

Investigating Language Policy from a Linguistic Justice Perspective in Multilingual Higher Education - a case study of the Science and Technology Schools in Adrar University, Algeria

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Abstract

This thesis attempts to understand language policy and practice at the level of university education while examining different linguistic behaviours to assess how linguistically just they are using a normative approach. This study seeks to answer the following research questions

1. How is the Algerian language policy operationalised at the level of university education generally and in science and technology classrooms specifically?
2. What are students' and teachers' perceptions of the effect of implicit and explicit language policy on their academic experience?
3. What are students' and teachers' attitudes towards languages, choice, and multilingual universities, and how can this be reflected in a successful language policy?
4. How can we assess to what extent language policies (implemented in this context, explicit or implicit) are linguistically just?

Through qualitative methods and thematic analysis, this study unveils how students and teachers at Adrar University use languages, their attitudes toward them in the classroom, and their perceptions of language policy. The findings are analysed using frameworks of linguistic justice inspired by the works of Rawls (1999), Sen (2010), Van Parijs (2011), and Kymlicka and Patten (2003).

Findings of this study suggest that linguistic justice can be assessed through manifestations of different linguistic practices such as language use and choices (choice of medium of instruction, for instance). It is also concluded that language practices and policies at the level of Adrar University are not always just according to the framework of justice discussed in the literature review. The recommendations presented at the end of this thesis will pave the way for language planning and policy that are more considerate of linguistic justice, especially in multilingual settings.

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1. Chapter 1 Introduction

Algeria has undergone numerous different language policies these have affected linguistic practices in different domains. These changes have been caused by many factors, including historical ones to do with colonial language policies under French, Spanish, and Turkish influence, and also postcolonial policies such as Arabisation, as well as contemporary socioeconomic factors such as globalisation along with the increase of English in industry and in academia. And finally, and more recently again, is the recognition and promotion of Tamazight. The ever-changing nature of planning for these language policies creates challenges for individuals, especially in vital domains such as education and higher education.

In Algeria, as is the case with many other multilingual African countries, language policies do not successfully meet the linguistic needs of its multilingual citizens. This is reflected in the poor management of languages and the various practices associated with them by important social institutions like universities. The inability to have access to an educational institution or to engage effectively within it can hinder justice and the well-being of the individuals concerned, something which, in turn, affects the development of the nation as a whole.

Research on linguistic justice has been very limited to the study of minority languages that have a long history within nation-states (Bonotti et al., 2022). Linguistic justice research has developed from a collection of works in normative political theory and philosophy to an independent field (Kymlicka and Patten 2003b; Van Parijs 2011; Robichaud 2015). It examines the just governance of languages and diversity in multilingual societies (Bonotti et al., 2022). It seeks to ask questions like what language (s) should be promoted to protect diversity or whether a shared lingua franca should be adopted by all people. Although discussions on linguistic justice are brought up more than ever before, it still lacks empirical research on the domain of education and university education, especially tackling language policy and language use at the university and classroom levels.

Effective and just language policies at the university level ensure equitable access for students and teachers. They also improve the quality of education by improving students' academic performance and achievement. Despite the potential role of just language policies in Algeria and Algerian universities, a discussion of their importance has yet to take place, and language policy and planning in general, is enormously under-resourced and it is not based on academic research. As a result, language practices across universities may be said to be unjust and not fulfil individuals' needs and choices. This study, therefore, aims to understand and deepen our understanding of language policy and how it functions at the level of university education, focusing on the role of linguistic justice and its importance in multilingual contexts.

This study sets out to explore in an ethnographic fashion the experiences of teachers and students at Adrar University, a major university in the south of Algeria. The study will look into language use, choices, and attitudes to build an understanding of the current linguistic policies and to assess them using a normative framework (see 1.3 for a definition of normative approach) on how linguistically just they might be.

In this chapter, I outline the background of this study and the reason for choosing this research area. The research aims and research questions are also presented, along with an overview of the research context. I mention the methodological approach briefly, being a case study of Adrar University in Algeria, followed by the potential outcomes of this research. I conclude this chapter by providing an outline of the chapters included in this thesis as a whole.

1.1 Background of the study

This research project aims to understand and explore language policy in Algerian higher education. It attempts to understand how language policies can contribute to linguistic justice, where everyone is granted their language rights. In the Algerian context, the concept and the implementation of language policy at the higher education level have not been effectively examined, especially in a classroom context. Students' and teachers' social, cultural, and linguistic backgrounds are not always considered when designing and

implementing language policy which may result in injustices. In addition to these, the most prominent gap this research is addressing, is providing empirical data from a practical situation such as language policy and language use at university, to theoretical frameworks of linguistic justice. These are gaps that this research is attempting to address as previous research has not sufficiently explored language policy at the level of higher education in Algeria, and the question of language policy from a linguistic justice and language rights perspective.

This is a significant gap, for it is widely understood that education is vital in the development of all societies. For Sen (1985), for example, education in general and language in particular are capabilities that boost individuals' abilities and empower them to do things in their communities. Language in the context of education is a powerful tool to help individuals develop their educational capabilities to perform better in their educational and academic paths (Cummins et al. 2012). Thus, this research focuses on the role of language policy in education, and more specifically, university education and how it affects students' and teachers' academic achievement and performance through their use and perception of different languages at Adrar University.

UNESCO's (2019) report claims that language-in-education policies should reflect the aims of the education system and should support the nation's objectives in ensuring the best learning outcomes. The language policy of Algerian universities seems to contradict UNESCO's recommendation by adopting French as the primary medium of instruction in Science and Technology schools and neglecting the students' and teachers' mother tongues (Algerian Arabic and Tamazight). Similar to many postcolonial countries, the language of instruction in Adrar University's science and technology schools is French, a colonial legacy. The use of French leaves little or no space for local languages at university, which in turn affects learners and creates confusion and frustration, and often injustices.

1.2 Reasons behind choosing this research topic

This study arises from an interest in understanding language policy and advocating justice, especially in educational settings. Many students of science,

especially those who are science and technology majors (henceforth, ST), constantly face issues with the medium of instruction being French. Many of them have experienced challenges more than their peers who chose other fields of study, because they have to keep up with the demands of their field and the linguistic demands of their courses, unlike students of other fields who use Arabic as their main language of instruction.

I have always been interested in studying language policy, especially in the Algerian context, because I believe it is still under-studied and needs more attention from interdisciplinary researchers. This interest grew since my MA course on sociolinguistics, where I did a presentation on language policy. I started doing small-scale research for my presentation in the classroom, then soon realised how interesting this area of research is, and how much it lacks research and up-to-date studies and empirical data. I chose the field of language policy for my MA dissertation, specifically on the policy of Arabisation, to gain a deeper insight into the importance of understanding language policy.

Adrar University was chosen for this study because of its familiarity and easy access. I completed my BA and MA courses in this university's English language and linguistics department. Also, this university is located in the south of Algeria, which is an under-studied region compared to the north.

My aim for this research is to bring about a discussion of language policy at the level of university education with a focus on linguistic justice. Language issues in universities are seen as problematic and can cause students to find learning challenging. Part of this research is also dedicated to proposing recommendations for institution-based policy, which will benefit larger-scale regional and national policy planning.

1.3 Research aims and research questions

This research project presents a view of justice and language rights in education regarding language policy and practice, a relatively new area of study. The research aims to understand how justice and language rights can relate in a language policy framework from a normative theory viewpoint. The normative approach provides criteria framework to help assess language policies as to the extent to which they are just or unjust depending on their aims,

methods, and outcomes (Peled 2014). Also, as a part of this research, I explore the concept of submersion education at the university level. This study's sample includes students of scientific specialties who study in French, a language that is not their mother tongue. According to Piller, submersion education is: 'having to learn a new language by learning content in that new language and having to learn new content while learning the language in which the content is delivered' (Piller 2016, p.127).

1.3.1 Research questions:

Guided by these main aims, in this study, I seek to address the following research questions:

3. How is the Algerian language policy operationalised at the level of university education generally and in science and technology classrooms specifically?
4. What are students' and teachers' perceptions of the effect of implicit and explicit language policy on their academic experience?
5. What are students' and teachers' attitudes towards languages, choice, and multilingual universities, and how can this be reflected in a successful language policy?
6. How can we assess to what extent language policies (implemented in this context explicit or implicit) are linguistically just?

1.4 Research context

Algeria is a former French colony located in north Africa. It is a multilingual and multicultural country, manifesting diverse identities under Arab, African, Muslim, Amazigh, and French influence. The country's history is vibrant due to centuries of language contact, migration movements, and invasions. The topic of language policy and planning has been a feature of national debates on education, identity, and social and economic reforms since independence. The modern state of Algeria has gone through multiple language policy changes, whether implicit or explicit, including a policy of Frenchification along with a disregard for the country's indigenous and cultural heritage, and then a policy of Arabisation, which also ignored the diverse linguistic scene in Alge-

ria, and finally, a policy that adopts Arabic and Tamazight but lacks robust implementation tools and successful management (Benrabah 2013).

Universities in Algeria adopt a policy that contributes to the identity of Algerian society. It adopts the country's constitution as a reference for providing an adequate education for all people without discrimination. It also attempts to cope with preserving the national identity and the demands of globalisation and modernisation (Foudil 2009). The Algerian universities' commitment to society does not necessarily mean the adopted language policies are just and people's choices are represented. This is especially true in specific fields of study, including science, technology, medical and pharmaceutical branches, where different language practices have been recorded. This study is concerned with the language policy of a specific university, namely Adrar University. It is taken, therefore, as a case study. This study focuses particularly on science and technology schools at Adrar University to understand in-depth how language policy and practices function in terms of language use and attitudes of language users. It attempts to assess how linguistically just these policies are through normative models of linguistic justice.

1.5 Methodological approach

At the most basic level, this research focuses attention on language users. The focus is on teachers and students because these two play a crucial agentive role in higher education (Hornberger 2015). It also focuses on policy and planning around language in teaching and learning and instructional practices in classrooms, taking into account the context in analysing, interpreting, and generalising the findings, reflecting on participants' ideological biases and sociohistorical identities (Hornberger 2015)

This study uses qualitative research methods in seeking to develop an understanding of the different individuals, groups, and contexts that are a part of this case study. Such methods are largely concerned with the quality of experiences, the collection of rich, in-depth information related to specific situations, and less with broad claims about an entire population.

Qualitative research methods also tend to assume that key findings will emerge from the research process; they should not be predetermined (Lewis-

Beck et al., 2019). Contributions of qualitative research are wide-ranging and can provide critical insights into the field of language policy. 'What qualitative research can offer the policy maker is a theory of social action grounded on the experiences -the world views- of those likely to be affected by a policy decision or thought to be part of the problem' (Walker 1985, p.19).

In this research, I adopted two methods to collect data: classroom observation and semi-structured interviews, and the data obtained was thematically analysed.

This explores how languages are used and managed at the meso and micro levels in this specific case. It will also explore how students and teachers use their linguistic repertoires to facilitate the process of learning, teaching, and conducting research. Thus, this study adopts an ethnographic approach with regard to data collection and methods of analysis throughout.

1.6 Outcomes of this research

This study is a useful contribution to understanding the intersection of language policy and linguistic justice in the context of university education. It is especially useful because the focus will be on an Algerian university in the south, an understudied setting that is an interesting case study. Part of this investigation presents some practical recommendations for language policy improvement at the level of Adrar University, which can also benefit similar universities. It will also provide an understanding of the relationship between the language of instruction and the academic performance of students and teachers.

In addition, a better understanding of students' and teachers' attitudes, ideologies, and beliefs towards languages used for instruction within their study fields will be presented. They are invited to say more about their choices of these languages and whether these choices respect their language rights and preserve linguistic justice. Their feedback and experiences will be considered in preparing for future policymaking and implementation. Also, by understanding attitudes, we might predict what the future holds for the local languages and the languages used in this context in particular (cases of languages from the context of study will be discussed in section 6.3).

1.7 Thesis outline

This thesis consists of eight chapters. In this introductory chapter, I provided a brief background to the topic and why it was chosen as a Ph.D. project. I then presented the research aims and the research questions that guided my study. Additionally, an overview of the research context, the methodological approach, and research outcomes were provided. I conclude with an outline of the thesis.

Chapter two deals with theories of linguistic justice and language rights. It starts with a discussion of the most prominent theories of justice developed by scholars from interdisciplinary research interests. It presents three models of justice, including that of liberal egalitarianism by Rawls (1999) and Van Parijs (2011), the capability approach by Sen (2010), and the preservation of multiculturalism as argued for by Kymlicka and Patten (2003). Another section in this chapter is dedicated to discussing language rights and their importance in achieving linguistic justice. The last part of chapter two is dedicated to defining language policy in higher education and multilingual language policies, in addition to describing the internationalization process of universities.

Chapter three gives a detailed description of the study's context by presenting Algeria's sociolinguistic profile. This chapter presents the history and the linguistic situation in Algeria, specifically regarding Tamazight, Arabic (including SA and AA), French, and English. It also gives an overview of some prominent sociolinguistic phenomena in Algeria, along with an overview of the region of Adrar and its specific features, as the university of Adrar represents the case study of this research.

Chapter four outlines the methodology used in this thesis. It describes the overall approach, the methods adopted, and the specific tools used to collect data. It also presents the research ontology and epistemology, the setting where data was collected, the participants in this study, and access. This chapter also includes the ethical considerations of this research and describes how data was collected and treated. Finally, some limitations and challenges in the data collection process are also noted.

Chapters five and six present the data analysis of the study. Chapter five describes and analyses the data from the observations and interviews in relation to language policy and language practice in Adrar University. The chapter starts with a deep analysis of the educational language policy in the context of this study. It delves deep into the medium of instruction in terms of both implicit and explicit policy, language use among teachers and students, and the major linguistic behaviours that make up the overall linguistic environment in this university. These findings will help understand better how language policy is operationalised and help assess it in terms of linguistic justice.

Chapter six is concerned with the analysis of the data as it relates to the students' and teachers' experiences of language use and policy as well as their general attitudes towards the linguistic environment. The chapter studies participants' experiences of language policy and language use. It links it with the academic performance of students in particular, and of teachers and researchers in general. The chapter also explores the participants' attitudes towards different languages and how this affects their use of these languages.

Chapter seven discusses the findings of this research and connects them to the idea of linguistic justice. It starts with conceptualising linguistic justice through interpreting and assessing language policy and practices from Adrar University in terms of the main framework of linguistic justice as put forward by Rawls, Sen, Kymlicka, Patten and Van Parijs. The second part of this chapter presents some recommendations on how just language policies may be created in the context of university education. It suggests how more effective policies and better teaching and learning environments may be created and maintained.

Lastly, chapter eight concludes the thesis by providing a summary of the main findings and the significance of the research outcomes. It also presents some limitations of the study as a whole and concludes with recommendations for future research.

2. Chapter 2. Linguistic Justice Frameworks

2.1 Introduction

Recently, the idea of linguistic justice has appeared as a topic of discussion in many disciplines including political philosophy, language policy, language and activism, and many others. The discipline of sociolinguistics, which may be said to include language policy and planning, has not yet provided a fully developed and comprehensive definition of the idea of linguistic justice neither in terms of theory nor in terms of practice.

Drawing on existing literature from the political philosopher Rawls, the economist Sen, and the political economist Van Parijs, I attempt to explore the idea of linguistic justice in a broad sense in the first place, whereby definitions of justice are presented, then an attempt to extract a definition of linguistic justice (or multiple definitions). As this research progresses the obtained definitions of linguistic justice are tested on the policies and practices in the context of this study.

The first section of this chapter aims at presenting an interdisciplinary overview of the approaches provided to define what linguistic justice is. I present different understandings of justice itself and build on it to be able to provide clearer definitions of the concept of linguistic justice. I begin exploring Rawls's theory of justice because he is one of the classical political philosophers who discussed justice and fairness, and his works were, and still are, cited in many written pieces on justice.

Next, I bring Sen's idea of justice into the discussion and show how his ideas revolutionised how justice is understood. I also attempt to link his capabilities approach and the 'freedom to be able to function', to language-related issues. More precisely to understand linguistic justice. Sen is considered as one of the most relatable figures who moved the debate of justice forward, initially by criticising the theory of Rawls. In this chapter, favourable and controversial views are presented to show the complexity of the debate of linguistic justice.

Another thought-provoking political philosopher, Van Parijs explores the concept of linguistic justice systematically in his book "*Linguistic Justice for Eu-*

rope and for the World' (2011). In this book, he claims that the spread in the competence of English is inevitable. Therefore, for all people to enjoy justice of language, English as lingua franca should be accepted, and people should work together for the greater good. He also discussed many other mechanisms to reduce injustices brought about by his proposition of a global lingua franca. This chapter will also explore how well the ideas of Van Parijs work in the context of this research.

I then examine the idea of linguistic justice in a more specific way by applying it to my chosen case study, namely the language policy of Adrar University along with the linguistic attitudes and behaviours of the staff and students at that university. I have chosen to use the works of Rawls, Sen and Van Parijs (and later Kymlicka and Patten, Skutnabb-Kangas) to guide my study on linguistic justice because I believe that these scholars presented justice in a systematic manner based on interdisciplinary theories which adds a depth to the study of linguistic justice. This research on linguistic justice remains an attempt to present different perspectives from different studies of justice and human wellbeing. It has limitations which are inevitable due to the limited time of doing this research.

The second part of this chapter (2.5) explores the language rights aspect which is a vital discussion when the debate about linguistic justice is brought up. Language rights which are rights that concern specific languages (minority languages for instance), while linguistic human rights are rights that every language should enjoy universally (rights to be promoted and preserved dignified, not discriminated against its speakers). The chapter focuses on the importance of these rights in preserving linguistic justice and ensuring fairness. It mentions types of rights that are relevant to this study, their importance in education including university education, and finally a set of critics on the language rights framework is also mentioned.

The final part of this chapter (2.7) tackles the concepts of bilingualism and multilingualism as important components in understanding and preserving linguistic justice. Under this subsection, definitions are explored including definitions of bilingualism and multilingualism, multilingual education, and multi-

lingual language policy, and finally, internationalisation of universities is discussed as part of understanding multilingual policies, with examples from universities around the world.

2.2. Fairness, equal opportunities and individual liberty

Rawls' work on justice remains amongst the most influential in political philosophy. His principal book *A Theory of Justice* (1971) revived the social-contract tradition in which the moral and political obligations that form the society are understood. This view was used to express and defend a vision of egalitarian liberalism which in turn combine what Rawls stands for, from equality to personal freedom and personal responsibility (Nagel 1973).

Rawls (1971) argues that justice should be seen as fairness. He divides the discussion into two main principles of justice — the first principal highlights that each person is given equal rights. He designed a social-contract-type of idea, partly inspired by Immanuel Kant¹, and criticised utilitarianism² by emphasising that justice as fairness is likely to be just to different parties.

The second principle states that social and economic inequalities are to be considered so that they serve the greatest good for everyone including the least advantaged. Moreover, opportunities should be distributed equally. Sometimes this principal favours those who have greater talents to use those for the benefit of the whole society.

Rawls puts these justice principles as follows:

First Principle: Each person is to have an equal right to the most extensive total system of equal basic liberties compatible with a similar system of liberty for all. Second Principle: Social and economic inequalities are to be arranged so that they are both: (a) to the greatest benefit of the least advantaged, consistent with the just savings principle, and (b) attached to offices and positions open to all under conditions of fair equality of opportunity (Rawls 1971, p.132).

¹ Rawls agrees with Kant that all human beings have a sense of reason, and that this reason should play a significant role in moral capacity and judging from an impartial point of view (Friend [no date])

² Utilitarianism is a form of consequentialism where the core idea is to judge actions whether morally right or wrong depending on their effects (Nathanson [no date]).

This principle is seen by many as an egalitarian principle (Garrett 2011), yet it mentions exceptions for its occasional merit-based purpose for the advantage of the whole. Rawls places emphasis on equal liberty, then what he calls "the difference principle" which is expressed in the statement (a), and finally equal opportunity (Voice 2011). These principles are argued by Rawls in two ways, the first is his idea of 'the original position and the veil of ignorance' and the second is his consideration of the importance of institutions in applying principles of justice when distributing goods such as wealth, power, opportunities and respect (Rawls 1999a, p.111).

The original position is a thought experiment presented by Rawls that seeks to identify what are the principles that should be followed by rational beings standing behind the veil of ignorance (deprived of knowing any information like gender, race, age, social class, physical handicaps, etc.) (Rawls 1971). Rawls presents this hypothetical choice situation with the aim of providing a method of treating the basic problems of social choice (Nagel 1973). The second principle proposed by Rawls is to do with understanding of the scope of justice and the roles of institutions in achieving it. In it, Rawls sees that society as a structure or as a system of rules is different from individuals who themselves constitute this structure. Rawls emphasises that not only does the scope of justice matter but also the context of it because there are systems of rules that do not apply in the same way to the personal behaviours of people within society (Miller 2017).

Rawls then discusses institutions as important social structures exploring his views on the concept of equal liberty giving more details on political justice attempting to apply what he explored in his theory to real life social institutions.

In this part of his work specifically, Rawls places more significant emphasis on distributive shares as a way to realise justice in political economy. He describes a four-stage sequence where the veil of ignorance becomes gradually see-through (this starts with a complete ignorance and then information is fed gradually). Rawls says that parties in society take up the new information to apply institutional details of what achieving justice requires in the real world.

Next, parties are given more information about the political culture and the economic sphere, and what it takes to achieve economic growth so that they can formulate a constitution that respects the agreed-upon principles of justice. In the third stage, more information is provided about the society so that they can agree on the legislation (legislative). In the fourth stage, Rawls claims that all parties should have all the information needed about society, so that they can operate as officers, judges, and administrators to implement the agreed upon legislation. According to Rawls, when the four stages of this process are completed, then the principle of justice as fairness is adequately brought to light in the political life of society (Wenar 2017).

Rawls's theory of justice can be applied to a certain extent to language and issues related to it. Rawls insists on individual liberty and equal opportunity which are two main concepts needed in realising justice (Rawls, 1971). Consequently, a person should be able and should be free to use his/her language or to use the language they wish to use. A person also needs to be given equal opportunity to use his/her language or the languages they wish to use to fulfil their needs. Rawls also stresses the role of institutions (educational institutions included) in maintaining principles of justice in our societies by affecting a fair distribution of power to use a language, opportunities for everyone to use the language of their choice and get equal opportunities regardless of their tongues. Rawls also stresses giving respect to languages and their speakers, which are crucial to the making of a fair language policy in educational institutions or any other social institution.

The theory of Rawls and his works received heavy criticisms over time. These critics are mainly targeted towards the way Rawls deduced his principles of justice from ideal conditions in a hypothetical manner (Weber 2008). His imagining of rational persons and how they would organise society if they were in unusual conditions that he calls "the original position" and "the veil of ignorance". Weber blames Rawls for not beginning with the question of how real people can best act for the improvement of their societies (Weber 2008). This critique is shared among many philosophers and theorists like Sen, who also claims that idealising justice is not the solution to injustice, but rather people

should be aware of what they are able to do to act and reduce the injustice regardless of the amount or the strength of their efforts (Sen 2010).

Also, one of critics of the theory of Justice by Rawls is the discussion of Kymlicka of liberal individualism. Kymlicka argues that Rawls's theory of justice is unreasonably individualistic, neglecting all the individual values that are formed in a social context and that tie the individual to its communal environment (Kymlicka 1989).

The next subsection will discuss in detail Sen's view to justice and his criticisms of Rawls theory. I will also mention how Sen's approach could be applied to language and linguistic justice.

2.3. The capability approach to justice

Sen presents, as he described, a sense of justice based on reasoning in a more realistic sense, and how this latter can work to reduce injustices rather than describing what a perfectly just society looks like. Sen has started the first pages of his book criticising the theory of justice developed by Rawls. For Sen, the Rawlsian theory is idealistic and fairly disconnected from the real world and cannot address social injustices in the way we should be able to do in the real world. He explains it in terms of "the transcendental institutionalism" which is defined as:

“... the approach that aims to identify an ideal of justice and then, on that basis, to define the nature of just institutions. Based on the social contract model, the transcendental tradition aims to frame a unique set of principles of justice and so make absolutist judgments of the form ‘society Z is just’ ”
(Ege et al. 2016, p.1)

Sen emphasises in addressing the idea of justice on relevant social actions, objectives, values and priorities. Sen attempts to locate his approach of capabilities to justice within the idea of public reason noting the challenges and the limitations that would emerge. Public reason is defined according to Stanford Encyclopaedia of Philosophy as a set of moral and political rules that regulate our common life which has to be acceptable and justifiable to people over whom the rules have authority (Quong 2018). This is why the concept of public reason occupies a vital role in Sen's *The Idea of Justice* because it paves

the way for more involvements as part of the democratic process or what he calls 'government by discussion' (Sen 2010).

Sen's capabilities approach was primarily designed not only to serve human well-being economically but rather offers a much broader perspective for human development. He argues that many practical exercises in economics assess a person's advantage regarding their income. This approach, says Sen, makes the difference between "utility-based and resource-based approaches" with contrast to "the freedom-based capability approach" (p. 231). The capability approach is about people choosing freely what to do based on their reason of what to value doing or being.

To understand the capability approach, we must first understand the concept of functioning. Functionings consist of what people do and what people are. They are essential to an adequate understanding of the capability approach because this latter is a reflection of the freedom to achieve valuable functionings (Sen, 1992). A person's chosen combinations of functionings (what they are and do) is part of their capabilities set. A functioning and a capability are different in terms of the freedom to choose. The famous example of fasting and starving says that both of these two are functionings. The only difference is that fasting is done out of choice. When fasting one chooses deliberately to starve themselves. Therefore, fasting becomes a capability because it is empowered by the opportunity to choose. The functioning in the context of this research is language. Language is what we do and sometimes who we are. This is why, according to Sen's model, it should be empowered by the freedom of choice to become a capability, and therefore achieves justice.

The figure below clarifies how Sen describes his model of justice.

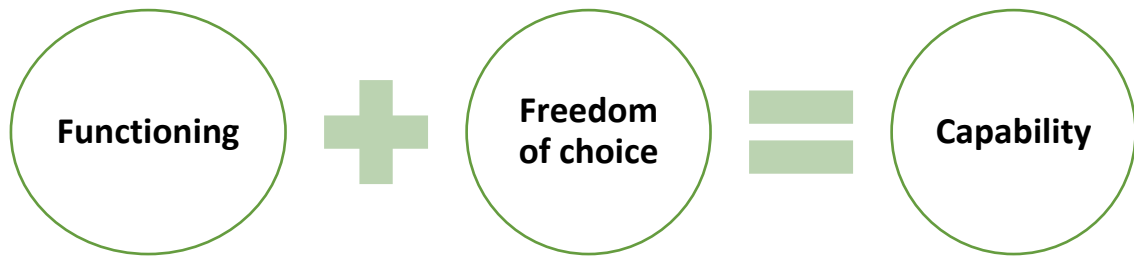


Figure 1. The Capability model designed by Sen (2010)

According to Sen, fundamentally, the domain of capabilities theory includes all possible factors that could affect a human being. These factors could be social, political processes, gender inequality, discrimination of all types (including discrimination based on language), social exclusion, disability, environmental conditions, personal and psychological factors. All of these can affect human capability which is the key measure of human well-being. Sen notes that the capability approach is characterised with a focus on information on individual advantages, judged in terms of opportunity rather than a specific design for how a society should be organised (p.232). He also adds that the capability perspective is concerned with a range of different features of our lives and concerns (p. 233), language and linguistic justice concerns are also included as his idea of justice is all-encompassing of every human scope. According to Sen, this approach represents a complete human development model that is not based only on economics and income, but rather on every aspect of life, including language choice and language use.

Sen's works are still used by many justice advocates, like Ingrid Piller, when she wrote about linguistic diversity and injustice and explained them in terms of "...our ideas about justice are formed by the experience of injustice" (Piller 2016, p.5). She followed Sen's pragmatic approach and also criticised Rawls's "perfect justice". She believes that finding solutions and exploring other alter-

natives to existing problems, like linguistic injustices, is an exploration of justice as a “realisation-focused” as Sen described it before (Piller 2016).

In a case study about the capabilities approach towards language education in the Gaza Strip, Imperiale (2017) notes that little attention is paid to the capability approach in language education advanced by Sen and Nussbaum, which according to Imperiale has been proven in other domains to be productive and effective towards a richer and a more all-inclusive intercultural education (Crosbie 2014). The Capabilities approach has been adopted by the UN Relief and Work Agency (UNRWA) in its Education Reform Strategy in order to move from competency-based models to a more dynamic learning framework that views "education as a means of realising greater human development" (Imperiale 2017).

The question to be asked with relation to this research is how the capabilities approach towards justice could be applied to linguistic justice and issues related to languages in general.

Language is an essential constituent of a person's individual and collective identity. It can be a source of advantage as well as a source of disadvantage and injustice. Huw Lewis discusses this relationship in a paper focusing on a specific understanding of linguistic justice. Lewis suggests a concept he calls "fair background conditions position" which was originally brought up by Sen and Van Parijs respectively. This concept is said to establish fair conditions under which people can have a fair opportunity to use the language of their choice and also strive for it to survive and flourish (Lewis 2017).

Lewis gives further details on how these conditions ought to be. He says that the provision of these conditions requires the elimination of any unfair pressures that help discourage certain linguistic forms of behaviour while promoting others. There must be discouragements that affect the availability of specific social or political options for those who associate with a particular language. Thus, refrain from using it and pass it on to future generations.

In Lewis's work, several opinions from different scholars have been used to enrich the content of arguments, Lewis mentions Green (1987) and Réaume (2000), Patten (2003), and Sen (2010) as his approach is the central attention of the whole work. Green and Réaume suggested ways to reduce injustices

related to language like removing pressures on language choice, the establishment of environments that are fair and unbiased, providing people with a secure milieu to make choices and transmit languages. Patten also suggested establishing conditions under which speakers can be protected and can strive for the success of their language, and that linguistic preferences are not judged as deviant or less legitimate than others.

For language again, Sen agrees with Rawls that part of the aim should be to ensure the existence of circumstances that provide people with fair and equal opportunities to pursue their linguistic goals. Yet, he disagrees with him on how to address issues related to injustices to realise the common good. After all, we are dealing with people who are influenced by a range of factors that determine the manner and the extent to which they can exploit these goods for their benefit. Sen points out that Rawls ignored the diversity of human beings because simplified definitions of -equality in the holding of primary goods- can lead to severe inequalities in opportunities.

The capability approach has been applied to many areas. It has been initially used to investigate poverty, inequality, well-being, social justice (Doody 2014), gender, health disability and identity (Alkire [no date]). There seems to be an important link of the capability approach to language and linguistic justice. Language, as mentioned, is a marker of collective and individual identity. It has to do with education and social communication. Language is a vital part of any human being's life. That is why the capability approach has been related to human needs, human rights and human security as well as development in general.

In an interview with Sen on language as capability, he acknowledges the fact that languages are part of our identities (Sen, 2010). He illustrates his thoughts on language using the Indian linguistic scene. In India many languages co-exist. Major languages are given a national status with English and Hindi given official statuses, having English as the most dominant language especially in higher education (Das 2014). Sen believes that English helped India in its economic integration and international relations. He maintains that one has to be pragmatic in dealing with language just like dealing with any other issue in society. Sen in this interview seems to agree with the idea that

English as a lingua franca is indeed important and serves to help people fulfil their needs in our modern times (see Van Parijs, section 2.4). Sen adds that learning one's own language in early school years could be beneficial just like learning English. For Sen, language is not a central issue to human existence. It should be dealt with pragmatism just like any other issue (Sen, 2010).

2.4. The lingua franca and linguistic justice

Van Parijs is a political philosopher and a political economist who was one of the very few first people who suggested a systematic understanding of the concept of linguistic justice. In this section, I am going to discuss mainly the ideas in his book *"Linguistic Justice for Europe and for the World"* (2011). Van Parijs explores the issue of linguistic justice with relation to the spread of competence in English as a lingua franca. He also discusses the injustices that can occur as a result of giving privilege to one language over the other. Van Parijs suggests in his book that the competence in English should spread to the world as a form of democracy while protecting and respecting other languages (Van Parijs 2011).

For Van Parijs, a common lingua franca is a prerequisite not only for democracy but also for the realisation of justice. Van Parijs holds an instrumentalist view of language, where he argues that when we share a common language, it is easier for everyone to integrate in a shared ethical community. For him, English is already a lingua franca in Europe, and it is more likely that it will be the lingua franca of the globe as well (Morgan 2013).

Van Parijs not only supports the spread of competence in English to be the lingua franca shared among people, he is also aware that implementing a monolingual policy could bring about consequences of injustices and resistance. Mainly because there are hundreds of languages with millions of speakers that are not willing to abandon their own language and adopt the lingua franca of the world. Earlier, Sen seemed to consider English in India a good deal because it helped the country obtain a position in the world's market. Yet, Sen neglected the fact that there are linguistic conflicts in India, and people are fighting for the survival of their languages. Das describes this state

of division as the stronger stays and the weaker disappears, “In India, hundreds of small languages are slowly but surely silently subsumed by their more influential neighbours” (Das 2014, p.5).

The real conflict is whether we should see language with an instrumentalist eye or an affective (romantic) one. Indeed, in my research, I argue both views and attempt to identify the benefit in both of them. After all, accessing learning in a certain language or many languages should serve the purpose of distributing fair opportunities to everyone so that they can be free to choose what helps them fulfil their achievements and well-being.

In *Linguistic Justice for Europe and the World*, Van Parijs attempts to correct injustices brought about by the spread of English as a lingua franca. He proposes many “remedies” including imposing a linguistic tax, whereby English native speakers would pay a tax to learners of English to compensate them for the efforts, time and money they paid for learning the lingua franca. He also proposes free access to learning materials available online provided to learners of English without payment. Likewise, he suggests the dissemination of English through immersion schooling and the ban of dubbing of foreign languages films and television programs (Van Parijs 2011; Adamo 2012).

Van Parijs believes that his suggestions could achieve linguistic justice for the world when looking at it from a “co-operative” perspective (Briey and Van Parijs 2002). In this principal people should be cooperating to reach the greater good in the human community. However, the principle of cooperative justice states that cooperating is best achieved when parties gain equal benefits. When Van Parijs suggested the idea of a linguistic tax, he did not consider that these taxpayers are just people who happen to be speaking English (the lingua franca) as their first language. They did not choose to speak it; it was their mother tongue. Therefore, the idea of paying money to compensate for something you did not choose voluntarily to do or be is unrealistic and unjust. Furthermore, his proposition of providing free access to all English language content online for non-native speakers of English only takes into account people who will benefit from it, disregarding content creators, authors, teachers who would take responsibility for something that wasn't their fault.

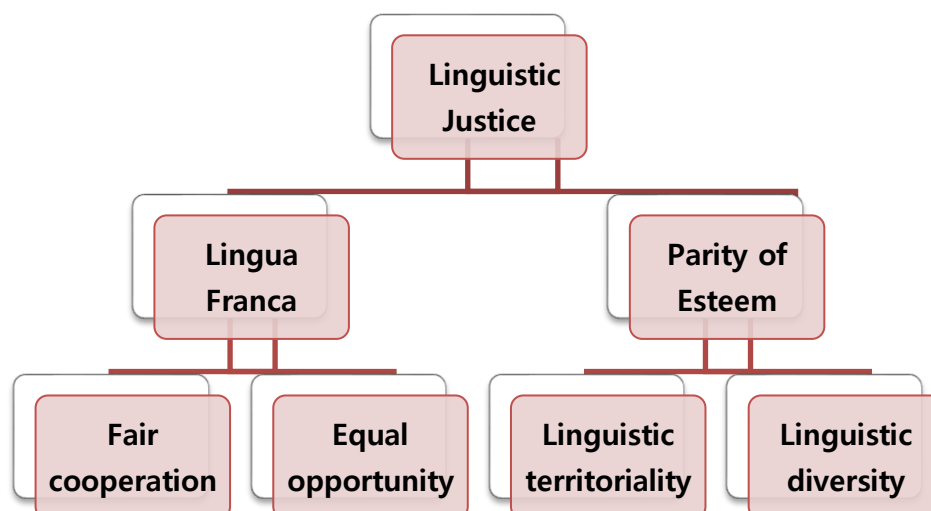


Figure 2. The linguistic justice model developed by Van Parijs (2011)

Robichaud (2015) argues that English gained interest in being learned by many people because of many micro-mechanisms. He states that many people choose to learn English out of self-interest. He uses Van Parijs's probability-driven learning and the maxi-min language use to explain why people learn a certain language. The first mechanism is explained in terms of whenever the probability of using a language is high, then the motivation to learn it is also high. The second mechanism is articulated mostly in multilingual situations where one must opt for the language of maximal, minimal competence (Robichaud 2015). This is certainly still debatable because as many people are learning English for self-interest, some are forced to learn it because of the demands of the linguistic market.

At the end, it is true that Van Parijs was one of the first people to discuss the matter of linguistic justice systematically, by providing a model that promotes one language in the world, which is the lingua franca, followed by a series of remedial procedures to reduce the injustices that could come with the implementation of his suggestions. Van Parijs also stressed the importance of "the parity of esteem" where all languages should enjoy equal dignity and be treated fairly with respect. Van Parijs has been criticised by some because his model seemed to many as unrealistic and very controversial especially the

linguistic tax and the free access dilemmas. Still, he opened up an in-depth discussion of other possibilities to practically start incorporating linguistic justice in our language policies.

In this research, from the data gathered I examine if English represents a necessity in the Algerian higher education. I attempt to suggest how it could be implemented and supported in the higher educational system in Algeria presented as a helping tool to improve the quality of education, alongside with the mother tongue or the language that people see best fit their needs.

Van Parijs's model is indeed a useful contribution to the debate of linguistic justice, just as much as the contributions of Rawls and Sen, though, these later were not as direct as Van Parijs's model in addressing linguistic justice. They presented ways of thinking and practical tools to allow policymakers to incorporate consideration of linguistic justice. Or to test whether or not certain language policies are just depending on the aims, the methods and the outcome of the language policy (Peled 2014a). The next section will provide further models concerning the human linguistic rights debate and how to consider them while designing a language policy, and also how can these serve human well-being.

2.5. Language rights and linguistic human rights.

Learning about some models to implement linguistic justice is not always complete without learning about the rights of languages and the rights to their speakers in different contexts, because deprived rights may result in injustices. This section, therefore, offers an understanding of what language rights are, and the difference between language rights and linguistic human rights. It also attempts to explore different theoretical discussions of language rights in general, but mainly in education as it is the context of this study, and to use political theory as a helping tool to sociolinguistics and how to ensure human well-being in all of this. By the end of this section, some criticism will be presented on the language rights framework.

2.5.1. Definitions and background

Language rights are mainly the rights related to a specific named language, while linguistic human rights are the rights that are essential and universal that apply to all languages irrespective of the context. They are also necessary for a dignified life and no state or group or individual has the right to violate them (Skutnabb-Kangas 2000). Language rights were not established as an independent field of study at first. Some specialists in minority rights specifically have been advocating a human rights approach to language rights (Skutnabb-Kangas and Phillipson 1995). Afterwards, the term linguistic human rights became more common in the debates of language because it became based on legislation of human rights' laws and conventions.

According to Skutnabb-Kangas, linguistic human rights are crucial because they reflect one's identity, grant access to mother tongue education and give people freedom to use their mother tongue for basic rights in multiple contexts (such as education, media, and public services) (Skutnabb-Kangas and Phillipson 1995). Skutnabb-Kangas and Phillipson argue that rights to learn and to use one's mother tongue in addition to learning at least one of the official languages in one's country of residence can be considered as inalienable, fundamental linguistic human rights (Skutnabb-Kangas and Phillipson 1995).

Skutnabb-Kangas defines two kinds of interests in the discussion of linguistic human rights explored in a clearer way by Rubio-Marín (2003). One is the **expressive interest** in language as a marker of identity' and the other is 'the **instrumental interest** in language as a means of communication' (Rubio-Marín 2003, p.56) Skutnabb-Kangas links these to what she and Phillipson name 'necessary' and 'enrichment-oriented' rights respectively. The first concept aims at granting one's capability to enjoy a safe linguistic environment in using their mother tongue with no constraints or oppression, and also, grant linguistic groups chances for cultural self-reproduction (Rubio-Marín 2003). It is argued that expressive language claims are "language rights in a strict sense" that should be strictly respected and incorporated in any national or local language policy (Rubio-Marín 2003). Skutnabb-Kangas calls them linguistic human rights (Skutnabb-Kangas 2006, p.274).

The other kind of interest is “instrumental language claim”. This aims at granting that language is not an obstacle to the enjoyment of civil and individual rights, social, and economic opportunities and the effective participation in the public life and the democratic process that require any linguistic skills (Rubio-Marín 2003). This type of rights is still important but not essential according to the dichotomy of Skutnabb-Kangas.

Recently, language rights and human rights have been brought together as linguistic human rights and then narrowed further by Skutnabb-Kangas’s discussions to become educational linguistic human rights, because she believed that formal education plays a critical role in the maintenance of languages or their demise (Skutnabb-Kangas 2000) .

Skutnabb-Kangas emphasises the interdisciplinarity of linguistic human rights as a field of study. She believes that different experts should come together to make sense and make use of what constitutes linguistic human rights. Moreover, Skutnabb Kangas argues that experts find it hard to agree on a single version because of the different ideologies and viewpoints each one offers. Therefore, she believes that what is really needed is first a concept clarification; secondly, providing a shared background through continuous multidisciplinary working teams. And finally open discussions about ideological conflicts and how to solve them (Skutnabb-Kangas 2000). One important problem to be addressed first, according to Skutnabb-Kangas, lies within our definition of language and to what extent this latter is an important aspect of our lives. She says that our view of language changes depending on our fields of study and research. She gives instances whereby lawyers and economists see language and the issues related to it as unproblematic. Whereas for linguists and sociolinguists they are very important (Skutnabb-Kangas 2000).

Most human rights are individual rights, and most language-related rights are to be found in declaration articles on minority rights and these so far have been individual (the beneficiaries being persons belonging to minorities). Language rights have been discussed long time ago especially after the First World War where peace treaties included rights for minorities (from the Paris treaties in the League of Nations Official Journal, special suppl

ement no. 73 of June 13, 1929). Rights to language were written by lawyers prompted by politicians rather than linguists and language experts (Skutnabb-Kangas 2000)

One way to approach the debate of language rights is to consider particular instances of violations of language rights. One instance is of the colonial system imposing a colonial language policy in a country adopting a different language (or languages). Subjects are governed by laws they do not comprehend unless translation and interpretation services are made available. The second instance is also when colonial administration recognises its language as the official language placing subjects in disadvantaged positions from communications with the government to access to education. Lastly, another instance is when a given country has plural ethnic and linguistic groups, and the government attempts to assimilate those groups into one homogenous culture and unified language (Chen 1998, p.48).

For Chen, language rights are the rights of individuals and collective linguistic groups to non-interference by the State, or to the support of the State. This includes the use of their own language, in preserving the use of the language and ensuring its survival, in receiving information and state-provided services in their own language, and in guaranteeing that their exercise of other rights, particularly fundamental human rights. For example, the right of a fair trial, the right to education, and the right to employment, will not be obstacles or subject to discrimination for linguistic reasons (Chen 1998).

