In your opinion, how important is the naming of software applications for students' engagement and learning? Why or why not?
4. Have you observed any specific reactions or preferences among students regarding thenames of software applications? How? Is it in their use/name/pronunciation, etc.?
5. Do you believe cultural and linguistic factors influence students' interactions with softwareapplications? Why or why not?

6. Do you consciously select software applications with certain names to align with the cultural or linguistic background of your students? Could you provide or name some? Why orwhy not?

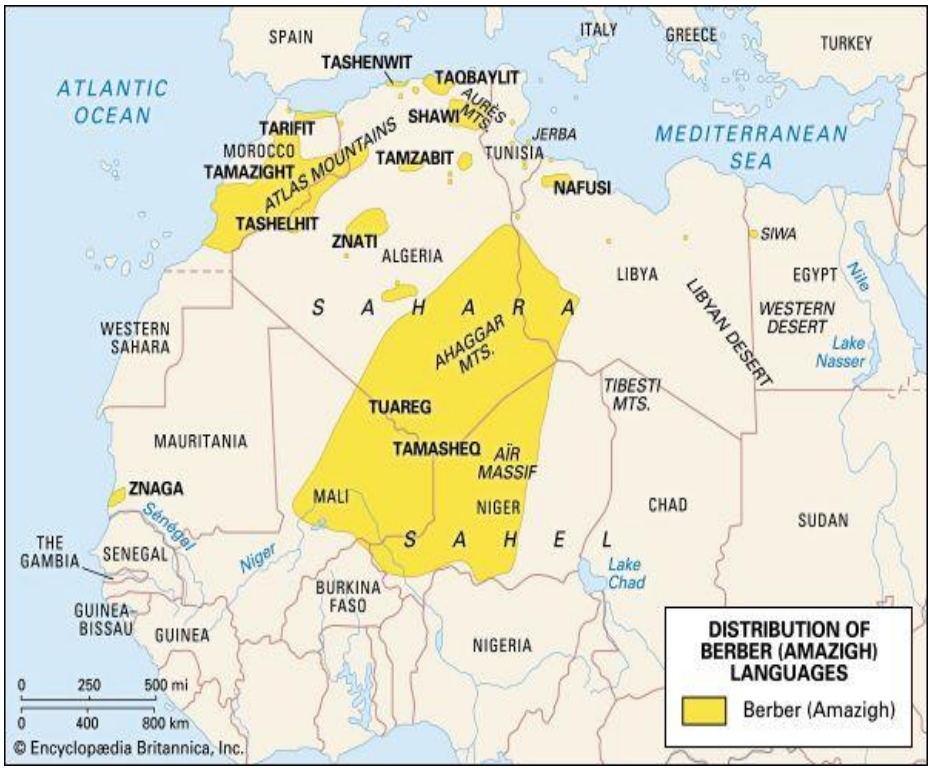
7. How do you address any challenges or issues related to language or cultural diversity whenusing software applications in your teaching?

8. Based on your experiences, do you have any recommendations for incorporating culturaland linguistic considerations into the naming of software applications?

9. In your view, how can the alignment between software names and cultural diversitypositively impact the learning environment for students?

10. Is there anything else you would like to share regarding the use of software applicationsand their names in the teaching environment?

Map 1. *Berberophones in North Africa.*



Summary

In Algeria, linguistic diversity and cultural heritage profoundly influence the naming conventions of software applications. This study explores the impact of Algerian linguistic and cultural factors on software naming practices, examining user preferences and perceptions, as well as the effect of morphologically adapted names on user engagement and satisfaction. Conducted through a questionnaire with 50 Master's students from the Department of Computer Science at Tiaret, along with interviews with four teachers, this research employs a mixed-method approach combining quantitative and qualitative methods. The results highlight that culturally adapted software names enhance user engagement and reinforce their cultural identity, underscoring the importance of culturally sensitive naming to optimize user interaction and educational outcomes.

ملخص

في الجزائر، يؤثر التنوع اللغوي والتراث الثقافي بشكل عميق على قواعد تسمية تطبيقات البرمجيات. تستكشف هذه الدراسة تأثير العوامل اللغوية والثقافية الجزائرية على ممارسات تسمية البرمجيات، وتفحص تفضيلات المستخدمين وإدراكاتهم، فضلاً عن تأثير الأسماء المكيفة صرفياً على مشاركة المستخدمين تم إجراء هذا البحث من خلال استبيان مع 50 طالباً ماجستير من قسم علوم الحاسوب في تيارت، .ورضاهم بالإضافة إلى مقابلات مع أربعة أساتذة. يستخدم هذا البحث منهجية مختلطة تجمع بين الأساليب الكمية النتائج تسلط الضوء على أن أسماء البرمجيات المكيفة ثقافياً تعزز مشاركة المستخدمين وتعزز .والنوعية هويتهم الثقافية، مما يؤكد على أهمية التسمية الحساسة ثقافياً لتحسين تفاعل المستخدم والنتائج التعليمية

Résumé

En Algérie, la diversité linguistique et le patrimoine culturel influencent profondément les conventions de nommage des applications logicielles. Cette étude explore l'impact des facteurs linguistiques et culturels algériens sur les pratiques de nommage des logiciels, en examinant les préférences et perceptions des utilisateurs ainsi que l'effet des noms adaptés morphologiquement sur leur engagement et satisfaction. Menée auprès de 50 étudiants en Master 2 du Département d'informatique de Tiaret via un questionnaire, et de quatre enseignants interviewés, cette recherche utilise une méthode mixte alliant approches quantitative et qualitative. Les résultats soulignent que les noms de logiciels adaptés culturellement améliorent l'engagement des utilisateurs et renforcent leur identité culturelle, soulignant l'importance d'une dénomination sensible aux cultures pour optimiser l'interaction utilisateur et les résultats éducatifs.