The IRCAM Realizations for the Amazigh Preservation and Revitalization in Morocco

Fadoua ATAA ALLAH, Aicha BOUHJAR
CEISIC, DCOM
The Royal Institute of Amazigh Culture
Allal El Fassi Avenue, Madinat Al Irfane, Rabat, Morocco
{ataaallah, bouhjar}@ircam.ma

Abstract

The computerization of languages is a strategic issue, closely linked to the rise of information and communication technologies. The globalization of exchanges and the dematerialization of information due to the digital revolution have changed the status of several languages in the world and have influenced their cultural, industrial and economic stakes. Aware of this, the Royal Institute of Amazigh Culture has put in place a vision for the Amazigh digitalization. This vision consists in computerizing the language, from a simple display on screens to the development of specialized tools. This paper presents the Institute’s achievements for Amazigh to live in the "information society".

Keywords: Amazigh, Less Resourced Language, Revitalization

1. Introduction

Throughout human history, minority languages are replaced by politically, economically, or socio-culturally dominant ones. This is due to many factors that, every day, endanger certain languages and threaten their transmission. These factors can be structured in three main reasons:

- Language extinction caused by the decimation of its community.
- Eradication of minority languages by certain linguistic policies.
- Renunciation to transmit a language to future generations, so that they are not disadvantaged by being socially excluded.

Some Moroccan languages have also suffered from these factors. According to the UNESCO Project: Atlas of the World’s Languages in Danger, seven Moroccan languages are in danger, two of them have completely disappeared. These are the Judeo Berber and the Tamazight of Aït Rouadi.

Unfortunately, current technological changes may, if no remedy is taken, dramatically increase this linguistic impoverishment. In this context, the Royal Institute of Amazigh Culture (RIAC; IRCAM in French) is committed to the preservation and the revitalization of the Amazigh language.

This paper aims to present the IRCAM’s realizations. Thus, the remaining of this paper is organized as follow: Section 2 introduces the Amazigh sociolinguistic context. Section 3 presents the Royal Institute of Amazigh Culture. Section 4 gives a brief overview about the IRCAM’s realizations, especially those related to language planning and language technology. Finally, Section 5 draws conclusion and exposes some future perspectives.

2. Sociolinguistic context

Amazigh language (known as Berber language in the literature) stretches, in a geographically discontinuous manner, over a vast area of North Africa, from the Canary Islands to the Siwa Oasis in Egypt in the north and from the Mediterranean coast to Niger, Mali and Bukina Fasso in the south.

Figure 1: Amazigh language distribution over North Africa

Section 4 gives a brief overview about the IRCAM’s realizations, especially those related to language planning and language technology. Finally, Section 5 draws conclusion and exposes some future perspectives.
Historically, the Amazigh language has been autochthonous and is a member in the Hamito-Semitic or "Afro-Asiatic" family. On the linguistic side, the language is characterized by the proliferation of dialects due to historical, geographical and sociolinguistic factors. This language has its specific writing system, called tifinagh, but it was neglected except in the Saharian region where it was transmitted, mainly by women, without discontinuity, from antiquity up till now. In the other areas, Amazigh was exclusively spoken and reserved for familial and informal domains. The old tifinagh script is found engraved in stones and tombs in some historical sites attested from 40 centuries. Its writing form has continued to change from the traditional Tuareg writing to the neo-tifinagh in the end of the sixties.

Figure 2: Tinzouline Inscriptions (Zagora, Morocco)

In Morocco, one may distinguish three major dialects on the basis of their geographical situation: Tamazight of the North (known as Tarifit or Rifian variety by linguists); Tamazight of Central Morocco and South-East, and Tachelhiyt in the South-West and the High Atlas. According the last demolinguistic data (2004), the Amazigh language is spoken by some 30% of the Moroccan population (around 10 million inhabitants). Politically, the Amazigh language has enjoyed its status at different levels, depending on the country where this language exists. In Morocco, the status of Amazigh has achieved an advanced level since 2011: its officialization, alongside Arabic, in the new Constitution. But the outline of the Amazigh language preservation and promotion is mentioned since 2001 in the text creating and organizing the Royal Institute of Amazigh Culture (Dahir or Royal Decree of 17th October 2001).

3. The Royal Institute of Amazigh Culture

This institution came as an answer to the civil society request since the very beginning of the 60 (after independence) which asked the recognition of the Amazigh language and culture by the State and its institutionalization in education, the media, culture and public administration. IRCAM is under royal tutelage and is dedicated to the promotion of the Amazigh language and culture.