In other words, language rights can be understood as what is legally codified about language use, generally with special attention to human rights and civil rights of minorities to use and maintain their languages (Kymlicka and Patten 2003b);Hult, F.M. 2014). These definitions and clarifications of language rights generally and linguistic human rights specifically lead us to distinguish the following dichotomies in the discussion of language rights.

2.5.2. Collective vs individual language rights

Observing linguistic human rights can be best seen at the individual level where everyone can be identified positively by their mother tongue and that identification is respected by others regardless of the language being a minority or a majority. Skutnabb-Kangas says that having education in one's mother tongue and the rights to use the official languages of the country of residence are considered basic linguistic human rights. (Skutnabb-Kangas 2000, p.498)

On the collective level, linguistic human rights are most of the time addressed as minority rights. These rights are (among many): the right to be different, the right to enjoy and develop the language, the right to establish and maintain schools and educational institutions with control of teaching and curricula in their own languages. It also involves an adequate representation in the political affairs of the state (Gromacki 1991; Skutnabb-Kangas 2000)

When individuals and groups are deprived of their linguistic human rights this is often associated with other human rights violations when it comes to fair political representation, access to education, access to information, freedom of speech, and the maintenance of their cultural heritage. This is why, Skutnabb-Kangas argues, linguistic human rights should be well codified and implemented and should be an integral part in national and international law (Skutnabb-Kangas 2000).

The law concerning language has two views, language affects the individual as a speaker, and the individual as a member of a given speech community (Kibbee 1996) The most straightforward definition of linguistic rights is the right of individuals to use their language with other members of their group, regardless of the status of their language. Language rights are derived from human rights, in particular: non-discrimination, freedom of expression, right to private life, and the right of members of a linguistic minority to use their language with other members of their community (De Varennes 2007)

Individual linguistic rights are provided for in the Universal Declaration of Human Rights (1948):

- Article 2 – all individuals are entitled to the rights declared without discrimination based on language.
- Article 10 – individuals are entitled to a fair trial, and this is generally recognized to involve the right to an interpreter if an individual does not understand the language used in criminal court proceedings, or in a criminal accusation. The individual has the right to have the interpreter translate the proceedings, including court documents.
- Article 19 – individuals have the right to freedom of expression, including the right to choose any language as the medium of expression.
- Article 26 – everyone has the right to education, with relevance to the language of medium of instruction.

On the other hand, as some rights are considered individual, some are considered collective. For example, the right of a linguistic group to ensure the survival of its language and to transmit the language to future generations (Chen 1998). Collective rights are seen most of the time as the rights of minority language groups within multi-ethnic, multi-cultural, and multi-linguistic states (Chen 1998).

There seems to be a disagreement on the definition of collective rights in international law. This could be, according to the UN, difficult because some minorities live together in a well-defined area, separated from the majority, while others live scattered throughout the country. Also, the definition of collective identity differs from one case to another. The definition that is widely accepted is individuals benefiting language rights (OHCHR, 2010). Another controversy lies within the definition of a speech community in legal terms, is it ethnically or nationally tied to language. A third problem could arise because language is also hard to be defined in legal terms (Coulmas 1998).

Furthermore, De Varennes argues that language rights are human rights and not group rights (De Varennes 2001). He argues that freedom of expression, for instance, is an individual freedom and cannot be transformed into a collective right just because a group of people are interested or demanding this freedom. He adds that communication always involves two people or more because one does not demand his/her rights to language to address oneself,

rather, demands his/her rights to be used with/for other people (De Varennes 2001). He explicitly states:

Language rights are not collective rights, nor do they constitute “third generation” or vague, unenforceable rights: by and large, the language rights of minorities are an integral part of well established, basic human rights widely recognised in international law, just as are the rights of women and children (De Varennes 2001, p.15).

Relaying on Skutnabb-Kangas’s definitions and elaborations, language rights can be part of individual and collective rights. Some rights are different than others. While the freedom of expression might be indeed an individual right and could be considered as a language right, some rights like mother tongue education and the promoting of minority languages in public services are collective language rights and are essential human rights.

2.5.3. Negative vs positive language rights

Legal theorists identify positive and negative language rights. This distinction of positive and negative language rights can also be identified in Kloss’s tolerance-oriented and promotion-oriented rights (Kloss 1971). Positive rights promote the status of minority languages by increasing the functions for which they can be used while also guaranteeing equality of access to their speakers (Hult and Hornberger 2016). Negative rights, on the other hand, allow the practice and use of a certain language without the interference of the state, for instance, interfering by setting policies of non-discrimination based on language (Hult and Hornberger 2016)

Kymlicka and Patten also discussed this distinction of language rights drawing on Kloss’s definition. Tolerance rights are protections individuals have against government interference in their private language choices (Kymlicka and Patten 2003b). Tolerance rights permit people to speak their language at home, civil institutions, workplace and so on (May 2014).

Promotion rights are concerned with the use of language by people in courts, public education, legislature, institutions in the public domain or civic realm. Kloss says that immigrants' languages, for example, should enjoy tolerance rights but not promotional rights. On the other hand, long-standing national groups should enjoy both: tolerance and promotion rights (Kloss 1971; May 2014)

This discussion of language rights is mostly concerned with the rights of minority languages. Arzoz (2017) makes this distinction between tolerance language rights and promotional language rights. An example of a tolerance language right with a promotional language right at the same time is the case when a court interpreter is brought for an accused person who does not understand the common language (Kymlicka and Patten 2003a, p.11). Arzoz thinks that this case is neither a tolerance or promotional right, but rather that it is a human right (Arzoz 2007). Arzoz says that this has nothing to do with any linguistic identity. It is merely to have an effective communication and adequately serve the court to deliver a fair trial (Réaume 2000)

Discussing the distinction between tolerance rights and promotion rights leads us to the discussion of the regime of linguistic tolerance and the official language regimes respectively, because they function based on the same principles. Using Kloss's distinction of course some claim that a regime of linguistic tolerance does not require, mostly, language-specific legislations. Rights granted based on this notion are derived from other rights like freedom of expression, freedom of association and other grounds of non-discrimination and equality (Green 1987). For Kymlicka and Patten (2003) a tolerance regime means a regime that follows "the-norm-and-accommodation" approach. This latter indicates the use of the normal language of the majority and the language of the jurisdiction as the medium of public schooling for instance (without having to declare it as the official language of that state). For those who lack proficiency in the normal language, a special accommodation is provided to overcome this gap. This accommodation could be providing interpretation services, bilingual assistance, educational immersion programs, amongst many (Kymlicka and Patten 2003, p.9). For both Kymlicka and Patten, the def-

initiation of tolerance rights and the implementation of a tolerant regime cannot be literal. A benign neglect of the linguistic situation and language management by the state is unfeasible with language, unlike with religion, for that they put together the norm-and-accommodation approach (Kymlicka and Patten 2003b, p.10).

The second regime or approach to language is known as “official language regime” that is based on granting promotion rights to a given linguistic group (or many). For Green, the rights of linguistic tolerance are ingrained in the value of security (to not endure discrimination), but they do not exhaust it (Green 1987). According to her, speakers of all languages have the same interest in not being discriminated against, or in having an environment which helps the flourishing of their culture (Green 1987, p. 656). A justification for official language rights, says Green, must inform us of the reasons why the interest in linguistic security is not fulfilled under a regime of tolerance. It requires further protections (Green 1987). Green believes that encouraging the flourishing of a minority language group is best done by having them to participate in public life using their language. She thinks that giving a language (a minority language specifically) official status means not only granting its survival but also granting its security (Green 1987, p. 662).

Green also claims that official languages in a given country should be the most common languages because of consideration like having common means of communication, social co-ordination, or simply being a symbol of national unity (Green 1987, p. 664). In this, Green is attempting to merge Kymlicka and Patten’s “norm-and-accommodation” approach to language policy and the idea of official language regime (promoting-orientation). For them, on the other hand, the official language regime appoints certain languages as official and then grant a series of rights to the speakers of these languages. This approach is not only about facilitating communication but for granting recognition and equal rights to all speakers of official languages. (Kymlicka and Patten 2003a). Unlike the norm-and-accommodation approach, the official language approach typically involves equality in promoting different languages that are selected for official status (Kymlicka and Patten 2003a).

Arzoz also brings another distinction concerning language rights and how to understand them; made by Georg Jellinek³: *Status negativus*, *status positivus*, and *status activus*. The *status negativus* means the freedom from interference of the state. *Status positivus* is where the state has to interfere to make people enjoy their freedoms and rights like (schooling, health care, judicial protection and so on). The *status activus* therefore refers to the exercise of the individual's freedom within and for the state (Arzoz 2007).

2.5.4. Territorial language principle vs personality language principle

May identifies two added dichotomies to the discussion of language rights of minorities in educational settings (May 2014). First, he identifies the territorial language principle as the process that grants language rights that are limited to a specific territory in order to preserve and maintain that language in that area (May 2014). Examples of this include the Welsh language in Wales, Catalan in Catalonia, and French in Québec. The second principle is called the personality language principle which attributes language rights to individuals instead of groups regardless of where they are geographically (May 2014). In this principle says May, that policies adopting the personality principle have a criterion called 'where numbers warrant' (May 2014, p. 228), meaning that these language rights are only granted when the speakers of a given language are believed to reach a sufficient number. Only then, people are given their rights to use language in all public domains (May 2014).

India is the best example of this principle. In India, English and Hindi were recognized as official language along with sixteen languages recognized as 'principal-medium languages' (May 2014, p.229). The governmental division of languages made it easier for people across the country to benefit from mother-tongue education at least at the elementary level. Therefore, at minimum 80 minority languages in India are maintained through being utilised as a medium of instruction throughout elementary schools (May 2014).

³ Georg Jellinek was a German public lawyer, he belonged to the group of Austrian legal positivists and was considered to be "the exponent of public law in Austria" (Paulson and Schulte 2000)

It is apparent by now that the advocacy made on language rights in education or linguistic human rights are made only in contexts where minority languages and their speakers are facing issues with regard to the use of that language. This debate, in my opinion, gets more complicated in a context where the majority and the minorities do not have their educational linguistic rights in a diglossic post-colonial context like Algeria (the Algerian university). The language rights approach to solving language issues may be straightforward when dealing with minority languages exclusively. Still, the proposal of bi/multilingual education is a proposal worth visiting to see whether it could present solutions to the language rights debate.

2.5.5. Language rights in education

Earlier in this section language rights and linguistic human rights were discussed generally and specifically within a language policy framework. According to Arzoz, linguistic human rights are better seen in action within the domain of education. He argues that 'the notion of linguistic human rights is less certain when taken outside the context of educational rights' (Arzoz 2007, p.2). Arzoz claims within the discussion of language rights in education, that 'everyone is entitled to receive education in languages of their choice in public educational institutions where that education is reasonably practicable' (Arzoz 2007, p.23) as long as language rights keep peace and reduce linguistic or other conflicts.

For Skutnabb-Kangas, language rights in education are vital not only for the well-being of its speakers, but also for the purpose of language maintenance and for the prevention of language death. In that sense, she argues that if a child does not have the rights to learn her/his mother tongue at school at an early age, her/his language is less likely to survive (Skutnabb-Kangas 1997). She believes that learning an alien language makes it easier for a child to not pass it on later for his/her children and grandchildren which will effectively lead to language death (Skutnabb-Kangas 1997). Quality basic education should start at least with mother tongue medium of instruction to facilitate communication and understanding in the classroom (Benson 2005) and to avoid the case of submersion education (Piller 2016).

Skutnabb-Kangas sees that educational linguistic rights are without doubt the most important language rights for the survival of any language (Skutnabb-Kangas in Wodak and Corson 1997). She also criticises the little attention given to educational linguistic rights in different universal and regional declarations and charters of human rights (Skutnabb-Kangas in Wodak and Corson 1997). She stresses the idea that education through the medium of mother tongue should become a human right and should be applied anywhere in the world. She maintains that among the problems that leads to the denial of educational linguistic rights as human rights could be a misinterpretation of the word “minority” in the concept of “minority language rights. She also considers the existence of hierarchies between rights of different groups needs investigation (native minorities, immigrant groups...etc). She adds that individual rights and collective rights need to be clearly distinguished in order to be both granted in the right way without neglecting the other (Skutnabb-Kangas 1997).

2.5.6. The right to mother-tongue education

Mother-tongue education has a great impact in the quality of education and the overall educational achievement of the student (Nguessan 1998). If we took Africa as an example, most former French colonies still use French as a medium of instruction from elementary school (Bokamba 1991). Nguessan says that a 6 or 7-year-old child is first introduced to a foreign language when she/he enters school for the first time. They are facing a new language with no prior exposure whatsoever. The outcome of this is most of the time children dropping out school or failing their subjects (Bokamba 1991) This failure is not merely because the child is intellectually inept, but rather she/he is a victim of the current linguistic situation (Nguessan 1998).

Even beyond primary education, people may face sorts of language rights' violations on other levels of education (Bamgboşe 1991). Many reasons could lead to the neglect of mother tongue medium of instruction in secondary or higher education, these reasons could be problems connected to curriculum materials, time allocations, teacher training and prestige (Bamgboşe 1991). These issue may look more pedagogical but it is rooted deep in the planning and implementation of a language policy that is characterised either by:

avoidance, vagueness, arbitrariness, instability or declaration without implementation (Bamgboṣe 1991).

The opportunity to learn one's mother tongue and receive mother tongue education are rights that are recognised by international conventions. In addition, to guarantee that children have equal opportunities in education, mother tongue education should also include aspects that can allow the transfer of native languages to next generations (maintenance and survival). This should also reinforce the feeling of equality in society (Idris 2018). Language is part of the human identity. Hindering mother tongue education is seen as destructive to this identity, and thus, the demand for mother tongue education continues to exist (Idris 2018).

Therefore, quality public education in the mother tongue should 'be extended to as late a stage in education as possible' (Rita Izsák-Ndiaye 2013, p.16). After the few first years of mother tongue education, it would be easier to increase gradually the amount of input in another language which will lead to better educational and pedagogical results where this is predictable (Melinda Dooly and Claudia Vallejo 2009). In conclusion and linking this discussion to the wider context of this research, mother tongue medium of instruction is assumed, from primary observations, to not be in use inside the classroom at university. The upcoming sections will clarify more the notion of language policy in higher education, highlighting what it means to have a bi-multilingual educational system, and what are the language management issues that could arise. The data and its analysis in the forthcoming chapters will explore and investigate how far the language of education can affect the outcome of that education.

2.6. Critics of the linguistic human right's framework

The human rights approach to dealing and 'solving' language related issues received many critics and questioning from people working in various domains from sociolinguistics to law to political theory and pedagogy. Blommaert, for instance, builds his criticisms on the argument that human linguistic rights are not supported and maintained by self-critical research (Blommaert 2001b).

The criticisms of the language human rights approach often challenge to the leading works of Skutnabb-Kangas and Phillipson. Blommaert for instance, critiques this approach because it idealises sociolinguistic concepts such as 'culture', 'language', 'identity', 'group' and 'community' (Blommaert 2001a). He also considers the use of the 'biodiversity'⁴ model as irrelevant and misused (Blommaert 2001a). What Skutnabb-Kangas and Phillipson were attempting to do was the presentation of proposals helping to end and resist linguistic (the term coined by Skutnabb-Kangas and Phillipson means the extermination of languages) (Skutnabb-Kangas and Phillipson 1996) and to empower the implementation of linguistic rights, and the emphasis on the importance of linguistic diversity (Skutnabb-Kangas and Phillipson 1995).

Blommaert disagrees with these proposals on the grounds that there are problematic and presumptuous (Blommaert 2001b). He elaborates on this giving three main arguments. Firstly, the issue of linguistic inequality and the linguistic rights are discussed in a theoretical framework only and cannot deal with refined questions of the distribution of resources. Secondly, Blommaert finds the nature of rights problematic when he conducted deep ethnography where he concluded that the idea of linguistic rights is based on the idea of a legal state controlling the well-being of state citizens, and those states are preventing linguistic, this view is too idealistic especially in contexts like the African postcolonial situations. And lastly, he questions the use of biodiversity and biology as metaphors (Blommaert 2001b).

In turn, Blommaert suggests another way to view language rights. He says *that* "what really counts is not the existence and the distribution of languages, but the availability, accessibility and distribution of communicative skills in standards and literate varieties of languages" (Blommaert 2001b, p.136).

Therefore, creating multilingual states means all languages should be institutionally recognized, with equal budgets, equal broadcasting hours on national

⁴ Skutnabb-Kangas thinks that preserving linguistic diversity through granting linguistic human rights has an important impact on the survival of the planet, in a similar way to biodiversity (Skutnabb-Kangas and Phillipson 1995)

media, equal spending on books and grammars. To Blommaert this is basically impossible, not financially, but sociolinguistically. He concludes that by attempting to do that inequality among language groups may be reduced, but inequality within languages would be increased (Blommaert 2001b).

In most of the postcolonial countries in Africa governments opted for a neutral language (generally the language of the former colonial power) to avoid conflicts among national and local languages. In a context like this, Skutnabb-Kangas sees this as 'linguistic inequality' which is the call that many other scholars disagree with. Blommaert says that the discussion of linguistic rights that aims at reducing conflicts by giving each entity institutional rights is not useful. He argues that this would sharpen social inequalities and make ethnic groups unstable. He puts it as 'declaring languages equal does not make their speakers equal in real societies' because according to him there are other factors at play beyond language itself (Blommaert 2001b, p.138).

Most postcolonial African countries followed an approach of keeping a former colonial language in the state. This is called an instrumental language rights which indicates that language is used for functional purposes only not as an identity marker (Wee 2010), as opposed to non-instrumental language rights which are the rights that adopt the promotion of local and native languages, which is what Skutnabb-Kangas strongly advocates.

For Wee, the language rights approach has four problems in dealing with real language issues (Wee 2010). These problems are, first, linguistic discrimination does not always occur when one does not speak a defined language: 'the act of speaking differently -as an other- may be sufficient for discrimination'.(Wee 2010, p.09) Secondly, speakers of the same variety may not agree on the desirability and legitimacy of their variety. Wee argues that the majority of people seek access to the standard prestige variety. Thirdly, the fact that there are people who speak hybrid varieties, that came about as a result of language contact (like Algeria, I suggest) (see chapter 3), weakens the idea of 'rights' because repertoires may be very individualised in nature. The last problem is what Wee calls 'the unavoidability of language'. This point also referred by Kymlicka, states that language is not like any other social practice

(religion for instance), institutions cannot be neutral towards languages. They have to assign a given language (or languages) for the functions of public services (Wee 2010).

This section outlined some definitions of language rights, linguistic human rights and other discussions concerning these two in different frameworks, from sociolinguistic, to cultural, legal, and pedagogical. The debate of language rights is as important as other human rights debates. Yet it needs to be based on more analytical and empirical ethnographic data rather than outdated observations and rigid data. The next sections of this chapter will continue to argue based on the two discussions of linguistic justice and language rights to establish a model of bi-multilingual education aiming to have a practical language policy framework feasible in the context of the Algerian higher education.

2.7. Multilingual and bilingual policies and higher education

This section will discuss the concepts of bilingualism and multilingualism generally and then more specifically with relation to higher education (university education). This section also touches upon different language policies and different instances of bi/multilingual language-in-education policies and implementations and showcases some instances of managing multilingual situation in universities around the world.

2.7.1. Definitions of bilingualism and multilingualism

The simple definition of a bilingual person is an individual who actively uses more than one language. Of course, the concept of bilingualism is conceived as more complicated and manifests in different ways (Kroll et al. 2015). According to Weinreich (1953) he defines it as ‘the Practice of using alternately two languages’ (Weinreich 1953, p.1). For Bloomfield (1984) he asserts that a bilingual is someone who has ‘the native-like control of two languages’(Bloomfield 1984, p 56).

Multilingualism is very common throughout history, as Cenoz (2013) shows. For example, in England after the Norman conquest in 1066 English was the language of the common people, while Norman French was the language of the ruling class, and Latin was the language of the church. In other cases of multilingualism the minority group in society learn the language of the majority, as is the case with Welsh and English in Wales (Cenoz 2013). The further type of multilingualism is where people move to another country with a different language where they bring their first language and use the language of the host country. Finally, according to Cenoz, there is the type of multilingualism brought to us by globalisation. Most people assume that English while spreading to the world made people and societies necessarily multilingual (Cenoz 2013).

Multilingualism can be defined depending on what aspect we want to study psycholinguistic, sociolinguistic, pedagogic and so on. The most generic definition would be the one given by the European Commission (2007): 'the ability of societies, institutions, groups and individuals to engage on a regular basis, with more than one language in their day-to-day lives' (p. 6). There are individual and societal multilingualism. In a multilingual society, for instance, there might be people who are monolingual and vice-versa.

2.7.2. Defining the term 'multilingual education'

The term multilingual education was only used recently and was acknowledged by UNESCO in 1992 (Madiba 2013). UNESCO in its 1999 resolution defines multilingual education as the use of at least three languages: the mother tongue, a national/regional language and an international language (United Nations et al. 2003). In other words, multilingual education ought to balance between the native and the global, promoting identities and internationalisation in a context of mobility and dialogue (Madiba 2013).

It is worth noting that the Council of Europe identifies multilingual education as plurilingualism. In Europe, for instance, the term multilingualism is used 'exclusively to the presence of several languages in a given space, independently of those who use them' while the term plurilingualism is used to mean the

‘...ability to use languages to varying degrees and for distinct purposes” (Beacco and Byram 2007, p.17,18). Therefore, multilingual education applies to both definitions. It is used to refer to multiple languages used in a classroom situation fulfilling the needs of students with multiple repertoires of languages or language varieties (Madiba 2013).

2.7.3. Multilingual language policy

The idea of multilingual education does not work without successful language planning and a well-researched pedagogical model. South African universities, for instance, follow the language management model represented in a group of informed strategies to implement a multilingual language policy in its institution (Madiba 2013). The use of the Language management model serves a shift from the classical language planning model ‘top-down’. The former model focuses on the micro-level and how people manage problems related to language use at the micro-level (Madiba 2013). It gives agency to individuals like students and teachers to manage problems in their institutions where they play an agentive role (Hornberger and Johnson 2007).

According to Ramanathan (2005), in South Africa, language planners focused only on the politics and ideologies of languages instead of giving sufficient attention to pedagogy and the role of individual agency (Ramanathan 2005). The benefit of the language management model, therefore, is that it studies also ideological factors that are considered the causes of problems in many teaching and learning contexts. In South Africa, in the university of Cape Town in particular, multilingual language policy frameworks were successful through promoting local languages alongside English (Madiba 2013). Planners adopted strategies at the level of curriculum and at the level of course (teaching and training in a local language and in English). They also used students to develop multilingual programs through their help in creating glossaries and giving feedback (Madiba 2013).

There is some complexity involved in being a bilingual or a multilingual individual. According to Spolsky (1978) it is not enough to characterise someone who knows more than one language as a bi/multilingual. We must also take

into consideration the uses of each language and to whom it is addressed, and what is the topic being discussed in that language (Spolsky 1978). The multilingual language policies should recognize the ethnic and linguistic pluralism as a resource for nation-building of the society where it will be implemented (Hornberger 2003). These language policies ought to give possibilities for oppressed indigenous and immigrant languages and their speakers transforming assimilationist policies into more diversifying ones. Hornberger (2003) gives us two instances where these discourses are put into practice, namely South Africa's post-apartheid education system, and Bolivia's educational reform of 1994 (Hornberger 2003).

In South Africa, the constitution of 1993 recognizes language as a basic human right, and multilingualism a national resource. This belief led to the promotion of nine major local languages to the status of national official status, along with English and Afrikaans (Hornberger 2003). In the case of Bolivia, the national educational reform of 1994 introduced all thirty indigenous languages of Bolivia alongside Spanish. Both of these cases presented a great challenge for implementation (Hornberger 2003). Part of this challenge recognized by Hornberger are the attitudes of the community favouring a particular language and of disliking others. At the level of the classroom, problems may arise like the lack of teacher training in all languages and lack of teaching material (Hornberger 2003).

Hornberger claims that there are two trends that work together to break the one language-one nation ideology and to preserve the linguistic diversity. These are the rise of English as a global language, and the reclaiming of endangered indigenous, immigrant, and ethnic languages at local and national levels (Hornberger 2003). This is done by treating languages as a resource and protecting them by adopting an ecological model that protects endangered languages and works for the survival and flourishing of all languages (Ruíz 1984).

The ecological model to linguistic diversity and the promotion of multilingualism has been well discussed because of its importance in understanding how to manage multilingualism in society. A quote by Voegelin (1964) cited in

Einar Haugen's paper *The Ecology of Language* (1972) explains clearly the concept of ecology in relation to language "...in linguistic ecology, one begins not with a particular language but with a particular area, not with selective attention to a few languages but with comprehensive attention to all the languages in the area" (Haugen and Dil 1972, p.59). Which, seem to agree with the principle of territoriality that Van Parijs has discussed in his approach to linguistic justice that states that in a specific territory (area) languages should be accommodated fairly in order to preserve linguistic diversity (Van Parijs 2010).

According to Ricento, the study of language policy in multilingual contexts shifted from two phases to reach the last phase. The two phases are 1- decolonization, structuralism, pragmatism; 2- modernization, critical sociolinguistics and access, to reach the current phase which is 3- postmodernism and linguistic human rights (Ricento 2000). The latter has been discussed extensively by Skutnabb-Kangas and Phillipson and showed how important this aspect is in planning for language especially in a multilingual area (Skutnabb-Kangas and Phillipson 1995)

In sum, multilingual language policies could be seen from different perspectives. The ecological approach could be one of them which in turn emphasises the importance of treating language like a living creature giving it rights (recognition, promotion, protection...etc) and also to its speakers. This debate leads us to the discussion of language rights and linguistic human rights that were elaborated above in this chapter. Also, the nature of a multilingual language policy in a specific context or area, should recognize the multilingual nature of that area and respect the linguistic diversity of it by accommodating each and every language to respect the rights of their speakers and have them treated fairly in this regard. The latter is the conclusion from the work of Van Parijs on the territoriality principle to language.

2.7.4. Internationalisation of universities

The internationalization of universities is a process that involves three components in a speech community, according to Spolsky (2004), these are: lan-

guage practices, beliefs about languages and languages use, and finally language intervention, planning and management (Spolsky 2004, p.5). Talking about the process of internationalising universities is talking about how language policies are planned and implemented in cases of universities around the world. It is a good example of multilingual environments that are also a field for assessing the justice of policies.

Speaking about the spread of English leads us to speak about the impact of globalization in the first place. This phenomenon is characterised by the compression of time and geographical distance through trade and communication (Coleman 2006). Arguably, the phenomenon of globalization reduced diversity in many domains, and it is said to reduce local power and influence (Coleman 2006).

The spread of English is relatively visible in countless domains. The importance of this language as an international tool for communication has been increasing in the past decades (Gardt and Hüppauf 2008). Hüppauf argues that the inevitable spread of English causes fear among European and non-European countries. The author presents two cases of countries experiencing 'the fear of English': France and Germany. This sense of anxiety can be interpreted as the dominance of English in the institutions of the European Union and the general communications within it. This is perceived as a threat that can reduce the status of other languages in the EU (Gardt and Hüppauf 2008). For French and German, the author explains that French is a language with a history of dominance in the colonies of France across Africa and elsewhere. This history is threatened at present by English dominance. Also, for German, as Germany is considered as one of the strongest economies in Europe, and the EU specifically, it is only spoken by around 100 million Europeans. German, according to Hüppauf is progressively marginalised, especially in scholarship, commerce, youth culture and generally in the global linguistic market (Gardt and Hüppauf 2008).

The use of English is promoted through various media: economy and business, politics and diplomatic ties, science and technologies, cultural cooperation, mass media, multinational companies, and communication (Coleman

2006). With this, resistance to the growth of English as the language of the globe increased, and is usually linked with sentiments of anti-imperialism and anti-capitalism (Coleman 2006) to the sentiment of calling for other languages' rights and the urgency for protecting multilingualism and linguistic diversity (Phillipson 2003 and Skutnabb-Kangas 2001).

Coleman (2006) argues that English indeed made it a lot easier for people from different tongues to communicate easily. He adds that accepting English to be a lingua franca does not necessarily mean accepting imperialism. In addition to this, he states that English is spoken by non-natives more than natives themselves (Coleman 2006). If English as a lingua franca is considered as a distinct variety that is described objectively and used for specific functions, it can make learning and teaching more accessible, and helps people embrace democracy and promote language rights (Coleman 2006). This view agrees with the view of Van Parijs in achieving linguistic justice through embracing English as a lingua franca.

The arena of higher education represents an important tool to reinforce the influence and the use of English. A quote by Kuresman cited in Coleman (2006) concludes that: 'English is the language of science. That is the language we have to use if we wish to prepare our students for an international career in globalizing world' (Kurseman cited in (Coleman 2006) p.4). In my opinion, indeed the adoption of English in higher (university) education presents a helpful tool into accessing materials, staying up to date with research and publishing, and to implement justice in having everyone learning and accessing the same language. This adoption of English is highly recommended in higher education unlike primary or middle phases of education, where the student is best accommodated in his/her mother tongue.

Choosing English as an instrument to improve higher education does not necessarily mean the negligence of other languages. It only needs thorough planning and implementation of a multilingual language policy that accommodate all languages and their speakers' needs. English can provide a tool that everyone can use equally and fairly.

2.8. Conclusion

This chapter attempted to introduce the concept of justice and contextualise it into the use of language via language policies and language use. It outlined the main frameworks on which this study is heavily dependent on, fairness and individual liberty, the capability approach and finally the lingua franca and the parity of esteem framework.

The chapter then discussed the concept of language rights and how it is linked to the discussion of linguistic justice. It also highlighted its importance especially in education.

The final section of this chapter briefly defined what bilingualism and multilingualism mean as sociolinguistic phenomena, and their implications when perceived as a language policy. It shows some cases where multilingual languages policies are adopted and implemented. This section attempted to link the discussion of multilingualism and multilingual policies with the discussion of linguistic justice and language rights that were elaborated in the above sections. Finally, the phenomenon of internationalising higher education is mentioned briefly, as a form of planning for language policies in multilingual contexts.

3. Chapter 3. A sociolinguistic profile of Algeria.

3.1. Introduction

Language is an important element in any society's collective and individual identity. This is why it has a strong link to power relations in a given country. In the case of Algeria, problems relating to ethnolinguistic identity are deeply entrenched in the country, and that many of the language policy and planning

issues arising from that have yet to be resolved, including the role and function of different languages in the education system.

In this chapter, I will be presenting an analytical overview of the situation of the various official and national languages in Algeria, excluding sign language. This is comprised of the following: a brief history of each language, its current demographics, and planning and policy actions related to it, to understand the background and the context of this research. I also describe the most prominent sociolinguistic phenomena that characterise the linguistic situation of Algeria including diglossia, multilingualism, code switching and code mixing with definitions. Lastly, I will present a more specific description of the linguistic situation in the south of Algeria represented by a study of the region of Adrar, where I will illustrate the distinct features of the south in terms of the abovementioned sociolinguistic phenomena in higher education, focusing more on language use at university.

3.2. Language in Algeria: history and status

3.2.1. Tamazight

The aboriginal inhabitants of north Africa are widely known as “the Amazigh” literally translated to “the free men”(Agrour 2012). They are also known as “Berbers” which is the name the Romans called them when they colonised north Africa in 429 AD, and the literal meaning of this term is “non-Greek speakers” or the “people whose language is incomprehensible” (Agrour 2012, p. ii). The geographical origins of the Amazigh people are multiple and are understood to include the Mediterranean, the Nile valley and the Sahara. Tribes from different parts in north Africa, at that time, spoke varieties of a language known as Libyan or “Libu” in ancient Egyptian (Maddy-Weitzman 2017).

The first historical references to the Amazigh language varieties date to 3000 BCE. The origins of Tamazight according to some claims are based on Old Egyptian and Old Phoenician where the first references to Old Egyptian has been dated back to 3000 BCE (Amazigh, (Berber) the Indigenous Non-Arab Population of North Africa, and Their language. [no date]). Also when Phoenicians established their trading centers in north Africa they influenced

local languages around the period of 1100 BCE (Amazigh, (Berber) the Indigenous Non-Arab Population of North Africa, and Their language. [no date]). More specifically, Tamazight is a member of the Afro-Asiatic language phylum also known as the Hamito-Semitic language family (Heine and Nurse 2000).

Tamazight language varieties have not been written until recently. The Tifinagh script was used to document this language, but after the Arab conquests, the Amazigh people started to use Arabic script and later Latin script to write their language depending on preferences (Larbi 2003).

Here is the Tamazight alphabet in the Tifinagh script illustrated with their pronunciation.

ⵝ	ⵉ	ⵏ	ⵓ	ⵛ	ⵄ	ⵇ	ⵏ	ⵔ	ⵓ	ⵉ
ya	yab	yag	yag ^w	yad	yad	yey	yaf	yak	yak ^w	yah
a	b	g	g ^w	d	d	e	f	k	k ^w	h
[a]	[b]	[g]	[g ^w]	[d]	[d]	[e]	[f]	[k]	[k ^w]	[h]
ⵏ	ⵓ	ⵏ	ⵓ	ⵏ	ⵓ	ⵏ	ⵓ	ⵏ	ⵓ	ⵏ
yah	yac	yax	yaq	yi	yaj	yal	yam	yan	yu	yar
h	e	x	q	i	j	l	m	n	u	r
[h]	[e]	[x]	[q]	[i]	[j]	[l]	[m]	[n]	[u]	[r]
ⵓ	ⵓ	ⵓ	ⵓ	ⵓ	ⵓ	ⵓ	ⵓ	ⵓ	ⵓ	ⵓ
yar	yagh	yas	yaş	yac	yat	yaṭ	yaw	yay	yaz	yaž
r	gh	s	ş	c	t	ṭ	w	y	z	ž
[r]	[ɣ]	[s]	[ʃ]	[ʃ]	[t]	[t]	[w]	[j]	[z]	[z]

Figure 3. Tamazight alphabet in Tifinagh script

In Algeria, many Amazigh varieties are spoken today. Probably the largest population among the Amazigh are the people who speak Kabyle (uncertainty here is due to the lack of the robust data available on precise numbers of Tamazight speakers). Kabyle is the most used variety of Tamazight. Kabylia (the areas where people speak Kabyle) is recognised as being an important part of the linguistic and cultural heritage of Algeria (Achab 2001).

The second most important area where Tamazight is spoken is called “Chawia” and the Tamazigh variety spoken there is called “Tchawit” (Achab 2001). Other spoken varieties of Tamazight are to be found scattered all over Algeria:

Chenoua in the north-west of Algeria, Tagergrent, Tamacine, Tamzabet spoken in the south-east of Algeria, and Taznatit in the south-west of Algeria (Maddy-Weitzman 2017). There are also the Tuareg varieties of the Amazigh people of the Sahara, namely Tamachaq and Tamahaq. The Tuareg live in the south of Algeria and in northern Mali and in the Niger (see figure 02) (Achab 2001).

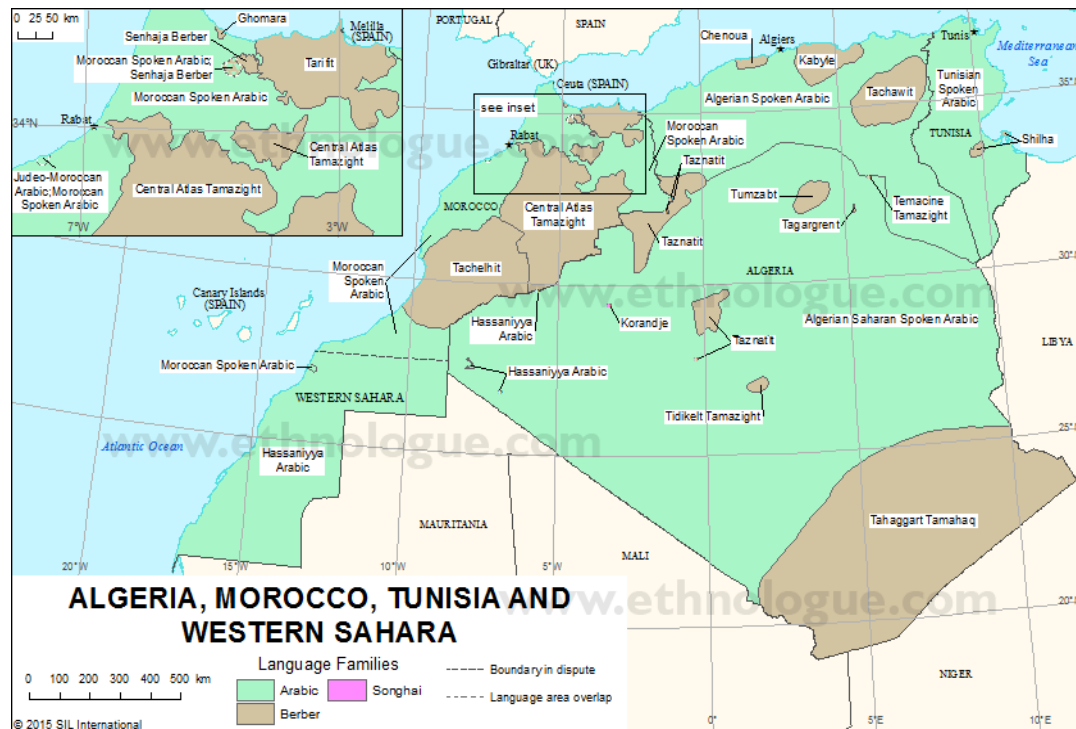


Figure 4. The distribution of the Amazigh people in the Maghreb region of North Africa (2019)

Today, the demo-linguistic data available is problematic because the Algerian government do not collect data on this (Office Nationale de Statistiques- personal correspondence). It is estimated that in Algeria 27.4% of the population are speakers of Tamazight (all varieties) (Boukous 2013). The Ethnologue⁵ has provided some recent data concerning speakers of some varieties of Tamazight in Algeria:

- Kabyle 5,000,000 in Algeria (2012).
- Chaoui 2,130,000 in Algeria (2016)
- Chenoua 76,300 (2004)

⁵ Is a website for annual reference publications concerning languages and related statistics (SIL International. [no date])

- Tchelhit 6,000 (2014)
- Tagergrent 20,000 (2014)
- Tamachaq/ tamahaq 40,000 (no date)
- Tamacine 6,000 (1995)
- Tidikelt 1,000 (2011) and decreasing
- Taznatit 11,000 in Algeria (2014)
- Tmzabit 150,000 (2010 UNESCO- as cited on the Ethnologue).

It is worth noting that the official office for statistics in the Algerian government (ONS) has not conducted any surveys or statistical data collection concerning languages in Algeria, speakers, and different speech communities in the region (ONS, personal communication). This is interesting as a very important aspect like language is totally neglected. This could further confirm that language policies and linguistic justice are fields that need investigation and extra attention in Algeria.

3.1.1.1. Efforts to promote Tamazight

Tamazight was recognised by the Algerian Government both as a national and an official language in 2016 having been previously recognized as a national language in 2002. This is an extract from the draft of the constitution before final amendments agreed upon in February 2016: “**Article 3 bis: Tamazight est également langue nationale et officielle.**” (Article 3. Amended: Tamazight is equally [to Arabic] a national and an official language) (Conseil Constitutionnel 2015). This official recognition gave opportunity to scholars and specialists to debate and discuss implementing and promoting this language with so many similar yet different varieties; this is why the High Commission of the Amazigh Language (Haut Commissariat à l’Amazighité. [no date]) and the Algerian Academy of Amazigh Language were created in 1995 and 2017 respectively, in order to promote the language in accordance with departments of the state (Nassima 2018). Questions that are more urgent would be what variety or set of varieties should be adopted as a representative of the Tamazight language, moreover what type of script should be adopted Latin, Arabic or Tifinagh, and of course questions to whether or not the promotion and modernisation of Tamazight should work (Arazki 2004).

3.1.1.2. Tamazight in the education system

Tamazight was neglected after independence, but the first Tamazight department was created in the University of Tizi-Ouzou in 1980 and then another department was created in Bejaia in 1991. These two departments had a very difficult start and operated under difficult conditions due to a lack of official support and a lack of teaching material, teachers and other resources (Chaker 2001).

In 1995, Tamazight was introduced into public schools in 16 provinces out of 48 provinces in Algeria (see figure 5. for the provinces in Algeria). Furthermore, after the foundation of the Higher Commission of the Amazigh Languages in Algeria in 1996, many attempts were made in favour of teaching Tamazight in secondary schools: training courses for teachers were organised; and Tamazight courses started in several schools (Berber Education: Tamazight Universities, Schools, Courses & Online Resources. [no date]).

In a press conference in 2018 the Algerian Minister of Education Nouria Benghabrit declared that by the end of the year 2019, Tamazight would be taught in every school in the 48 provinces, and in more universities in Algeria (ElKhabar 2018). This is a big step to be taken in a relatively short time, yet the hopes of Amazigh people will be finally met. The challenge is whether the new Tamazight policy will be successfully implemented, or if it is just part of the usual political discourse.



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Figure 5. A map of provinces in Algeria . (Mapsland | Maps of the World. 2010)

3.2.2. Arabic

The history of Arabic in Algeria started with the Arabs when they came to the region to spread the message of Islam in the 7th century CE. They established the Fatimid Caliphate which ruled north Africa and the Levant. The Arabs came into Algeria to colonise, yet they empowered Amazigh people to manage their own affairs (Spolsky 2018). By the 11th century CE the majority of Amazigh of north Africa became Muslims and many came to speak and use Arabic fluently (Abun-Nasr et al. 2016).

When the Arabs settled and started to establish urban centres, the Amazigh people started learning Arabic yet still keeping their own mother tongue. The Arabic and Tamazight language communities co-existed peacefully. The Algerian historian Mubarak El Mili (1986) said in his book *The History of Algeria* (originally in Arabic) that in the time of the Islamic expansion, the Amazigh people were writing their language in Arabic script because they wanted to embrace the Islamic identity yet conserve their own (El Mili 1986).

The historian Dr Yahia El Houdi also mentioned in his book *the History of the Islamic Philosophy in North Africa (1966)* (originally in Arabic) that Ibn Tumert (an Amazigh scholar), the founder of El Almohad⁶Movement wrote some of his books in Tamazight about Islam for people who do not understand Arabic. He also translated the Quran (Islamic holy book) to Tamazight (Houdi 1966).

Tamazight was used after the Islamic conquests, among cultural, political, social and economic circles. A Tunisian historian named Othman El Kaak claims that Tamazight remained after Islam, and after the Islam of the Amazigh, the language improved since the first century, and was mostly modified from the old Tifinagh script, and written in Arabic script. It is assumed to be written by the Islamic religious class and used to write poetry, stories, and narratives (El Kaak 1957).

The expansion of Quranic Arabic with the language contact between the Arabs and the natives of those Amazigh territories, socioeconomic, and political factors (trade, migration, interracial marriage...etc) widened the gap between Quranic Arabic and spoken varieties in the newly Arabized territories (Ibrahim 1985). The resulted varieties continued to change with new words and expressions coming from Arabic and words and expressions from Tamazight with words that inserted from Andalusia and Sicily due to the Islamic expansion and the language contact that continued (El Kaak 1957).

⁶ **Almohads**, Arabic *al-Muwaḥḥidūn* ('those who affirm the unity of God'), Berber confederation that created an Islamic empire in North Africa and Spain (1130–1269), founded on the religious teachings of Ibn Tūmart (died 1130). (Almohads | Berber confederation. 2014)

3.2.2.1. Arabic: Classical Vs Modern Standard Arabic

In the 7th century, the rapid Muslim conquests of territories across the Middle East, north Africa, central Asia and south-western Europe resulted the introduction of the Arabic language in different everyday-life domains (Shah 2008). During the later centuries, however, with the language contact between the language of the Islamic religion and the Arabs and the natives of those territories, socioeconomic, and political factors widened the gap between CA and spoken varieties in the newly Arabized territories (Ibrahim 1985).

In a general sense, Arabic is spoken by 290 million native and non-native speakers across the middle east and north Africa (Azoulay 2018). The modern standard variety (MSA) was derived from the classical Arabic (CA) the language of The Quran. Modern Standard Arabic (MSA) is the primary language used in education, administration, public discourse in 26 countries (Sawe 2018). The Arabic language does not only represent the languages of the religion of Islam but also considered an integral part of the Arab identity.

Classical Arabic

Arabic belongs to the Semitic family of languages. Semitic languages are members of the Afro-Asiatic (Hamito-Semitic) phylum of languages (Shah 2008). The following figure shows the family tree of the Arabic languages:

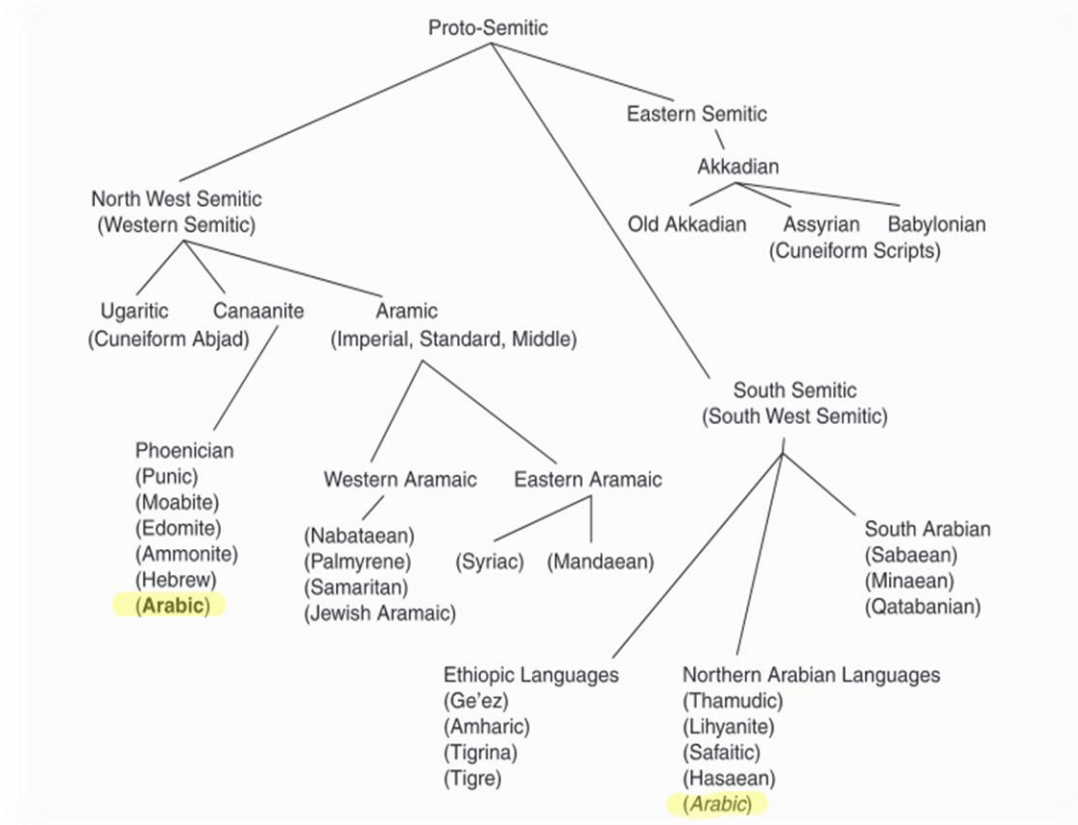


Figure 6. Arabic language family tree (Shah 2008)

Historians recorded many graffiti along ancient trading routes that used south Arabian script (see figure. 04). It is also considered that the pre-Islamic Northern languages were the proto-Arabic and are somehow distant ancestors of Classical Arabic (Shah 2008). Although the finding of several scripts and drawings, writing was not very common at that time. After the emergence of Islam, the Quran, according to historians, represents the earliest sources of Classical Arabic (Shah 2008).

Modern Standard Arabic MSA

Nowadays, Classical Arabic enjoys the prestige of being a written language, but it is no one's mother tongue. Rather, it survives only in religious related genres and classical literature (Mitchell 1978) and the type of commonly used in formal contexts in Arabic speaking countries is known as Modern Standard Arabic (MSA). Although MSA is less sophisticated and less prestigious than Classical Arabic, it is used in administration, schooling, the courts and, indeed, in most formal situations (Kerma 2015). The development of MSA as a distinct variety was partly due to many centuries of language contact where

many foreign words, new structures, accents merged and were all introduced to the corpora of Classical Arabic.

The salient differences between CA and MSA are mainly stylistic and lexical rather than grammatical due to the simplification, modernisation, borrowing processes that happened during language contact and multiple immigrations and trade (Kerma 2015)

Some examples are shown in the table below to illustrate that MSA is just a simpler version of CA. CA is characterised by its case endings (Kerma 2015). The following instances clarify the difference:

Table 1. Differences between CA and MSA in terms of phonology

CA	MSA	Gloss
[mæktæbun]	[mækteb]	A desk
[qalæmun]	[qæləm]	A pen
[wælædun]	[wæləd]	A boy

Algerian Arabic (AA)

Language contact has affected the varieties spoken in Algeria. Benrabah simplifies the history of this contact in Algeria as follows: (1) Tamazight-Arabic contact starting with the Arab conquests of north Africa, and then (2) Tamazight-Arabic-Turkish-Spanish when the Ottoman Empire ruled Algeria for about three centuries (1515-1830) , and the Spanish contact during conquest to western Algeria, then, (3) Tamazight-Arabic-French contact when the French colonization started in 1830, and finally with (4) Arabic-Tamazight-French-English contact after the independence in attempting to open up to globalization (Benrabah 2014).

Algerian Arabic is the mother tongue of the vast majority of the Algerian people. It is used in everyday-life interactions (Kerma 2015). It has also a folkloric

significance as many story-telling traditions, songs, proverbs and sayings are in AA (Kerma 2015).

There are important differences between AA and MSA with regard to phonology, morphology, syntax and lexis. Here are some examples of lexical differences within AA with their origins and equivalents in MSA:

Table 2. Differences between AA and MSA in terms of lexis

AA	Origin	MSA equivalent	Gloss
[smana]	Semana (Spanish)	[u:sboʔ]	week
[vista]	Veste (French)	[sotræ]	jacket
[qahwaji]	Kahveci (Turkish)	[qæhwadʒi]	Coffee shop waiter, or waitress

The phonological differences between AA and MSA could help understand some differences between the two varieties and how they evolved a long time as well. Here are a couple of instances where vowels in MSA are deleted in AA and replaced by a schwa:

Table 3. Differences between MSA and AA in terms of phonology

MSA	AA equivalents	Gloss
[rasama]	[rɤm]	He drew
[fæhima]	[fhɤm]	He understood

Morphological differences between MSA and AA are salient too, here is an instance where duality changes its form from one variety to another:

Table 4. Differences between MSA and AA in duality

MSA	AA	Gloss
[bintæ:n]	[zu:3 bnæt]	Two girls

The discussion in this section will be concerned with Modern Standard Arabic and Algerian Arabic only. MSA and AA are two distinct varieties mainly because of the diglossic situation in Algeria where the language learned in schools is MSA while the native tongue of the majority is AA (About 73% of the country's population speaks Algerian Arabic).

3.2.2.2. Arabisation: the re-introduction of Arabic

The term 'Arabization' means the extensive use of Arabic as a medium of interaction in all domains of life (Dekhir 2013). Arabization planning is defined as a set of deliberate efforts to influence the behaviour of people on the acquisition, structure, or function of the Arabic language (Mihoubi 2017). It was reintroduced after the French colonialist tried to erase it from the Algerian school and from the general linguistic and identity scene.

Immediately after the independence of Algeria in 1962, the Algerian government under the lead of Ahmed Ben Bella launched a series of measures to re-Arabize the country and eradicate the French language (Benrabah 2013). At the level of status planning, Algeria's leadership imposed monolingualism in MSA at the expense of the pluralism and the mother tongues of the people Algerian Arabic and Tamazight. Politicians at that time followed a nationalistic view to adopt MSA only because they considered it as the unifying language as both AA and Tamazight are changing varieties from one region to another in Algeria (Ali Chaouche 2006).

The educational sector was the starting point and the fertile arena where the policy of Arabization could bring results, according to the views of the people in charge at that time. The first grade in the primary circle was fully Arabized in September 1964. Moreover, in order to Arabize the first year of elementary

school the Algerian government recruited around 1000 Egyptian teachers of the Arabic Language in 1964 (Grandguillaume 2004).

In 1965, the new President of Algeria Houari Boumediene came into power with a more radical views to impose the policy of Arabization. He wanted to eliminate any other language from public life and regarded MSA as the only language suitable for use in the public sector leaving no place for French, Tamazight and Algerian Arabic in any formal and official domains (Abu Haider 2000). In Algeria, all four constitutions from 1963 to the last amendments in 2016 (see above sections) rejected multilingualism stating that MSA is the only official language of the Algerian people (Aitsiselmi 2006).

The period of Houari Boumediene as President witnessed stricter laws concerning the application of Arabization. By 1975 all primary schools were entirely Arabized with French taught only as a subject. In secondary education, the humanities section was totally Arabized along with one-third of the mathematics, and the science sections⁷ (Grandguillaume 2004).

In April 1977, Mostefa Lachraf became the Minister of Education in Algeria. He was against the intensive implementation of the policy of Arabization. He was pro-bilingualism and a supporter of the French language (Benrabah 2007c). He re-instated a strong form of bilingualism in primary schools with scientific subjects including maths, calculus, biology taught in French (Benrabah 2007c). This bilingualism continues to exist in the contemporary higher education system with scientific and technical specialities taught in French.

However, in 1980, a decree launched the complete Arabization of the first year of social and political sciences at Universities in Algeria (Metz 1994). On 22 of July 1991, the Minister of Higher Education declared that they hired around 1500 Iraqi professors to contribute to the Arabization process of higher education (Metz 1994). In 1999, with the arrival to Bouteflika to power as president, he launched a series of policies aimed at bringing about both the aban-

⁷ In secondary education in Algeria students get to choose which stream they want to study among these: Science and Biology, Mathematics, Technical Sciences, Foreign Languages, Literature and Philosophy.

donment of monolingualism and a greater openness to foreign languages (Mihoubi 2017).

Algeria as many recently independent African countries inherited a French linguistic heritage of 132 years. For some Algerian intellectuals, the Arabization policy was a major disappointment since it reduced the status of French to that of a foreign language. Thus, the process of Arabization from the beginning witnessed lasting clashes between supporters of MSA and supporters of French.

Grounds of Legitimacy

After the independence of Algeria, the political leadership at that time used various ideological sources to legitimise their choice of language policy. Among which Benrabah mentions socialism, nationalism, and religion (Benrabah 2004). In a society where the majority of the population is Muslim, Islam is legitimising in the eyes of the government. Furthermore, during the period of French colonisation, Islam was a powerful motivating factor in the resistance, and most Algerian parents preferred sending their children to Islamic schools where they could learn to read and write in Arabic and memorise the Quran with basic lessons in Mathematics as well (Benrabah 2004). The politician Nait Belkacem states that:

‘The Arabic language and Islam are inseparable. Arabic has a privileged position as it is the language of the Koran and the Prophet, and the common language of all Muslims in the world, language of science, language of culture’ (Benrabah 2004, p.54).

Another fundamental legitimising tool is nationalism and nation-building models that encourage the unity of the nation via adopting one language, one religion, one party. The Arabization policy came as a result of this idea and gain popularity and support by most nationalists inside and outside Algeria.

It was in the time of the second president Houari Boumediène when socialism started to appear on the ground with his initiative of the agrarian revolution in 1971. His style of leadership followed a more socialist approach which regarded the policy of Arabization as an important part of socialism in Algeria (Abu Haider 2000).

Critics of the Policy of Arabization

Linguistic nationalism in Algeria produced clashes among Francophones, Berberophones and Arabophones. When the policy of Arabization was launched, and while it was implemented francophones and Tamazight activists challenged the Government's decisions and called for a multilingual language policy (Briggs 2010).

In a multilingual, multicultural society like the Algerian one, Benrabah argues that the Arabization policy has failed (Benrabah 2013). This is because political leadership after the independence did not take into account the historical and cultural background of the Algerian people (Soukehal 1999). Therefore, instead of attempting to unite the country under an inclusive language policy, the policy of Arabization further divided groups and created clashes between the different communities within the country (Benrabah 2004).

After the independence of Algeria in 1962, illiteracy rates were higher than ever before, and the elite were all educated through French education, which made it even harder to implement a language policy with a language that was never used in formal schools and workplaces (Soukehal 1999). Supporters of Arabization believed that with the one-language policy inequality would disappear. Yet it has been acknowledged by Benrabah that this policy did not solve any problems but instead it helped them grow (Benrabah 2004).

Another reason for the failure of the policy of Arabization is the Amazigh resistance. A percentage of the population was neglected and prevented from using their language freely in public domains and in public education (Briggs 2010). The Amazigh people initiated civil protests and organised debates and talks to make other people aware of their issue and their rights (Mostari 2004). In 1980, the authorities in a province called Tizi Ouzou prevented an Amazigh lecturer from giving a lecture about the language and the culture of the Amazigh people. The region of Kabylia (having one of the highest populations of Amazigh people) went into a civil disobedience demanding the recognition of the Tamazight language and identity (Benrabah 2004).

Arabization was implemented in primary and secondary education; however, it was not fully applied in higher education. At the level of university, humanities

and law were and still are taught in Arabic yet medicine and engineering, and other natural sciences were and still are taught in French. To many observers this might be the result of the claim that French is already equipped with technical terminologies from Latin while Arabic when it was implemented lacks flexibility to be easily modernised (Mostari 2004).

The persistence of the French language in Algeria in most of its public domains validates the failure of the policy of Arabization. A survey conducted in 1999 revealed that 75% of the participants supported teaching scientific school subjects in French (Benrabah 2007c). Moreover, a study in 2004 suggested that 49% of the participants did not view French as a foreign language and 44% of them considered it a part of the national identity (Benrabah 2007d).

The media sector helped the continued existence of French in Algeria. Algerian viewers preferred international channels because of the poor quality of the programs broadcast on the national television. In 1992, around 52% of the Algerian families watched French channels on a daily basis (Benrabah 2007c). In 2004, newspapers in Algeria were 20 newspapers in Arabic and 26 francophone newspapers. (Benrabah 2007d).

Some people, on the other hand, believe that Arabization as a language policy was successful. Comparing to 1963, where Arabization was first launched, with 2012 (50 years after independence), an estimated 70% of the literate population could read and write in Arabic (MSA) (Benrabah 2013). This indicates that Arabization despite everything was a success. Yet the consequences of this policy led to some issues and conflicts of oppositional identities of different ideologies that helped further dividing the Algerian society (Benrabah 2013).

A related issue to what has been discussed earlier is at the level of higher education. Schools in Algeria are facing the challenge of producing a semi-literate generation that master neither Arabic nor French (Benrabah 2013). This issue became apparent because students' decline in French proficiency has become a major obstacle in pursuing higher studies in courses taught in French (Benrabah 2013). In November 2005, the minister of higher education

declared that around 80% of first-year students at university failed their final exams because of the lack of proficiency in French language (Allal 2005)

As a conclusion to this section, it has been discussed that amongst the strongest reasons Arabization implementation has failed is because some scholars think that Arabic cannot cope with technological development the way French or English do. Arabization in the 1960's was not well planned by the government because it was merely a political decision. This policy as a goal was an easy thing for some because they had the legitimate tools, but in reality, implementing it on society as pluralistic as the Algerian one was almost impossible.

Conflicting Identities and language conflicts

Algeria faced many periods of social unrest and most of them lead Algerians to ask the question of 'who are we?'. In 1988, the government issued a new constitution allowing the establishment of a multiparty system (Bouandel 2003). Before that Algerians reacted with violence to the government inability to provide a better life, historians say that these riots were not only concerned with economic performance but also linked to conflicts of identity and language (Bouandel 2003).

During the same period of social unrest, conflicts aroused concerning Arabized students of Algiers University who went on strike in November 1979. Arabized students, at that time, constitute 25% of the student body rebelled against French-educated students' favouritism and the lack of social and economic opportunity (Benrabah 2013). When these students ended their strikes, unrest grew in Kabylia because the Amazigh of the Kabylia region felt their language and cultural heritage were threatened and under siege (Benrabah 2013).

The Algerian government tried to work out the demands of these communities, so the creation of the High Commission for Amazigh Affairs in 1995 came to rehabilitate the Amazigh culture and introduce the Amazigh language in the system of education (Benrabah 2013). In 2016 Tamazight was finally made an official language. This act has positive implications because it allows a great portion of the Algerian people to live their full citizenship and practice their

language in every public domain, and to end part of the struggles Algerians face vis-à-vis their identity and language manifestations.

3.2.3. French

When the French colonized Algeria in 1830, the Amazigh speaking community with L1 as Tamazight, represented more than 50% of the population at that time (estimated at 3 million) and the literacy in Arabic language represented 40 to 50% (Gordon 1978). During the period of colonisation, France adopted a policy of deracination and deculturization along with forced assimilation. Around 1845 the native population had diminished by one million already (Benrabah 2013). The below extract is a personal letter of a French army officer to one of his friends on 15 March 1843, that is a testimony of the common attitude amongst the colonizing French:

This is how [...] we must conduct war against Arabs: kill all men over the age of fifteen, take their women and children, load them into naval vessels, send them to the Marquesas Islands or elsewhere. In one word, annihilate all that will not crawl beneath our feet like dogs (Montagnac 1885, p.299).

The French regarded their culture, including their language, to be a tool to colonise with the mission of bringing civilisation, with violence, if necessary, to 'less civilised', 'inferior' peoples. The motif of many colonising powers was to dismantle the systems of education, law, religion and to extinguish language of the societies which they colonised, the same can be said about France that colonised Algeria under the name of 'the civilising mission' (Gordon 1962).

3.2.3.1. The Frenchification of Algeria

According to Benrabah (2013), the French assimilationist approach followed three main ideologies to take complete control of the Algerian people and erase the Algerian identity. The first 'divide and rule' was achieved by creating conflicts between Amazigh people and Arabs, Muslims and Jews, and spreading stereotypes and misunderstandings amongst different communities. The second ideology was 'instruct to conquer' whereby the school represents a tool for linguistic dominance. In this regard, Gordon cited a saying which was famous at that time describing the priorities of colonisers: '...the Portuguese

built churches, the British build trading centres, and the French built schools.’ (Gordon 1962, p.7). In 1897, the Minister of Public Education declared his department’s activities in Algeria:

[The] conquest will be by the school: this should ensure the predominance of our language over various local idioms, inculcate in the Muslims our own idea of what France is and of its role in the world, and replace ignorance [...] by the notions of European science. (Colonna 1975, p.40).

Another colonial education theorist (not mentioned by name in (Taleb Ibrahimi 1981)) claimed that the successful transformation of the Algerian people (referred by him as ‘primitive people’) is to render them as devoted as possible. The method to do so, in his opinion, is to take the native children subject them into the intellectual and moral habits of the French for many years in succession in schools built specifically to shape the minds of the Algerian child (Taleb Ibrahimi 1981).

The Algerian people prior to colonisation had their own educational system. Nearly all Arabs were able to read and write in Arabic because in each village there were at least two schools (Horne 1987). Education in Algeria was related to a greater extent to religion. The schooling was autonomous with regard to the local authorities and depended on mosques and religious centres (Benrabah 2013). When the French started their educational policy implementation, they introduced a highly centralised schooling system whereby decisions were made in Paris by the French Ministry of Education and had to be implemented by school teachers in Algeria (Benrabah 2013).

Policies and planning in Education

The policy adopted by the French was to assimilate the Algerian people into French culture (Le Roux 2017). This policy also forbade the use of Classical Arabic. For this assimilation to happen the indigenous Arabo-Muslim cultures, value system of the Arabs and Amazigh had to be eradicated (Le Roux 2017).

In this regard, the French brought their own education system and attempted to apply it in Algeria regardless of the cultural and ideological differences that existed. The majority of the Algerian people themselves refused to send their

children to learn in 'the schools of the devil' because of the brutality and cultural aggression policies that were adopted by the French colonialist for almost five decades since their arrival to Algeria in 1830 (Hadjerès 1960).

To make native people go to school, the French tried three types of teaching institutions. First, they established schools identical to those in France, then they re-established the old traditional school with Arabic teaching but under French control, and Lastly, they created bilingual schools with Arabic and French with respecting the religious character of the traditional schools (Benrabah 2013). According to Benrabah (2013), none of these school types worked. They were all rejected by the vast majority of the Algerian parents.

When Louis Bonaparte (Napoleon III) visited Algeria in 1892, he wanted to improve the situation to gain the natives' approval. He gave orders to create a bilingual school system which he thought could create a peaceful co-existence of the French and the Algerians (Maamri 2009). This bilingual education along with some 'écoles indigènes',⁸ paved the way for the final stage of the fusion of the two educational systems (Maamri 2009).

Negative attitudes towards colonial education and the French language started to change after WW1 (World War 1). Algerians were obliged by the French to join the French Army and fight with them; others were forced to go to France to replace workers who had been conscripted to the Army (Benrabah 2013). Both Algerians who participated in the WW1 and were expatriated realised the importance of modern education for social advancement (Colonna 1975).

Until 1949, the schooling system was divided into two: Programme A, where European children and a small Muslim elite children study and have access to university education in France or at the University of Algiers (Colonna 1975). The second system is Programme B, which is the 'programme for *indigènes*'⁹ this program consisted of two years of French language teaching and French disciplines (Colonna 1975). The creation of these programs is a strong representation of the apartheid-like program that aims at creating a second class

⁸ Indigenous schools: traditional schools for Muslim education

⁹ Arabs and Amazigh.

citizen training that could not progress beyond low-level vocational level (Benrabah 2013).

In 1949 program A and program B were merged together, and Muslim children had the chance to study the same program as the French. Yet this merger resulted in confusion for young Muslims as they were taught misleading history that shows ‘..barbarism and fanaticism on the Algerian (indigene) side, and heroism and humanitarianism of the side of the French and their system’ (Hadjerès 1960, p.38).

Finally, though some Algerians started to have a positive attitude towards the education system and the French language, it did not necessarily mean that they have accepted the French colonialist culture (Le Roux 2017). These nationalist feelings grew ever further due to the fact that France was not willing to improve the situation of education and the economic situation of the Algerian people. Nowadays, French still exists in the Algerian linguistic scene despite all the efforts of Arabization and attempts to eradicate the language of the ‘coloniser’. French is still used in many everyday-life domains including education. The next sections will explore in detail the state of bi/multilingualism and (Ar-Fr) code-switching to understand better the current situation.

3.2.4. English

The rising interest in English has been explained by David Crystal as part of the global phenomenon of the spread of English (Crystal 2003). In Algeria particularly, this interest came as a result of the desire to eliminate the hegemony of the Francophonie (Jacob 2019). There has been also a very active diffusion of English learning and teaching programs organised by different NGOs like World Learning sponsored by government bodies like the US Embassy and programs sponsored by the British Council (Belmihoub 2018a).

Following the independence of Algeria, Benrabah claims that Algerian leaders were thinking of introducing English as the first foreign language instead of French (Benrabah 2013). This could not be possible at that time due to practical reasons like lack of qualified teachers and finance. In addition to that, the majority of the elite were francophone because of their schooling in French

(Benrabah 2013). Benrabah also adds that the rivalry between French and English was intensified during the period of the 90's because French became merely a subject in school and the demand on English increased dramatically with the increase of media exposure and the internet use later on (Benrabah 2013).

In 1993, the Algerian government introduced English as the first foreign language in primary schools instead of French (Benrabah 2013). In particular, English was introduced in Grade 4 of some primary schools, before it was generalised throughout the national territory in early 1995. In the year after (1996), the Ministry of Education in Algeria conducted a survey dedicated to parents asking if English should replace French in the curriculum. Over 73% of the parents who took that survey agreed on the maintenance of French as the first foreign language in the curriculum (Benrabah 2013). This might be the result of the fact that most parents were educated in French-Arabic bilingual schools and still refuse English as another new language invading the school in Algeria.

By the 2000's, English gained attention again as a leading and a global language. Many exchange programs and scholarships were granted for Algerian students to finish their studies in the UK and the US (Belmihoub 2018a). Many teachers of English were granted training opportunities inside of Algeria by NGO's or outside of Algeria in different universities around the world (Belmihoub 2018a). For instance, Britain agreed with the Algerian Government to prepare 500 PhD students in British universities between 2015 and 2020 (Belmihoub 2018a). The US Embassy in Algeria is very active in this regard as well. It participates actively in national and international book fairs, establishes the American Corners in many universities, granted hundreds of scholarships to Algerian students to study in the US, in addition to many youth programs (Belmihoub 2018a).

According to a study done by Euromonitor (2012), the English language is growing in popularity among younger Algerians. The explanation of this according to the report, is that Algerian youth are changing perceptions about French as an outdated language and embracing English as the language that

could open doors to career prospects. Furthermore, the rise of English is largely dependent on the exposure of young Algerians to social media (Ramaswami et al. 2012). See table 05 for a summary of the English language status in Algeria.

Table 5. Profile of English in Algeria between 2010/2011

English speakers in 2010/2011	7% of the population
Salary gap between someone who can speak English and someone who cannot	10%
Ranking of benefits of English in the workforce (1= not beneficial. 5= very beneficial)	3.2
Level of English required for recruitment	5% (0.5/6) fluent 25% (1.5/6) Good 36% (2.2/6) Intermediate 34% (2/6) Basic

According to a study done by Jacob in Algeria on Algerian Youth (mostly students) on the use of English, he believes that at this point English, according to many participants in his study, is the key to learning and being up-to-date across sectors from computing to marketing to many other fields (Jacob 2019). This study also reports the importance of English especially in Academia, because most papers and articles are published in English to reach a wider audience. Unlike papers in French or Arabic that are dedicated to a specific audience (Jacob 2019).

Among the manifestations of the interest in English among the Algerian youth is their interest in pop-culture and Hollywood films and music production. Their interest appears also through their organizations of many events in English like TEDx events, Wikistage events, AIESEC clubs, radio stations, and many more (Jacob 2019).

Another driver of the demand of the English by Algerian is the gas and oil industry. In the south of Algeria, there are industrial towns which are the home of the majority of advanced speakers of English (Belmihoub 2018a). The industry of gas and oil in Algeria is the most demanding domain of English proficient users because of the multinational nature and the foreign investment and overseas workers that require harmony and mutual understanding in the workplace (Belmihoub 2018a). The figure that follows shows percentages of investments by country in Algeria’s gas and oil industries:

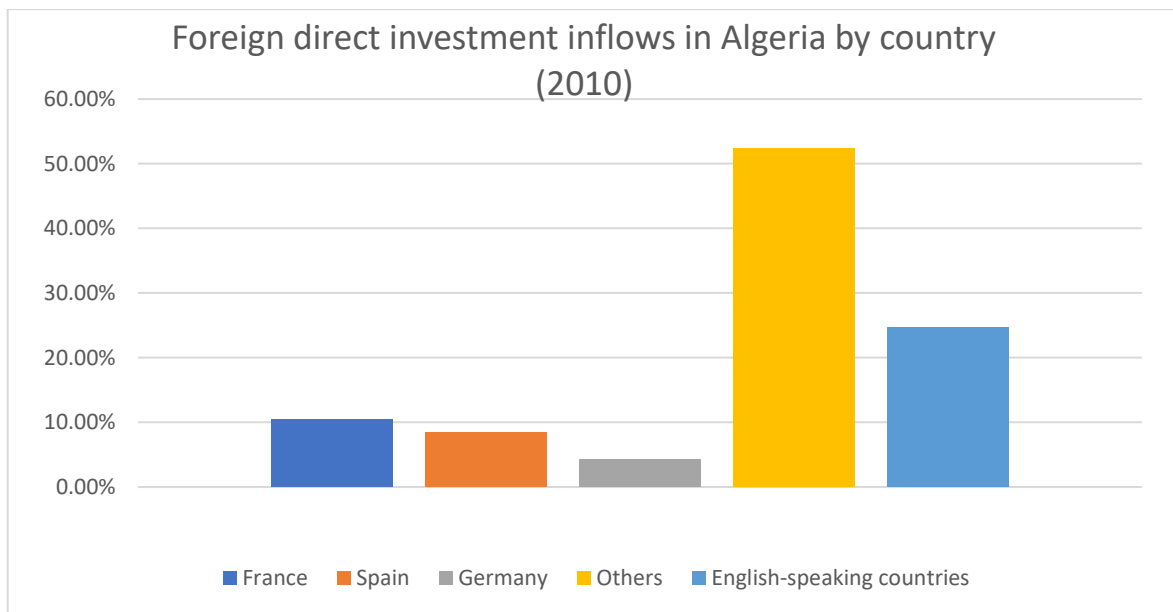


Figure 7. Foreign direct investment inflows by country in 2010 (Eurometer, 2011)

Whilst there is no clear English language policy, the Algerian government, as well as the Algerian individual, recognise that there is an increasing need to improve access to this language and improve proficiency in it (Euromonitor International from OECD (Organisation for Economic Co-operation and Development), 2011). These demands are more urgent in academia, technology and economy. Due to the importance of oil and gas companies to the Algerian economy, the government tried to improve the education of English in the educational system (Ramaswami et al. 2012). For this, the government is relying on many projects and agreements to train teachers and inspectors to raise the level of English use in the country.

English is becoming attractive for Algerians living in the South, and the region is generating more demand compared to other regions of the country (Ramaswami et al. 2012). This is among the reasons why the South is relatively different from the North, and this will be explored in the last section on language use in the south of Algeria.

3.3. Prominent sociolinguistic phenomena

3.3.1. Diglossia in Arabic

Ferguson describes the term diglossia as a linguistic phenomenon where two varieties of the same language are used for different functions. In this situation, says Ferguson, there is a high (H) and a low (L) variety (Ferguson 1959). The high is used for formal settings and the low is used for everyday informal situations. The high variety is highly codified, grammatically more complex, learned by formal education and is not normally used for ordinary conversations (Ferguson 1959). In the case of Algeria MSA is the high variety and Algerian Arabic AA is the low variety. In addition to this, Algerian Arabic has many regional varieties whereby each region has its own dialect (differences in accents, some words...) (Ali Chaouche 2006).

William Marçais described diglossia in Arabic-speaking countries as a situation where Arabic the literary language, which is the written or the regular variety, but never spoken anywhere as a mother tongue. The second Arabic is the spoken one used for conversations in all popular and cultural circles (Marçais 1930).

Ferguson described diglossia as a kind of bilingualism in a given society in which one language is H and the other is L. In the Algerian situation, L which is the low variety is the mother tongue of millions of Algerians and some people think it is better to give it credit and start teaching it and adopting it as the language of the mass population along with Tamazight. This view has opposing opinions that call for the adoption of an already codified language such as MSA or French or English. Another key point which is used as a counterargument of the supporters of the mother tongue, is that MSA is more stable, because it is protected from change as a result of its association with writing

and education. AA is more localised and displays dialectal variations and it is not officially codified in any form (Djennane 2014).

As suggested earlier, AA is considered as the mother tongue of the majority of the Algerian people, therefore, it would be natural for it to be used in everyday activities. It is usually used in formal situations such as delivering lectures at universities to make lessons easier to understand. It can be used by politicians to reach all people, used by media to promote their programs and broadcasts (Ali Chaouche 2006). The question of whether or not it is used at university is answered in this thesis.

3.3.2. Bilingualism and multilingualism in higher education in Algeria

Bilingualism exists almost everywhere in Algeria but differs from one region to another. Big cities like the Capital, Oran and Constantine are more multilingual. Algerians use French with Algerian Arabic or Tamazight to a varying degree depending on the proficiency of the person. There are different kinds of bilinguals the ones who speak Algerian Arabic and French, Tamazight and Algerian Arabic, Tamazight and French and Algerian Arabic (Ali Chaouche 2006).

The Algerian linguistic Market¹⁰ consisted at least three languages Arabic, French and Tamazight making societal multilingualism the general case rather than an exception. Considering Higher education, French is the medium of instruction in many faculties and schools in many universities across Algeria. Especially disciplines such as: engineering, architecture, computer sciences, biology, pharmacy, medicine...etc. Other disciplines, namely humanities, social sciences, law, literature, are taught in Standard Arabic. Outside the classrooms in normal interactions people generally use Algerian Arabic (Djennane 2014).

The multilingualism that can be seen in the Algerian University is not managed well. The problem is, especially for those choosing scientific and technical fields, students whose schooling from primary school to secondary school has been entirely in standard Arabic with few hours of French plus an-

¹⁰ A concept by Bourdieu (1977) explaining a domain where languages are used regardless of their status.

other chosen language as subjects, are confronted with having to learn these new subjects in French at university level and as a consequence, they simply fail to achieve academic growth (Le Roux 2017). I have mentioned earlier the comments of the minister of higher education in Algeria in the year 2005 noting that 80% of first-year students have failed their final exams because of related linguistic issues.

This discussion is emphasised in Ingrid Piller's notion of 'submersion education'. She clearly describes this process as 'having to learn a new language (relatively) by learning content in that language and having to learn a new content while learning the language in which the content is delivered' (Piller 2016, p.104).

In the context of bilingualism and multilingualism, in 2006 Chaouch conducted a survey in which a significant majority of university students of Oran (which is the second largest city in Algeria) participated in. This survey was about the languages used in teaching. 35% of the participants said that teaching in Algeria should be bilingual, 46% said that it should be multilingual (considering that multilingualism is the knowledge of more than two languages). 49% felt that Algeria needs multilingual reform (Ali Chaouche 2006). It is worth mentioning that the majority of these participants were bilingual or multilingual since bilingualism or multilingualism are real socio-linguistic phenomena in Algeria.

3.3.3. Code-switching and code-mixing

The coexistence of French, Arabic and Tamazight in Algeria, led to the alternation of various languages within the same speech by people (Albarillo 2018). In Sociolinguistics the term code-switching refers to the use of more than one language (or code) in speech. The languages have to be distinct. This phenomenon happens more often among bilinguals who switch from one language to another in the middle of their conversations (this switching happens only in oral communication) (Ali Chaouche 2006).

Most people who code-switch tend to shift between Arabic, French, Tamazight and sometimes other languages such as English and Spanish. It is worth noting that the choice of code-switching differs from region to region and also

depending on the educational level of the person. Also, French-Arabic code-switching is more frequent in the North of Algeria than in the South (Habbi 2017). (Further discussion on the situation in the South and the difference between the north and the south, sociolinguistically, be elaborated in the next sections).

The growing interest in English also marked a new choice of code-switching among the Algerian people, especially the youth, and those who study English as foreign language. The following represents some examples of different code-switching choices among students in Ouargla University in the South of Algeria (Habbi 2017)

French –AA /ka:n **le prof** jaʃræh ʃɪl **ku:r**/ The teacher was explaining the lecture

English –AA /mæçndɪʃ **əprɪsaɪz** 'tɒpɪk / I don't have a precise topic.

As mentioned before, in Algeria, code-switching is a natural consequence since people are multilingual or bilingual. This phenomenon of code-switching is being studied by many Algerian sociolinguists, yet the South of Algeria lacks investigation and studies of these sorts of linguistic and sociolinguistic phenomena. The following section describes briefly the sociolinguistic profile of the south of Algeria compared to the rest of Algeria, focusing more on higher education which is the area studied in this research.

3.4. The case of the south of Algeria

The south of Algeria is mainly characterised by its social structure that is widely diverse as a result of a unique mixture of people and ethnicities and of course languages coming together all in one place. This area in Algeria is the focus of this study.

The South has been recognized by its economic and commercial activity throughout time. It has been a route for traders coming from Africa going to the Mediterranean and to Arabia. It is also known for its richness in oil and natural gas resources. This history led to the emergence of linguistic diversity.

The case of the Adrar region (as an instance) from the south of Algeria is a reliable example to explore the language issue in the southern part of Algeria. Adrar is a province in the south-west of Algeria, it is 1600 km away from the capital Algiers. It is a multicultural area and plurilingual community that holds people from different backgrounds who speak different languages (Bouhania [no date]).



Figure 8. A map showing the province of Adrar (Coloured in red) (Gaba, 2009) The different linguistic manifestations in the area of Adrar are MSA, AA with a special variation called Touatia (the Algerian Arabic variety in Adrar region), and Tamazight represented with two varieties Zenete and Tamacheq. There are also the foreign languages taught in public schools French and English (Bouhania [no date]).

The linguistic phenomena that could attract our interest concerning this research are code-switching of Algerian Arabic -French, Algerian Arabic-Zenete (Tamazight), Algerian Arabic-Tamacheq (Tamazight); individual bilingualism and collective multilingualism, diglossia, and pluriglossia (Bouhania [no date]).

The most prominent sociolinguistic phenomena that characterise this region in the south of Algeria are two types: individual and collective/societal. In the case of individuals, the majority of people are bilinguals they use their mother tongue (Arabic Touatia or Zenete) and use other languages like MSA and French at work, schools, for administrative correspondences, in the bank, in the post office, city hall services and the police (Bouhania [no date])

The multiple use of these varieties indicates the richness of the communicative repertoire of this region in particular. It has been acknowledged though that many factors play in the variation of these sociolinguistic phenomena like age, gender, education (Bouhania [no date]).

In the region of the centre of Adrar, in 2004 an estimated number of illiterate women who are monolingual in their mother tongue (Algerian Arabic of Adrar or Tamazight: Zenet or Tamachaq) are 8277 women compared to 445 men only (estimated population of 64,781 in 2008 by ONS). These numbers generally refer to elderly people as women were not allowed to go to school to learn Standard or Classical Arabic. Moreover, the habitants of some villages called (ksour) in the North of Adrar speak only Zenete, and some villages or people who live further in the South of Adrar speak only Tamachaq. Certain people from these Amazigh regions are bilinguals by necessity not by motivation (Bouhania [no date]). Being bilingual in Adrar is a must because it helps speakers to function and fulfil their needs ranging from administrative services, buying and selling, education, praying (In CA) ...etc.

The Adrar region in particular is very well known by its attachment to the Arabic language due to the religious nature of the region. Quranic schools are very widespread across Adrar. These schools are the very first sources of Arabic language education, and they are a very common tradition amongst inhabitants of this region. Also, what explains the strong existence of Arabic in the South is that French colonisation focused on the northern part of Algeria in its war on the Algerian identity. And also because of the strong influence of the Quranic schools Arabic remained present and celebrated (Khaladi and Boukemish 2014). Another reason is that people who live in Adrar are very

conservative and have a great sense of nationalism which led to the rejection of French as an alien language and culture (Bouhania 2008).

Yet, the French language still exists in most official domains as I mentioned throughout this chapter and has to be taught and dealt with everywhere. In addition to this, English and other languages came into being with the openness of foreign investments and the influence of globalization. Adrar is an industrial region that is considered one of the most important sources of natural gas, this led to a growing demand of bilinguals and multilinguals not only in Arabic and French, but more in English, French and in many cases Spanish and Chinese (Khaladi and Boukemish 2014).

Interesting findings show that there has been great effort in learning English not because it is the language of globalization, but because it is the “rival” of French (Benrabah 2014) in Adrar particularly the demand increases (Bouhania 2008). In the latter region, people are encouraging their children to learn English so that they can secure jobs in the flourishing gas and oil industry in the region and also to be open to the rest of the world (Bouhania 2008). In a survey conducted by Bouhania on university students in Adrar asking to what extent their parents encourage them to learn a foreign language (English or French). He illustrates the results in the following table according to the regions of Adrar:

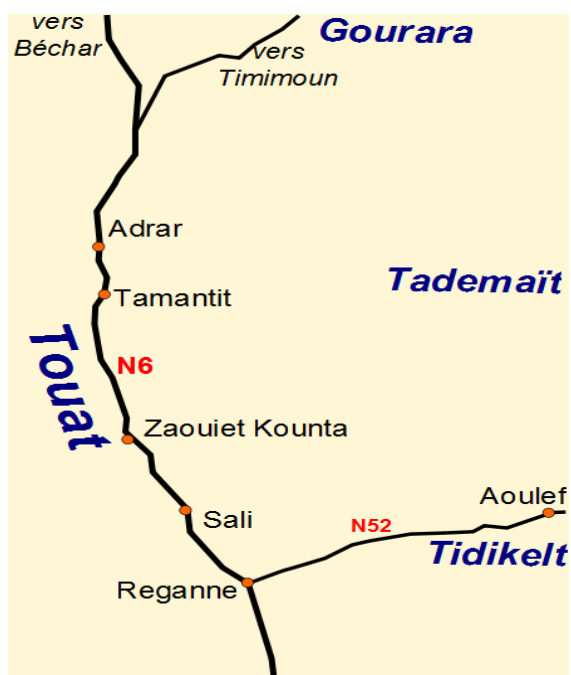
Table 6. Percentages of students encouraged by their parents to learn foreign languages in three regions in Adrar

Encourage to learn	French	English	Total %
Total %	51.80	48.19	100
Gourara	50	50	100
Touat	55	45	100
Tidikelt	40	60	100

Gourara and Tidikelt are regions with a Tamazight speaking majority, and Touat is mainly Arabic speaking (AA). It shows that English is more encouraged in Tamazight speaking regions compared to French. Yet both languages are similarly encouraged in general.

Here is an illustration that shows the location of the abovementioned regions within the province of Adrar:

Figure 9. A map of the three regions in Adrar (2011)



3.5. Conclusion

This chapter explored briefly the current sociolinguistic situation in Algeria from a historical perspective. It described Tamazight, its history, features and current obstacles towards promoting it. This chapter also presented some descriptions of Arabic and its history in Algeria, illustrating the main differences that exist among different varieties of Arabic. In addition to these, I have also described the status of French in Algeria starting from French colonialism to present-day Algeria. I have also presented some facts about the status of English in Algeria and the reason behind the growing interest in learning and promoting this language.

This chapter works as a brief introduction to setting the scene for better understanding the context of this study and answering the research questions. I believe that raising important questions and exploring various connections between the existing languages, and the policies of each is an important endeavour this research is trying to achieve.