It has the following missions:
- Advisory mission to the Royal Cabinet on measures meant to promote Amazigh.
- Partnership mission with the concerned institutions, in particular the Ministry of National Education, Ministry of Information and Communication, Ministry of Culture, Ministry of Justice, Ministry of the Interior and Ministry of Public Service.
- Academic missions: collection and transcription of various Amazigh cultural expressions with an eye to safeguarding, protecting and disseminating these expressions; studies and research on Amazigh culture; promotion of artistic creation; codifying the Amazigh graphic system for teaching ends; production of didactic tools, elaboration of general and specialized lexicons, elaboration of pedagogical plans of action; cooperation with universities in organizing research and Amazigh language and culture development centers, training trainers; development of methods meant to strengthen and encourage the place of Amazigh in communication and information spaces; cooperation with cultural and scientific institutions at the national and international levels.

During these two last decades, changes occur in the sociolinguistic field and are specifically related to the Amazigh language. What are the observed changes? How was managed the Amazigh language planning process in Morocco? Which were the priorities and what principles guided the decision making? These questions, among others, had to be answered by IRCAM in order to contribute to the new language policy of the country.

Indeed, the motive 6 of the founding text of IRCAM explains that it has "to deepen the linguistic policy defined by the National Charter for Education and Training (CNEF), which stipulates the introduction of Amazigh in the educational system". Indeed, Amazigh, in the National Charter, was considered as an "opening", a language facilitating the learning of the Arabic language (COSF, 2000: lever 9 paragraphs 115 and 116). With the creation of IRCAM, the ultimate goal is to introduce the Amazigh language, not as a facilitator but as a language taught and a "national heritage" of all Moroccan pupils and students. The "codification of the Amazigh script will facilitate its teaching, learning and diffusion, guarantee equal opportunities for all the children of our nation in acquiring knowledge, and consolidate national unity" (Dahir, 2001). Since then, the Amazigh has become, alongside Arabic, the official language included in the new Constitution.

As it can be observed, within a decade, the status of the Amazigh gradually has changed: from “opening” (CNEF, 1999) to official language (Constitution, 2011: Art. 5) through a process of patrimonialization and language planning (Dahir, 2001).

IRCAM had to translate the general orientations stipulated in the Dahir into concrete action to enable the introduction of the Amazigh language and culture in the public sphere but primarily in the educational and training system. Therefore, issues related to which Amazigh to teach and with which script have arisen as an urgent and pressing priority. In other words, IRCAM had to deal with the "corpus" of the Amazigh language in Morocco.

3https://www.ircam.ma/?q=fr/node/4668
4. IRCAM Realizations

Amazigh language has rich oral corpus with stories, songs and histories that was threatened. To preserve this heritage, it is important to revitalize the language (Boukous, 2012) and ensure it transmission. In this aim, IRCAM piloted and drew up a strategy that has been translated into actions through steps involving the progressive planning of Amazigh, its insertion into the educational system and its integration into the digital world. The following points present some of these actions.

4.1 Informatization Roadmap

To ensure the integration of Amazigh language in the information technology sphere and to guarantee its sustainability, IRCAM has elaborated a roadmap. This roadmap is organized in basic processes, designed to take place in three phases: short, medium and long terms.

These processes are represented by a chain starting from elementary processing, passing by the language resources constitution, and going towards generic applications. This chain ranges from adapting and improving tools based on new technologies to the development of applications (Ataa Allah and Boulaknadel, 2014a).

The main bricks of the Amazigh informatization roadmap introduced below are graphic encoding, language tools and resources, in addition to language learning materials.

4.2 Graphic Encoding

Before the creation of IRCAM, the Amazigh language has been writing, in Morocco, in Latin alphabet or in Arabic script. In order to facilitate the decision making process regarding the script choice, IRCAM produced a technical report analyzing the two different scripts in use in addition to the Amazigh ancestral writing system (tifinagh script).

After the adoption of tifinagh as the official script for writing the Amazigh language, in Morocco, on February 10th 2003, the Unicode homologation of this script has become a necessity (Andries, 2008). This encoding enabled Amazigh language to have a prominent position in the digital world both at the national and international levels. Beside tifinagh Unicode standardization, Amazigh was integrated also in the international standard prescription keyboards ISO/IEC 9995, to facilitate its keyboarding.