The chapter was also devoted to exploring some of the most prominent sociolinguistic phenomena in the Algerian situation. Concepts like multilingualism and bilingualism, diglossia, code-switching and code-mixing were described briefly. These phenomena help understand the complexities of the case studied here. Also, the last section was dedicated to exploring the south of Algeria as a sample sociolinguistic entity within Algeria in terms of language use and language policy focusing on Adrar region in the south-west because it is the most accessible in terms of data and available literature.

4. Chapter 4 Methodological Framework

4.1. Introduction

This research project aims to understand and explore language policy and language practice in the Algerian higher education system. Specifically, it attempts to understand how language policies can contribute to linguistic justice and quality-education. In the Algerian context, the conception, and the application of language policy at the level of higher education have largely been unexplored, especially in a classroom context. The social, cultural, linguistic backgrounds of students and teachers are not always considered when planning for a language policy, something which may lead to acts of linguistic inequality and linguistic injustice.

Benrabah (2007) is one of the few people to have tackled the question of language planning and policy in Algeria systematically from a historical perspective. Yet, his focus was particularly on the policy of Arabization and the related identity crisis (Benrabah 2007b). Generally, therefore, the question of language policy at the level of university has not been addressed sufficiently from a linguistic justice and language rights perspective. Also, in the context of this study, one needs also to take into account language attitudes and the linguistic behaviour of the people involved: educators and students.

The University of Adrar is located in the region of Adrar, being the case study in this research, is the second largest province in Algeria by surface with a population of more than 68.791 in 2008 (ONS. 2008). Adrar is a multicultural and multilingual area where people use different linguistic repertoires, including Arabic and Tamazight in their different varieties, and different regional variations, for different purposes. This linguistic diversity can be explained in terms of its rich history by being one of the most important trade routes between north and west Africa (Encyclopedia Britannica. 2014) (see chapter 3, section 3.4 for more details).

To connect the previous discussion to the wider framework of this research we need to understand how justice and language rights can relate in a language policy framework from a normative-theory viewpoint as this provides some criteria to help assess the extent to which certain language policies can

be considered as just or unjust. This assessment depends on the aims, methods, and outcomes of the policy (Peled 2014b). According to Piller, submersion education is: “having to learn a new language by learning content in that new language and having to learn new content while learning the language in which the content is delivered” (Piller 2016, p.127). Submersion education happens at the level of university because students of scientific specialties study in French, which is not their mother tongue. The answer to this will be explored in analysing the obtained data.

This chapter will explore the significance of this study which clarifies the applicability of this research to other similar contexts. The utilised strategies adopted in this research are elaborated in section 4.4 and draw on case study and ethnographic approaches. I also mention the underlying ontological and epistemological key concepts behind this study. Also, the researcher positionality will be made clear to the readers in terms of the epistemologies stated, and in terms of the research itself, and the research participants as well.

The following part explores the setting and the participants of this study, how I obtained ethical approval and gained accessibility to the research site and the people. Next, I explain how I collected my data using semi-structured interviews and classroom observation. And finally, I describe how I managed the data I gained and how I will be analysing it. Also, the challenges encountered in the process of data collection.

4.2. Methodological approach

Research in language planning and policy (hence LPP) has moved over time from problem solving theoretical frameworks that work more on national or regional scales, to incorporating interdisciplinary analysis like economic, legal and political, and a more ethnographic micro-level context analysis (Hornberger 2015, p.11). Language policy and planning research has evolved to be more adaptable to many contexts. In this research, I have adopted a variety of methods to meet the research questions, of which, legal from the discussions of language rights; economic from the capability approach; historical from the Algerian linguistic situation. In addition to pedagogical and classroom ethnog-

raphy, especially as newly emerging discussions within the field of LPP (Hornberger 2015)

At the most basic level, this study as a piece of language policy research focuses attention on language users (Cooper et al. 1989). The focus is on teachers and students because these two play an important agentive role in the institution of higher education. The research also focuses on policy and planning around language in teaching and learning and instructional practices in classrooms at tertiary level. It takes into account the context in analysing and interpreting the findings, reflecting on participants' ideological biases, and sociohistorical identities (Hornberger 2015). This research attempts to understand policies and practices that are also implicit in their contexts. In addition to that, it tries to understand these policies and practices within challenging contexts such as a classroom, a research community, a university community, rather than simply understanding a policy on the state/institutional levels.

This study will use qualitative research methods to seek the perception of different individuals, groups, contexts on the current situation. Qualitative methods are concerned with the quality of experiences, and the collection of rich, in-depth information related to specific situations, and less concerned with broad claims about an entire population. Qualitative research methods also tend to assume that key findings will emerge from the research process, they should not be predetermined (Lewis-Beck et al. 2019). Contributions of qualitative research are wide-ranging and can provide key insights in the field of language policy:

‘what qualitative research can offer the policy maker is a theory of social action grounded on the experiences -the world views- of those likely to be affected by a policy decision or thought to be part of the problem’ (Walker 1985, p.19).

In this research I am implementing two methods to collect data in a specific context which is Adrar University. As presented in the context of the study chapter, Adrar is a unique case in terms of its diversity. Therefore, the investigation in front of us will look into individuals' language attitudes and language use patterns inside classrooms, also, their language choices in terms of eve-

ryday use visa-a-vis the existing language policy. The data obtained is thematically analysed.

In addition to that, this study will closely explore how multilingualism is managed on this specific micro-level. It will also explore particularly how students and teachers use their linguistic repertoire to facilitate the process of learning, teaching, and doing research. It adopts a sociolinguistic ethnographic approach with two data collection methods: semi-structured interviews and classroom observation that are discussed later in this chapter.

4.3. Research questions:

These were the guiding questions to help me collect and analyse my data.. which are:

5. How is the Algerian language policy operationalised at the level of university education generally and in science and technology classrooms specifically?
6. What are students' and teachers' perceptions of the effect of implicit and explicit language policy on their academic experience?
7. What are students' and teachers' attitudes towards languages, choice, and multilingual universities, and how can this be reflected in a successful language policy?
8. How can we assess to what extent language policies (implemented in this context explicit or implicit) are linguistically just?

4.4. Overall strategies

A key feature of the methodological framework for this research was the adoption of a case study approach. A case study is defined as a scientific research method that investigates a current phenomenon within its real-life context when the boundaries between this phenomenon and its context are not defined, and in which various sources of evidence are used (Yin 2009, p.23).

A case study is identified by Lewis-Beck et al.(2019) as research that studies a limited number of cases, possibly even one, in considerable depth. A case may be an individual, an event, an institution, or even a whole national society or a geographical region (Lewis-Beck et al. 2019). A case study is different from both social surveys and experimental research. In social surveys, the

cases studied are numerous, but the data collected could be very limited. Whereas in case study research, one case may be studied but the amount of data collected is arguably richer and more in depth. For experimental research, variables of a certain case (s) can be controlled, and cases can be created by the researcher. In a case study, however, the case is just identified as occurring in a social context, and the researcher is not controlling any element of the case whatsoever (Lewis-Beck et al. 2019).

A case study can involve many sources of evidence including archival records, interviews, observation or participant observation, physical artefacts (Miller and Brewer 2003). Case study findings cannot be generalisable, but it can provide constant new ways of approaching similar social phenomena. In a study called Tally's Corner (first published 1967), Elliot Liebow studied and analysed a case study of a group of black men living in a poor inner-city American neighbourhood (Liebow and Lemert 2003). Liebow used the data he analysed to build a theory of subculture existence, which was used after him by so many researchers interested in the characteristics of subcultures, the structural relations between them and group structure dynamics (Miller and Brewer 2003). Thus, case study findings can be used in several ways to different other cases that address similar social phenomena.

Another key feature used in this study, in terms of methodology, is ethnography. It is better known as 'field research' and can be defined as the study of people in their natural occurring settings using several means, if needed, to capture the social meanings of activities in order to collect data in a systematic method without having the researcher being externally imposed (Miller and Brewer 2003). Its objectives are to understand the social practices and meanings of people in a certain field -context- using several methods like interviewing, observation, personal documents and discourse analysis (Miller and Brewer 2003).

Ethnography in LPP is concerned with the community's point of view about matters concerning their language, and it focuses on the micro-level of language use, conversations and everyday life of the language users and their language itself (Canagarajah 2006). Language planning and policy ethnog-

raphers tend to adopt a social constructivist understanding which says that 'human reality is extensively reproduced and created anew in the socially and historically specific activities of everyday life' (Rampton 2000, p.10). This view impacts how a specific context is studied and how a language policy is interpreted in that context (Hornberger 2015). Hornberger (2015) claims that a multilingual classroom is a rich site for LPP ethnographers to look at local language policy implementation. Studies like this document patterns of language use and social relations within a specific context, which is also why ethnography was chosen, because it helps answer this research's main inquiries.

For LPP ethnographers the heart of ethnographic research is to understand deeply the changing nature of the speech community as a research setting for the study of language policy, language use and language learning (Hornberger 2015). Ethnographic research attempts to also understand the significant recognition of the pressures in language policies and practices especially in postcolonial contexts like Algeria, which are experiencing concurrent processes of decolonization and globalization (Lin and Martin 2005).

McCarty (2005) explains how ethnography should be done in any LPP research. She claims that 'ethnography involves experiencing through participant and nonparticipant observation, enquiring through formal and informal interviews, and examining through the analysis of documents and cultural artefacts'(Wolcott 2008, pp.48–50). Participant observation is the method most used in ethnographic research, where the researcher is involved in everyday activities of participants, observing their activities and the physical aspect of the situation and systematically recording those observations (McCarty 2015).

The tools of collecting data about the activities of the participants during an ethnographic endeavour are various. Field notes are a common tool and they consist of rich descriptions of the setting, participants and activities (Emerson et al. 2011). This may include quoting naturally occurring speeches of people, their nonverbal communication and body language. Writing good field notes, according to McCarty, requires a degree of reflexivity. Which means having the ability to critically reflect upon our assumptions and subject position and how these affect our observing and our interpretations (McCarty 2015).

Interviews are also very common among the community of LPP ethnographers. Ethnographic interviews often involve casual conversations recorded as part of the participant observation process (Wolcott 2008). These interviews could be structured, or unstructured. However the most widely used are semi-structured interviews that are held with key participants of the group being studied (McCarty 2015) (more details about interviews in section 4.11.3. in this chapter). LPP ethnographic research can also be supported by survey questionnaires and other quantitative data measurement tools depending on the nature of the context studied.

Adopting two complementary data collection methods that are semi-structured interviews and classroom observation allowed me to answer research questions about language policy, language use and language choice and attitudes in-depth and all at once.

4.5. Ontology and epistemology

Early researchers in LPP were problem-oriented where they sought to solve problems related to language planning and policy by standardizing, regulating, or managing a state of linguistic diversity in order to help building a national cohesion and modern economic development (Spolsky 2008). Currently, however, LPP researchers are focused more on micro levels. They look closely at agency of local social actors and how this help in the implementation of a given policy (or policies) (Lin 2015).

Before an LPP researcher knows their positionality vis-à-vis their research, they have to ask some questions first. These questions include: why do they do this research? What kind of interests motivate them? What kind of knowledge will be produced? Its impact? and on whom? (Lin 2015). To answer these kinds of question, the researcher must be aware of their interests that drive them to do this research. In other words, the ontological and epistemological assumptions that help answer the abovementioned questions.

According to Habermas (2015), there are three kinds of interests that drive researchers to do research. These are summarised in the table below (Lin 2015):

Table 7. Human interests, knowledge, and research paradigms (Lin 2015, p.23)

Types of human interests	Kinds of knowledge	Research paradigm
Technical	Instrumental / Descriptive (Cause-effect regularities)	Positivist
Practical	Practical / Descriptive (Sociocultural understanding)	Interpretive
Critical	Emancipatory / Reflexive / Transformative (self-knowledge, transformed consciousness/ practice, ideological critique)	Critical

The technical interest is related to finding effective ways to solving problems and improving life. This mode of research helps producing generalizable universal laws through empirical-analytic sciences (Habermas 2015). This paradigm sees social phenomena like any natural phenomena. The aim of it is to discover relationships between different variables that allows researchers to predict future social phenomena regardless of their sociocultural or historical context of occurring. This paradigm also emphasises that valid knowledge allows positive verification of empirical data through experimental methods (Lin 2015)

The second interest is the practical interest which is often called the communicative interest as well. This kind of interest arises from the human capacity to use language for communication and the capacity to make meaning in order to understand and to be understood (Habermas 2015). The research paradigm that goes hand in hand with this knowledge interest is the interpretive research paradigm. In it, the focus is on understanding the meaning and pur-

pose of social actors and social actions. Because it is believed that, unlike the positivist approach, there is a variety of considerations when analysing a social event. There is also a huge dependency on context which make it impossible to predict future events or generalise laws based on previous similar events. This approach aims to produce knowledge to explain to us why people do what they do and why, from the perspectives of the participants (Lin 2015).

This paradigm seems to fit this research because the main aim of it is to understand what language policy is as a social phenomenon, and how can linguistic justice and language rights play a role in creating an inclusive language policy in a multilingual context at the level of tertiary education.

The last type of interest is the critical or the emancipatory one. This kind allows the researcher to be involved in a critical methodological reflection that brings the different ideological assumptions underlying their studied research. the critical interest emphasises self-reflection that helps gain emancipatory insights which allow researchers to be aware of their current values and their position (Maclsaac 1996). The paradigm that works best for this interest is the critical research paradigm. This latter seeks to answer a fundamental question of 'how will your research findings affects those studied?' and 'in what way will your research be used?'. In this paradigm also, the researcher, in some cases, advocates for the studied subjects of the research. The focal point of the research is to empower subordinate groups in society, those who are struggling under certain policies or practices, or those dominated by another group in society (Maclsaac 1996).

4.6. Researcher positionality

My positionality, as a researcher with regard to my participants, can be perceived as an outsider of this enquiry (Herr and Anderson 2005). This means that I was a non-member of that case study. I was neither a student of science and technology nor a faculty member. Researching as an outsider consisted of gathering data about others as objectified research subjects (Herr and Anderson 2005).

However, as I started to get access and collect my data, I was feeling more like an insider. This is when participants got to know me and knew I had pre-

viously completed my studies in the same university. My research participants felt familiarity at some point. This can be manifested in so many instances when we discussed internal policies of the university, or in understanding the way things work in terms of administrative procedures, or even the struggles they are facing because of the lack of materials or the poor management. I personally could relate to what they told me because I was a part of this institution in the past.

In sum, my standpoint as a researcher vis-à-vis my research participants was not categorised strictly under an outsider or an insider. It was considered more fluid depending on the context and the subjects being discussed. Many researchers find themselves in the same position where they cannot decide if they feel like an outsider or an insider to their research study. This is called a multidimensional positionality (Coghlan and Brydon-Miller 2014).

4.7. The setting

The setting of this research is the university of Adrar in the south of Algeria (see Figure 5-chapter 3 for a map of the province). The University of Adrar is a newly established higher educational institution in the city of Adrar. It was first an institute of Islamic sciences established in 1986 then extended to many specialties and faculties over time until the year 2001 when it was finally recognised as a national university (About Ahmed Draya University, n.d.). The university currently has five faculties including nine disciplines and sixteen schools with thirty-one BA specialties and 34 Masters specialties, and thirty-six PhD specialties and eleven research unites that are recognised on the national level (About Ahmed Draya University, n.d.).

The Faculty of Science and Technology in the University of Adrar is a newly structured faculty. It was established in its current form in 2012 with 5 schools in total (Statistics | Faculty of Science and Technology. [no date]). In a 2019 survey, the total number of teachers of all ranks was 108 in all specialties. The total number of students was around 4404 and increasing (Statistics | Faculty of Science and Technology, n.d.).

4.8. The participants

The targeted sample are teachers and students of the science and technology faculty whose main language of instruction is French. I have conducted semi-structured interviews with 10 students and 11 teachers without counting the pilot interviews (see section 4.11.1 on pilot study). I have chosen the participants for their roles as both teacher and students and their linguistic experiences thus their age or gender was not regarded.

Table 8. Participants and their linguistic and scientific backgrounds

Students' and specialities	Languages used reported by students	Teachers' and specialities	Languages used, reported by teachers
SP1 / Chemical Engineering	Tamazight (as mother tongue) SA and AA, French	TP1 / Electronics and Physics	AA (as mother tongue), SA, French, English
SP2 / Sciences of Matter	Tamazight (as mother tongue) SA and AA, French	TP2 / Mechanical Engineering	AA (as mother tongue), SA, French
SP3 / Electronics	Hasania Arabic (as mother tongue) SA, and Spanish	TP3 / Electronics and Electrical Engineering	AA (as mother tongue), SA, French
SP4 / Chemical Engineering	Algerian Arabic (as mother tongue), SA and French	TP4 / Process Engineering	AA (as mother tongue) SA, French, English
SP5 / Science and Technology	Tamazight and AA (as mother tongues), SA, French	TP5 / Renewable Energies	AA (as mother tongue), SA, French, English
SP6 / Civil Engineering	AA (as mother tongue), SA, English	TP6 / Electronics	Tamazight (as mother tongue), AA, Sa, French,

			English
SP7 / Chemical Engineering	AA (as mother tongue), SA and French	TP7 / Electronics	AA (as mother tongue), SA, French, English
SP8/ Chemical Engineering	Tamazight and AA (as mother tongues), SA and French	TP8 / Biology	AA (as mother tongue) SA, French, English, Spanish
SP9 / Chemical Engineering	Tamazight (as mother tongue), SA, AA, French	TP9 / Matter Sciences	AA (as mother tongue), SA, French
SP10/ Process Engineering	AA (as mother tongue), SA, French	TP10 /Chemical Engineering and Renewable Energies	Tamazight (as mother tongue), AA, SA, French, English, German
		TP11/ Chemical Engineering and Renewable Energies	AA (as mother tongue), SA, French, English
		TP12/TP13/TP14	Teachers I observed but did not interview

I interviewed ten students -eight females and two males- from different linguistic backgrounds: 5 were of Amazigh background speaking different Tamazight varieties including Tkwaylit, Tznatit, Tmachaq (see chapter 3) others were of Arabic speaking backgrounds. One of the students interviewed was from Western Sahara which is a neighbouring country in the western south of the Algerian border. The student SP3 speaks Hassania as his mother tongue, which is a variety of Bedouin Arabic that is spoken throughout the region of

southern Morocco and Mauritania and Western Sahara (Cohen 1963) (See figure 04 for a map of the region). He also speaks Spanish, he acquired while growing up. Most students that I interviewed speak Arabic because basic education in primary, middle, and secondary schools in Algeria are entirely in Arabic (SA), they also speak French to a varying degree.

For teachers, eleven members were interviewed – 2 females and 9 males- 3 from The School of Renewable Energies, 3 from The School of Electronics, and the rest are scattered between Schools of Chemistry, Mechanical Engineering, Biology, Matter Sciences, and Physics. They teach a variety of modules depending on which school and speciality. Among the modules that they teach are: Chemical Engineering, Petrochemistry, Fluids Mechanics, Energy Quality, Electric Networks Protection, Protecting Equipment, Unitary Operation, Separation methods, Industrial Automatism, Semi-Conductor Physics, Solar Panels, Nutrition, Biochemistry, and Animal Biology.

Concerning their linguistic background and the languages they use; nine out of eleven teachers use AA -Algerian Arabic- as their mother tongue while only two use Tamazight namely Tkwaylit and Tchawith varieties. They all can speak Arabic and French and use them to varying degrees in their classrooms. Yet only 8 from this group of teachers can use/speak English. Some teachers can speak Spanish and German beside these languages as well (TP9, and TP6).

The selection of these interviewees was not random. I first contacted some teachers I know to participate, then requested them to invite other teachers to participate in this study using a snowball technique to recruit.

For students it was more challenging, because I do not know any students personally from that faculty and I had to talk to them and establish rapport first during the observation phase, then invite them to participate in the interviews. Many rejected for various reasons. Some were shy, others were scared because they have not done it before, some agreed at first then never showed up to the interview.

The sample selection was a nonprobability sample using convenience sampling because it makes accessibility to participants relatively easier. It is also

used because the sampling is based on a theoretical framework (Lavrakas 2008). This indicates that the sample is gathered following a certain criterion which in this case: students and teachers from science and technology schools who use French as the main medium of instruction.

4.9. Access

Gaining access to the research setting is a challenging process because it is the step that can facilitate the whole data collection. The setting can be private or closed which includes organizations like schools or universities in which access is controlled by gatekeepers (Walsh 2012). According to Silverman (2000) there are two types of access, covert and overt. Covert access is where the researcher collects data on the subjects without their knowledge. Whereas overt access dictates that participants should be aware, and their permission is necessary (Silverman 2000). In this study, overt access was sought because I needed the permission of gatekeepers first, and the participants second. Being an outside researcher, overt access is required to get inside the studied context in an ethical manner.

For collecting data, permission was granted from the Head of Faculty in order to carry out the research. Individual teachers then were approached so that observations could be carried out. I was able to meet teachers after I observed their classes and asked them if they would be interested in doing interviews. As expected, some politely refused, and some said they would think about it, others were very happy to participate. For students, it was more challenging. Most students were shy to participate or afraid they would say the wrong things or be asked difficult questions. I attempted to simplify the task for them by saying I will just ask you simple questions about your experiences with the language of instruction and languages in general. After a few weeks, I was able to get an acceptable number of approvals to participate in interviews both from teachers and students.

4.10. Ethical consideration

Ethics are very important in any kind of research, and LPP research is no exception. Research participants, the researcher, the research environment, and

the process of research itself should all be safe and should not involve any potential harm to any part whatsoever.

Before conducting this study, I considered carefully the ethical aspect of it by deciding what to study and who are the people involved and how their experiences can be represented in my research (Canagarajah and Stanley 2015). With the start of my data gathering process, I went through the ethical committee in the School of Welsh, Cardiff University to authorise my study and see if I met the requirements of general research ethics. I provided detailed information about my research project and research questions, and how I will be conducting my data collection including recruiting participants and dealing with their personal data. I also provided the consent procedure through explaining to the participants what will happen to the data they provide, and that they are protected and free to withdraw their participation at any point. Afterwards, I presented some forms to my participants to read and fill when they are ready to give me their full approval for participating in my study (See appendix 3 for a blank participant form).

4.11. Data collection

4.11.1. The pilot study

I prepared the interview questions and the observations worksheets, and I completed a pilot study with 3 students and one teacher. As I asked them questions, some of the answers were not as clear as I expected. In some cases, the interviewees asked me to paraphrase the question or explain what I mean by some terms. This led me to revise many questions and delete or add many others. Moreover, the first two interviews with students took around 12 to 15 minutes which was a relatively short time for an interview.

I transcribed and analysed my first interviews then discussed the questions and the participants answers with my supervisors and got some feedback from them. Eventually, I recreated a set of questions to guide me with my interviews, with the occasionally occurring follow up questions since they were semi-structured interviews. For the observation however, I did not change much. I was adding fieldnotes along the way and built a corpus of data from observations. After this, I embarked on my major data collection and adopted

the refined set of questions from the pilot study. The data obtained from the pilot study was valuable and relevant to my research therefore it was used in the analysis (Malmqvist et al. 2019).

4.11.2. Classroom observation

Observation is a very common research method in qualitative research. It can be either structured or unstructured, or even both (Mulhall 2003). According to Mulhan, in most anthropological and sociological research, unstructured observation is key because they are used to convey and interpret cultural behaviour -such as language-. Structured observations, on the other hand, are more systematic and less flexible in terms of taking raw data from the studied case (Mulhall 2003).

Observations are methodologically systemised in many forms to address research questions. Some of these forms can be classified under pairs as follows: covert vs overt observations in which the researcher asks how far the observation is revealed to the participants. Participants vs non-participant observations in which the researcher chooses to be either an active part or a passive part of the observed field. There is also structured vs unstructured observations in which the observer decides if the observation is kept standardised or is more flexible (Flick 2018).

As there are many forms of observations that can be adopted in research, there are also many observer roles. These roles include: the complete participant, the participant as observer, the observer as participant, and finally the complete observer (Flick 2018). These roles vary according to the distance maintained between the observer and the participants. In this research I adopted the role of a complete observer, as I have not participated in any form of activity with the people being observed. The complete observer, maintains a distance from the observed objects, in order to not influence them (Flick 2018). The reason why I opted for this beside the non-interference characteristic, is that I am not a student in these classes, nor I am a teacher or even a member in the field of science and technology. This circumstance automatically dictates that I have no right to participate in the occurring events being observed.

Because this study is ethnographic in nature, observation of classroom activity and practices was a vital part in collecting authentic, real-life data from both agents: students and teachers, and also from classroom artefacts, signs and related course documents. This study has also a descriptive nature because the researcher is in a situation as it exists at the time of research. The main characteristic is that the researcher has no control over the phenomena being investigated. They are only reporting what is happening and perhaps provide an explanation based on the established theoretical framework, or from the data itself.

A non-participant observation was carried out, which consisted of attending several lectures and tutorials and seminars for a range of courses that has a scientific nature at the university of Adrar, Algeria from the beginning of February 2020 till end of March 2020 when the COVID-19 lockdown happened for the first time. Initially, a detailed descriptive observation took place in the form of field notes followed by a checklist that was filled based on some aspects that were pre-determined before entering the field. A checklist is a form of selective observation that concentrate on aspects that are more relevant to the research questions (Flick 2018).

The observation checklist was built to record instances of specific language use patterns (See appendix 1 for a sample of the observation worksheet) . Swann states that:

Observation schedules are often used by those who wish to investigate talk in different contexts- for instance whether certain activities, or certain classroom arrangements, encourage a more even distribution of talk, or different types of talk (Swann 1994, p.37)

More specifically, the observation checklist was created to record instances of code-switching, code-mixing, Translanguaging, and a few other linguistic phenomena. By recording these language use instances in classes, it enables a comparison to be made between the different parts involved in the context of the classroom (teachers and students). This checklist also helps to structure the observation along with the notes taken during classes. Which were more

spontaneous and containing real-life examples of instances of language use recorded in the structured part of the observation recording.

The observation was carried out for 30 hours across 6 weeks depending on the timetables provided for me. In the initial observation sessions, some students would notice me as a new person coming to their classes attending with them, which may have affected their behaviour a little. Although I would first agree with the teacher running that session before coming into the classroom, and they would present me before they start their lecture or seminar. Yet this does not prevent their awareness of a stranger attending their classes and observing the behaviours and taking notes. It was hoped that my presence would be less intrusive as staff and students became more familiar with me after a few sessions. In addition to that, the head of the faculty, after we met, sent a notification to all academic staff about my presence in their schools. So, everyone had an idea about me coming into their classes and observe for some time.

The observations took place in classrooms and laboratories of different levels -undergraduate and postgraduate classes-. Sometimes, I attend with one teacher several sessions because they teach different modules or different sessions (seminars and lectures for instance -module names and details on the sessions are provided on the observations worksheets-). The observation notes were taken simultaneously as the observation was taking place. Usually, I would get a desk in the back of the classroom and write my notes. I personally chose to sit in the back to have an overall view of the classroom setting and how teachers and students interact. After the observation ended, I organised the notes and the checklist elements in one document to make it easier for access. Sometimes I would add some notes and reflections at the end of the session to help me understand the social setting or the behaviour that was taking place, also to help me remember anything interesting later when analysing the data.

Along with the observation, I collected some documents from some classes I attended. The documents were mainly course documents and lists of readings and also copies of the lecture being delivered. Some documents were proce-

dures explaining what students need to apply in labs. I also collected some images from different places in the campus. These included signs of rooms or lecture theatres, timetables, poster of events, warning signs in laboratories and random announcements posted on some schools' boards. Collecting documents and images like these help in analysing the linguistic landscape of the university.

4.11.3. Interviews

Interviews can collect an enormous amount of data in a short time using less materials (Palviainen and Huhta 2015). The content of the questions in an interview differs depending on the subject investigated. An interview can be defined as “a process in which a researcher and participants engage in a conversation focused on questions related to a research study” (DeMarrais 2004, p.55). Interviews are also defined by Rubin and Rubin (2012) as an in-depth qualitative investigation which is characterised by three features. First, interviewers should look for obtaining rich and detailed data instead of merely yes/no answers or agree/disagree statements. Second, questions should be open ended, and the interviewer should not give answer categories. The last feature is the order of the questions and the flexibility of the interviewer with the interviewees. The former should not follow a fixed set of questions, rather she/he can adapt to the flow of the interview with keeping it tight to the original topic being studied (Rubin and Rubin 2012).

The most common form of interview is the one-to-one encounter in which one person draws information from the speech of the other person (DeMarrais 2004). There is also a group interview, but it is less common in qualitative research. Researchers prefer focus group conversations and discussion instead of interviewing a set of people (Merriam and Tisdell 2015; Flick 2018). The purpose of using interviews in any way is summarised in what Patton explains (Patton 2002):

We interview people to find out from them those things we cannot directly observe . . . We cannot observe feelings, thoughts, and intentions. We cannot observe behaviours that took place at some previous point in time. We cannot observe situations that preclude the presence of an ob-

server. We cannot observe how people have organized the world and the meanings they attach to what goes on in the world. We have to ask people questions about those things. The purpose of interviewing, then, is to allow us to enter into the other person's perspective. (pp. 340 – 341)

Many types of interviews can be distinguished in terms of their structure, theoretical stance, and ways of conducting them. First, the most common way of deciding what type of interview to conduct is to determine what structure suits the study undertaken first (Merriam and Tisdell 2015). In terms of structure, there are three types to take into account: the structured/standardised interview: where questions and their order are predetermined, and usually starts with demographic data because the underlying format looks more like a survey. The semi-structured interview is the second type that I personally have adopted for my research. It is more flexible with a mix of structured and open-ended questions. Follow up questions and discussions on the topic are allowed in this type of interview. Finally, the unstructured/unstandardised or open-ended interview, that entirely depends on open-ended questions. It is more of an exploratory method for the researcher to understand a phenomenon she/he is not very familiar with. It can be the foundation of later interviews or can stand by itself as a data collection instrument (Merriam and Tisdell 2015).

There are other types of interviews that are worth mentioning briefly to give the reader a sense of framing. According to Roulston (2010), there are six interview categories depending on their theoretical and epistemological stance. There is the neo-positive interview where the interviewer should reduce biases and aim for an objective outcome and valid data. The next type is the romantic interview, which unlike the first type, allows both the interviewer and the outcome of the interview to be subjective and self-revealing. The third type mentioned by Roulston is the constructivist interview. Data gathered from the latter type are analysed using tools like discourse analysis, narrative analysis, and conversation analysis. This type depends on the analysis and interpretation of the researcher to construct a theory from the data gathered. The fourth type is called the postmodern interview, which from the name aligns

with the concept of postmodernism. The aim of this interview is to come up with various representations of the self from the data gathered. The last two types are the transformative and the de-colonizing interviews. Both are based on a critical philosophical theory of power, privilege, and oppression. The de-colonizing interview works more to unveil injustices and advocate for justice (Roulston 2010).

Other writers also mention other types of interviews depending on each discipline or each theory or depending on how the interview is conducted. For instance, there are, the focused interviews or the phenomenological interviews in which they focus on individual experiences or on a stimulus (a videoclip, an image...) and data gathered from understandings and reactions of it (Merriam and Tisdell 2015). We can have an ethnographic interview that is well established in the practice of ethnography with participant observation. This type is merely concerned with the culture (the rituals, the myths; the hierarchies...). Mostly it is performed as an unstructured interview or a conversation-like interview (Merriam and Tisdell 2015). Another type of interview that became recently very common is the online interviewing. It can take place using virtual apps and websites or even using email. It is a more convenient way to collect qualitative data from participants who might be far from the researcher, or just cannot meet face-to-face for any reason (Flick 2018)

For the purpose of this study, semi-structured interviews were conducted with teachers and students as key actors in the teaching and learning process. We discussed their experiences and interpretations of the current language practices encouraged by their university or by themselves. I also asked them about their language use and preferred languages whether for teaching, learning, or for publishing and research, also, their language use outside university. I asked teachers about their students' language use inside classrooms and how it affects their (the students') academic progress. If there were any miscommunication/mis-instruction triggered by language, how can they be solved. In addition, we discussed the issues related to language and how can they affect the pedagogy of how things work at university education (See appendix 2 for the interview schedule).

Furthermore, I asked the participants about their attitudes which is an important aspect when studying people's linguistic behaviour and how they affect the policy in a setting. In implementing and evaluating language policies and practices, an essential consideration has to be the attitudes of those affected by them (Palviainen and Huhta 2015) thus attitudes are key to understanding the reasons why certain languages are viewed as suitable or not for use as a medium of instruction at universities (Reilly 2019).

Attitude according to Rokeach (Rokeach and Sciences 1968) is a set of beliefs, each belief is in turn composed of a cognitive, affective and behavioural component. This definition was criticized mainly by Fishbein (Fishbein 1965, p.108) who reported that a multidimensional definition of this concept may be troublesome not only in theory but also in research.

Agheyisi and Fishman agree that a definition of attitudes is: 'attitudes are learnt from past experiences, and they are not momentary but relatively enduring' (p.139). According to Agheyisi and Fishman, the studies and reports discussing language attitudes in the current sociolinguistic literature fall into three categories: 1- those dealing with language-oriented or language-directed attitudes. 2- those dealing with community-wide stereotypes impressions towards a particular language or language varieties and also speakers of a language or many languages. It also looks into the functions of languages, and finally 3- those concerned with the implementation of different types of language attitudes.

The second major category listed by Agheyisi and Fishman (1970) is the category most relevant to this study. It deals with the social significance of languages or language varieties. Attitudes towards a language or speakers of a language in a multilingual context (Agheyisi and Fishman 1970). Although the study of attitudes should not be exclusive to one category, consequently, the third category could also be very relevant. According to Agheyisi and Fishman, the third category discusses major topics like language choice and usage, language implementation and planning and also language learning...etc (Agheyisi and Fishman 1970).

To Fishman and Agheyisi (1970), the studies that are most relevant to language attitudes investigation are language choice and usage, and social significance of language varieties. My research addresses language choice and language use at a university setting. It also touches upon the social significance of social varieties that co-exist in the context of this research from the perspectives of the participants. Therefore, qualitative questions about attitudes were immensely useful as part of the interviews as they allowed gathering data and interpreting some language practices at Adrar University.

In addition to focusing on attitudes related to languages, I also asked them questions on how they identify their identity individually and collectively in terms of languages, and the level of acceptance of learning and using foreign languages. I asked students about their struggles in terms of language in the classroom and if their teachers or their institution offer any help. We also discussed the responsibilities of each part starting from the micro level to the macro level of policy and practice. And finally, I have asked them about justice and unfairness and if they recognize them. I asked them before we conclude to just recommend what they see as solutions and improvements of the current linguistic situation whether they were teachers or students.

Interviews varied in length between 20-50 minutes, averaging 30 minutes for students and 36 minutes for teacher. The interview was a combination of building rapport, asking general then specific questions, some are pre-determined, and some are follow-up and spontaneous. Interviews were held during and after classroom observation in order to get more informed discussion from what has been observed. Using qualitative semi-structured interviews, I have obtained some rich, in-depth data about individual experiences with regard to their language attitudes, language use at university, their input on linguistic unfairness and language rights and many other interesting themes that will be discussed in the coming chapters. The data gathered were transcribed then analysed qualitatively using a coding scheme.

4.12. Data transcription and thematic analysis

After gathering a sufficient amount of data, it is important to know how to manage it first, then analyse it. Interviews were transcribed fully from the au-

dio recordings. Because the interviews were held in different languages rather than English, the necessity to translate the recordings became urgent to make it easier for analysis. The interviewees were given the choice to speak in whichever language they prefer, and most of them went with Algerian Arabic, and French.

Transcribing in qualitative research is a central process to data organisation and management. According to Oliver et al. (2005) transcription can be seen in terms of a continuum with two modes: naturalism and de-naturalism. The first mode is very detailed where every utterance is transcribed, while the second mode depends on correcting grammar, eliminating interview noises like stutters, pauses, nonverbals (Oliver et al. 2005).

Adopting the naturalistic approach means that the researcher is considering language representation as in the real world (the conversation as it is). While adopting the denaturalistic approach conveys the impression that within our speech, there are meaning and perceptions that construct our reality (Cameron 2001). Denaturalised transcription is more concerned with the substance of the interview and the meaning shared during the conversation taking place (Oliver et al. 2005). Therefore, my own approach to transcribing the interviews is the denaturalised approach because it has less to do with the mechanics of speech, and more with the content of the interview itself.

Analysis of data is a recursive process that involves reading and re-reading of the database (McCarty 2015). For this purpose, I made use of the Nvivo software for qualitative data analysis to organize and manage the interview data after I transcribed it. Other types of data obtained from observations and course documents and signs are managed manually without any software.

The process of data analysis started with identifying parts from the dataset that corresponded to the research questions. According to Lincoln and Guba (1985) a part or a unit previously identified from the dataset should be two things: heuristic in which the unit reveals information and can be interpreted beyond that particular piece of information (Lincoln and Guba 1985). The second thing is, a unit should be the smallest piece of information that can stand

alone without any additional information except for the broad understanding of the context (Lincoln and Guba 1985).

Reading the textual data from interview transcripts or observation notes then assigning a short phrase or a word for certain passages is called coding. According to Saldaña (2015) coding is defined as ‘...a word or a short phrase that...assigns a summative, salient, essence-capturing, and/or evocative attribute for a portion of language-based or visual data’ (Saldaña 2015, p.3).

Coding is important because each dataset gathered needs identifying notations to make it easier for the researcher to access in the analysis stage and in the writing-up of the findings stage (Merriam and Tisdell 2015). There are many coding strategies that can be used depending on the properties of data we have. Saldaña (2015) identifies 32 strategies to coding including, structural coding, descriptive coding, in vivo coding, process coding, initial coding, affective coding, narrative coding, hypothesis coding, causation coding and many others. Each has its different characteristics in analysing and interpreting data (Saldaña 2015).

In this study multiple coding strategies were adopted because of the diversity of data gathered and the multiplicity of data sources. The different approaches to coding can be mixed as needed according to particular data, research aims, methodological approach (Miles et al. 2018). In the analysis of the data of this research I mixed a couple of coding techniques that I will give examples from the data. More details about the data and the yielded codes and themes are discussed in later chapters dedicated to the analysis and discussion of these findings.

I have treated some segments of my data using process coding, concept coding, values coding (Miles et al. 2018). Process coding conveys observable and conceptual actions in the data that are intertwined with time -it is represented in a form of a gerund- examples from the data can be: code-switching, code-mixing, promoting equality. Concept coding is widely common in qualitative coding where a concept is a word or a phrase that represents an idea broader than a single item or an action (Saldaña 2015). This coding technique is useful when the researcher wishes to make the data more abstract and

generalisable. It suggests an idea rather than an observable behaviour (Miles et al. 2018) for instance: coping with language difficulties, students' responsibility, and capability.

The last approach to coding is the values coding. This approach applies three different types of related codes, those that reflect attitudes, beliefs and values of the participants (Miles et al. 2018). Values are the importance we attribute to something, while attitude is our idea or our feeling about something, and finally a belief is a system that include both values and attitudes in addition to our personal knowledge, experience, opinion, prejudice, morals, and other perspectives of something (Saldaña 2015).

Once the coding is done, the codes can be gathered into categories according to similarity in themes. A categorisation is also based on formulating headings for parts of the dataset which then are used for thematic comparison (Flick 2018). A theme is the outcome of coding and categorisation, or analytic reflection (Saldaña 2015). A theme is more abstract in nature and not in itself coded (Saldaña 2015). The generated themes are the foundation of interpretation, claims, and theoretical suggestions (McCarty 2015). The yielded themes mainly addressed language behaviours (code-switching and languages used for instance), attitudes, academic performance (during assessment for students, publishing for teachers for instance), perceptions of unfairness according to participants, and a few more. The analysis of these themes is presented in chapters 5 and 6.

4.12.1. Thematic analysis

Thematic analysis includes within it both processes of transcribing and coding the data to obtain a set of workable themes. The two processes of data management are already mentioned as part of how to start treating data in the previous section, then we come to mention the overall approach of analysis which is thematic analysis in this case.

Clarke and Braun (2016) propose this method to analyse a dataset mostly in social and human sciences. They suggest this method as an approach combining discourse analysis, narrative analysis, and grounded theory. They define thematic analysis as

A method for identifying, analysing, and reporting patterns (themes) within data. It organises and describes your dataset in rich detail. However, frequently it goes further than this, it interprets various aspects of the research topic (Clarke and Braun 2016, p.297)

The application of this method requires the researcher to identify some elements before embarking on the analysis journey. Clarke and Braun (2016) recommended to identify first what are the themes relevant to the study. A theme is an identified pattern response or meaning within a dataset. The next consideration is deciding the aim of the analysis, if it is a rich description or a detailed analysis. They also provide a distinction between inductive and deductive analysis. The first one develops codes and themes from the dataset. The second one uses the theoretical and analytical interests to decide on codes and themes from the dataset (Clarke and Braun 2016). A distinction is made by Clarke and Braun in terms of how data is analysed. Thematic analysis can be undertaken semantically or in a latent approach. The former means taking the superficial, explicit meaning of data. The later means 'identifying and examining the underlying ideas, assumptions and conceptualisations and ideologies' (Clarke and Braun 2016, p.298).

According to Clarke and Braun, doing thematic analysis require following a certain guide to find that meaningful pattern that could lead eventually to answering the research questions. It starts first by transcribing any data obtained into a textual form of data with careful reading and re-reading of the transcripts several times (Clarke and Braun 2016). The second step is coding in which the researcher chooses between the semantic or the latent coding as mentioned previously. In the case of this research, both techniques to coding have been used to cover both sides, the explicit and the implicit. The next step is to sort the produced codes into themes then refine them into more focused themes and subthemes. It is always important to review and sort the themes to match the theoretical points of the research and the stated research questions. Which leads to the final step of writing the results from the study at hand (Clarke and Braun 2016).

4.13. Presentation of extracts and languages

In the analysis, the dataset contained more than one language. It contained at least 4 languages namely Standard Arabic (SA), the formal variety of Arabic, Algerian Arabic (AA), a spoken variety of Arabic that is mixed with other codes, French, and English.

The languages used in the extracts from the dataset are Standard Arabic written in Arabic script, Algerian Arabic written in Latin script, and French in Latin script as well. The reason why Algerian Arabic is written in Latin script is due to its nature. Algerian Arabic, as mentioned earlier (see chapter 3 section 3), is a spoken language. Algerians have the choice to write it either in Arabic or Latin script when chatting or messaging or in different media. I have chosen Latin script here for the purpose of clarity and easy access.

Extracts in other languages are always put in brackets to be distinctive in the text, followed by a literal translation to English in square brackets for the readers to understand what is being said. Translations are my own attempt.

4.14. Conclusion

This chapter has laid down the methodological foundations of this research and how it is conducted. It started with a general introduction to the approaches used in this research. Then, the significance and outcomes of this study were highlighted. The research questions were stated then the research strategies which are a case study research design and ethnography. The chapter also explored the epistemological dimensions and how the researcher is positioned vis-à-vis the research. Following this, the setting, the participants and how access was obtained were all elaborated in detail. Next, the data collection process was also explained in detail and finally the chapter explored how data was organised and managed then analysed. The next chapter, therefore, will be the start of the analysis of the data. It will cover mostly the aspect of language policy in Adrar University in its explicit and implicit form, and how this will affect the people living under it.

5. Chapter 5 Language Policy in the University of Adrar

5.1. Introduction

In the previous chapter I established the methodological framework of this study where I described how data was gathered and how it is analysed. This chapter presents findings from both classroom observation and the participants' own perceptions of what is a language policy and how it affects them on a daily basis. This chapter will introduce manifestations of policy implementation in both the explicit and the implicit forms. It will focus more on the language used in classrooms and different linguistic behaviours. This section will attempt to answer the following research question: *How is the Algerian language policy operationalised at the level of university education generally and in science and technology classrooms specifically?*

Answering this question is important to understand the linguistic situation of the context of this study which relates to schools of science and technology in Adrar University. They help identifying the nature of the implemented language policy and how people perceive it. They will also pave the way to understanding the justice aspect and how can a language policy be assessed based on the literature between our hands, and the experiences of participants' and their aspiration. Answering these questions will also help understand the Algerian linguistic landscape which has been understudied for a long period of time.

The findings presented in this chapter in the form of excerpts related to the themes that emerged from participants' own experiences and from the observations of different linguistic behaviours. The participants were previously mentioned in chapter 4 and will be also mentioned here for clarity and easy access. These are referred to by SP (Student Participant) and TP (Teacher Participant) and their comments are quoted throughout the chapter.

Therefore, this chapter will explore language policy in the university of Adrar in both forms the explicit and the implicit. It starts with exploring the explicit language policy that is manifested in official papers and legislations. It also explores the educational language policy that is declared by the 'canevas' the ministerial authorised curriculum. The following section (5.3) offers an analysis

of the implicit language policy presented by the language usage and the different linguistic behaviours of the participants. Finally, the chapter concludes with a brief summary of the main findings.

5.2. The explicit language policy: the national and the official

The Algerian government clearly state a bilingual language policy in its constitution. This status has not always been the case. Since its independence from France in 1962 it adopted a monolingual policy of Arabic only with a wide use of French as a remnant of the coloniser, and because the elite was entirely francophone. As per the last constitutional amendment in 2016. Tamazight gained an official status after only having a national status. Article 3 and 4 in the Algerian constitution clearly declares the status of these two languages as follows (Algeria 1989 (reinst. 1996, rev. 2016) Constitution - Constitute. [no date]):

Art 3

Arabic shall be the national and official language.

Arabic shall remain the official language of the State.

A High Council for the Arabic Language shall be established under the auspices of the President of the Republic.

The High Council for the Arabic Language shall be assigned the special task of working towards the affluence of the Arabic language, the generalisation of its use in scientific and technological fields and promoting the translation into it for this purpose.

Art 4

Tamazight shall also be a national and an official language.

The State shall endeavour to promote and develop it in all its linguistic varieties in use throughout the national territory.

An Algerian academy for the Tamazight language shall be established under the authority of the President of the Republic.

It shall be supported by the work of the experts and assigned the task of providing the necessary requirements to develop the Tamazight language in order to integrate it as an official language in the future.

The modalities of implementing this Article shall be stipulated by an organic law.

The Algerian authorities refused to adopt any language policy supporting the use of French explicitly because it was perceived as a form of neo-colonialism (Gordon 1978, p.172). This has been manifested through the constitution for decades, but this has not forbidden officials to use it freely in public. The former president Abdelaziz Bouteflika used both French and Arabic in his public declarations which was seen as a breach of the law, specifically the content of article 5 known as 'Act N° 91-05' that states the following:

All official documents, reports, and minutes of public administrations, companies and organisations are to be drafted in Arabic. The use of any foreign language in deliberations and discussions in official meetings is forbidden.

Bouteflika was unlike his predecessors who were very conservative especially to the idea of banning French as a colonial heritage and promoting Arabic and Islam. He was an advocate of bilingualism and plurilingualism and worked to manifest it in his speeches and reforms. However the majority of his aspirations was not realised in policy (Benrabah 2007d, p.28). Bouteflika's way of seeing things clashed with some of the elite who are in favour of the hegemony of Arabic, he declared to a newspaper that '*For Algeria, I will speak French, Spanish and English, and if necessary, Hebrew*' (El Watan, 2000, p.23). To emphasise his views on plurilingualism Bouteflika also stated in live television in 1999 that:

'... Algeria is part of the world and must adopt to it, and that Arabic is the national and official language. Let it be known that an unrestrained opening to international language ...does not constitute perjury. In this domain we are neither more Arab nor intelligent than our Arab neighbours. To move forward, one must break taboos. This is the price we have to pay in order to modernise our identity...' (El Watan, 1999, p.3)

This was the starting point of the language debate that was dormant for a long time since the independence of the country and the introduction of the Arabisation policy. This new 'policy' in favour of bilingualism aimed to, ac-

According to Vermeeren, bring back some Algerian intellectuals who went into exile (Vermeeren 2004). It could be a sign of the decline of Arabisation because the economic and the political situation changed (Bouhadiba 2017, p.500). Bouteflika's use of French openly in public led to its use among the public without the feeling of guilt (Bouhadiba 2017, p.168) this phenomenon was named 'the Bouteflika effect' by Algerian sociolinguists. It was an important phase that helped the continuity of the existence of French in different domains including higher education. This effect illustrates Tollefson's description of 'the role of political leaders in shaping public discussion of language issue'(Tollefson 2010, p.424) which was very powerful as it did not need any official policy documents to be implemented.

5.2.1. The educational language policy: the medium of instruction in science and technology domains

The acknowledgement of French as part of the Algerian linguistic profile was perceived as a strategy to modernise Algerian institutions including universities and higher education. This process has been described by many observers as 'a real failure' (Grandguillaume 1997, p.237). Indeed, the return of bilingualism was seen to be promising yet, in education it was not very well planned for.

The main language of instruction in higher education is French especially in Scientific and Technical branches (Benrabah 2007d, p.98). This reality changes depending on each context because every school uses the pedagogical means available to deliver their courses with the languages most used by their students and staff.

The presence of French persisted at the level of university since the independence of Algeria in 1962. From the 1970's the government has been trying to Arabise universities but that remained an obstacle (Kashani-Sabet, 1996). The complexity of both the linguistic situation in the country and the university mechanisms allowed this confusion to persist. From the data gathered we can understand roughly the nature of these complexities and why neither complete Arabisation nor Frenchification of the sector has succeeded. Interviewing teachers and students and asking them about the na-

ture of policy in its explicit sense, and how they perceive it, has resulted in three categories, from which the themes will be introduced:

- 1) There is no official educational language policy, or any law which indicates which languages should be used at the level of university.
- 2) The curriculum designers and the teacher trainers put a pressure on everyone to use a certain language (in this case: French).
- 3) Circumstances oblige teachers to teach in a particular language like teaching resources, content of a module, presence of foreign students...etc.

5.2.1.1. Absence of an official Language policy at the level of university

Many participants who have experienced language policy, especially among teachers, reacted towards the question 'is there any language policy or law to organise the language use at the level of university?' in different ways. The first category of participants reacting to this, said that there is no concrete document that clearly states which language or languages are encouraged or discouraged to be used at the level of university in teaching. Teachers like TP6, TP1, and TP9 were very certain that there is no policy which governs the use of language in their schools. Whereas other teachers namely: TP7, stated that:

- 1- I don't not know if there is any policy and if there is, I have not heard of it.

5.2.1.2. Curriculum and teacher training

While some of the academic staff clearly declared that there is no official language policy in documents. Others preferred to explain their experiences with language policy in terms of the curriculum created by specialists with the agreement of the Ministry of Higher Education. An extensive document called 'canevas' among the academic milieu in the university of Adrar. This document plays the role of a curriculum. It is created at the level of university and then sent to the ministry to authorise its use. Many teachers interviewed spoke about the 'canevas' and its importance in deciding the language of the instruction of the course. TP8, one of the teachers in the school of Biology said that:

- 2- ...as a fact, that I am certain of, there is no law or rule that govern the use of a given language, Arabic or French or... we use the.... The curricula that the ministry send us, I only speak of the scientific domain, and also, our training was in French and all the curricula are designed and written in French... we as I said, were trained in French, so automatically the first thing that come to our mind is to teach in French regardless, because nothing says what language to use, I mean I can teach in Arabic and I won't have an administrative or legal problem.

TP8 in his views mentioned the first aspect which is the absence of a language policy, then he emphasised on the fact that curricula created in French are the main reason why French is used. He also mentioned that the teacher training provided pre-service, and in-service are offered in French. This view is shared between the majority of teachers interviewed. TP9 a teacher in the school of Matter Sciences mentioned the importance of the 'canevas' in deciding the medium of instruction. He explains why they have to use French as the principal medium of instruction:

- 3- ...of course, they [teachers] have to. By order of the 'canevas' which is a document created in the university by the specialty creators. It is most of the time in Arabic or French depending on the specialty itself. In our domain it is of course in French, but recently some curriculum designers are creating it in English. The 'canevas' then is agreed by the ministry of higher education. This works like a policy document for instance.

TP2 another teacher based in the school of engineering agrees with both teachers' points of view. Although they do not personally know each other. TP2 stated:

- 4- We have to use it [French language] because in Adrar's university, French is the language of science and technology... the specialty's responsible creates with other associates a document that the ministry agrees on. This document is very important in creating the curricula of the specialty. In our case, this document was

written in French of course, using resources in French as well. This led to us automatically using French while teaching and implementing the content of this document which is considered as a law according to the university.

This document called 'canevas' is important. It plays a role of a guide that indicates which language to be used. However, this is not a policy document because it does not oblige fully the use of the language it was originally authored in. There are other factors deciding on the medium of instruction that will be discussed in the next sections.

5.2.1.3. Other factors influencing the choice of the medium of instruction:

Other teachers expressed additional factors that could influence their use of a certain medium of instruction as a stated policy. TP11 for instance, a teacher in the school of renewable energies, said that he uses three languages (Arabic, French, and English) depending on the content of the module and the sources used to create the course he teaches. He is well established in the industry of energy where English is widely used. Some other teachers like TP5 who was the head of school of Renewable Energies, explained why sometimes academics and teachers use a variety of languages. He stated that:

5- '...the training path and the whole course program are in French. Everything in French ...the planning, the resources...everything... yet, in the classroom we use a mixture of languages, sometimes French, sometimes Arabic sometimes both... what's important is that they understand the lecture and catch the information.'

This illustrates that, indeed the existence of a document such as the 'canevas' can organise language policy at the level of this university. However, the teachers and the students alike cannot adhere to such a document because it is not an official policy or a statement of law. This flexibility is explained in section 5.3 about implicit language policy.

5.3. The implicit language policy: how languages are used

Language use and common linguistic behaviour in this situation inform us about the nature of the language policy and how it operates. This section will explore language use patterns in the classroom setting from observations, and also as reported by participants in the interview recordings. It will also look at different linguistic behaviours such as code-switching, Translanguaging, diglossia, translation and others.

5.3.1. Language use among students and teachers

Findings from previous research into language use in African universities indicates that European languages are often used in universities (English and French most notably) instances from Cameron (Kouega, J. P. 2008), South Africa (Dominic 2012) and Morocco (Chakrani and Huang 2014) confirm this. These studies also show that in similar contexts multilingual practices occur in order to help student comprehension and enhance rapport between students and staff (Reilly 2019).

This section will present the reported language use from the perspective of participants in the interviews, and also as reported by observations conducted in the classroom. Participants' linguistic profile and their scientific and technical specialties are mentioned in the methodology chapter.

When reporting language use in classrooms the majority of participants, whether from students or staff, shared a common view that French is the language of the classroom environment and all interactions, discussions, and questions should be in French only. From observations conducted, out of 20 lectures and seminars and lab sessions 19 of them adopt French as the main medium of instruction in speaking and writing, meaning, in the delivery of the lecture and the written notes on the board or in the handouts and course documents given to the students. It is also worth mentioning that the use of French in these sessions is not rigid, teachers use other languages like AA and SA. This will be further discussed in the next section. From observations also, it was recorded that a variety of languages were used in the classroom among teachers and

students to different degrees and for different purposes. The following section will elaborate on each language and how it is used by both students and teachers.

5.3.1.1. *Teachers*

In observations, I attended around 20 sessions of 30 hours (1.5 hour per session) including lectures, seminars and lab sessions. The teachers involved in the observation were the ones I interviewed, in addition to others I did not have the chance to interview. First, the language that was widely used by most teachers was French, because it is the language of the course. French is used as the main medium of instruction which means all deliveries and explanations are in French. Terminologies and jargon are exclusively in French, terms like (*la puissance*) [power](*La resistance*) [resistance], (*La resistivité*) [resistivity]. Also, equations, chemical symbols and metals are all used in French exclusively. Formulations and mathematical calculations and relations, numbers and units are all in French. Examples of this can include Fe (Fer)[Iron] Cu (Cuivre)[copper], ($h =$ *Hauteur*) [Height], ($V =$ *Vitesse*) [Speed].

French was also used in illustrating graphs and figures, and used in writing notes on the board, presentations and PowerPoint slides and others. It is also used by most teachers to dictate to their students some important definitions or notes that are not mentioned in the class handouts which are in turn written in French with their list of readings that is entirely in French most of the time. Also, from observing some lab sessions, the function of the machines there are explained by the teacher in French.

The other language that was widely used is AA (Algerian Arabic) which is the common first language for most participants. It is noticed that AA is used always for greetings when the teacher enters the classroom. The common expressions for greetings used are (*Asalam Alikoum*) [Peace be upon you] or (*sbah el khir*) [good morning]. AA was used many times and very often for different purposes as well.

This language is used mostly in the following cases as observed in many classes, the teacher uses AA to explain some complicated concepts for students to understand. It is also used to summarise some points after the teacher has explained them using French. Teachers also use AA to attract students' attention or emphasise something important such as (*ansija hia majmouaa mina lkhalya... wesh hia mohema taahom?*) [Tissues are simply a group of cells... what is their mission?] -TP8's lecture of Animal Biology-, or by using words like (*wesh hada?*) [What is it?] when pointing on a graph, (*wesh dir?*) [what does it do?] when trying to make students more engaged.

AA is often used by teachers when giving real-life examples to illustrate a concept in class (*Matalan, usine taa plastic...*) [For example, a plastic factory...], (*lokan nchofo tyarat kifash ykhadmo...*) [if we look at airplanes and see how they work...] -TP3's lecture of Industrial Automation-.

Algerian Arabic is used also when trying to directly address students or ask them questions like (*Andkoum soual?*) [Do you have any questions?], or to check their understanding (*Fhamtou?*) [understood?], (*wadha yak?*) [is this clear?]. It has been noticed too that teachers used more AA when they interact with students individually, when discussing individual concerns, or answering students' questions that were asked in AA too, and also when translating something not known to students. Other uses of AA in the classroom could include, spontaneous words and expressions used unconsciously like (*aya..*) [so that..], (*wah*) [yes], (*aywah*) [exactly], (*chofo*) [look], (*saha*) [okay], (*ki chgo*) [just like]... and many others. Last but not least, the use of Algerian Arabic is very common when teachers and students interact with each other outside the context of the lesson in the form of informal chats (*raham kharjo les resultats taa semester roho chofohom...*) [the results of this semester are out you can now check them] (from TP4 session). Finally, the other use of AA that was recorded from observations is preference. Some teachers prefer to use Algerian Arabic instead of French in delivering their lectures (TP12 lecture about Energy Stocking), this preference can be for

any reason, the teachers may opt for AA for their students or for themselves because they feel more comfortable in using this language.

The languages the least used by teachers in all classes are Standard Arabic, and English. For some teachers, on the other hand, Standard Arabic was useful in explaining some scientific or technical concepts that the students may have seen in their secondary education. SA also used commonly in translating some terminologies for instance (*Wesh hia la densité d'electron.. هي كثافة الإلكترون*) [What is the density of electron ..it is the density of electron] -translated literally from both AA and SA to English- (From TP7's lecture of Electronics). It is noted also that SA is used in a very irregular way such as throwing words in the middle of a discussion or an explanation that is entirely in French or a mixture of both French and AA. For example, words like (المساحة) [the surface], (دائرية) [rounded], (الميل) [inclination], (الإرتفاع) [the height], (انقسام خيطي) [mitotic split] and so many more. It also can be used like AA to emphasise something in class.

For English, the classrooms that were observed lack any use of English by teachers except for one teacher -TP3 in his lectures about Industrial Automatism- who used it to inform his students of important terms in their field. Examples of the used terms were (*hard and soft transformation systems*), (*hard-wired*) and many abbreviations that were inspired by research published in English journals -as he explained to his students-.

To sum up, every teacher had their own way of using language which they adjusted according to either: personal preferences or the needs of their students. The very common pattern was alternation from one language to another (French-AA-SA and some English) and not a single language is used alone. It is worth mentioning that teachers who reported being Tamazight speakers, spoke less AA and SA in their classes (TP6 in his lecture of Electric Commands. And TP10 in his lectures about Corrosion and Equipment Protection). Other teachers who reported speaking AA as their first language, used it very often in their classes.

Also, for teachers having foreign students in their classes, they paid extra attention to what language they used to accommodate the needs of all students.

5.3.1.2. *Students*

In the case of students, recorded observations from classrooms show that the majority of students used either AA or French very often and SA less often with no trace of English whatsoever. Students used French mostly to participate in the discussion of the classroom and ask questions, however, most of the time it was limited to special terms and jargon of the field. The rest of the speech was either in AA or a mixture of both AA and French. These patterns indicate a noticeable code-switching which will be discussed further in the following sections. Numbers, names of elements and units were all pronounced in French by students, yet a few prefer to say them in Standard Arabic. This can be explained in students relating to previous education that was entirely in Standard Arabic.

It was also observed that only Algerian students opted for different codes in one utterance (from French to Algerian Arabic to Standard Arabic) while international students have more of a fixed language use pattern. For example, students from Mali speak only French, and students from Western Sahara and Palestine speak only Standard Arabic.

Some other linguistic behaviours that were observed during classes include the following: in classes where French is 100% used such as in TP10's lectures and seminars, students appeared to make more effort to use French. This was apparent because many students used French in a way that does not negate the existence of AA, yet the use of French compared to other classes was very apparent. On the other hand, in the same session, some students struggled more because of their competency in the French language. A student at the end of one of TP10's sessions asked a question in AA then got his answer in French, the student replied in AA (*besah mafhamt tachi!*) [but I did not understand anything about it!] and the teacher told him to refer to the course documents.

Another instance occurred with TP6 who prefers to run his sessions in French only. A mature student asked him a question in SA and got his answer in French as well. The student did not comment but seemed to understand the answer because he was nodding and wrote down some notes. In a different class with TP3, who also prefers to run his sessions in French only with a strict use of AA and highly technical English terms, students rarely say anything in French. If they wanted to say something, they used AA, and the teacher had no problem with that. Also, he would gladly translate a word or a term they did not understand to AA.

In observing many classes of different levels (from first year undergraduates to master students) I have noticed that first year students tended to have more difficulties with French. Especially in understanding new terms. In a lecture about animal biology, TP8, was very patient and very flexible with so many questions about translating terminologies from his students. For instance, one student asked (*ostad wesh homa 'les glandes'*) [Teacher, what are '*les glandes*'?] and the teacher replied (*homa الغدد*) [they are *the glandes*] translating to SA. TP8 got to a point where he himself struggled to find translations of terminologies from French to SA. An example was caught when explaining the mitotic splitting of cells, he was trying to say it in SA to make students relate to this concept, because they have already studied it in secondary school, but the only difference is that they have seen it in SA. He was trying to explain the kinds of cells and giving the equivalent of each in Arabic. However, this was challenging, and he kept repeating (*wesh ygolollha?...aah ya rabii! w hadi ygololha emmm..3awnoni chwia*) [What's its name?... oh my God! And this is called emm... Help me guys...]. In another instance, a student asked for a translation for a term, TP8 did not know the name of it in SA so he explained the features of it instead and asked them to use dictionaries when they feel trapped.

Attending multiple classes that offer different types of knowledge and different exercises allowed me to recognise an interesting reality about the majority of the students involved in this study. The first years always struggled the most with French. In the sense that they always opt for SA

in their discussion and participations and make many mistakes if they attempt to use French. Second and third years students seem to master the use of French better. As mentioned before, this trend is likely because first years have just moved from secondary education where every subject including STEM subjects were entirely studied and taught in Standard Arabic. Another tendency that caught my attention in observing multiple classes, is that the majority of students perform better in modules that deal with mathematical calculations and problem solving more than modules that depend on a theoretical or an explanatory nature.

Finally, language use tendencies among students are characterised as being fluid and changeable according to each individual. Also depending on previous education experiences and cultural backgrounds. The common pattern among student is the immense use of AA as the mother tongue of the majority of them. Then, a discreet use of French and SA. For foreign students, the pattern of language use changed according to the cultural background of each. Also, the use of certain languages changed with time as students moved from one level to the next.

The next section will report and discuss the salient linguistic behaviours in observing classrooms and in what participants have experienced from points of views of teachers and students through the interviews.

5.3.2. Salient Linguistic behaviours

In this part of the chapter, I report on data from both observations and interviews concerning practices like codeswitching, translanguaging in the classroom, translation, diglossia, and other behaviours that cannot be classified under any one of these.

5.3.2.1. *Code-switching and code-mixing*

Among the very common linguistic phenomenon in this context is code-switching and code-mixing. CS has been defined as the alternation between two or more codes (different languages or dialects) in one conversational context. This alternation can occur between sentences or within one sentence (Bokamba 1988). It can also be defined as 'a feature of stable bilingualism in communities where most speakers can speak both

languages' (Gardner-Chloros and Gardner-Chloros 2009, p.20). In the study, countless instances of code-switching occurred within the classroom context and outside it. For clarity reasons the term code switching is used to refer to both code switching and code mixing.

Code switching happened from and to different codes. The most common one is switching from French to Algerian Arabic, then French to Standard Arabic, then Algerian Arabic to Standard Arabic and often combination of all these codes in one utterance. In the next section I will be reporting both, what I observed in different classrooms, and the experiences of students and teachers with code-switching as they expressed it in the interview recordings.

5.3.2.1.1. French to Algerian Arabic (AA) and vice-versa

The patterns of code-switching are not all the time predictable and organised. Each individual switch back and forth depending on their personal preferences or to fulfil the needs of the present circumstances. For instance, teachers tend to code-switch more often to accommodate the different linguistic needs of their students, because each student has a different language competency in the medium of instruction. Examples from observations included: (-the parts in French indicated by being underlined. The rest of speech is AA-).

- 6- ('*Andkoum hna le même niveau... donc wesh ydir ytlaa mn réervoir...'*, '*Naarfo le début volumique c'est quoi?*') (TP2)
- 7- ('*donc, chofo f la phase gas ykon stable ombaad f la phase liquide on a deux stages : stagnant puis liquide'') (TP11)*
- 8- ('*dok chkoun yaatina la charge kifash tkon ?*') (TP13)
- 9- ('*win kayen les changements d'énergie' wktach tkon l fog ? fel hala taa le barrage ?*') (TP12)
- 10- ('*La transmission de charge wesh fiha ?' 'chahoma les étapes ?*') (TP5)
- 11- ('*La prochain tkon kifkif wela la ?*') (Student asking a question in TP12 lecture)

- 12-('Quelle est le but taa had system ?' 'lokan yji system, les deux sont équivalents') (TP6)
- 13-('Had l'electron va se déplacer w rah ykhali un creux') (TP7)
- 14-('nkder nedi l'interval zero-cinq?) (Student asking a question in TP14 seminar)
- 15-('Les spermatozoïdes sont des cellules reproductive... ombaad ykhroj le sperm avec le liquide') (TP8).

5.3.2.1.2. French to Standard Arabic (SA) or vice-versa

In other cases of code switching or mixing, some students and even teachers opted for standard Arabic in their speech to deliver their message. The use of Standard Arabic is not as common as the use of Algerian Arabic. However, its use can be explained in terms of teachers trying to make students relate to what they have seen before in secondary or middle education. It can also be explained in terms of personal preferences and how francophone the person is.

There are some examples collected from real-life interactions in the classrooms I observed for the purpose of this research. Again, Arabic is written in its script, AA in latin script and French is underlined to help the reader distinguish each code. Translation is provided in square brackets:

- 16-('had الإلكترون rah ykhali فراغ [This electron is going to leave a void] 'moch la même li المنزل في المنزلهما في المنزل...') [..not the same that we use in the houses](TP7)
- 17-('إذا إعتبرنا أن عدد الإلكترونات par exemple.. عندنا فقط الإلكترون لي ينقل الكهرباء ' محدود c'est-à-dire...')[we only have électrons who can transmit electrical current, for example let's suppose in this case that the number of electrons is limited... which means...] (TP9)
- 18-('dok chkon yaatina إتجاه الحقل kifash ykon' [now who will give us the direction of the feild ?]) (TP13) Students answered his questions using SA 'يكون موجب أستاذ' [it is positive]
- 19-('الانتقل ykon d'une phase a l'autre..') [transmissions happens from one phase to the other...] (TP11)

In the interviews, when I asked about whether both teachers and students code-switch, and if they do, then why the answers were similar to some extent. Some teachers said that they only code-switched from French to Arabic because of their student. Teachers argued that code-switching does not happen inside their classrooms only, but even outside university. TP2 for instance states that *'In the classroom I use many languages to convey and deliver information to my students... yet I find myself code-switching from mainly French at university to mainly AA at home!'*. This is interesting because code-switching does not only occur at the level of Adrar university, but also is a reality in the lives of Algerian people everywhere they go.

TP3 had other reasons why he code-switches in his classes. He said *'I use multiple languages to be fair to all my students... there are students from Mali who understands only French, and other Algerian students who understand only Arabic'*. TP7 shares the same reason why she opts for many codes in one situation, she claimed that *'the diversity of my class makes me alter languages to accommodate their needs especially that I have students from Mali and others from Western Sahara...'*. She also said that her switching from one code to another is sometimes a personal preference. She reported in her interview *'... sometimes I just feel comfortable using French and Arabic together... even when I teach technical English, I switch back to Arabic and French...'*

TP6, on the other hand emphasised only one reason why he code-switches to Arabic, although very little compared to other colleagues, he said *'...we sometimes mix languages in the classroom because honestly the competence of students in French is below average'*. He continued to say that *'...I am obliged to use Arabic with French; I have to deliver my message straight'*.

Students had similar opinions why they and their tutors code-switch. SP2 who is a third-year student in Science of Matter, explains why she code-switches at university and at home. She said, *'I use both French and Arabic at university, according to each module and each teacher, and*

according to my own capacity... at home, I also use Zenet [Tamazight] and Arabic [Algerian] depending on each situations too!' this again, confirms that code-switching is not only bonded by university but also a social reality in Adrar. SP6 and SP8, also students from Civil Engineering and Chemical Engineering agreed on why their teachers codeswitch. They noted that code-switching from French to Arabic happens only because of students. According to them, the level and competency of French among them is weak. That is why teachers use a lot of Arabic to make them understand the content of the instruction. SP8 and SP9 also added that some tutors switch from one code to another because of their own linguistic abilities. Some teachers simply find themselves more comfortable using one language over the other, which is the case of TP7 for instance.

Some of the participants agreed that is this phenomenon has a negative effect on everyone. TP2 for instance, says that the jumping from one language to another has negative effects on students because they will master neither language. He also commented on the necessity to use only French as it is the language of the scientific community. He thinks that using other languages beside French will make students dependant on them instead of mastering French in speaking and writing.

TP10 agrees with the views of TP2 on the negative effects of code-switching. He argued that using one language at a time facilitates the process of learning and teaching. He said '*this behaviour will trouble the student even more on exam days*' because, according to him, the language of the exam and the language the student used to comprehend the content of their module might not be the same.

Code-switching, or using more than one language beside the language of the classroom can be a way to create a relaxed environment for both lecturers and students. The purposes of code-switching differ from one person to another, but it has been observed that classes with more language alternation tend to be lively and interactional. Students then are encouraged to use their mother tongues freely even with the importance

of French in the context of university. The more multilingual the class the more engaged the students were. In classes adopting a monolingual practice, students' activity was low. For instance, in TP8's lectures students were perceived as more quiet than usual, probably because only French was used, however, students in this class made more effort to use only French without frequently alternating to AA or SA.

The phenomena of code-switching or code-mixing was noted to be a normal occurrence in most classes I observed. Lecturers in many cases code-switched unconsciously. The teacher would start in French and switch to AA, and no one would blink an eye. On the contrary, keeping a class run on one language was seen by students as unusual and inconsiderate of different people with different needs as some of them indicated in their interviews (SP10, SP2).

5.3.2.2. *Translation*

The other common linguistic behaviour that is widely spread among teachers and students is the act of translating or interpreting from one language to the other. The very basic meaning of translation is the process of changing something that is written or spoken into another language keeping the same meaning of the original spoken or written unites (Regmi et al. 2010).

It is very predictable to witness translation and interpretation being used in multilingual settings where multiple languages are used in one context. In the observations I conducted, this practice was used to varying degrees. Sometimes used more by teachers to clarify concepts to their students. Other times students ask for translations, or they help their lecturer in finding them.

When observing some classes like the lecture of TP9 on Electrical Commands, he was actively using both French and Arabic (AA and SA). He would ask a question in French then repeat the same question in SA. For instance, he said: (*Dans un circuit électrique, nous avons de nombreux composants, pouvez-vous me dire quelles sont les caractéristiques de chacun d'entre eux?*) then immediately afterwards said (في

(الدائرة كابين بزاف حوايج وش هوما و واش بيديرو) [In an electrical circuit we have many components can you tell me more about them please?] (TP9).

In another session with TP10 who preferred to run his classes using French only. A student asked him to translate some terms and the lecturer translated them to AA: (*'ostad wesh manatha l'effet nocif*) [what does l'effect nocif means] the teacher replied: (*'hwa taatir li ykhaser l'equiepemnt'*) [it is the harmful effect that could damage the equipment] the translated term being 'l'effet nocif' [the harmful effect].

Another example of how translation or interpretation is used is in TP8's Animal Biology lecture because it was very rich in scientific terms. Students asked many questions including those that asked for translations or interpretations to help them grasp the meaning of what was being discussed. For example, a student asked (*'kifash ngolo la différenciation bel arbia?'*) [how to say *la différenciation* in Arabic], the teacher responded (*'howa التمايز'*) [it is the differentiation]. There are numerous of other examples from different lectures and seminars that tell us that the use of translation and interpretations is a reality. This can be also in the form of students looking for meaning in dictionaries and google searches as one of the students indicated in her interview (SP2).

It is worth mentioning also, that most teachers do not mind translating terms and concepts to their students. However others prefer to ask students to look for it themselves as per TP8, and TP11 and others who were mentioned by students in the interviews. In summary, the use of translation as a pedagogical tool to convey the subject content is very common and very important, because it also helps students stay engaged and focused. It can also help facilitate the process of communication among staff and students. On the other hand, it can create a burden on both teachers and students because it is time and effort consuming.

5.3.3. Other linguistic behaviours

There are other linguistic behaviours that are not very apparent, yet they are important to understand in depth the linguistic situation of this con-

text in particular. In this, diglossia, and the phenomena of arabising French words are discussed in this section.

5.3.3.1. Diglossia

The definition of this concept is described as a situation where two dialects of the same language are used, like Algerian Arabic and Standard Arabic in Algeria, or two different languages that are used by the same speech community as French and Arabic in this case. What is special about diglossia is that one variety is considered to be higher than the other (High-Low dichotomy)(Ferguson 1959).

In observing classes and talking to students and teachers, their use of different linguistic repertoires for different functions proves the existence of diglossia even if they are not aware of it. Many teachers like TP2, TP5, TP3 said that French is the language of science education in most Algerian universities while Arabic or Algerian Arabic in particular are just helping tools in the process of teaching, and cannot be the languages of science, especially when referring to AA. French is always regarded as the high variety at university while AA is the low one, because it has no 'official' status.

The same case for standard Arabic and Algerian Arabic, although the difference in function is not prominent in this context because both are used to help in the transmission of lectures and seminars. The difference in function between the two varieties is evident in pre-university education. Where SA is the formal language used for instruction in the entire education sector from primary to secondary. Whereas AA is used again as a helping tool and a casual everyday way to communicate. The same way it is used at university with French.

5.3.3.2. Arabising french words

Another interesting common phenomenon I observed while attending classes, was the Arabisation of French words or making French words sound like Arabic by changing the structure or the phonemes. Examples of this are seen in TP5's lecture about Adsorption procedures and membrane separation, he used the word (*ytfixaw*) which is originally French

from the word '*a été fixé par...*' [it has been set]. He added the prefix 'yt' which in Arabic indicates the present tense and the suffix 'w' which refers to the plural form. Another word that was recorded is (*yprovokilek*) from the French word '*ça provoque*' [It provokes]. Again, the prefix 'y' and the suffix 'lek' which means for you, and it is used here to show that he is addressing someone with this speech. Another example from TP4's seminar 'homogeneous reactors' he used the word (*n'treaté*) which refers to the French word '*je traite*' translated literally as [I treat]. The prefix 'n' signifies 'I' as the doer of the action, and the rest of the word is the action.

5.3.3.3. *university signs*

During my visits to Adrar university for observation and interviews, signs in the university either by the administration or student societies and clubs were captured to highlight the significant linguistic landscape of the university of Adrar as this can give an idea into the multilingual nature of this context. In this section, I will showcase some official signage from university in indicating facilities or events or even timetables. I will also showcase some signs posted by student organisations that indicate events in their societies or clubs.

How languages are used visually in a specific location say a lot about the state of a language policy directly and indirectly (Hult 2018). Issues in language planning and policy helped the emergence of the field called linguistic landscape (Landry and Bourhis 1997). Linguistic landscape is the study of visual language use in public space (Hult 2018). It can also be defined as 'the visibility and salience of languages on public and commercial signs in a given territory or region' (Landry and Bourhis 1997, p.23). The study and the analysis of how language is displayed publicly helps researchers understand the beliefs and ideologies, the policy and practices in a certain space. The appearance or disappearance of a language sends messages regarding the centrality and the marginality of languages in a given society (Shohamy 2006). In the following paragraphs, figures are attached to analyse and illustrate the lin-

guistic landscape of Adrar University and its relation to the explicit and implicit language policy in this institution.

The very first sign any visitor of Adrar University can see is the main entrance's sign. In Algeria, the majority of universities have a wall surrounding their campuses so that they are all contained in one physical establishment. The main entrance of this university is shown below and was taken from their official website:



Figure 10. The entrance sign of Adrar University

In the entrance sign, there are two main languages that are used Standard Arabic and French. Both languages indicate the name of the university 'The African University of Adrar -Ahmed Draya-. On the top of the sign the long sentence in Standard Arabic says, 'The Ministry of Higher Education and Scientific Research'. This sign is an explicit manifestation of the language policy of this university: the use of Standard Arabic as a national and an official language of the country and the use of French that has no official status but widely acknowledged as the language of scientific and technical disciplines. Whereas a total absence of Tamazight from the signage although considered official and national by the constitution of the country.

As I came to the university campus where schools of science and technology are, I did not witness much of a change in terms of the languages used. But rather a different pattern where sometimes both languages (SA and French) were used, other times one language is used at a time. The other case is the existence of other languages. The following figures show the case for each.



Figure 11. The entrance sign of the laboratories building in the campus of ST (Monolingual sign in SA)

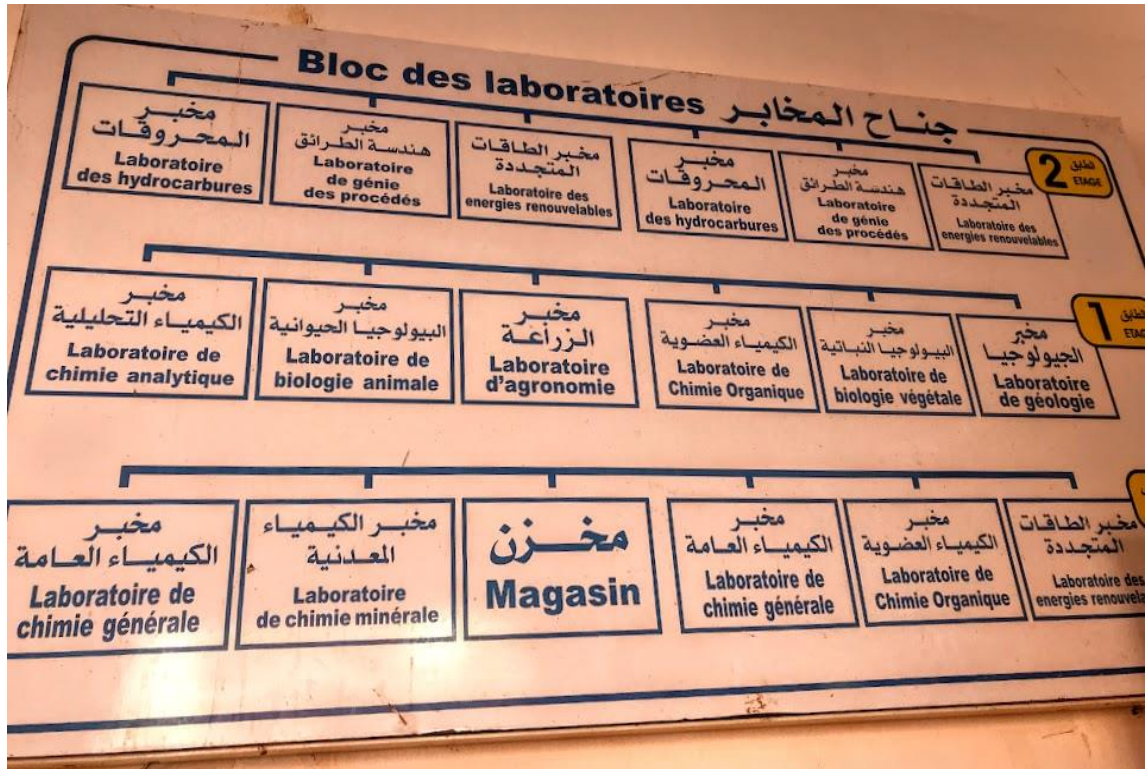


Figure 12. A map of the labs on each floor of the building (Bilingual sign in SA and French)

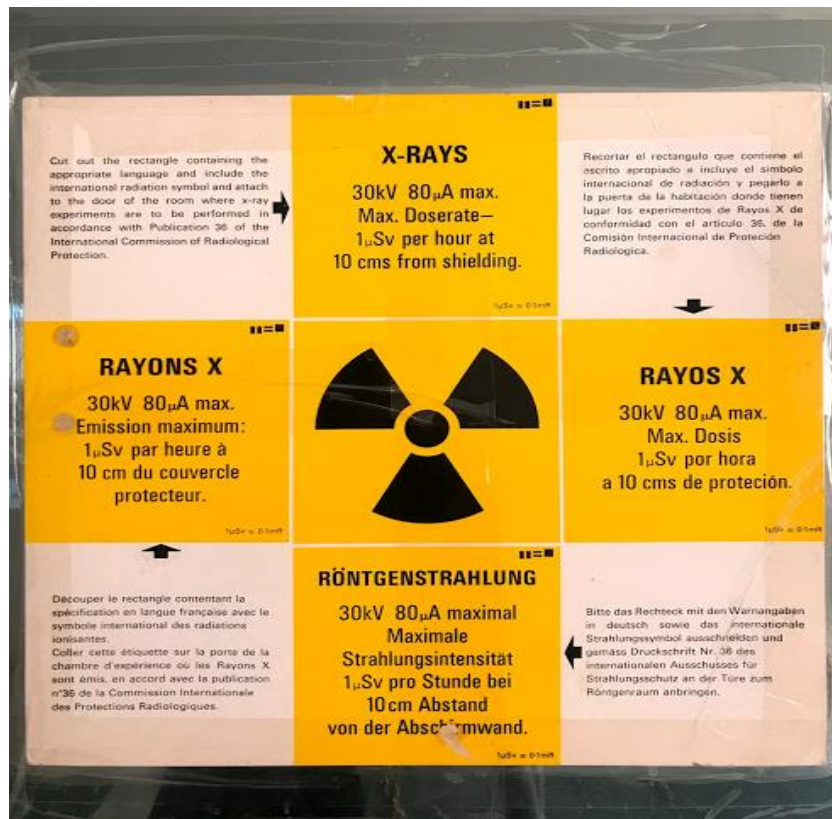


Figure 13. A sign on the door of a laboratory facility (A multilingual sign)

The figures 11, 12, 13 are signs located in different places in the laboratories area. As demonstrated, the languages used are very random and have no specific pattern to follow. The first picture (figure 11) is the entrance of the labs building and the monolingual sign says 'laboratories' in Standard Arabic although French is the common code in ST campus. The second picture (figure 12) is the map of the laboratory building located just by the entrance of the building. It is a bilingual sign using both French and Standard Arabic. The last picture (figure 13), interestingly, has less common languages in the domain of science and technology in this university. Besides English and French, it is seen that Spanish and German were also used. This use of multiple languages is perhaps due to the materials used inside the labs that are manufactured in different origins and have manuals written in different languages.

As I went further to lecture theatres and seminar rooms, I noticed different language patterns in signs. Pictures attached below are more examples of this diversity.



Figure 14. The back entrance sign of a lecture theatre in ST (Monolingual sign in SA)

In the entrance of each school's administrative office, there is a large announcement board where timetables and important announcements are displayed to students. The next figures show some samples of these timetables.