To ensure the conversion of all the Amazigh writing into a standard and a unique form, which is Unicode based tifinagh, a transliterator was developed (Ataa Allah, 2014; Nejme et al., 2016), named entities (Talha et al., 2015), as corresponding to a particular part of speech (Ataa Allah et al., 2013). The second tool concerns the Amazigh conjugator (Ataa Allah and Boulaknadel, 2014b). It allows an online access to the conjugation of the Amazigh verbs. Other tools are under study, they concern morphological analysis (Ataa Allah, 2014; Nejme et al., 2016), named entities (Talha et al., 2015), spellchecker (Chaabi et al., 2019) and machine translation system (Miftah et al., 2017; Taghbalout et al., 2018).

4.3 Language Tools and Resources

Since the colonial period, many studies have been undertaken. They have contributed to the collection of the Amazigh lexicon and oral tradition, and have focused on linguistic features. However, most of these studies covered local dialects only.

The inclusion of the Amazigh language in public life, in Morocco, has resulted in the extension of its areas of use, which has generated the need for terminology, and a reference grammar.

Thus, IRCAM has produced sectorial lexicons, including grammatical, media and administrative terminologies (Ameur et al., 2009ab; Ameur et al., 2013; Ameur et al., 2015), in addition to an Amazigh language general dictionary (Ameur et al., 2017). Moreover, it has published a standard morphosyntactic reference books where the spelling rules were set (Boukhris et al., 2008, Laabdelouaoui et al., 2012).

In parallel, IRCAM has undertook projects to build terminology and lexical databases. The terminology database contains terminological entries related to grammatical, media and administrative themes5. This database was used also in the production of the ‘LEXAM’ mobile application6. Whereas, the lexical database includes the usual lexicon belonging to the Amazigh variants7 (Ataa Allah et al., 2019). This database subject of online open access, to meet the needs of actors working in the fields of linguistic, teaching, translation and communication.

Furthermore, it was also a question of endowing the Amazigh language with grammar tools. The first developed tool concerns the morphosyntactic tagger (Ataa Allah and Jaa, 2009), which helps linguists to annotate words, of the Amazigh corpus (Boulaknadel and Ataa Allah, 2013), as corresponding to a particular part of speech (Ataa Allah et al., 2013). The second tool concerns the Amazigh conjugator8 (Ataa Allah and Boulaknadel, 2014b). It allows an online access to the conjugation of the Amazigh verbs. Other tools are under study, they concern morphological analysis (Ataa Allah, 2014; Nejme et al., 2016), named entities (Talha et al., 2015), spellchecker (Chaabi et al., 2019) and machine translation system (Miftah et al., 2017; Taghbalout et al., 2018).

4.4 Language Learning Materials

Language learning plays an important role in its preservation and the transmission of its culture. Aware of that, IRCAM has realized many digital teaching aids and educational materials5, in order to contribute to the discovery of the cultural heritage and the development of the reading and the lexical competences. The objectives of these materials are to familiarize the learner with tifinagh, to support oral expression, to prepare and facilitate the transition to writing, to develop reading taste, and to enrich the learner’s vocabulary.


5http://tal.ircam.ma/talam/ref.php
6http://tal.ircam.ma/talam/lexam.php
7http://tal.ircam.ma/dglai/  
8http://tal.ircam.ma/conjugeur/
dictionaries *ⵜⴰⵎⵡⴰⵍⵜ* [Tamawalt inu tawlafant] ‘My illustrated vocabulary’ and *ⵜⵎⴰⵣⵉⵖⵜ* [Tamawalt n.imzizzyan] ‘Children dictionary’ (Ataa Allah, 2011), the multimedia game *ⵜⵎⴰⵣⵉⵖⵜ* [Tinml n tmaazight] ‘Amazigh School’, and the mobile games *ⵜⵉⵏⵎⵍ ⵉⵏⵈⴰⵎⵢⴰⵔⵏ* [IgDaD d ibukha] ‘Birds and Insects’. In addition to these materials, IRCAM is actually working on a Massive Online Open Courses project that aims to make Amazigh language courses available for all interested persons inside and outside Morocco (Chaabi et al., 2018).

### 5. Conclusion

IRCAM has risen to a number of challenges, particularly those related to the Amazigh language integration in the digital world. Nevertheless, the validation of the organic law relating to the implementation of the Amazigh language as an official one, which stipulates its insertion into education and the priority areas of public life, opens up for IRCAM new challenges. In order to face these challenges, some research projects are underway and other are planned.

### 6. Bibliographical References