UNIVERSITE D'ADRAR
FACULTE DES SCIENCES ET DE LA TECHNOLOGIE
DEPARTEMENT DES SCIENCES DE TECHNOLOGIE

EMPLOI DU TEMPS 2^{ème} Semestre MASTER I Commande Electrique
-- G 02

	DIMANCHE	LUNDI	MARDI	MERCREDI	JEUDI
8H-9H30	Maintenance et Sûreté de fonctionnement C Salle : HTC 05 Mr Belbekri T	Diagnostic des défaillances des systèmes de commande C Salle : HTC 09 Dr Bellaili B	TP Asservissement échantillonné et Régulation numérique Salle : Dr Makhloufi S	TP Techniques de la commande électrique Salle : 203 Mr	Techniques de la commande électrique C Salle : HTC 05 Mr Ouledali O
9H30-11H	Asservissements échantillonnés et Régulation numérique TD Salle : HTC 09 Dr Makhloufi S	Modélisation et identification des systèmes électriques C Salle : HTC 09 Dr Bellaili B		Asservissements échantillonnés et Régulation numérique C Salle : HTC 05 Dr Makhloufi S	Ethique, déontologie et propriété intellectuelle C Amphi 2 Mme AÏT HAMOIDA
11H-12H30	Diagnostic des défaillances des systèmes de commande TD Salle : HTC 09 Dr Bellaili B	Modélisation et identification des systèmes électriques TD Salle : HTC 05 Mr Belbekri T	Techniques de la commande électrique C Amphi 01 Mr Ouledali O	Techniques de la commande électrique TD Salle : HTC 05 Mr Ouledali O	
14H-15H30	TP Diagnostic des défaillances des systèmes de commande Salle : 207 Mr Belbekri T	TP Modélisation et identification des systèmes électriques Salle : 207 Mr Belbekri T			
15H30-17H					

Année universitaire : 2019/2020

Figure 15. Timetable of the second semester of MA students, Electric Commands Course (Monolingual document in French)

UNIVERSITE D'ADRAR
FACULTE DES SCIENCES ET DE LA TECHNOLOGIE
DEPARTEMENT DES SCIENCES DE TECHNOLOGIE

EMPLOI DU TEMPS / 6^{ème} Semestre

3^{ème} Année « LMD » Domaine : S.T. Filière : ETT Spécialité : 3^{ème} ETT
Groupe 01

	DIMANCHE	LUNDI	MARDI	MERCREDI	JEUDI
8H-9H30	Automatismes Industriels TD Salle : GC 01 Mr CHABANI B	Automatismes Industriels C Amphi 01 Mr CHABANI B	Commande des machines TD Salle : Mme ARAMA A		Projet Professionnel et Gestion d'Entreprise Cours Salle : HTC 5 Mme KALLOUM
9H30-11H	TP Régulation Industrielle LABO ETT Salle : GC 9 Mme BOURBIA W	Régulation industrielle C Amphi 01 Mme BOURBIA W	Régulation industrielle TD Salle : GC 01 Mme BOURBIA W	Commande des machines C Amphi 01 Mme ARAMA F	Protection des réseaux Electriques C Salle : HTC 09 Mme MENASRIA
11H-12H30		Matériaux et introduction à la HT C Amphi 01 Mme MENASRIA		Matériaux et introduction à la HT TD Salle : GC 01 Mme Menasria	
14H-15H30		Maintenance Industrielle C Amphi 01 Mr CHABANI B	TP Automatismes Salle :	TP Commande des machines LABO ETT Salle : GC 9 Mme ARAMA F	
15H30-17H			TP Projet de fin de cycle Salle : Mr Dahbi H		

Figure 16. A timetable of the sixth semester for third years Electrotechnics Course (monolingual document in French)

Both pictures of (figure 15 and figure 16) are examples of timetables where modules, their teacher, and the rooms are displayed. As shown French is the only language used here mainly because module names are written and pronounced in French. Also, this was perhaps because these timetables were directed at students and staff only not at visitors.

The patterns of display shown indicate a random use of languages that can be described as separate bilingualism because languages appear separated and each one is used on different signs (fig 11. Fig 14. Fig 15. Fig 16). The other pattern is parallel bilingualism on signs, where two languages are displayed on one sign (Fig 10. Fig 12) (Creese and Blackledge 2011). The other type mentioned by Creese and Blackledge (2011) is flexible bilingualism, which indicates the practice of Translanguaging that encourages the use of bilingualism without separation (Garcia 2007). Others may define flexible bilingualism as 'the simultaneous use of different kinds of forms or signs (Bailey 2007). The practice of flexible bilingualism is seen more in classrooms where language is used and seen less in signs.

The last type of signs that were noticed around the campus were the signs or postage related to students' activities and events. Some examples are attached here, and the languages used are to be discussed after.



Figure 17.A poster on celebrating the National Day of Martyrs (bilingual sign in SA and Tamazight)



Figure 18. A poster by the Algerian Organisation of Consumerism for students about cyber security awareness (monolingual sign in SA)

The last two posters (figure 17) and (figure 18) are examples of many posters around the university that indicate some sort of activity or event supported by different organisations but mainly directed to students by students. The first poster is an announcement to celebrate the remembrance of the martyrs of the Algerian revolution, this memory is annually celebrated by holding many events and seminars and usually sponsored by governmental organisations. This might be the reason why the poster is issued in the two official and national languages of the country: Arabic and Tamazight. The other poster is also a poster sponsored by an NGO that is

widely popular among students. The topic covered in this poster is also directed to students to raise awareness on the cyber security and how to protect oneself. The poster is issued in Standard Arabic, and this can be explained as this language is the most used among students from different backgrounds.

5.4. Conclusion

This chapter has discussed language policy in Adrar university in both the explicit and the implicit form, language use among participants and the salient linguistic behaviours that describe the linguistic situation as it is in the university of Adrar's Faculty of Science and Technology. These were explored through the analysis of findings from the interviews and from classroom observations in an attempt to answer the following research question: How is the Algerian language policy operationalised at the level of university education generally and in science and technology classrooms specifically?

While each participant may have had a different experience with regard to language at university, it appears that there is a consensus that it has been challenging to almost everyone. The policies concerning languages at university are not planned clearly. The implementation of these policies is not well managed.

The linguistic situation affected the majority of students and created a barrier between them and their full potential since they reported a confusion in terms of the languages they use. For researchers as well, language is seen as an obstacle to achieving a successful research career. These claims will be further explored in the next chapter which will be dedicated to the participants' experiences with language policy and language use. The next chapter will explore the attitudes of both students and teachers towards the present languages, choices and preferences. In addition, the chapter will look at how can these elements be reflected in a language policy, besides their own experiences with language policy and language use.

6. Chapter 6 Experiences, Attitudes and Perceptions of Language Use and Academic Performance

6.1. Introduction

This chapter will present the analysis of key findings from data about participants' attitudes towards different languages in the University of Adrar, their experiences with these languages and whether, in their view, the multilingual nature of the University affects their academic performance. Then, students' and teachers' choices and preferences of languages are explored to understand the patterns of language use in this case study. This chapter paves the road to answering the following research questions:

- What are students' and teachers' perceptions of the effect of implicit and explicit language policy on their academic experience?
- What are students' and teachers' attitudes towards languages, choice, and multilingual universities, and how can this be reflected in a successful language policy?

The chapter attempts to answer the above research questions as an important part of understanding how policy and practice are operationalised at Adrar University. This chapter will introduce themes from interviews as the main source of data, but also from observations, on how participants experience languages used in their classrooms. It will examine how participants perceive the language policy and practice at Adrar University and whether they feel that this affects the academic performance of both students and teachers. In addition, the challenges they face and how they cope with them are demonstrated.

Furthermore, the chapter will explore their attitudes and beliefs towards different languages: AA and Tamazight as the native languages of the participants, French, SA and English. It will explore also the connotations attached to each language variety and in what way they affect the participants' choices and preferences. This is especially important in paving the way for future research and language planning, where participants are taken into account in the process. The last section of this chapter will analyse the contribution of language attitudes to the evaluation of language policy in this context. It will also help to

understand how to assess the viability of language policies in similar contexts and assess particularly how linguistically just they are (see Chapter 7).

6.2. Experiences: how language policy and practices affect academic performance (participants' perception)

There has been extensive research on the impact of the medium of instruction on the educational and academic outcomes of students who do not speak that language as their mother tongue. To mention a few, a lack of concentration and lack of motivation are among the main results found (Piller 2016).

In Algeria, this topic is very important because this phenomenon does not only appear at the university level with French but also in the very first years of education with Standard Arabic as the first language Algerian children learn at school (Taouinat 2004). An incomplete set of language skills can affect one's participation in all aspects of social life including schools where the first years of a child are spent (Roulstone et al. 2010). This lack of language skills mastery may lead to an educational hindrance which creates difficulties in academic performance generally because language is the vehicle in which all learning happens.

In Algeria, SA, being the formal variety of Arabic, is not the mother tongue of the people. It is taught in the first years of primary school. The children find themselves exposed to diglossia and bilingualism at a very early stage of their education (Taouinat 2004). AA and Tamazight are considered to be the mother tongue of the Algerian people. The situation is complicated further when French is introduced to the curriculum in the third year of primary school. Again, this puts the child in a multilingual situation where two new languages are introduced in a short time.

A study was conducted at the University of Algiers on middle school students, who spoke Algerian Arabic and Tamazight as mother tongues, to see the effects of SA on the educational performance of these students (Taouinat 2004). This longitudinal study used many research tools to collect data including testing students in SA and Mathematics, in addition to surveying teachers and parents. The reason why students were tested in Mathematics

was to examine to what extent they could understand the content of a test in SA. They were tested in SA to see their performance in this subject and identify the linguistic and pedagogical problems they might have (Taouinat 2004).

The result of this study showed that Tamazight speakers found more difficulties in formulating sentences correctly in Arabic. They also reported not being able to understand some words in their mathematics test (Taouinat 2004, p.206). In addition to this, they had problems with negation in different verb tenses. For students whose mother tongue is AA, they face different kinds of difficulties (Taouinat 2004, p.207). The researcher reported issues including repetition, false order of the words in a sentence, lack of grammatical connectors, and sentences with a correct syntax but no complete meaning. The author interpreted these issues as referring to the significant difference between the structures of SA and AA, and the linguistic distance between Tamazight and SA.

The study also explored the relationship between attitudes of Tamazight speakers and their performance in a SA language test. Interestingly, students with negative attitudes towards learning SA scored the lowest grades. These attitudes were reported by students themselves in questionnaires and their parents also expressed the same attitudes towards learning SA in schools (Taouinat 2004, p.208). Tamazight speaking students with a positive or neutral attitude towards Arabic (SA) scored relatively higher than the first category yet remain low in comparison to their AA speaking peers (Taouinat 2004). Taouinat (2004: p.210) suggests that some possible causes for these difficulties in performance include teaching methods, the condensed curriculum and the environment surrounding the learner in school and at home that could affect how SA is acquired.

The linguistic situation outlined above continues until the university level when students speaking AA and Tamazight as their mother tongues face a another change in the medium of instruction from SA to predominantly French. Despite the work on compulsory education outlined above, there is no research that examines the experiences of students following this change of MOI. The following section will, therefore, present an analysis of the experiences of stu-

dents. In addition, I will also discuss relevant insights from the staff working with students in Higher Education. The section is divided into three parts: difficulties in student engagement in the classroom; difficulties in written assessments; and difficulties in scientific research and publishing. It is important to note here, that these themes are extracted from the data as they are, and the fact that the focus is mainly on difficulties rather than benefits because the participants only focused on that.

6.2.1. Difficulties in student engagement in the classroom

The term student engagement refers to the extent to which students appear involved or interested in their learning, and how connected they are to their classes, their institutions and their peers (Axelson and Flick 2010). It has been shown that student engagement at universities is seen as a vital indicator of institutional excellence and course satisfaction (Muir et al. 2020) and most importantly academic success (Carini et al. 2006). In their study, Carini et al. (2006) tested 1058 students from 14 different institutions in the US using different qualitative and quantitative approaches including characteristics of institutions and courses, graduations rates, performance in general education, major field tests, reputational ratings. The results of this study support the claim that student engagement has a positive impact on learning outcomes such as critical thinking and grades.

The results of Carini et al. (2006) highlight the importance of student engagement in retaining the best possible outcomes from the learning process. The data from my study suggests that student engagement is often perceived to be linked to language use in the classroom. More specifically, participants reported limitations in engagement because of the limitation in communication, lack of concentration, lack of interest, and a sense of frustration due to different levels of ability in the languages used in the Algerian Higher Education.

6.2.1.1. *Limitations in communication*

The importance of verbal and nonverbal communication in the classroom between the teacher and their students or between students among each other is vital to the success of the learning experience. According to Johnson (1999):

if a child does not speak Standard English [in an English-speaking country], the teacher must be able to reach the child of their level of understanding and transfer them to the level of standard understanding: effective classroom communication requires the teacher and students to be able to send and receive messages accurately (Johnson 1999, p.1)

In the interviews, teachers at the University of Adrar were aware of the issues of student engagement and comprehension in their classrooms. The problems varied from low response rates to issues related to listening, reading and speaking skills. TP6, a professor of Electrical Engineering, for instance, stated in his interview that

20-‘Sometimes we discuss a concept in Arabic [referring to AA and SA alike] and the response is great! I find that they have a rich background on different topics, yet most times they cannot express themselves when French is being used’

In the same context TP7, another teacher in the same school also declared:

21-‘...Many students understand me well when I speak French, but when it comes to them, they cannot produce the language unfortunately...’

Students, on the other hand, also expressed similar views especially in SP1, SP4, SP7 and SP6 recordings when they acknowledged some issues related to language skills that they experience daily:

22-‘I, sometimes, face difficulties in comprehension, because of listening... I just record what they are [teacher] saying to do my research later at home.’

23-‘I honestly cannot communicate myself in French, but I can in English... it’s easier’

24-‘... Even the reading they gave us. We take a long time to finish them because we translate and take a long time to understand them then make use of them in our studies. Let alone the problem of finding resources itself which is another hassle.’

25-‘...I cannot be engaged in class because I always need extra time to process the overwhelming content since understanding the language and understanding the content are done simultaneously’.

Based on the previous extracts it is clear that French, being the language of the classroom, can create a gap that prevents students from being fully engaged. Whether active listening to instruction, speaking correctly to express oneself, or reading that became inefficient because of the unnecessary time and effort put into it. This situation is more challenging to non-Algerian students because of the different linguistic and cultural backgrounds.

6.2.1.2. Lack of concentration

Among the difficulties stated by students also is the lack of concentration in the classroom. This is a common phenomenon that occurs when students are facing difficulties with the input or how it is delivered. Concentration has been defined as ‘the ability to direct one’s thinking and complete focus on whatever direction one intends’(Brand 2010, p.10). The practice of concentration is often associated with selective attention using intense mental effort (Graf and Schacter 1986).

Many students I interviewed expressed their concerns about maintaining concentration while in the classroom when French is the only language used as the medium of instruction. SP6 is a civil engineering student, who answered elaborately when questioned about the difficulties in the classroom students may face because of the language of instruction. She said:

26-‘To be honest, I lose my focus when the teacher is speaking only in French... if they are easy-going, we ask them to speak more in Arabic or at least translate some words, but if they are difficult, we cannot ask them that. I lose my attention span and just wait till I get home and do my research, or ask my classmates...’

From this extract, it is apparent that this student loses concentration in the classroom because of the language of instruction being used. If there is no code-switching to Arabic, students like SP6 struggle with keeping their focus and receiving as much input as they should.

Other students expressed a different type of issue. SP4 and SP10, both students of Chemical Engineering, reported that they cannot memorise terms in French. However, they are obliged to learn them by heart just to pass an exam or a test without really understanding the meaning. SP10 declares that:

27-‘I know I need to have a great amount of terminology to be able to understand anything! This is my problem; I do not have enough terminology because they are hard to memorise in French’ he then adds ‘this is a problem for many students and even teachers... now they have to change the language [in the classroom] to help us stay engaged’

This extract consolidates the point above, the language of instruction being French, a language that is no one’s mother tongue or first language creates a barrier that prevents the learning process from being accessible to all.

6.2.1.3. Lack of interest towards French

Another emerging issue reported by some students in the sample in describing their experiences with language use and their performance is the lack of interest in French generally.

The data obtained so far from several student participants demonstrates that French is seen as difficult or dull. SP9, a student preparing her master's dissertation and about to graduate expressed this as follows:

28-‘I hated French when I was in secondary school. It was not interesting to me at all. I did not pay much attention because I focused on scientific subjects and because everything was taught in Arabic. I was an excellent student, but when I moved to university, my level deteriorated, until I started working on myself and studying more French during breaks. In the following year, I noticed a big difference in my level and my academic performance’

We understand from this extract that this lack of interest may be caused by many factors. This will be elaborated in section 2.5 about the reasons for these difficulties. Yet, a great number of students expressed this lack of interest in French because they view it as an outdated language, the language of

the coloniser, a language that is dull and taught in traditional methods, and so on.

29-‘I think French is decreasing already. I mean in terms of use and interest. People are interested more in English, especially younger generations’ (SP10)

In another extract, SP10 was telling me about the situation of French at his university. He stated that French is no longer interesting compared to English, which he claims is more useful to younger generations.

6.2.1.4. Sense of frustration

Another prominent theme in the data was a sense of frustration or demotivation because of the use of French at the University. Both SP2 and SP4 state this feeling clearly in their interviews:

30-‘Most time I feel frustrated because I need to know so many things in so little time... the linguistic meaning and the scientific meaning’

31-‘We are struggling with this educational system that is producing less effective results...the problem is always the management... we have to fix this! How come an engineering student relies more on the dictionary of French language more than actual engineering stuff... we are struggling with translating everything it is time-consuming and very tiring’.

32-‘...with everything in French, I feel disabled. No matter how much effort I put I am still behind’

The state of amotivation (understood as a lack or absence of motivation) in the classroom has been linked to learned helplessness, defined by Seligman (1972) as the phenomenon characterised by a reduced response initiation, or a negative cognitive set where it is difficult to believe that one’s responses will succeed even when they do (Seligman 1972, p.411). Amotivation and lack of interest are typically a result of boredom, poor concentration, poor psychological adjustment, and stress (Baker 2004). The extracts presented above suggest that students may feel frustrated as a result of amotivation caused by the linguistic situation and, more specifically, the use of French at university.

6.2.2. Challenges in written assessments

This sub-section explores in detail the aspect of writing in French, especially in exams and written tests. The data obtained show that students face specific challenges when writing French, especially in formal tests and exams. Such challenges were also mentioned by teachers who tended to struggle to mark the work. The following section tackles two parts, a part dedicated to students' experiences and another dedicated to teacher experiences.

6.2.2.1. *Experiences with language in written assessments*

An extensive amount of research has been put into evaluating and investigating the performance of students who study using a medium of instruction that is foreign to them. A considerable amount of these studies (from different places around the world) shows similar results: testing the performance of students show that the majority are facing varying but noticeable amounts of difficulties in terms of the language of the classroom (Hossain et al. 2010; Belhiah and Elhami 2015).

It is argued that scientific literacy, which indicates teaching students to read and write scientific texts, is crucial for the states of 'being knowledgeable, learned, and educated in science' (Norris and Phillips 2003, p.56). The concept of scientific literacy means that students must be proficient in both the language and the content of scientific inquiry (Yip et al. 2007). Academic language in itself is challenging because terms like 'heat', 'power', 'energy' are used in everyday language but in science, they have different implications. Thus, learning science is almost equated to learning a new language (Wellington and Osborne 2001). This comparison is made when science is taught using the same language as the students'. Using a different or a foreign language to students is arguably more challenging.

The difficulties reported by students and teachers concerning writing in general and written assessments, in particular, are mentioned separately in the following paragraphs:

6.2.2.1.1. Linguistic challenges

Many participants from students reported in their interviews a set of challenges they face especially in their exams and tests. Issues of performance occur

in different modules that have different requirements. Some modules rely on calculations and mathematical problem-solving and technicalities that can be understood without a great capacity for language. Other modules depend on significant linguistic competency. Students in the latter type of modules have to explain processes and demonstrate their understanding of the content in the assessment. This type requires some writing skills to be able to convey the meaning, including accurate language. These are some of the extracts from the interviews illustrating this:

33-‘For modules which count a lot on calculations, I have never faced any problem. Because the questions are very clear [...]. For other modules which count on defining concepts and a lot of explanation... these are the ones that need good linguistic baggage for.’ (SP7) (SP4)

Even when their teachers were asked about the types of difficulties students face, they acknowledged the problem of writing immediately. These issues will automatically affect the outcome of students in their assessments. Extracts 33, 34, 35, 36 are the experiences of teachers with their student’s writing skills, while extracts 37, 38 are the students’ experiences with language and of getting low exam marks because of it:

34-‘You hit the nerve! [in asking about his students’ writing skills] ... their writing is catastrophic. Sometimes I cannot read what is on their papers. Of course, not all students, there are excellent students, but the majority are indeed struggling’ ‘I teach many modules, one of which students are required to write about different phenomena and elaborate on concepts. When I mark their papers in this module I find tons of spelling mistakes, grammar mistakes, bad sentence structure... all sorts of language mistakes’ (TP2)

35-‘Writing capacities in French are generally catastrophic. Especially in exams in terms of spelling and sentence structure. Some students write well but many find it hard to put together a coherent piece of writing’ (TP11)

36-‘Most difficulties I face with their writing is the spelling mistakes and grammar mistakes, let alone their issues with speaking and expressing their thoughts and opinions in the classroom’ (TP3’)

37-‘I sometimes struggle to understand their writing... a lot of spelling mistakes and sentence...’ (TP1)

The shared concern among all these teachers is the issue of writing in exams including spelling, grammar, and structure which are common themes emerging from these extracts. These linguistic problems cannot be ignored because they are widely acknowledged by teachers and students alike.

On the other hand, in asking if the language of the exam was a reason students got a low mark, these students responded:

38-‘Yes, multiple times... Especially in modules that count a lot of writing and expression... if I do not understand a question or just a word in that question I cannot answer, therefore I get a bad mark. Even if the question is easy if it was asked in Arabic. I do not face any difficulties if the module is about calculations and formulations ...etc’ (SP1)

39- ‘Yes, it happened many times... when not understanding the questions of the test. Sometimes you know the answer and all but the question itself is the tricky part especially when you find new words you haven’t seen before.’ (SP3)

These findings are similar to many cases around the world. For example, a study of secondary school students’ performance in Hong Kong after adopting English as the medium of instruction to a Chinese speaking majority of students resulted in poor academic performance in Science tests (Siu 1979). This study also shows that the underperformance of these students was a result of their lack of thinking in the English language. The study found that students studying in English have problems with understanding abstract concepts and differentiating between scientific terms and applying scientific knowledge to realistic situations (Yip et al. 2007). These outcomes are similar to the evaluations made by students and teachers at Adrar University.

6.2.2.1.1.1. Classroom dictation and misspelling

Among the emerging themes in the data was the difficulties students mostly face in writing and exams. These include dictation and the misspelling resulting from this practice. During my observations, I noted that some teachers tended to use dictation very often, especially when introducing new definitions or terminology to students.¹¹ The following extracts are of some students who mentioned this issue in their interviews:

40-‘When the teacher is dictating [...] I just write what I hear... I could misspell many words. Then on exam day, these words might come up again, misspelling could change the entire meaning. And I could get bad marks because of it’(SP6)

41-‘...when the teacher dictates some definitions or something. I cannot copy that down easily. My main problem is grammar, I think’ (SP5)

Dictation is a helpful practice adopted in many classrooms, especially in primary and elementary education. It helps learn the correct spelling, correct sentence structure and punctuation (Betz 1918; Marsh 2019). This practice is especially useful when learning languages because it fosters two skills: listening and writing. It is used exclusively for teaching languages. However, it is interesting that some of the teachers of science and technology at Adrar University use dictation in their classrooms.

The issue with dictation in French is not the practice itself, but rather using it in classrooms of students where the majority do not have the sufficient linguistic competences according to what many participants have stated. If the writing is poorly presented then the information is compromised and consequently, the assessment results will be affected negatively. The practice of dictation in this case is not a useful tool in achieving the best academic outcomes.

6.2.2.1.1.2. Confusion in meaning

Students studying in a medium of instruction that is not their first language face many difficulties including generating meaning in situations such as exams. A comparative study was done on Chinese students in which one cate-

¹¹ As I observed, not all classes provide handouts for the lectures and the seminars.

gory adopt English as the medium of instruction and the other group adopted Chinese as the medium of instruction (Yip et al. 2007). The first category of students when given a free-response question had difficulty organising their thoughts and present them logically and concisely. According to the findings of this study, most answers of the students adopting English as the medium of instruction were ambiguous and isolated ideas (Yip et al. 2007). In my data, many students also talked about difficulties with meaning and ideas. The following extract illustrates this issue:

42- '...If you do not understand the question you cannot answer. Many times, I diverge from the topic of the question because I could not understand one or two words in the question, I get confused' (SP10)

The participant in this extract explains here why sometimes it is hard for him to correctly answer questions on the exam sheet. He stated that if only one word/term is not understood (linguistically) then the whole meaning is lost. This supports Yip's (2007) finding that students using a foreign language find it hard to organise ideas and meaning and to retrieve them when needed. In a similar study on Ghanaian children receiving their education in English, the researcher concluded that children function at a higher conceptual level in their vernacular than in English (Collison 1974). It appears that the results are similar no matter how different the context is.

6.2.2.1.1.3. Difficulties related to memorising in French.

Another issue mentioned by students concerning the challenges they face with the language of instruction and their performance in written assessments is the issue of memorising terms in French, especially for students who have weak abilities in the language. This difficulty is related to the previous one because if the meaning is not well understood the memorisation tends to be more challenging. Memorisation is a technique commonly used by students who are learning a foreign language to build confidence in their skills in this language (Yu 2013). If this practice is difficult, the complete comprehension of abstract concepts is problematic. The following extract from an interview recording shows the difficulty in memorising and understanding scientific concepts.

43-'I find it so hard to memorise in French. I mean the terms are fine, but you have to memorise their definition and other related stuff' (SP4)

From the extracts of some students' recordings, it shows that there is no surprise Wellington and Osborne (2001) consider language to be a major obstacle to science learning for most students. Abstract concepts need to be correctly imagined in the minds of the students to gain meaning (Maskill 2007). If meaning is not well received and information is only memorised without fully understanding, then the results will not be positive.

6.2.3. Scientific research and publishing

Among the very important issues that arose while discussing the situation and the use of language in the University of Adrar is the issue of research and publishing. The data collected concerning opinions and experiences of the participants with regard to research and publishing has revealed some recurring sub-themes among researchers, including lecturers and postgraduate students. These sub-themes revolve around a central theme which is: that a researcher has to be proficient in English well enough to get published. This finding is not exclusive to this study because much research done in similar contexts found similar results. For example, a study was conducted on Indonesian researchers publishing in English and the difficulties they face. The findings show that among the highest-ranking problems is the English language itself, specifically, grammar, and constructing arguments (Cargill et al. 2017).

The sub-themes obtained include lack of resources in French and Arabic necessitates the need to research in English; lack of English competency led to falling into plagiarism; opting for professional translation services; better proficiency in English means better careers, and finally, adding Technical English modules for many schools' curricula.

Several studies done on this matter show that scientists in Algeria face many difficulties when publishing in English-speaking journals including funding, lack of research materials, and most importantly language difficulties (Sloughi 2009). Sloughi (2009,p .226) confirms through the findings of her research that English is the main requirement for the Algerian scientist (as used in her

research) to do the following tasks: read literature, communicate with foreign peers, take part in international events, and most importantly, to translate findings into published material (Sloughi 2009) the same study concluded that 'Though it is never explicitly stated as a normative criterion, poor and insufficient language proficiency often acts as a primary reason for rejecting manuscripts' (Sloughi 2009, p.226). The following extracts illustrate each sub-theme as they occur in the data, from the need to read, research, and understand texts in English to getting published:

6.2.3.1. Lack of resources

One of the emergent themes also relates to challenges participants faced in scientific research and publishing such as lack of resources. Many resources available in the library or online are written in French (or translated to French from English). TP1 in this extract explains why this is a burden for her.

44- You know as a PhD student; I am struggling to find resources for my research... everything now is available in English. Even when publishing, we have to write in English to get published in classified journals... why make us use French then when we get to postgrad studies, we are obliged to do everything in English. (TP1)

This was a teacher, who happens to be also a PhD student, who expressed her frustration with the languages she used to study, teach, and research. The issue appears to be finding the right resources which are mostly written in English or having to deal with the available ones which are written in French, or rather translated versions to French that are not enough. The other issue is the publishing also, English is a requirement for many of the highly ranked peer-review journals.

45-We need English as teachers not only for our students but for us as I told you earlier with research, I struggle to find resources in French because I cannot use English. This limits me as a researcher. English is a must in today's world in my opinion. (TP9)

These extracts also confirm the last point and can also be considered an attitude towards the presence of English in the linguistic situation in this universi-

ty. The need for English and the demand for establishing it as a required code in academia is increasing among students and teachers alike.

46-we still face a problem when we use English because we do a lot of research and there isn't much research published in French in our field, because we were trained in French, and we are francophones (TP2)

Extract 45 shows that one of the reasons many researchers face problems is their training. As mentioned in section 5.2.1.2. in the previous chapter, teacher training is entirely designed using French as the main language and the language of science and technology in Adrar University. The great dependency on the French language created difficulties when doing research for these researchers because English is the lingua franca of academia (Mauranen 2011), it facilitates communication and collaboration with peers and allows for a range of opportunities other languages cannot provide.

6.2.3.2. Plagiarism

The other sub-theme that appeared in one of the interviews with a researcher in the school of Chemical Engineering is plagiarism and how many teachers fall victims to it because of their poor proficiency in English. The following extract is an example of this:

47-This problem of writing in English led to the problem of plagiarism that many researchers here fall victim of. You find a competent researcher with brilliant ideas, but they cannot simply put them into words.

Plagiarism is a form of academic dishonesty where an individual copies the work of another individual without acknowledgement of the original source (Broome 2004). This participant thinks that plagiarism is a result of not having an adequate competency in English. He claims that researchers who do not speak the language or master it tend to use the same exact words as other people without mentioning the original source.

6.2.3.3. Translation services

A perceived lack of proficiency in English led some researchers to employ French-to-English translators when attempting to publish in international journals or to translate research from English into French for themselves to facili-

tate understanding. The need for translation was suggested by two participants. The following extracts are their opinions on translation:

48-When I attempt to publish an article, I automatically do my research and see other papers and how they are structured and written. Even sometimes me and my colleagues write our articles and publications in French then professionally translate them (TP2)

Translation is a necessary tool to help researchers work with at least two languages French and English. French because it is the working language in these schools and the main medium of instruction, and English is the lingua franca of academia in which the majority of world research is published. The Algerian researcher encounters the challenge of mastering both languages in order to have a balanced career. Almost the majority use English when publishing their journals even if they have no proficiency in it. They use whatever tool available to publish their research findings (TP2) (TP5) (TP6) (TP8) (TP10) (TP11) all mentioned that there are no French journals in their fields that they know of; they publish only in English. The need for English meant that some schools in the faculty of Science and Technology had added a Technical English module to their curricula. The lecturer from the Electrical Engineering School confirmed this:

49-We had to add it! because English is more used in research. Everyone knows that resources are published in English. Every researcher needs basic knowledge of English to be able to do their research. Publications in English are richer and more detailed than the French.

6.2.3.4. Reasons for poor publishing

I also asked participants who were doing research, or were lecturers, if English was really needed in their domain and whether a policy should be established in this university. Some of the participants answered positively.

50-Yes, I am in favour of this idea because English is the language of science and technology. Even people from China publish in English. I think this is one of the reasons why Algerian researchers are not publishing enough. Because of language of course. Most of our colleagues publish in French journals or Algerian francophone journals, and only a

few get published in international journals that require very good English. No one can hide the fact that the strongest language nowadays is English. (TP3)

51-I would say language is not a big issue here, because our field requires experimenting and research materials and lab materials. These things are not widely available in every university in Algeria. This is usually the reason why researchers don't publish much. Language could be an obstacle, but anyone can publish in English with the help of an English tutor or a colleague or a translation service...etc. (TP5)

52-The language is not the first obstacle for Algerian researchers in my opinion, because the last step for me is language, I do my study and prepare my research in French then I translate the written form to be ready for publishing. For me, the number one obstacle is the research materials and the lack of equipment, especially in our laboratories. (TP4)

These participants confirm that among the obstacles researchers face when doing their research or getting published is language. The need for English is almost necessary for any academic activity. Some lecturers, on the other hand, think that English is an additional privilege, and the priority should go to providing researchers with lab materials and resources to reach an acceptable level and publish in well-known academic journals.

6.2.4. Causes of these language difficulties

The conversation with the participants about the challenges they face was very elaborate because they felt that the linguistic situation affected the quality of teaching and learning at the university. Some of the causes of these challenges/difficulties are mentioned by the participants themselves when describing their experiences with languages. From the analysis, three prominent themes occurred continuously throughout the data: management problems; blaming the whole educational system; and a psychological barrier and complexity towards the French language. The following sections will elaborate on each theme with examples from the interview recordings.

6.2.4.1. *Management problems*

One of the teachers responded to a question asking why her students face some linguistic issues, especially with French, she responded that the problem is not the students' weak abilities in this language but rather a management problem.

53-I think the problem is a management problem. And both students and teachers need to work to improve the competency of the language to be able to improve the quality of giving and taking information (TP1)

When I asked for more clarification on what she referred to as 'management problems' she responded:

54-'I wish there are any regulations concerning language we use here! Especially if they do it with the introduction of English. It would have been better. I think it should be strict as well. Because this is a mess. What we are doing is a total mess'. (TP1)

It is interesting for a participant to say this because it indicates that an explicit language policy is needed in this university to set the rules and regulate how languages should be used clearly instead of the implicit policies that are adopted by each agent. Different teachers adopt different language practices, different students respond differently to these practices according to their linguistic abilities, also the administration of the university display different patterns of language use which is clear via the linguistic landscape of the university.

It is also important to note that this participant highlighted the preference for English as a language much needed in the academic arena especially in Algerian universities because French no longer serves this purpose. In the case of Adrar University, it is assumed from the findings so far and the last extract of (TP1) that the issue of language planning/management is a real issue that yields linguistic confusion among people in this university. Therefore, some of the participants demand the existence of a clear-cut explicit language policy to wipe away any confusion.

6.2.4.2. *Blaming the educational system as a whole*

In asking the participants about the reasons why some language difficulties are affecting the performance of students specifically, some participants mentioned that the whole educational system is the main reason that led to consequences like the poor management of languages at the level of the university. The following extracts from the interview recordings show this sense of blame manifested:

55-‘...for the language of instruction which you know is French, they face difficulties of course. But this is not because of the university policy, this is because of their training back in their secondary school or middle schools where they had the chance to learn proper French but did not... There are so many problems in French language teaching, especially in the south [...] also, this deterioration in French may be because of the level of the teachers in secondary and middle schools. Maybe there were not any teachers for French at all. Maybe schools had a lack of teaching materials... I mean reasons are a lot. But we cannot tell which one is for sure. This is why the whole construction of the education system should be put into questioning.’ (TP2)

56-‘I can’t talk about the situation at university without tackling the roots. The ministry of education developed curricula that do not fit our society or our people. This is why, especially younger generations, they lose interest [...] I cannot speak about the university alone without taking into consideration the policy of the state and the ministry of education. Because of all the reforms and the changes that they do we pay the price of their failure. But eventually, all parts of the system have to be coherent and coordinated among each other to be able to produce people with beyond average level.’(TP8)

Analysing and understanding the content of these extracts show that both of these participants (teachers) are blaming the educational system in Algeria for producing less effective results in managing languages. Decisions and reforms regarding regulations and practices at universities are the responsibility of the Ministry. Some regulations, such as the canevas, are collaborative work

between the university and the ministry, yet the final approval for it as a working regulation is granted only by the ministry (MESRS 2013).

The language of the instruction poses many problems to students and staff. The ministry has tackled this issue multiple times. The last initiative to change the linguistic situation at universities was done by the former minister of higher education Tayeb Bouzid (2019), who was a supporter of English being the first language in universities across the nation. This support was manifested in many of his televised interviews and social media posts. He also created a scientific committee that includes linguists and sociolinguists to aid in the study of enhancing English in the domain of higher education (Minister of Higher Education, 2019)

6.2.4.3. A psychological barrier

An emerging theme occurred when I discussed how language difficulties affect students' and teachers' academic and professional performance. The theme is the existence of a psychological barrier or a complexity toward French. The attitudes towards French will be explored in detail in the attitudes section but it is worth mentioning here because some of the participants brought it up as a barrier/difficulty toward performing better in their academic life.

The following extract of a teacher who mentions the existence of this barrier in some of his students:

57-I feel like it is a psychological challenge for them [students]. It's more of a psychological than linguistic...it is easy to learn languages but if there is a complex of any sort towards a certain language it cannot be learned. We are trying as staff members and advisors to help them with these difficulties, but it is only up to the student to fix their mind-sets.

Psychological barriers are common in people trying to learn a foreign language. Students at Adrar University are no exception to that. The most known psychological barriers are lack of motivation to learn, low self-esteem, shyness, and fear of making mistakes (Ariyanti 2016). I also observed some of

these behaviours when attending some lectures and seminars in different schools. The factor of shyness was often very apparent. The factor of fear of making mistakes if one speaks in French was also apparent clearly through some practices such as immediate code-switching from French to Algerian Arabic, not finishing the whole sentence in French, and pausing shortly to let others help when asked a question in French by the teacher the answer would be in Arabic.

I argue, that with the presence of French in Algeria, there are also historical, social, and cultural barriers, in addition to the psychological ones, hindering the performance of these students (See attitudes towards French later in this chapter).

6.2.5. Coping Mechanisms

The absence of clear management of all languages that co-exist in the university of Adrar led to some difficulties that were mentioned in the previous sections (6.2.1 until 6.2.3). People facing these difficulties reported that they used coping mechanisms in the light of a clear absence of support from the university. They mentioned some of them in their interview recordings, and the most common are divided into two categories: the first category is the help and support teachers offer their students through language practices such as code-switching and translation in the classroom, and through adapting written assessments and changing their methods. Teachers also encouraged their students to take language courses. The second category is the help students seek by themselves through personal efforts to learn French at home or with private tutors, and the help they receive from their peers. The following sections will elaborate on each category and its components in detail.

6.2.5.1. *Code-switching to Arabic and translation*

Code-switching and translation were explored in section 3.2 in chapter 5 as two practices occurring very often in many of the classrooms observed. Not only that but it was also reported by many participants from both sides that this happens on a daily basis, yet to a varying degree depending on each teacher and their classes. Code-switching, for instance, was seen by some of the students as facilitating communication in the classroom and about over-

coming the obstacle of a French-only classroom. Some teachers even confessed that they use code-switching to break the ice when their students lose interest.

58-Sometimes, when they are not very responsive, I start to explain in Arabic or motivate them to look for translations and explanations by themselves. I tell them that they have to search by themselves and be more autonomous in their learning. (TP1)

59-I usually start my lesson by explaining then stop for a while if I see that students are not being responsive, I explain again everything in Arabic. Especially the fundamental concepts for them to understand. (TP9)

60-I evaluate their feedback individually and collectively to be able to conclude what to do. Since then, I realised that there is a gap concerning the medium of instruction. Some students have no problem with the language, I also have students from Mali who understand French only. I try to mix both French and Arabic to be fair with everyone. (TP3)

The above extracts show that these participants opt for code-switching from French to Arabic (AA or SA, the participant did not specify) to help their students be more engaged, this was seen by them to offer help. The last participant mentioned that opting for code-switching does help his students and it is a way for him to be fair to everyone in his class including international students. Interestingly, the idea of fairness appears when discussion revolved around technics to help students adjust to the language of the instruction namely French. The discussion of the findings and their relation to the core themes of this research will be explored more in the next chapter.

Code-switching has been proved to have some positive educational effects on students who are not fully proficient in the language of the classroom. Among these effects are: socially beneficial because it fills the gap between the teacher and the learners which influences the learning environment; pedagogically beneficial because it can be used as a teaching strategy to understand ambiguous concepts ensuring learner comprehension (Mokgwathi and Webb

2013). In addition to this, code-switching is seen as a tool to increase group participation in the classroom, which was also observed in many classes, especially in lab sessions with (TP2) learning about fluids mechanics. I observed an increase in participation when the same question was in AA where everyone shouts their answers after it was asked in French and everyone kept silent.

Other teachers also claim that having a multilingual milieu improves their student's motivation to participate and be more engaged. This was observed also by TP7 who used SA and French very frequently in her seminar about Electrical Engineering. She confirmed that as follows:

61-The milieu plays an important role as well, that's why I do my best to provide a multilingual environment for my students to encourage them.
(TP7)

6.2.5.2. Coping in written assessments

As the findings in section 6.2.3 explored the difficulties encountered in written assessments and the reasons underlying them. Many teachers and students alike developed a set of coping mechanisms to adjust to the needs of students who are not proficient in French or struggling with this language in general. The weakness in the proficiency in French appears more in written exams and tests as many participants declared. This is why many teachers changed the method of testing in their modules to help their students achieve better. The following extracts show some of these adjustments in the assessment methods

62-[...] when we noticed that most students have a language problem, most teachers started using questions of multiple-choice as a method of assessment to avoid questions that prompt writing. (TP3)

63-I had to change my exam many times for them. I sometimes adopt (true-false) questions or MCQ type of questions that focus on their scientific comprehension rather than their language production. (TP10)

This adjustment in testing is explained because many students I interviewed stated that because of the language of the exam they had below-average marks. This is the case because some modules depend on language produc-

tion to explain some processes and scientific phenomena. This language production posed a problem for both students and teachers, consequently, some teachers thought of adopting new testing methods like MCQ (multiple-choice-questions), or simple true-false questions to make their students focus on understanding the content rather than worrying about how to communicate in writing.

Some students also managed to help themselves navigate tests and exams where the language is an obstacle for them using creative methods. For instance, SP3, a student from Western Sahara, who is fluent in Spanish, used the similarities between Spanish and French to understand and perform well in his exams in the first years. He reported this in his interview:

64-For the first year, I struggled with French, but Spanish helped me. I remember once, I got a good mark on a test, and I was surprised! Thanks to the help of Spanish. Now [a third-year student] I am okay with French...much better than before (SP3)

6.3. Attitudes to languages and how it affects policy and practice at Adrar University

This section explores the attitudes of students and teachers from different schools in the faculty of Science and Technology at Adrar University. The findings from the interviews with regard to participants' attitudes show a variety of opinions towards the different languages that exist in this context. Both students and teachers had different attitudes and beliefs toward each language. The overwhelming majority viewed multilingualism as an asset in Algeria that needs to be addressed and well managed through more explicit language policies (as will be demonstrated through analysing the attitudes of the participants). The following paragraphs will present these attitudes per language. Under each section of a language, emerging themes from the data will be explored. By the end attitudes and motives behind them are discussed and how this relates to the framework of language policy in general which, in turn, will address the third research question of this study.

6.3.1. Attitudes towards Algerian Arabic

AA is considered the colloquial dialect of Arabic specific to Algeria. It is acquired as a mother tongue and used in everyday situations in contrast with SA which is the high variety, from a diglossic perspective, and is only taught through formal education (Davies and Bentahila 2012)(See also section 3.3.1 in chapter 3 for more about diglossia in Arabic).

The discussion of attitudes in the region of North Africa generally and Algeria specifically has had a lot of attention from Arab scholars, especially the phenomenon of diglossia in Arabic. Mainly because speaking the colloquial form of Arabic is a marker of ingroup identity. However, the idea of writing it is met with fierce resistance in many places of the Arab world (Davies and Bentahila 2012).

AA -described here as a form of colloquial Arabic specific to Algeria- is used in writing only for informal purposes, such as personal or private interactions. Yet, AA is incorporated more in formal settings like the media, billboard advertising using Arabic script, or transliterate it into latin scripts (Davies and Bentahila 2012). In the case of Adrar University, AA is not used in any written form but rather used in its spoken form. The use of this variety was seen by students and teachers alike as useful in facilitating communication and getting the message across in a time-efficient manner. However, participants displayed positive and negative attitudes towards AA and its use in higher education. The following sub-sections will explore their attitudes per theme.

6.3.1.1. *Negative attitudes toward AA and its use in higher education*

'It is not a pure language'

Some comments from participants pointed at the linguistic nature of AA describing it as impure or a mixture of language. The nature of AA being a mixture of many varieties including Arabic, French, Tamazight, Turkish and Spanish is an acknowledged historic fact (See chapter 3). However, some participants might see that negatively because the language is not pure. The concept of a pure language is linguistically impossible because all known languages have a degree of borrowing in them and have experienced language contact and mixing in one way or another (Brunstad, 2003).

65-to be honest, this language that we are speaking is a mixture it is not pure Arabic or pure French. It is not a language for me. It is not a language at all! (TP2)

The extract shows an interesting ideology adopted by some participants that reflect their attitude towards AA. The fact that AA is a spoken language and has no tangible standard form is the main concern for many participants here. The above extract is an illustration of this. The participant goes on to say that AA is not a language at all because in his mind it is not a standard language like Arabic (SA) or French.

It is not a new finding that people think badly of their mother tongue, especially in educational settings. Similar research was done in different contexts in Africa, where mother-tongue education is an important discussion. In Uganda for instance, the government has launched a pilot program that focuses on introducing mother-tongue education in primary schools. In the meantime, research on these policies has shown that many parents assume that mother-tongue policies are imposed for political agendas rather than sociolinguistic or pedagogical ones (Becker 2014). Becker finds in her research that some of the parents holding these negative attitudes toward mother-tongue education see that English, being the language of the educated elite, is the most useful and powerful language and denying that to their children is denying them great opportunities (Becker 2014)

In the case of TP2, he not only denies any benefit of mother-tongue in education, but he also refuses to recognise it as a language in the first place. He assumes that AA as the mother tongue of the majority of Algerians should stay a language of communication in informal settings only, and away from education.

'Using AA in education is degrading'.

In the same flow of attitudes, participants who hold a negative view of AA as a mother tongue used in education. A participant who happens to be a lecturer in Electrical Engineering school, and a Tamazight speaker, states clearly when asked about his opinion on AA in education and higher education:

66-yes, for me, I don't think our language (AA) fits to be used in an academic setting. It is just a spoken language. I think our language is Arabic [SA] and it is the most appropriate language to be used at university. We don't use dialects at universities they are very poor for contexts like academia [...] I think using a dialect like AA is degrading. (TP6)

and when I told him that I saw him using it while delivering his lecture, he said

67-I am obliged. I have a message to convey. I must deliver it regardless of what language I use. The most important thing is that they [his student] are following what I say... (TP6)

This might seem as a contradiction, considering his attitudes towards AA in education, and the fact that he uses it in his sessions. However, this participant declared his negative attitude towards AA in education if it has an official form or an explicit language policy, not as a language used everyday. The casual use of this language is an act the majority is approving. In addition to this, the refusal of AA in education is due to its nature -a spoken language/non-standard- thus it is used in speaking but never in writing. Which explains the negative attitude of this participant.

The view of dialects in education as being degraded types of language specifically has been criticised by many for a long time. This view stems from the fear that these dialects will interfere with the standard language and compromise the educational outcome of students, in addition to the stigma attached to dialects like AA as being corrupt and an impure version of Arabic (Siegel 1999). Thus, the continuous negative attitudes towards mother-tongue dialects like AA prevent it from being formally used in educational institutions, despite the research showing the benefits of mother tongue education. Paradoxically, the case of TP2 and TP6 (extracts 65,66,67) proves that they see the benefits of using their mother tongue (AA) in their classes to facilitate communication and learning, however, still hold a negative view of it because it is not 'pure' and standard.

Another negative attitude emerged when analysing interview recordings. A participant having a negative attitude towards the use of AA in education, and higher education talked about language and power and how a nation or a

speech community's local and aboriginal languages can be used if only that nation or speech community were powerful and in a position of influence.

68. We take knowledge from all around the world, and it is produced in English, not even in French or Chinese... we need to acquire foreign languages because they are useful. We can count on our mother tongue if we were strong enough and were among the principal producers of knowledge. When you read history, you find that Cordoba university for instance in Andalucía in the 1200s was producing knowledge and publishing manuscripts in Arabic, but now I do not see that because power plays an important role in this equation (TP3)

Researchers have been able to think about a language community's linguistic power through a model called the ethnolinguistic vitality (Bourhis et al. 1981). One of the bases of this model includes the sociohistorical and cultural status of the language community inside the nation and internationally (Ng and Deng 2017). In the case of AA, despite being the language of the majority of the Algerian people, it does not enjoy a national status or an international one. In Algeria, SA and French are enjoying a national status despite differences in the policy, with French gaining more credibility in higher education. English on the other hand, is undeniably, a global language and the lingua franca in academia, and it is finding its way to invade the academic and the political scene in Algeria. With all that, AA has no significance in terms of use on the national or the international level because it has no power. Previous extracts illustrate this discourse of language and power and how important it is in shaping people's attitudes towards their own mother tongue.

The ethnolinguistic vitality model mentioned earlier, also draws on the linguistic landscape of a speech community's language/languages, to identify important informational and symbolic functions as a marker of the vitality of these languages, which affects their use in institutional settings (Cenoz and Gorter 2006). This is also applicable in our context, where the visibility of French and SA in the linguistic landscape of Adrar University is prevalent where there is no trace of AA on any of the signs or the posters in this institu-

tion, which tells us about AA's status and consequently why many participants hold negative views towards it (refer to chapter 5 section 5.3.3.4 on the linguistic landscape).

Students seem also to have a discouraging view towards AA to be integrated formally into education. This is clear through their support of English to be the language of instruction instead of French, while some support SA to be the language of instruction. Either way, AA has no significance for students at all. Thus, major unfavourable attitudes represent a major obstacle to the consideration of AA as a language with a future in planning for policy in education/higher education.

6.3.1.2. Positive attitudes towards AA

From the data, some participants also hold a positive view of AA because it is their mother tongue. Inevitably, the mother tongue is considered a marker of identity. Also, it is considered a tool to facilitate communication and get the message across. As observed when attending different classes, most times AA is used for explanations, discussion, and non-academic interactions as well. Some teachers explicitly said that they do not mind AA being adopted as a language officially used at university, while others, admitted to using it however not welcoming of the idea of giving AA an official status. The following extracts illustrate some of the positive/neutral opinions held toward AA

69. I don't have any problem with the idea of using our mother tongue in education. I use AA all the time. I told you earlier I use three languages in my lectures one of them is Algerian Arabic. I feel it makes information delivery much easier...uh I prefer using it actually... (TP11)

70. I must say also that it will help students a lot because it will take off all the pressure of having to learn French and master English...etc. I think it's a good idea but very difficult to implement. People may not accept it. Because our language is not codified! It is a spoken language only. (TP11)

When asked about his opinion if AA was adopted as an official language at university (TP5) replied

71. I consider this as a solution too. I am with it.

It is interesting how TP5 considers adopting AA at university, as the medium of instruction, a solution. This indicates that the current situation with French as the medium of instruction is considered a challenge. This can be explained, perhaps, because of the many challenges students and teachers encounter having French as the medium of instruction and having to always shift back and forth to it (see section 6.2.1 for more details about these difficulties and challenges).

6.3.2. Attitudes towards Standard Arabic

Participants were asked about their opinions and attitudes towards SA especially if it was adopted as the language of higher education in science and technology and replaced French. Their attitudes were mostly favourable among students and teachers alike.

6.3.2.1. Positive attitudes towards SA

Students entering university have already been equipped with SA because the entire educational scheme from primary to secondary school is Arabized. Languages like French, English, Spanish, and German are soon after introduced to the curriculum as subjects only.

Efficiency

One of the reasons why some students prefer SA to hold the place of a medium of instruction at university in the scientific and technical field is the element of efficiency.

72. Many people would love the idea because they would not have to pay extra effort to use French. But I insist on learning languages anyways. (TP6)

73. This idea can work also because we have already been taught in Arabic [SA]...but again we have to work with English in scientific research because it is inevitable. (SP8)

Efficiency here means less effort to learn, unlike when using French since it is challenging for many participants. SA is already taught to all students attend-

ing public schools which makes it easy to proceed with this language at university. This will also help students in many aspects including avoiding translation from French to Arabic and vice-versa.

Improving Student Engagement

Related to the previous point, some of the participants who have a favourable attitude toward SA at university, refer to the concept of student engagement. This concept has been already tackled above (see section 6.2.1) where many participants expressed having difficulties in staying engaged in the classroom because of the use of French only. Here, one of the participants brought the concept again and linked it to SA.

74. I expect a dramatic change in our education. If Arabic was the language adopted everyone would be 100% engaged with their course. Arabic is great for many of us. It makes things way easier... Also, I mentioned with English we have better job opportunities. Maybe Arabic and English would be great together. (SP2)

Classroom engagement is an important aspect of education. Where there is more student engagement in the class the outcome of their education would be better. This is recognised by some of the participants namely (SP2) when she mentioned that having a familiar language like SA is more likely to result in a better engagement.

Some other participants had a middle-ground attitude where they express their loyalty to SA yet emphasise one having other languages besides it.

75. Yes, it is a good thing [to have SA at university instead of French]. However, I do not agree with it. Because keeping Arabic [SA] alone would mean keeping our entire university education closed. (SP10)

76. Arabic is great for me because it is my first language, yet it has no future in our industry [job market]. Especially since we have to work with international companies. (SP4)

As illustrated in extracts 75, 76 these participants seem to focus particularly on the importance of multilingualism especially, with English being the focus of this demand. They do not explicitly reject SA. However, for them, it is not enough. This attitude has an ideological implication where supporting Arabic

presents a moral obligation because of its ties to Islam and Arab identity. However, being supportive of openness to other languages, particularly English is also required because of the privileges and opportunities it offers (Errihani 2008). It is clear from extracts 75 to 76 that although these participants have a favourable opinion of SA and encourage its use at university to a varying degree they also insist on the importance of multilingualism, with a special emphasis on English in particular. This remark is important to discuss and will be elaborated in the section on attitudes to English (6.3.4)

6.3.2.2. Negative attitudes toward SA

Although many participants, mostly students, advocate the use of SA at university and support it with the consideration of other languages like English. Only one negative attitude was recorded in the data. The following extract shows this

77. I do not know. I think this will not be helpful for us. It will make us more dependent. Because everything would be very easy, and we neglect to learn other languages. Especially since we need English as researchers. I disagree with this idea. (SP9)

Interestingly, not many negative attitudes towards SA but one from the data was recorded in the data, especially when the participant is a Tamazight speaker. (SP9) disagrees with the idea of adopting SA as the main medium of instruction instead of French because using SA will make students more dependent. The dependency of students on SA according to SP9 will make them neglect to learn other languages and therefore not willing to develop their academic careers internationally. Again, although the attitude towards SA is different from the majority of the participants, the demand for English and its importance in academia is clear and a mutual demand among all students.

These attitudes towards SA present a micro picture that transcends the individual and becomes part of a larger picture where bodies like the ministry of higher education in Algeria pledge their support for SA. Also displaying its readiness to adopt English while in fact adopting French as the language of science and modernity.

6.3.3. Attitudes towards French

Attitudes toward the French language were predicted as most participants see it as an obstacle in their university education and research careers. However, although French has been labelled always as the ‘coloniser’s language’, ‘the enemy’s language’, and ‘the language of the devil’ it has maintained a prestigious and high status in Algerian society without having an official status like SA and Tamazight. Benrabah (2007) attempted to explain the maintenance of the French language in Algeria despite an assertive language policy to Arabise every sector in Algeria and to eradicate the existence of French (Benrabah 2007a). He mentions numerous reasons why French is still persistent in Algeria including political and historical and cultural reasons that stems mainly from colonialism (see section 3.2.3).

The hegemony of the French language in Algeria is rapidly fading with the introduction of new challenges brought by globalisation. The demands for policies that replace French with English and Arabic have been rising for a long time. Especially with the younger generation that is exposed more than ever before to English material.

The participants in this study have mentioned why most of them hold a negative view towards French being used at university. The following sub-sections will elaborate more on their views.

The Coloniser’s language

An Algerian writer predicted the linguistic future of Algeria after independence (1962) in a quote cited in Gordon’s study: ‘In ten to fifteen years..., Arabic will have replaced French completely and English will be on its way to replacing French as a second language. French is a clear and beautiful language, ... but it holds too many bitter memories for us’ (Gordon et al. 1966, p.113)

This quote describes the aftermath of the independence where the newly appointed government adopted a policy of Arabization and changed its policy and position towards French. People also have had different attitudes, and complex opinions towards French as a language tied always to the ex-coloniser (Benrabah 2007a). Below are some extracts from the data where

participants expressed their attitudes towards French and link them to colonialism:

78. some parents and students think that French is the language of the coloniser, and it is a shame to learn it. The reason why French still exists in Algeria in the first place is because of our history with French colonialism (SP7)

When asked why some people do not prefer to learn and use French (SP8) and (SP9) replied

79. ...because French is always related to colonialism (SP8)

80. Algeria has a long history with French from the colonial era. It stayed because it was treated as a tradition or a habit. Many people studied French during colonialism, and even after independence people were educated in French. It was difficult to detach it from society. Therefore, it is still present now (SP5).

The existence of French in Algerian society and its relation to the former colonial power is not a new case in Africa. Many African countries live with a heritage of ex-colonial languages besides their indigenous and local languages. This situation has been the interest of many African researchers interested in the attitudes of people towards different languages, especially towards the languages of the former colonisers. For instance, Adegbija (2000) describes patterns of attitudes occurring in cases where the ex-coloniser languages co-exist with local languages regardless of the status of the latter. These patterns are characterised by two influences: centripetal and centrifugal (Adekunle, 1995). The centrifugal influence on the ex-coloniser's languages stems from a utilitarian, instrumental motive. It is described as a call for modernisation in all aspects of life -including higher education-. This is why French continues to be used in Algeria, even after independence and many official efforts to erase it.

On the other hand, the centripetal influence on attitudes indicates a refusal of the ex-colonial language to exist and be promoted in different life spheres. This force promotes a desire for a sense of belonging and solidarity through the use of an indigenous language. This perspective also advocates the pro-

motion of local languages and the preservation of local cultures. This type of influence sees European languages as alienating languages of colonialism and imperialism (Adekunle, 1995). Again, this view reflects the attitudes of many people rejecting French to be used in public sectors such as higher education. The extracts 78 to 80 above are proof of this rejection.

Dull teaching methods

While interviewing some students and teachers, some have expressed their attitudes toward French which seem to be neutral yet contain a negative connotation to it. One of the themes emerging from this type of discussion is tying the negative attitude and beliefs about French to how it is taught in primary, middle, and secondary public schools.

After the policy of Arabization in 1962, the government worked to eliminate French from the only language of education to a subject taught for limited hours during the week, with heavy dependency on Arabic in the curricula (Benrabah 2007a). French is taught until now as a subject but with the same teaching methods for decades. The weakness in French that many teachers spoke about and many students confessed is the result of an overburdened system that lacks adequate teaching materials and conditions, overcrowded classrooms, and policy confusion (Maamri 2009).

81. I personally, do not like French because of my teachers at primary and middle schools. They were very dull and made me hate this subject (SP7).

82. as you can see, French was not successful since we did not start it off correctly. No strong foundation, no interesting teaching methods, and add to that the social connotations (SP10)

83. I think the roots of this issue date back to primary school. You see in the third year of their primary education children are introduced to French. They are not mentally prepared, and they feel scared of this language because everyone says they will study French now not only Arabic and Maths (SP8)

84. this deterioration in French may be because of the level of the teachers in secondary and middle schools. Maybe there were not any

teachers for French at all. Maybe schools had a lack of teaching materials... I mean reasons are a lot. But we cannot tell which one is for sure (TP2)

85. The bigger problem in my opinion is that the language teaching of French is very poor. Sometimes students come to me and tell me that we haven't studied French at all, although they have it as a subject in their curriculum (TP9)

A study by an Algerian sociologist (BenGhezalla 2018), on the didactics of French in primary schools in some regions in Algeria, reflects a set of obstacles in teaching French, especially in primary schools. He found that the general weakness among learners is caused by the following: The inadequate competency of teachers in the language and/or in teaching methods; a change of attitudes towards French to unfavourable, the encouragement of SA instead; psychological barriers (which was also pointed out by many participants in the data and is discussed in the following section) (BenGhezalla 2018).

A psychological barrier

This theme emerged earlier in discussing reasons why some students at Adrar University face difficulties in terms of the medium of instruction, which happens to be French. It is no surprise that speaking about the attitudes of French brings about the discussion of having negative feelings and psychological barriers towards the use of this language in school.

BenGhezalla (2018) suggests that these types of psychological barriers to learning French originates from a young age these pupils are exposed to French being a new language to them, besides SA which, also, poses a dilemma for many. Another reason is mentioned above, the poor competency of teachers of French. Which is also related to their training that lacks the understanding of adequate teaching methods specific to the French language.

The scholar also mentions an important point that plays a role in determining the attitudes and the obstacles students face when learning French. It is the regional differences which will be discussed in the following sub-section.

Regional differences

Many participants reported their attitudes towards the use and the teaching of French and the nature of the region of Adrar specifically, and the South of Algeria generally. Adrar is a region that is known to be very conservative in terms of its identity: namely Islam and Arabic (See chapter 3 section 4 for more information about the region of Adrar). This difference in exposure to outside influences like the French language dates to the colonial period. Adrar being situated in the south of Algeria before the discovery and exploitation of gas and oil was the least interesting region for the colonial power at that time. Also, the widespread existence of Qur'anic schools helped the maintenance of Arabic and its ties to Islam (Bouhania [no date]). The following extracts showcase where the contrast between North and South occurs in the data:

86. It depends too on regions as well. I think that the north uses French more often than the south of Algeria [...] I am not sure again what the reasons are but probably because the south is more conservative, especially in terms of Islam and Arabic. This is why they are hard to open up to other languages, especially French. You know...because French is related always to colonialism (SP8)

87. I think the north of Algeria is more affected [in terms of the use of French] not like here [Adrar]. I mean we do study using French, but it is a ministerial decision coming from the capital [Algiers situated in the North]. However, we do not use it in our daily lives apart from some words (SP7)

88. There are so many problems in French language teaching, especially in the south. In the north, they use it on daily basis [...] In the south, on the other hand, you rarely hear French outside. It is not used very frequently. The university is part of the local society. (TP2)

89. In the north of Algeria, there are people very good and very interested in French. But here not really (TP9)

Relative lack of usefulness of French and shift of interest toward English

The other attitude that rises from the analysis of the data, is the concept of usefulness. To many participants, especially students, they see that French, as they use it for their studies at university, is not beneficial for them, at least not as useful as English. The following extracts show some of the opinions in favour of English instead of French.

90. I honestly consider it a non-important language here at this university. Maybe if they consider English, it would be better [...] French is okay, but it is very useless. (SP2)

91. I think French is decreasing already. I mean in terms of use and interest. People are interested more in English especially younger generations [...] Like, they are adding more pressure on us with a language that is not useful at all [...] French cannot be used anywhere apart from France and few other countries in the world. It is not the language of research, and it is not the language of entertainment so why are we still holding on to it. I do not know honestly. (SP10)

Attitudes to French have changed over the years in Algeria and many African francophone countries. French was and still is (to some extent) considered an instrument for better socioeconomic status, and better access to scientific and technical knowledge (Djité 1987). However, the status quo suggests that now the world is shifting altogether toward linguistic ecology where English is the international lingua Franca (Diallo 2019). Not only that, nowadays, African local languages are gaining recognition and are used more than ever in the public sphere (Diallo 2019). These facts caused French to be threatened in some francophone African countries including Algeria. This is especially true after the French president Emmanuel Macron expressed his worry and disappointment in the last conference of the Francophonie saying that the French language has indeed declined in the world and in the African continent (Rahhou 2022)

6.3.4. Attitudes towards English

The English language has been gaining attention since the 1990s. During this period Algeria's economy shifted from a socialist-style economy to a market economy. This has brought about a demand for learning foreign languages, especially English (Benrabah 2007d).

Several studies on attitudes towards different languages have been already conducted in many parts of Algeria. In Belmihoub's study on engineering students, for instance, he found that the majority of students are in favour of multilingualism, favouring English 'as a useful vehicle of economic opportunity and knowledge transfer' (Belmihoub 2018b, p.144). This positive attitude has been reinforced immensely by the special programs the embassy of the US and the British Council in Algeria are offering in collaboration with local authorities and local communities (Belmihoub 2018a).

For this study, participants also have mostly had positive attitudes toward English and the possibility of it replacing French at the level of higher education. This support comes due to two reasons (which represent the themes extracted from the analysis): 1/ to facilitate research, finding resources and references and publishing in national and international journals; 2/the language is highly requested in the job market (especially in the industries related to the fields of study in the faculty of ST).

6.3.4.1. Research and publishing

This point has been tackled several times, especially with the difficulties participants face when doing research or attempting to publish it. Mainly, because of the lack of support in the English language the researchers receive. The following excerpts from the data show where this is relevant:

92. We want English truly! You know as a PhD student; I am suffering with finding resources for my research. Even when publishing, we need to publish in English. Why teach us and make us use French for five years or more than when you get to postgrad studies you are obliged to do your studies and research in English [...] As a student and as an instructor, I need English in both roles (TP1)

93. I think everyone should have adequate knowledge of English because it is an international language [...] If you find obstacles in research caused by language, how would you proceed then. If you don't have adequate language training, you cannot do anything to advance in your work and your research (TP2)

94. I think not learning English is one of the reasons why Algerian researchers are not publishing enough. Most of our colleagues publish in French journals or Algerian francophone journals, and only a few get published in international journals that require very good English. No one can hide the fact that the strongest language nowadays is English [...] our field of study depends a lot on publications written in English, so I expect English to be promoted in our universities to ameliorate the educational and academic systems in Algeria. (TP3)

95. I see that English is quite important. It is the only language strongly used in research and academia around the world not only in English speaking countries (TP5)

96. it is indeed an international language and very important in the domain of scientific research. I think they should incorporate it bit by bit (SP5)

97. I think they [universities] should support English. The government should also. It is now the language of the world. I highly recommend people start learning it (SP10)

6.3.4.2. Better Job opportunities

Belmihoub's study on attitudes also finds that the sample of Engineering students believes that knowing other languages may help obtain better job opportunities, especially when knowing English because it is becoming a necessity in all job markets (Belmihoub 2018b).

The domain of the oil and gas industry in particular is growing in Algeria and in continuous demand for engineers and technicians and workers who are proficient in English. According to Belmihoub 'among all industries nationally that demand the most English proficient users, the oil and gas industry produces an astounding 96.5% of the demand' (Belmihoub 2018a, p.212). The presence of multinational companies makes English a necessity even if the companies were French (e.g Total) or Algerian (Sonatrach) (Ramaswami et al. 2012). This is especially relevant to the participants of this study because most of them are students interested in oil and gas jobs which are active in the region. The following extracts illustrate this relation:

98. Also, our students did training with real engineers in oil refining factories. And saw that in the field specialists use technical words and concepts and material names in English. They did not hear any French in the industry that why I think our students are less interested in French and are more into English. (TP11)

99. But I think English is more accepted than French in these times. It is easier to learn. We need it in our careers. For us, the industry requires engineers with excellent English language skills (TP7).

100. Maybe if they consider English it would be better. It is the language of the world and with multinational companies and stuff, it could be very useful. (SP2)

Other students also mentioned why their generation is more interested in English than any other language, besides study and job requirements. They mentioned the need for English in entertainment such as gaming, social media, mainstream media, music, and tourism.

6.3.5. Attitudes towards Tamazight

Attitudes towards Tamazight in this study were mostly unfavourable even from Tamazight speakers themselves. These negative attitudes differ in nature from one person to another. Most participants respect this language and its heritage however the only obstacle is its usefulness; for others it is the debate

of which regional variety comes first that creates the dilemma; some are worried about the future of this language; some are claiming its ties to political agendas. The following extracts show some examples of these:

101. I personally will not need it in the future or in my career nor in my research... like many other people. So why should we learn it anyway? It is part of our identity yes, but it is not useful (TP1)
102. In my opinion, I don't think using it is a problem of course. But first, we need to settle the debate of orthography, because it creates a conflict between all Amazigh (TP6) (Tamazight speaker)
103. I do not think this is a good idea. The Amazigh language should not be imposed on everyone. Some people do not wish to use it. It is not a scientific language for the moment (TP10) (Tamazight speaker)
104. It can't work in scientific research. I disagree with this idea (SP7)
105. I do not think it would make such a good idea. I mean we have languages but Zenete [Tamazight variety] for instance is not a language. It is not rich. It is not standardised (SP2) (Tamazight speaker)
106. It is our culture indeed and we have to conserve it. But I do not think It can be an educational tool. I mean it cannot work in schools and universities (SP9) (Tamazight speaker)

Some attitudes were neutral from some participants as exemplified in the following extracts:

107. It is part of our national identity of course and it is very important... We have a problem in managing all the languages that we have in Algeria let alone regional varieties. We need to work more on Tamazight and give it attention, but I think we need to prioritise working on universally used languages like English, or Arabic because it is the language of the majority, than Tamazight of course. It is not fair that we neglect it. Thousands of Tamazight speakers have the right to use their mother tongue of course (TP9)
108. I have no idea about how the language works... but I respect it and I respect its speakers. (TP11)

109. honestly, I have no contact with this language, so I am not sure 100% yet I hear a lot about it, and I have friends who are speakers of it. So, I cannot give you an accurate response (TP5)

A participant (TP3) while asking his opinion and attitude towards the use of Tamazight at the level of higher education, asked me to stop recording him. Then he asked me to move to the next question. I respected his request yet, I found this to be interesting because I assume his attitude stems from abstaining to talk about the politics of this language and the debates around it. This attitude remains uncategorised as neither negative nor neutral, however, it was necessary for me to mention it.

The last extract is for a Tamazight speaking student who agrees strongly with the promotion of Tamazight in all and every domain including education:

110. I am strongly supportive of learning Tamazight, even if a person does not speak it. I feel ashamed that I did not learn it. It is part of who we are as Algerians. Yet we only learn Arabic then French, why is Tamazight absent then. This is unfair.

It is also noticed that some strong or mild supporters of the recognition and promotion of Tamazight tie it to the concept of unfairness. That this language, in any of its varieties, is absent from the scientific and technological scene in universities across Algeria is noted as being especially unfair.

6.4. Summary and conclusions

This chapter started by analysing findings concerning how language policy and practice affect experiences of people participating in this study. Then the second half of the chapter elaborated on their attitudes towards different languages co-existing in this context.

The findings in the first part of the chapter are more focused on the difficulties participants face because of the current linguistic practices and policies (be they explicit or implicit). This is not surprising since one of the motives for pursuing this research is the recognition of a difficult situation created by the current language policies and the unmanaged practices among students of ST.

Attitudes, on the other hand, are a product of subjective beliefs and are an important driving force for human behaviour (Palviainen and Huhta 2015).

The multilingual nature of the Algerian university system with the confusion in policy planning and policy implementation is what caused the above-mentioned challenges and difficulties. Students coming from different linguistic backgrounds and possessing different linguistic proficiencies cannot be assimilated into one classroom without having troubles with their engagement, academic achievement, research, and publishing (for postgrads and professors). The challenges described by the participants themselves are explained indirectly through expressing their attitudes. For instance, the attitudes toward French being a language taught using traditional and dull methods can be one of the reasons why many students are facing difficulties in writing at university, and consequently having poor academic achievement. Another reason might be the culture and the stigma surrounding French. Alternatively, the example of English, the positive attitude and the demands for English stems from the fact that students and academics need it in their research and for publishing.

The attitudes and experiences of the participants shape how languages are used. The obvious rejection of the French language led many teachers to adopt code-switching as one way to overcome this obstacle (see 6.2.6.1). They are also important in shaping ideologies and new policies. For instance, English as a potential replacement of French in higher education. The demands of globalisation along with the demands of students, researchers, academics for access to English for better academic performance, all led the government of Algeria to start planning for a big project to introduce English in the scientific and technical spheres at universities across the nation (See 6.3.4)

Attitudes towards AA and Tamazight also were mostly negative because participants see that they are not standardised, well-resourced, modernised languages that could have their share in future policy plans. This is translated in reality in the absence of any efforts by the Algerian government to promote AA in all domains, and Tamazight in the domain of higher education. Although the latter received recognition and promotion in several other aspects (educa-

tion, culture). SA gains some positive attitudes, because it is above all a representation of the country's Islamic heritage, although still being absent from scientific and technological domains at university.

To sum up, the experiences of policy agents (students and teachers) and their attitudes are relevant to language policy and planning, because they play a major role in the maintenance and promotion of certain languages, and the negligence and sometimes even the death of other languages. Which is the answer to the third research question of this study 'What are students' and teachers' attitudes towards languages, choice, and multilingual universities, and how can this be reflected in a successful language policy?' A language is likely to be used, maintained and promoted if speakers embraced positive attitudes towards it (Errihani 2008). I argue that having positive attitudes towards a language is not enough for it to be promoted and maintained. There are many factors at work such as effects of globalisation and power.

On the contrary, if a language is viewed negatively by speakers, this language is not likely to survive in the long term. This is the case for both French and Tamazight in Algeria. French has a colonial history in Algeria, in addition to the many obstacles it is facing, it is expected to gradually disappear from the Algerian linguistic scene as English rises. Tamazight is also a language facing numerous obstacles that made attitudes towards it mostly negative.

Chapter 7 Linguistic justice, fairness and language rights: a discussion

7.1 Introduction

The purpose of this chapter is to discuss and interpret the significant findings from the current research in relation to the concepts and previous research identified in the literature review (Chapter 2). More specifically, this chapter aims to ascertain the extent to which the explicit or implicit language policies at Adrar University are linguistically just, and what can be done to create more linguistically just policies. In order to answer this question, the chapter will apply the concepts of unfairness, equality, and capability to the experiences of the participants (the findings from the previous two chapters).

The definition of the word 'justice', despite its ubiquitous use, is still not clear nor is it easy to find answers as to what it is, nor can it be explained by one approach (Lee et al. 2021). Social justice is a specific form of justice that recently received massive attention from scholars in different domains. Bell (2007) suggests, for example, that social justice needs to be understood as a process as much as a goal. In this chapter, I apply political, economic, and sociolinguistic approaches to social justice in general in an attempt to understand the nature of linguistic justice.

Participants' experiences of language policy and their language use, along with their attitudes, help tell us to what extent language policies at Adrar University are just. The first section in this chapter is dedicated to the discussion of the main theories of justice explored in the literature review chapter in light of the findings of this study. The second section of this chapter discusses what a just language policy at Adrar University might look like based on the results of the study.

7.2 Conceptualising linguistic justice

7.2.1 Unfairness through language policy and practice

In this section, I will discuss how participants experience unfairness and injustice based on what they believe is unfair or unjust towards the linguistic situation of their university. The data from themes discussed in chapters 5 and 6

reveal findings that are related to how participants conceive the concepts of unfairness and injustice. These are discussed below.

7.2.1.1 Extra time and effort

The most frequent reason why some of the participants think that the linguistic situation is unfair is that it causes them to have to pay extra time and effort doing their studies. Among the practices that they perceive as unfair is that they have to translate content from or to French. Teachers and students alike see this as unfair because the switch from code to code is seen to be time and effort-consuming.

7.2.1.2 Lack of support

A further theme which suggests unfairness is the lack of language support. Participants mentioned the change in the medium of instruction from SA during pre-university education to French at university, without providing any support or language courses. The case is more challenging for international students attempting to adapt to the languages of their university and host country. Research has proved that language difficulties influence the level of psychological well-being of international students (Gatwiri 2015). The majority of the Algerian participants of this study have reported that they face difficulties in French when used in their classrooms. Thus, these language difficulties entail a similar effect on both international and home students.

The themes from 7.2.1.1 and 7.2.1.2 pertain to what Ingrid Piller (2016) calls 'submersion education'. She defined it as 'a situation where students are made to study exclusively through the medium of a language that they have not yet fully mastered' (Piller 2016, p.106). The learning of the content along with the learning of the language creates a burden for students and teachers alike. Piller adds that this situation is also paired 'with an absence of any structured language learning support' (Piller 2016, p.106). The situation described by Piller here is almost identical to the situation at Adrar University. In this, French is used to teach scientific and technological matters to students who are not native speakers of it, nor are they receiving support to catch up with their studies. Consequently, this situation can therefore be described as unfair.

7.1.2.3 French no longer needed

The position of English as a lingua franca in academia and entertainment is another reason why the use of French as a medium of instruction is unjust according to some participants. Similarly, the results have shown that some of the participants see French as an unnecessary language at university (see chapter 6 section 6.3.3.5) not only because of the difficulties it creates for both students and teachers (see section 7.2.1.1) but also because they view French as increasingly redundant as a global language.

The themes raised regarding the use of English are reflected in the work of Van Parijs (2011) who argues that English can be a means then to achieve linguistic justice if the competency in English spread in the world. (see chapter 2 section 2.4 and chapter 7 section 7.2.2.3).

7.1.2.4. Inequality in the classroom

The demographically diverse nature of classrooms at Adrar university automatically entails linguistic diversity, with home students from Arabic-speaking backgrounds, Tamazight-speaking backgrounds, and international students from both francophone and Arabophone countries. Some participants claim they have experienced inequality and discrimination in the classroom because of their language competency. This sense of exclusion is manifested when students express how some teachers prefer to interact more with students who are fluent in French rather than those who are not.

Paradoxically, participants who speak Tamazight as their mother tongue declared that they never felt discriminated against in the classroom because they never use Tamazight in the first place. In addition to the perceived discrimination of those who are less fluent in French, it could be argued that the lack of visibility given to Tamazight in the classroom, and in the linguistic landscape in general are other indicators of inequality which is discussed below.

7.1.2.5. Discrimination toward languages

The presence of multiple languages in one place in which each has its status and function can create a set of challenges when managing them. One of these challenges can be inequality in treating these languages. General attitudes and beliefs towards languages, and the prestige awarded to different

varieties, are reasons inequalities may occur. A positive belief toward a specific linguistic variety increases its status and vice-versa (Sierens and Avermaet 2015). English for instance enjoys a positive attitude, this is why the Algerian government invests in promoting this language. Recently, a project to teach English in primary school was initiated by officials to extend the teaching of English to early years of education instead of starting to teach it in middle school (Naser 2022). The results of this study have shown this in contrast to what is happening to Tamazight, where people do not hold positive attitudes towards it, especially in the domain of higher education. This is translated to an absence of a policy to promote the use of Tamazight at university (see section 6.3.5 chapter 6 for more about attitudes towards Tamazight). Findings from the data imply that there is a sort of discrimination between languages favouring one or more over the others for different purposes including usefulness (French less useful), prestige (AA and Tamazight less prestigious), and power (English and SA more powerful).

7.1.2.6. Unfairness in Research and Publishing

Several discriminatory practices may occur in the field of academic publishing, including discrimination based on race, age, and gender. These practices may tackle unfair reviewing processes, unethical behaviours, restraints on time and research and so on (Le Roux 2015). Research on unfairness in publishing has mainly focused on the factors of race, age and gender, but neglected factors like language. Van Parijs elaborates on the language factor through his study on fair cooperation and what he calls 'the anglophones' free ride' (Van Parijs 2007, p.50). Van Parijs argues that in science we need a lingua franca, namely English. He claims that adopting other languages other than English will unavoidably create injustices in various ways (Parijs 2007). This section demonstrates how the language policy in Algerian higher education creates injustice and unfairness for students and teachers because it fails to recognise the dominance of English in academic publishing.

Findings from interview recordings show how participants struggle when they conduct research and/or publish research (See chapter 6 section 6.2.4). They expressed their frustration as they feel constrained because of the linguistic restraints they experience including lack of resources in their languages

(French, Arabic, and possibly Tamazight); the low rates of acceptance into peer-reviewed journals because of the absence of English in the linguistic repertoire of the Algerian researcher by training. Participants experiencing injustice in their careers because of language is evident. When we match these findings with the conclusions of Van Parijs mentioned above, I argue that inevitable injustice occurs when a poor distribution of opportunities is present, in which anglophones get better opportunities in scholarly publishing. Van Parijs argues that the only solution to fair cooperation is the adoption of English (Van Parijs 2011).

For Adrar University, enhancing the presence and the use of the English language will certainly solve several issues including challenges in research and publishing for researchers.

7.2.2. Assessing linguistic justice at Adrar University

Having outlined the key themes which refer to unfairness and injustice, this part of the chapter focuses on a more general discussion of different theories of justice and links them to findings from the data. In this discussion, I focus on the main approaches to linguistic justice, including liberal egalitarianism, represented by the discussions of John Rawls and Philippe Van Parijs (1999, 2011); the capability approach to justice, which was constructed by Sen (2010), and finally, the integration of the importance of language rights for the preservation of multiculturalism, as discussed by Kymlicka and Patten (2003)(See chapter 2 section 2.1). The theories of justice discussed in this research are central to the understanding of, first of all, what is justice and how can one conceptualise it in real-life practices; and secondly, the projection of these definitions onto language practices and language policies to initiate a discussion of how policies and practices can become more just in the future.

7.2.2.1. Fairness and individual liberty

Justice as fairness is the theoretical framework brought about by the philosopher John Rawls, who constructed a systematic moral conception addressing moral and ethical dilemmas. Although criticised a great deal for being unrealistic and abstract, the theory of John Rawls is still discussed and applied to

different domains mainly social institutions as part of the basic structure of society (Rawls 1999b; Fanton 2020). In this section, I apply Rawls' theoretical framework to the linguistic situation at Adrar university in an attempt to assess whether the policy and practices at Adrar University can be described as fair.

As previously stated in chapter 2 section 2.1, the Rawlsian theory of justice as fairness stands on certain essential elements such as individual liberty and equal opportunities (Rawls 1999b). This theory can be applied to language use, language policy, and language practice. People should be able to use the language(s) they wish to use without being discriminated against in respect of the individual liberty principle. In addition to this, different people, especially in multilingual contexts, should have equal opportunities using the language(s) they wish to use without being judged or discriminated against in respect of the second principle namely equal opportunities.

In light of what was discussed in the previous paragraph, it can be argued that these two principles are not achieved in the classroom. Participants such as SP1 and SP4 claim that they experience inequality in their classrooms because their teachers somehow prefer to interact more with students who can speak French fluently and tend to ignore (or interact less with) students with poor abilities in French. Moreover, some Tamazight-speaking participants also expressed their disappointment because they are unable to use their mother tongue in the country that recognises it as its official language.

These incidents and experiences demonstrate the lack of equal opportunities and liberties for using one's language freely in the classroom. Therefore, the concept of justice as described by Rawls, stands on equality and liberty is not achieved in the case of Adrar University's ST classrooms, and its management of languages. According to Rawls, in order for the two principles of justice to work, they have to 'first, each person participating in a practice, or affected by it, has an equal right to the most extensive liberty compatible with a like liberty for all; and second, inequalities are arbitrary unless it is reasonable to expect that they will work out for everyone's advantage [...]' (Rawls 1958, p.165).

If we are to apply Rawls' rule to the situation in Adrar University, we can see from the data gathered that participants do not enjoy equal rights in using their languages, i.e. they are prevented in some cases from using their mother tongue, as is the case for Tamazight. Likewise, these inequalities are not expected to work well for the greater good. Thus, we can conclude that, with regard to Rawls's theory of justice, some linguistic practices in the University of Adrar are characterised as being unfair.

7.2.2.2. Incapability in language

The capability approach developed by Sen was introduced in detail in chapter 2 section 2.3. This theory is based on a simple equation for justice: a functioning should be accompanied by freedom of choice to become a capability. A functioning is capability but without the freedom of choice (Sen 2010). Or as Sen himself puts it; 'Capability is an intellectual discipline that gives a central role to the evaluation of a person's achievements and freedoms in terms of his or her actual ability to do the different things a person has reason to value doing or being' (Sen 2009, p.16).

A functioning consists of what people can do and who they are (to do and/or to be) (see chapter 2 section 2.3). Language is an example of what people do and sometimes who they are. Therefore, according to Sen's model, speakers should be empowered by the freedom of choice so that language becomes a capability, hence achieving justice.

Some students and teachers who participated in this study have mentioned certain language practices that limit their freedom of choice and therefore limit their capabilities at university. Among the limitations mentioned are these two: a limitation in studies in terms of writing and reading and assessments; and a limitation in communication in general especially among international students (see chapter 6 section 6.2 on experiences). Some students mentioned being linguistically incapable because of their poor competency in French which limits them from achieving satisfactory results at school. These experiences show that some of these participants struggle with the language situation at Adrar university. The theme of struggling with languages is highly frequent throughout this research. This incapability in language use is often at times

paired with lack of freedom of choice because students are usually encountered with a new linguistic situation at university where they cannot choose the language they want (Arabic or/and English as they reported in the interviews).

The capability approach, therefore, provides a normative framework for the assessment of policies to judge whether or not they are just. The theory highlights aspects of people's lives, in this case, their education. It is also concerned with what people can do, such as being able to obtain good quality education; use the language they value and/or prefer (Robeyns 2017).

For this endeavour, the capability approach asks: what are students and teachers able to do and what kind of people they want to be? Does the institution of Adrar University's language policy and practice focus on people's capabilities? In other words, does it provide opportunities for people to be/do what they value/able to do? The answers to these questions are gathered from the findings of the data about participants' experiences.

In answering the first question, we find that students feel incapable, sometimes, because they cannot use French in their classroom which entails a set of challenges (see chapter 6 sections 6.2.2 and 6.2.3), that hinders their academic performance and therefore affects their education. Consequently, the ability to have a quality education is compromised because of the linguistic challenges these students face on a daily basis.

In answering the second question, Adrar University's language policy and practice do not necessarily focus on people's capabilities but adopt a benign neglect approach towards the languages used by its staff and students. A good example of that is the flexibility and the fluidity of languages used in the classroom from French to AA to SA (see chapter 5 section 5.3 on how languages are used in Adrar University classrooms). This flexibility is a double-edged sword, in one way it is helpful for both students and teachers to facilitate communication and understanding; on the other hand, it can create confusion and injustice. An example of injustice can be the negligence of Tamazight as a national and official language in the classroom although many speakers of Tamazight attend those classes. They have not been given the

choice to use their language. In Sen's terms, a capability is lacking when the freedom of choice is absent from a functioning (being a Tamazight speaker).

In multilingual settings, the languages used for communication can foster or limit one's abilities to flourish (Brando and Morales-Gálvez 2021). The discussions of the capability approach seem to neglect the role played by language and language policies in promoting justice (Brando and Morales-Gálvez 2021). This negligence may hinder how languages are regulated in diverse societies which may affect how we practice some fundamental capabilities (Brando and Morales-Gálvez 2021), to express oneself, understand the world around us, and connect with others are among the fundamental capabilities which are enabled by language. Additionally, language, given its intrinsic nature, is inseparable from human wellbeing, agency and human dignity (Brando and Morales-Gálvez 2021).

In the case of Adrar University, some participants declared that they struggle in communicating their thoughts in their classrooms using French (see chapter 6 section 6.2.2). Freedom of choice is also often denied because as French being used no Arabic (SA and AA) or Tamazight is allowed to be used, which entails a restriction on students (and sometimes teachers) and limit their freedom of choice.

According to the capability approach, therefore, the French language policy in these classrooms is unjust. Also, neglecting Tamazight as a language with an intrinsic value to its people is also considered unjust, because according to the capability approach, communicating in a language one values enables self-autonomy and dignity as a Tamazight individual enjoying a status of an equal member of their community (Brando and Morales-Gálvez 2021). In short, the capability approach advocates the development of fundamental capabilities including language and what can a person do with it and how they value it. It also provides a normative framework to assess how linguistically just they are.

7.2.2.3. Linguistic justice and the lingua Franca

As mentioned earlier in section 7.4.2, among the proposals for achieving linguistic justice is a normative monolingualism that adopts a policy of one lan-

guage to ensure inclusivity and equality of opportunities among people. Amongst the strong advocators of this proposal is the economist Van Parijs, who systematically tackled the issue of linguistic justice in his *book Linguistic Justice for Europe and the World* (2011). Van Parijs claims that language is not only a means of communication and transferring information, but also a means of exclusion, domination and fairness (Van Parijs 2016).

In a world that is becoming more connected, there is a need for people to communicate efficiently. For this reason, Van Parijs claims that achieving this without being unfair is to adopt the democratisation of competence in one language, a role for which he claims English to be best placed (Van Parijs 2016, p.1)

The idea of Van Parijs of having English as a lingua franca to facilitate communication and information sharing in order to achieve linguistic justice, seems to have some value to it according to the finding of this study at Adrar University. Students and teachers claim to have difficulties accessing quality academic resources because of their poor competency in English. Findings also show that participants face some difficulties in their studies or careers at university because of the lack of access to English whether for research, publishing, or international collaboration.

The absence of English at Adrar University can be seen as a form of injustice according to the framework of Van Parijs. I argue that having English as a lingua franca at Adrar University schools of Science and Technology (ST) would solve several issues such as difficulties in research and publishing, accessing information worldwide, and communication. I will argue in the following section, however, that the increased use of English should go hand in hand with applying Van Parijs's parity of esteem where different linguistic groups (Arabs, Amazigh) are entitled to have respect and rights to use and promote their languages.

A point of concern that might arise when considering adopting a policy of English at Adrar University is the possibility of having the same consequences as the current policy of French; this can be the case because both languages are not local to Algeria. The success of implementing a language policy depends

mainly on the purpose it has been created for, and the attitudes related to that language. Additionally, Algeria is not an anglophone country, nor has adopted any policies supporting the spread of English nationwide throughout its history.

Nevertheless, unlike French at Adrar University, from the findings, we see that the English language in Algeria seems to have a bright future. The increased positive attitudes among participants toward English (see chapter 6 section 6.3.4) and the great demands for this language in the job market in Algeria (see chapter 6 section 6.3.4.2) are all factors for it to succeed. I believe, although Van Parijs tackles mostly the European context, some implications might benefit planning for language policy in Algeria in the future, with the demands to enhance the existence of English instead of French in the scientific and technological fields. English would be beneficial instead of French because of many reasons including the difference in attitudes towards each language; the different history of each language in Algeria; and the future of each language with English gaining a significant advantage.

I believe heading towards a policy of English at the level of higher education is needed for the greater good, thus, achieving linguistic justice according to the principles of fair co-operation and equality of opportunity of Van Parijs's *lingua franca*. It is also noteworthy that, languages like SA, AA, and Tamazight should have their share in the policy because of their significance in the construction of the Algerian identity. The latter can be achieved also via Van Parijs's parity of esteem and the principle of conserving linguistic diversity in multilingual contexts like the Algerian university.

7.2.2.4. Language rights and multiculturalism

Language rights have always been a recurrent topic when the discussion of linguistic justice is brought up. Linguistic justice is concerned with protecting the linguistic rights of language users especially those of minority languages (Alcalde 2015). This school of thought criticises liberal equalitarian theories such as Van Parijs's idea of justice (Alcalde 2015) and presents a model, that is often heavily criticised for being unfeasible in reality, but asks important questions about linguistic justice. Patten (2001) was among those who raised

those questions regarding language protection and to what extent it is important to linguistic justice; the debate of language loss and its relation to political action; and finally, can language equality be achieved as a normative goal.

These questions were tackled especially related to linguistic justice in several works of Patten, including his collection with Kymlicka (2003). Among the conclusions of their works are the following: the state cannot adopt benign neglect towards languages and language issues (Kymlicka 2001); language rights are important in the achievement of linguistic justice and are divided according to cases of each language community (see 2.5.2 and 2.5.3 in chapter 2 for details on kinds of language rights); language policies should maintain national minorities as distinct cultures (Alcalde 2015).

The contributions of the language rights and multiculturalism approach to the discussion of linguistic justice have been very useful in identifying and preserving vulnerable language groups and working to support them via normative language policy designs. However, authors and contributors to this school of thought have always focused on cases like Canada, Spain, the US, and Belgium to name a few, neglecting postcolonial contexts and their policy literature and sociolinguistics (Alcalde 2015). The world is far more complicated than individual or state monolingualism, and empirical studies on postcolonial contexts with regard to debates of linguistic justice and language rights are still missing from policy literature.

Patten (2003) argues that fairness rights should be allocated following specific criteria based on the size of territorial concentration. If we project this claim to the case of Adrar University, we find that the concentration of people including students and staff varies, with Arabic-speaking and Tamazight-speaking Algerians, and international students who speak different variations of Arabic (e.g. Mauritanian and Levant Arabic), French or Spanish. The University of Adrar does not offer any statistics on the languages of its students or staff, however, if Arabic-speaking students and staff are the majority at Adrar University, then, according to the model of Patten, they should be granted language rights that promote their language and put it first. The constitution of Algeria declares the

importance of Arabic and adopts it as the nation's language while the University of Adrar being a public University supported by the state adopts a different language policy in ST schools, neglecting Arabic and adopting French, per se, with a blend of other language practices that are not managed by either explicit or implicit language policies. The model of Patten then says Arabic-speaking students and staff should be granted fairness rights and Arabic should then be promoted to be the language of schools of ST. Since this is not the case, then we can conclude that the situation at Adrar University regarding language rights is not just.

Linguistic justice, hence, falls into two policies. Firstly, normative monolingualism that advocates justice is achieved through speaking a unified language ensuring equal opportunities and efficiency in communication, supporters of this claim include Van Parijs. The second is a multilingual language policy that ensures that languages valued by different people are all accommodated to respect one's identity supported by Kymlicka and Patten. Thus, a multilingual policy that recognises, promotes and respects minority and majority languages alike.

7.3. Envisioning linguistic justice: policy recommendations

Drawing from the main models of linguistic justice discussed above and from the findings of my data, this section outlines policy recommendations on how language policy and practices can be more just at Adrar University specifically and Algerian universities with similar circumstances generally. The first part of this section will focus on how more effective language policies can be created, and the second part will focus specifically on creating a better teaching and learning environment by implementing these policies.

7.3.1. Creating effective policies

The purpose of this research is to understand first how language policies operate at the level of Adrar University and detect the issues language users face with regard to linguistic justice. Chapters 5 and 6 have analysed and pinpointed these issues and the reasons behind them. In this section, I attempt to present some recommendations to pave the way for a better policy planning that respects and integrates the discussion of linguistic justice in the future.

These recommendations are based on both solutions proposed by participants in the research as well as my own analysis of their experiences using the theoretical frameworks outlined above.

7.3.1.1. It's time for English

Although English dominates academia globally, it is still facing many obstacles in replacing French in Algerian universities. Among these obstacles are historical, political, pedagogical and economic concerns. However, the situation is slowly but surely changing and the status of French at the level of higher education in Algeria is diminishing because of the growing interest in English including from the Algerian government itself (Yahi 2022).

The participants of this study have themselves expressed their positive attitudes toward promoting English in their university because of its usefulness and importance in today's world (see chapter 6 section 6.3.4). Not only that, but some participants also emphasised the creation of an effective policy for English starting from implementing political decisions with regard to enhancing the presence of English in the educational system, especially allocating budgets to ensure teaching quality.

Furthermore, a study by Belmihoub shows that there is an increasing number of university students joining language centres to learn English because it is believed to open doors to study, travel abroad, and enjoy better opportunities (Belmihoub 2018a). Findings from the data concerning attitudes toward English confirms the findings of Belmihoub's study.

Reflecting on this theme, it is concluded that English in the Algerian university is becoming increasingly essential, and that this has implications for discussions of linguistic justice. The majority of students and teachers who participated in this study confirmed their need for English to access quality education via accessing resources, and in turn, produce knowledge and export it to the world. One of the demands of linguistic justice is the right to have quality education, and the opportunity to achieve better through the languages people value and/or choose willingly (Sen 2010; Van Parijs 2011; Mowbray 2012; Piller 2016). This is the starting point for Algerian officials and policymakers to

plan for English language policy, not only in higher education but also in other domains as well.

I therefore recommend that English is useful to replace French gradually as a medium of instruction while keeping the use of Arabic and introducing Tamazight in the classroom. This can be achieved by the points and practical recommendations mentioned in the following sections. Replacing French with English is a starting point to allow students to have access to information worldwide and empower them on many levels including communication, research, quality education. By recommending English to replace French I am not advocating one language over the other, but rather I adopt the belief that a successful language policy is built upon people's needs and choices to eventually prevent any linguistic injustices.

7.3.1.2. Better language management

Another theme that occurred more than others is the demand for a better management of languages that are used in Adrar University. Language management is an important component of language policy along with practices and beliefs (Spolsky 2009). In this study, it is concluded that language use (language practices) and language beliefs (attitudes) are important components to understand and assess the language policy (s) at Adrar University. Thus, the absent component in this equation must be adequate management in this context. Spolsky states that language management is 'the explicit and observable effort by someone or some group that has or claims authority over the participants in the domain to modify their practices or beliefs' (Spolsky 2009, p.4).

Thus, the management of languages in multilingual situations requires identified managers (Spolsky 2009). In universities, managers could be teachers, curriculum designers, students, university policymakers, government officials, and non-governmental organizations. In the case of Adrar University, findings have revealed that the policy and practice at schools of Science and Technology are governed by various parties including teachers and their training, students and their needs, and the proposed curriculum (canevas).

The need for an understanding of the importance of language management at the level of Adrar University stems from the issues that are caused by the poor management of languages themselves. The management of languages at Adrar University is described as being poor because no basic interest in discussing issues related to language has been sparked in the first place. In addition, according to Spolsky's discussion, Adrar University lacks a language manager (s) who plans and executes language management through successful planning for policies.

The poor management of language policy and language practices, or its absence altogether, has resulted in not only the poor competency in languages such as French (as the perceived language of instruction) but also the students' academic achievement and the researchers' academic careers. Hence, language management as Spolsky presented it (2009) needs agency and agents as managers who can influence policy and practice in Adrar University. Adopting a bottom-up approach that focuses on individuals who are directly in contact with the policy implementation, in this case, students and teachers, is the ultimate start to better planning.

Policymaking can rely on students and teachers, and needs to fulfil better, more just linguistic conditions. First, a general study needs to be conducted on students and teachers and staff in general to explore their linguistic backgrounds. Surveys can be a useful tool to collect this type of data. Then, decisions on language policy (medium of instruction, linguistic landscapes, communication inside the institution) can all be made locally with respect to the region's identity. Teachers and students can play as policy managers because they are in direct contact with policy implementations in their classrooms.

A more just policy should respect the Algerian people's national identity including the religious and cultural components. It should also respect people's choices and what they value and see useful. The findings of this study show that the majority of participants prefer to use two languages at their university: Arabic and English. Arabic (SA and AA) because of its ties to religion, ethnicity, and familiarity to students (public education from primary to secondary is offered in SA in Algeria); and English because of its status as a global lan-

guage and as a lingua franca in the domain of academia internationally, in addition to its importance in creating better life opportunities (job, travel, etc).

Arabic (both SA and AA) can be supported via a policy that permits their use on university premises, especially inside the classroom. Code-switching can be a practice that remains allowed in the classroom for better communication. The initiatives by the Algerian government to promote the teaching of English in primary school can be a starting point for future planning for English at university education. The officials responsible for planning language in education can all agree on a policy that starts from primary school and extends to university to ensure sustainable and consistent results. However, for now, universities can adopt teaching language courses to their students before starting their studies to ensure eliminating any linguistic challenges.

The implementation of these preferences can be easily translated into policies with the right tools and a firm political will. Agents like teachers and students being an important part in language management in their institution, can work to solve communication problems and accommodate all individuals from different backgrounds to ensure goals are achieved fairly within a policy framework.

7.3.2. Creating better teaching/learning environment

Linguistic justice requires a consideration of the effects of language policy in education especially questioning the role of language in students' academic achievement (Mowbray 2012). As this research proceeds, it is concluded from the findings of this study that language policy has indeed affected students' academic achievements. Not only that, but it has also affected research and productivity. It is also concluded through this research that having French as a medium of instruction and the language of academia in Adrar University has created obstacles in most cases because students (and sometimes teachers) are not proficient in this language (therefore they code-switch to AA for instance). This outcome is endorsed by Mowbray when she confirms that within the frame of linguistic justice 'proficiency in the language of instruction is necessary for students to understand and achieve in their subjects' (Mow-

bray 2012, p.18). This is where linguistic justice comes into play, ensuring equality of educational opportunity and better academic achievement.

In the following sub-sections, I discuss how linguistic justice can be achieved through a reflection on teaching methods and teacher training, and how important support for students is at university. These discussions are also inspired by recommendations put forward by participants themselves.

7.3.2.1. Teaching methods and teacher training

Teachers may be considered agents in the process of language planning, management, and implementation of the policy. The understanding of language policy is a crucial dimension of the professional roles of teachers who have second-language users in their classrooms (Varghese and Stritikus 2005). This section will suggest some key discussions on teacher preparations for the instruction in the classroom including raising awareness of language and methods, including the dimension of tolerance and linguistic justice.

According to Datnow et al, 'Teachers are considered by most policymakers and school change experts to be the centrepiece of educational change' (2015, p.71). This quote shows how important the role of teachers is in the process of policymaking and policy implementation. This role is often neglected because of the chain of authority that externally or internally influences teachers and their linguistic choices in the classroom. Most teachers in this study have pointed out that they can be policy agents if they have to (some teachers prefer to use AA or SA more than French for instance because of personal preferences, students' needs, better communication...etc), others insist on having external forces influencing their choice including the canevas, their professional training being in French (most of the time), some ideologies such as French is the traditional language of science and technology in Algeria.

By far, teachers in schools where I collected my data do not seem to have similar views on their role as LPP agents who can influence the linguistic behaviour of their students and the policy of the school itself. To discuss linguistic justice systematically then is still early in my opinion because a discussion

of the role of teachers in policy-making has not been initiated yet; although participants have reported their opinions on what is just and fair. This research, therefore, can be considered a first step towards the initiation of these discussions.

However, as the Algerian government pays special attention to languages in Algeria and their promotion for the greater good, policy guidelines need to be generated by specialists in multiple fields including education, sociolinguists, and law, to name a few, concerning language of instruction, teacher training, teaching methods and student support; instead of poorly informed political decisions that are always announced without investigation. An example of this is the recent decision to promote the teaching of English in primary education that was announced surprisingly with no clear workplan for the changes that will occur to the educational system, the curriculum, teacher training, recruiting teachers of English...etc. Language policy at universities should be made with the great help of teachers being an important agent in the implementation of a successful language policy. Teachers with rich experiences in teaching and interacting with students in their schools can benefit from the policymaking process, especially in rising awareness towards creating fairer policies that respect linguistic diversity.

Teaching methods, on the other hand, are another issue that burdens language policy in education because of the ways languages are taught. A frequent theme that appeared throughout research were the teaching methods, mainly the teaching of the French language in the Algerian educational system, from Primary school to university (See chapter 6 section 6.3.3.2). This point connects us back to the discussion of policymaking above, where methods of teaching languages should be well planned for and updated with research findings to be compatible with the goals of the language policy outlined. For instance, some participants reported how the French language was taught (see chapter 6 section 6.3.3.2), if these methods were to change there would be an improvement in language teaching in the long term, i.e., until university education. Where, in the case of French, teaching methods ought to be modernised adopting technology and learner-based approaches instead of heavily focusing on teacher-centred approaches.

Moreover, regions like the south of Algeria, have to have more attention because the number of French teachers is low when we consider the number of schools in the city of Adrar alone. Many participants reported not studying French because of the absence of teachers of French during their middle and/or secondary school. These practices need to be treated via revising the language policy and the related teaching methods whether French or English is to be adopted.

A poor language policy will inevitably lead to poor teaching methods which in turn lead to poor academic achievement. The case of the French language in Algerian universities is the best example of this: poor planning (or no planning at all) for French language policy at university results in poor teaching methods that do not fulfil the needs of students and teachers alike. It is also noteworthy that poor teaching methods of French in pre-university education is a leading cause of the weakness in competency in French at University (as participants reported in section 6.3.3.2 chapter 6).

To sum up this section, we see that it is all interconnected. Successful language policymaking will lead to successful teaching methods and empower teacher agency that fosters better academic achievement and better language competency. This in turn can contribute to linguistic justice at university since it enables people to obtain quality education and enjoy equal opportunities in learning the language (s) of their university.

7.3.2.2. Student support

Another important aspect in creating a better teaching and learning environment besides teacher training and teaching methods is student support. I will be discussing two types of support that, I believe, contribute all together to the achievement of linguistic justice, the linguistic support and the mental (psychological) support of students before and during their university education.

The theme of student support has been neglected in terms of Algerian educational policy debates. There seems to be a controversy in the transition to university education from an Arabized medium of instruction educational system to a predominantly French medium of instruction for ST schools. Therefore, this is where student support linguistically and mentally should be present.

Many participants in this study have acknowledged the total absence of such support before or even during university courses. Schools of ST in Adrar University assume that all students enrolled are competent in French being the medium of instruction. However, the situation is different. Students come with different linguistic competencies and abilities, and from different cultural and linguistic backgrounds. Therefore, the necessity to provide support for those students is a must to grant them better opportunities in pursuing their academic paths. One practical suggestion is the creation of language courses similar to pre-sessional or in-sessional courses undertaken by many international universities to consolidate the linguistic skills of the medium of instruction for students who lack the necessary linguistic competency. These language courses can be directed to students whose competency in French is poor. If the current language policy at schools of ST will not change (i.e., keeping French as their main medium of instruction). However, if English was adopted instead, the same proposition for establishing English language courses will be still necessary to ensure equality among students who have different language competencies.

Many participants also confirm the need for a set of reforms to the educational policy including the linguistic aspect of it in Algeria. Starting from primary education and building a policy that is effective and inclusive to have better results paying off at the level of university. Participants seemed to agree that treating issues related to language in education should start from the roots not until university because it will be too late for any remedial work.

Another practical suggestion is providing language resources for both French and English to help facilitate autonomous learning for students to improve their language abilities. This can be done via creating special study areas in schools of ST that are dedicated to language learning, where students come and interact or use resources available (textbooks, books, magazines, media... etc) onsite or online to be exposed more to the language of their courses.

It could be also useful for the university to initiate programs or provide bilingual help to students who cannot fully use French in the classroom (in the

case of keeping French as the medium of instruction). For instance, offering choices to students to answer exams in French or Arabic while providing the questions sheets bilingually. Also, teachers are encouraged to use more code-switching between Arabic and French to ensure all students understand what is being said.

The Algerian government can create a vision for the long term with the aid of different universities including Adrar University. This vision will include setting a goal: to enhance the use of English in the educational system besides Arabic and Tamazight (as a suggestion informed by the findings of this study and frameworks of linguistic justice). This vision aims to increase language use of these languages through language learning, and motivation to use them in different situations in education and other domains.

I suggest that the government start collecting data on language speakers, language preferences, and language needs in Algeria through specialised bodies and researchers. Data and information about these aspects will help the process of creating a language policy that truly represents the people of Algeria and their needs in different domains. Universities, like the University of Adrar, can also work on their own to create a policy within the institution. The university can also collect data from students and staff concerning language use and language preferences and use them to improve the linguistic situation. It can also work with researchers on developing and reviewing research that promotes multilingualism, linguistic flexibility, linguistic justice and inclusivity. The university should also raise awareness and support values of diversity and sustainability and well-being.

Finally, it is also important for the university to provide psychological support to students for their overall well-being and mental health. The transition from secondary school with a language policy to university that adopts a different language policy can be challenging and psychologically demanding. University can be described as a period of 'heightened distress' (Bewick et al. 2010). This stress can be caused by various reasons including financial concerns, adjusting to university life, adapting to new social networks and possibly forming a new learner identity, besides the demands of their courses (Cage et al.

2021). Add to these, students who face a change in linguistic practices from school transitioning into university like the case of students at Adrar University.

This is where student support comes into play, providing linguistic support (as mentioned above in this section) and most importantly psychological support that helps them navigate university in the best possible way. Psychological support can comprise a set of mechanisms including providing students with the necessary skills to cope with university life including preparing them for the linguistic change occurring at university using accommodating approaches to local and international students alike. It is also important for the university to adopt a pre-entry support approach that focuses on managing student expectations and raising awareness including promoting linguistic justice through supporting bilingual programs and supporting students linguistically. This can be done through creating services (online and face-to-face) which are easy to reach for students and staff alike. These services can include events directed to students, informative posters, chat services, and others. Together, the importance of providing linguistic support and mental/ psychological support contribute to the overall achievement of linguistic justice by enabling students' full potential to obtain quality education and a better university experience.

7.4. Conclusion

To conclude, this chapter analysed and discussed the findings from the data related to policy, practice, and attitudes, and linked them to the frameworks of linguistic justice brought about by three prominent figures in the discussions of justice: John Rawls, Amartya Sen, Philippe Van Parijs, whose interdisciplinary contributions enriched the discussion of justice and brought it forward. This chapter then started by discussing unfairness in language policy and practice at Adrar University schools of ST. It also discussed how injustice is manifested in the classroom in teaching/learning practices, in the absence of support from the university, and also in research and the domain of academic publishing. Section 7.2.2 then demonstrated how language practices in this university can be assessed in terms of linguistic justice using the models of justice discussed in the literature review. Also attempting to answer the last research question 'how can we assess to what extent language policies (implemented

in this context explicit or implicit) are linguistically just?' is achieved in: First, Rawls's principles of fairness and individual liberty, which are not always achieved in the classroom (see section 7.2.2.1 in this chapter); Second, many participants do not enjoy capabilities when they use languages at Adrar University. Partly because there is no freedom of choice that gives the functioning of language its value into becoming a capability in most cases. Thus, we can say that sometimes the linguistic practices in the classrooms of ST schools are unjust when there is a capability denied (see 7.2.2.2 in this chapter). Lastly, the groundwork initiated by Van Parijs on the necessity of English to become the lingua franca of the world has some benefits if applied to the field of academia and university in Algeria, because the current policy seems to be unfair to participants as it prevents them from the full access to information and sharing as a result of an absence of an English language policy (see section 7.2.2.3 in this chapter).

Moreover, the multicultural model highlighted by authors like Kymlicka, and Patten was also demonstrated in relation to the situation at Adrar University. It was concluded that linguistic rights are not always granted to users of language no matter their status in the Algerian society. This remains an issue because not enough data on percentages of speakers of the different languages at universities in Algeria are presented, to help study language rights.

The last section (7.3) tackles how linguistic justice is conceived via recommendations for policy and practice at Adrar University (as a case study). These recommendations were condensed into two main points: how to create effective language policies that are linguistically just, which in turn contribute to a better learning/teaching experience.

A summary of the main findings will be provided in the next chapter. This research's contributions to knowledge will be also highlighted by showing the significance of the findings. It will also provide recommendations for further research work and the limitations of this study.

8. Chapter 8 Conclusion

This chapter answers the research questions stated at the beginning of this research. It also provides a summary of the main findings and their significance vis-à-vis the domain of language policy, linguistic justice, and university education in multilingual settings. The chapter also provides a list of limitations to the study and concludes with recommendations for future research.

8.1. Summary of the main findings

This study attempted to answer the following research questions

1. How is the Algerian language policy operationalised at the level of university education and in science and technology classrooms precisely?
2. What are students' and teachers' perceptions of the effect of implicit and explicit language policy on their academic experience?
3. What are students' and teachers' attitudes towards language choice and multilingual education, and how can this be reflected in a language policy?
4. How can we assess to what extent language policies applied in this context are linguistically just?

This study adopted a qualitative research approach to answer the abovementioned research questions, using two instruments: classroom observations and semi-structured interviews. The approach used for this research is of an ethnographic nature tackling a meso-level context as a case study (Adrar University). This was adopted to obtain an in-depth understanding of the language policy practices and attitudes of the language users. The data acquired was thematically analysed, and the findings were analysed and discussed in chapters 5, 6, and 7 of this thesis. The main findings are summarised in this section.

The findings relate to the first research question: **how the Algerian language policy is operationalised at the level of university education generally and in science and technology classrooms precisely'** are as follows:

The linguistic situation in Adrar University and the language policy are not compatible. The explicit language policy that adopts the country's official languages is not reflected in practice. Participants do not strictly use SA and Tamazight in their classroom communication. Similarly, the implicit language policy represented as French (allegedly French from '*the canevas*' -the curriculum-, the tradition of the scientific community in Algeria) is also not applied since most teachers and students use AA or code-switch. Therefore, there is no clear language policy implemented in this context. There is also a lack of planning for the medium of instruction in these classrooms because findings show a random selection of languages and a fluidity of language practices. Findings also show a lack of management of the existing languages.

The second research question: **What are students' and teachers' perceptions of the effect of implicit and explicit language policy on their academic experience?** is answered in detail in chapter 6, yet summarised in this subsection:

The adopted language policy and its implementation in Adrar University affect students' educational outcomes and academic performance. This study has also proven that the current policy situation affects the research environment and the quality of academic publishing. Students and teachers have reported encountering numerous challenges as a result of the confusion in policy planning and implementation and the multilingual nature of Adrar university. These challenges include student engagement in the classroom (poor communication, lack of concentration, lack of interest, a sense of frustration), writing and assessments (miss-spelling, confusion in meaning, difficulties memorising), and finally, in scientific research and academic publishing (lack of resources, plagiarism, poor publishing). This study highlighted the challenges caused by the current language policy and practices adopted at the level of Adrar University. These practices are characterised as arbitrary because there is a lack

of planning for policy and a lack of language management which are essential in multilingual settings such as Adrar University.

The third research question, '**what are students' and teachers' attitudes towards language choice and multilingual education, and how can this be reflected in a language policy?**' was also answered in chapter 6 on experiences and attitudes. This study revealed the extent to which attitudes towards languages affect language use and, consequently, the policy (implicitly and explicitly). Based on the premise that attitudes are a product of subjective beliefs and are an important driving force for human behaviour (Palviainen and Huhta 2015), participants of this study have manifested a set of attitudes that affected how some languages are perceived and used. Examples include the negative attitudes toward French, which led most participants to reject this language. This is partly why code-switching is used. Also, the positive attitude towards English led to the demand for English to be adopted gradually into university education. Finally, the negative attitudes towards Tamazight and AA stem from the belief that Tamazight and AA are old-fashioned languages and cannot keep up with the demands of modernisation and globalisation. This attitude led to a reluctance to promote these languages in higher education.

Study of the attitudes of language users is vital to understanding language policy and planning. Attitudes play an essential role in maintaining certain languages and the disregard and sometimes death of other languages. Languages having positive attitudes are likely to survive and be promoted and maintained. On the other hand, languages viewed negatively are expected to disappear in the long term.

Finally, answering the last research question and the central enquiry of this study, '**how can we assess to what extent language policies applied in this context are linguistically just?**' was achieved in chapter 7, where some language practices were described as unjust and unfair in the university of Adrar, specifically in classrooms of science and technology. These points encapsulate the findings:

- Regularly spending more time and effort on tasks in the classroom is seen as unfair.

- Students and staff require language support which the university does not provide. This is seen as unfair.
- The significant dependency on French in these schools, although many students (and sometimes teachers) are not competent in this language and face many challenges, including challenges that impact their academic performance.
- Sometimes students face inequality and discrimination because of the language they cannot speak (like French), or they can speak it but cannot use (like Tamazight).
- Unfairness has been found in research and publishing because many researchers in Algeria cannot meet the demands of academic research because of language. Mainly, the lack of competence in English limit their research endeavours.

This study also finds that we can use frameworks from different disciplines and apply them to language to understand it better. In this, I used frameworks of justice that have been applied to welfare economics, political philosophy, and multiculturalism, and applied them to language policy and language practice in a multilingual setting, namely, Adrar University in Algeria. I draw from these frameworks a set of recommendations for Adrar University (and other Algerian universities) for more just policies compatible with people's choices and preferences.

As elaborated in chapter 7, section 7.4, the situation of linguistic justice in Adrar University concerning the models of linguistic justice presented by Rawls, Sen and Van Parijs are described in the following points:

- Rawls's principles of fairness and individual liberty are not always achieved in the classrooms of ST schools.
- Many participants do not enjoy capabilities when they use languages at Adrar University. Partly because there is no freedom of choice that gives the functioning of language its value into becoming a capability, thus, we can say that sometimes the linguistic practices in the classrooms of ST schools are unjust when there is a capability denied.

- The model of Van Parijs on the necessity of English to become the lingua franca of the world has some benefits if applied to the field of academia in Algeria, because the current policy seems to be unfair to participants as it prevents them from the full access to information and sharing as a result of an absence of an English language policy.

These findings are then used to suggest a set of recommendations to conceive a just language policy at Adrar University, including:

- Creating effective policies via collecting accurate data on language and language users in the institution of Adrar University to know the population's needs and preferences.
- Adopting a multilingual policy that accommodates the needs of Algerian students and international students as well. This can be translated into incorporating an English language policy to facilitate access to information, communication, collaboration and publishing research opportunities.
- Create a role dedicated to managing languages co-existing in this university by assigning each language its use and providing the necessary support for its speakers.
- Updating teaching methods and teacher training to meet the demands of the era (incorporating technology, providing learning materials for languages, raising awareness, and promoting tolerance)
- Providing constant support to students and staff, including (linguistic, academic, and psychological).

8.2. Significance of the research results

As previously stated in the introduction of this thesis, this research is a useful contribution to the literature combining language policy and linguistic justice in multilingual settings, more specifically in higher education. Moreover, what makes this research an original contribution is the usage of empirical data from a context of policy and practice and apply them onto theoretical frameworks of linguistic justice. This study is beneficial to similar settings where multilingualism is a reality. This research explores a case study from an Alge-

rian university situated in the south which is an understudied region with very distinctive linguistic and sociolinguistic features.

The findings of my research have several implications for language policies. On a larger scale, multilingual contexts, especially with a postcolonial history, can benefit from the assessment models of linguistic justice provided in this research with the help of the theories of Rawls, Sen and Van Parijs. More precisely, applying linguistic justice models to language policies in education (any stage of education) where more than one language is used. Implications of this study also pinpoint the importance of the medium of instruction policy in affecting the academic performance of students and the careers of researchers.

This study also showed that there is indeed a link between the medium of instruction, the languages used in the classroom and the way in which students and researchers perceive their own academic performance and their ability to engage with the wider academic community.

The findings of this study suggest the importance of the English language as an instrument to improve the current linguistic and academic situation. By promoting English in the Algerian university, students and teachers are expected to use it in their studies, research, and careers (inside and outside of academia, as many participants proposed). The future of English in Algeria seems to be bright since the attitudes towards this language are generally positive, holding a genuine interest in learning and using it to upgrade their education and other domains.

Applying English will not necessarily mean neglecting other languages, especially those representing Algerian society. I encourage promoting multilingualism in which people's needs and choices are accommodated. This study shows that participants in my research prefer English and SA. They declare they do not need French and hold sceptical opinions of AA and Tamazight. With that in mind, a policy of Arabic and English bilingualism can be adopted as the primary medium of instruction and the language of academia. Nonetheless, the other languages, including AA and Tamazight, can be used in different domains wherever possible. Support should also be provided in these lan-

guages to make people speaking Tamazight and AA feel included in their institutions.

8.3. Limitations of the study and recommendation for further research

There were certain limitations in the study, especially in data collection. This is a normal occurrence because dealing with human beings, and their reactions in real life differs from expectations of the initial research design. Many incidents occurred while interviewing both teachers and students, which were challenging to some degree. The sensitive nature of the topic of language and identity played a considerable role, especially when Algeria had one of the most significant public movements for political and social change. Amongst the topics discussed extensively by local media during that period were identity, language, and ideology. This discussion began with the beginning of the national Algerian *Hirak* (literally translated to 'movement') in February 2019; these issues gained the spotlight again after not being taken seriously by government agendas (Abderahmane 2020). Different political groups have had the opportunity to channel their ideologies and concerns for the newly rising government to legislate some of the Algerian identity's fundamental constituents, such as language (Abderahmane 2020).

The difficulty also lies in collecting accurate data, especially data related to statistics (concerned with languages, language use...). This was absent from the official websites of the schools, the university, the ministry of higher education, and other bodies that specialised in collecting statistics. In addition, the lack of literature concerning Algerian students and teachers and their language use at university regarding language policy, language management, and most importantly, linguistic justice. Therefore, this research it is hoped will spark a discussion and be a starting point to further research and practical reforms.

Indeed, further research on language policies in Algeria needs to be conducted and could adopt an engaged approach (Davis 2014) to raise awareness of students and teachers and educators in terms of the underlying impact of language policy on academic performance and careers. This research presented

a fundamentally important understanding of language policy and practice in science and technology classrooms. Consequently, the research has touched upon many areas that need further study.

This study includes a set of limitations, which present many opportunities for future research. The focus of this study was mainly on the language use and the lived experiences of students and teachers with language. The main concern was the language of the instruction and the languages used inside the classroom, and how they affect their academic performance. Thus, students' and teachers' use of language at home or outside the university is another area of research that could be considered, especially concerning their use of language in the classroom. This is relevant, especially in attempting to understand how language is used on a larger scale, which determines how language policies are shaped.

Moreover, this research focuses on Adrar University's schools of science and technology as a case study. However other schools and disciplines are not yet studied in relation to policy planning and linguistic justice (as is the case of ST schools in this research). I have also looked at participants irrespective of their age and gender. Addressing these factors can be relevant to other studies, but for this research, it did not appear significant.

It is hoped that this study draws more attention to language issues in the Algerian higher education, and the importance of considering people's choices and preferences to enable them to be capable beings in their society.

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- * The teacher uses French mainly with frequent usage of A.A.
- * A.A words / expressions are those related to actions ~~or~~ outside the scientific jargon. like: "choufo f warqa" "wesh ndiro doka..."
- * The teacher was checking the results of a calculation done by students individually. She was explaining entirely in A.A when addressing only one or two students. She used French only when saying terminologies like: "la puissance", "l'énergie", "la résistance", "cuivre", "résistivité".
- * The teacher paid special care to students from Western Sahara. She explained a question ^{to them} in Arabic with an attempt to not use French. _{in the TD.}
- * The teacher used some S.A to explain some bites.
- * One student from WS asked a question entirely in S.A. The teacher found it ~~hard~~ a bit hard to understand the question. She asked him to repeat and other students helped in translating the question. She then explained in a ~~mixture~~ mixture of A.A - Fr and S.A.
 - e.g of code switching:

Had	l'élection	va se déplacer	vers	w ra7	y kali	un troux,	y kali
A.A		Fr		A.A		Fr.	A.A
<u>farag</u>	→						
S.A		...					
- * Foreign students seem to struggle more in communicating their questions and answers. (esp from Arabophone backgrounds). (-the difficulty is doubled AA is not their MT neither is French)
- * The teacher (sometimes) asks for translation to make sure students know a certain concept. "wesh hia la densité d'électrons"

A.A	Fr
-----	----

 students collectively responded: "هيا كثرة الإلكترونات"

S.A

Appendix 2 Interviews schedule

The teachers interview

- 1- Establishing rapport:
Introducing myself and what I do as a researcher.
Getting to know them and ask about their job at university and research interests if any.
Ask permission again to record the interview (normally they consented this in the consent form)

- 2- Start a conversation by asking general questions:
 - how many languages can you speak/use?
 - how do you identify yourself? (Arab/Amazigh/mixed backgrounds/other)
 - how do you think the Algerian identity should be defined?
 - how many languages are there in Algeria? In Adrar?
 - in your opinion, does Algeria face problems in managing languages?
 - in your opinion, does the Algerian university face problems in managing languages?
 - what languages are important for learning/teaching science and technology?
 - what do you think of mother tongue as a medium of instruction?

- 3- Language use and potential challenges:
 - What language do you use to teach? To communicate with students/other teachers/university staff? Do you code-switch? Do you translate terms/concepts more often when delivering a lecture/explaining a lesson?
 - What language do you use in doing research? In publishing?
 - Do you generally face problems with the languages you are using inside the classroom?
 - do you face any problems with languages you use while communicating with students or colleagues? Doing research? Publishing? Speaking at conferences...etc?
 - who/what tell you what language to use when you teach? Do research? Present conference papers? Publish?
 - what do you think of French being used as the medium of instruction in STEM fields in most Algerian universities?
 - what do you think about the French language being used as MOI in STEM fields in Adrar university?
 - Do students face difficulties in understanding or producing written work because of language?
 - do you think that the used MOI has an impact on their learning process?
 - do you use English at all at university?
 - do you think English is important in academia?
 - what do you think of incorporating more English MOI in our education system especially at the level of university?
 - do you believe in bilingual/ multilingual education?
 - if you were to choose what language (s) is to be used at university what would it (they) be?
 - do you think there is a language policy at the level of university? (I can explain what a language policy means and how it can be detected)

- Can local Tamazight be used as a medium of instruction? Should it be used in STEM fields too? Why or why not?

-do you think the used MOI is fair taking into consideration the students' different mother tongues? Why or why not?

-do you think it is fair for everyone to have the choice of what language they want to pursue their courses in? Why or why not?

- do you agree with the new law issued by the ministry of HE that says "the mastery of English and having a proof for that is important to get a degree in higher education"

4- Concluding:

- Any concluding remarks or additional comments or questions?
- I thank them again for their time and valuable participation.

The students interview

1- Establishing rapport:

Introducing myself and what I do as a researcher.

Getting to know them and ask questions about their course/research/interests.

Ask permission again to record the interview.

2- General questions:

Why have you chosen your field of study?

What is/are your favourite module/modules? Why?

How many languages are there in Algeria? In Adrar?

How would you define yourself (Arab/Amazigh/mixed backgrounds/other)?

What languages do you use inside the classroom?

Do you face any difficulties understanding something because of the MOI?

In your opinion, does Algeria face problems in managing languages?

In your opinion, does the Algerian university face problems in managing languages?

What languages are important for learning/teaching science and technology?

What do you think of mother tongue as a medium of instruction?

3- Language use questions and potential challenges:

- What languages do teachers use when they are delivering lectures, seminars, tutorials?

- Do you and your teachers code-switch a lot during a session?

- If you don't understand something, will your teachers translate the concept/term for you in your mother tongue? Would you look for its translation yourself?

- What language do you use when participating in a lesson? When presenting an exposé? When writing your dissertation/thesis?

- Do you think that the use of French in ST education is useful? Why?

- Do you use English at all in a lesson/ doing research/ reading?

- Do you think that the mastery of English is important at university?
- If you were to choose what language/languages to study with and do all your academic tasks, what language/ languages would you choose?
- Which foreign languages you think is more important for you at university English or French? Why?
- Can French be sometimes an obstacle to achieving academic tasks?
- Do you feel that if French was replaced by Arabic (standard Arabic) it would be easier for you to grasp lessons inside the classroom?
- Have you ever gotten a bad grade because of the language of the test/exam?
- Have you ever faced difficulty expressing your ideas/presenting them in the language of the instruction? What was the language?
- What do you think if Algerian Arabic or local Tamazight are used as media of instruction?
- If you can choose what language will be used to learn your subjects, what would it be? Why?
- If you could take out a language that you are using currently, what would it be? Why?
- Do you think it is fair to you to choose what language you want to study with?
- Do you think it is fair to learn English because it is the language of the “world” besides your mother tongue?
- Do you think languages are treated equally at the university of Adrar? (equal learning opportunities/ equal appearances on signs/ equal promoting. Etc)
- do you agree with the new law issued by the ministry of HE that says: “the mastery of English and having a proof for that is important to get a degree in higher education”?

4- Concluding:

Any concluding remarks, additional comments, questions.

I thank them for their time and their valuable participation.

*These questions are guiding questions only. Follow up questions and discussions will yield from these prompts because this is a semi-structured interview.

Appendix 3 Participant information sheet (Bilingual)



CONSENT FORM

Title of research project: [Language Policy, Linguistic Justice, Language Rights in Multilingual Higher Education (Algerian University of Adrar as Case Study)]

عنوان البحث: السياسة اللغوية، العدالة اللغوية، و حقوق اللغة في مجال التعليم العالي المتعدد اللغات. جامعة أحمد دراية نموذجاً

SREC reference and committee: [Insert SREC reference and committee or other relevant reference numbers]

Name of Chief/Principal Investigator: [Assala Mihoubi]

إسم الباحث الرئيسي: أصالة ميهوبي

**Please
initial box**

I confirm that I have read the information sheet dated [INSERT DATE OF PIS] version [INSERT VERSION NUMBER OF PIS] for the above research project. أؤكد أنني إطلعت على معلومات البحث المبين في العنوان اعلاه	
I confirm that I have understood the information sheet dated [INSERT DATE OF PIS] version [INSERT VERSION NUMBER OF PIS] for the above research project and that I have had the opportunity to ask questions and that these have been answered satisfactorily. أأكد أنني فهمت المعلومات المتاحة حول البحث و أكد أن الفرصة متاحة لطرح الأسئلة و الإستفسار	
I understand that my participation is voluntary and I am free to withdraw at any time without giving a reason and without any adverse consequences (e.g. to medical care or legal rights, if relevant). أفهم أن مشاركتي إرادية و أنني حر في سحب إجاباتي متى أريد بدون تبرير	
I consent to the processing of my personal information (signature for consent) for the purposes explained to me. I understand that such information will be held in accordance with all applicable data protection legislation and in strict confidence, unless disclosure is required by law or professional obligation. أقبل المشاركة في هذا البحث من خلال إمضائي أسفل هاته الوثيقة. أتفهم أن أي معلومات سوف يتم استعمالها ضمن قوانين حفظ الخصوصية	

I understand who will have access to personal information provided, how the data will be stored and what will happen to the data at the end of the research project. لدي حرية الولوج إلى معلوماتي الشخصية و الإجابات المقدمة من طرفي في أي وقت	
[IF RELEVANT] I understand that after the research project, anonymised data may be [SELECT APPROPRIATE STATEMENT FOR DATA SHARING] made publicly available via a data repository and may be used for purposes not related to this research project. I understand that it will not be possible to identify me from this data that is seen and used by other researchers, for ethically approved research projects, on the understanding that confidentiality will be maintained.	
I consent to being audio recorded for the purposes of the research project and I understand how it will be used in the research. أقبل بتسجيل صوتي من أجل الامشاركة في هذا البحث	
I understand that anonymised excerpts and/or verbatim quotes from my [INTERVIEW/QUESTIONNAIRE ETC] may be used as part of the research publication. أتفهم أن بعض المقاطع المسجلة سوف تنشر بشكل غير معرف ضمن هذا البحث	
I understand how the findings and results of the research project will be written up and published. اتفهم أن النتائج و المناقشات الناتجة عن هذا البحث سوف تنشر بدون ظهور أي معلومات خاصة للمشارك	
I agree to take part in this research project. أوافق على المشاركة في هذا البحث	

Name of participant (print) Date Signature

الإمضاء التاريخ إسم المشارك

Name of person taking consent (print) Date Signature

Role of person taking consent
(print)

THANK YOU FOR PARTICIPATING IN OUR RESEARCH

YOU WILL BE GIVEN A COPY OF THIS CONSENT FORM TO KEEP