

Comfort Beyang Oben Ojongnkpot
(University of Buea)

Bridging the digital divide of Ejagham: Challenges and opportunities

Abstract

The advent of imperialism in Africa promoted the use of European languages to the detriment of African indigenous languages. This has had a devastating impact on African traditional ways of life in various ramifications, such as the near absence of African indigenous languages in the digital space. Arguably, there is no better way for Africa to attain the 4th Industrial Revolution, than through language digitization. Hence, the African Think Tank Summit (2021) entreats African countries to adopt digitization for technological development. However, the alarm bell on the digitization of African languages is yet to receive the attention it deserves. There have been efforts in Cameroon to promote indigenous languages (Njock 1966; Tadjaju 1975; Chumbow 2013; Ojongnkpot 2015). Albeit, the future of these languages appears threatened as far as digitization is concerned; no language in Cameroon is served by ICT (social media, email). Osborn (2010) affirms that “there is still a long way to go before all world languages appear on the World Wide Web” (Osborn 2010: 29). Ejagham, though spoken in Manyu Division (Cameroon) and Cross River State (Nigeria), is moribund (Ojongnkpot 2015: 202). Indeed, bridging the digital divide of Ejagham gets the language reinvigorated, gets people well connected and engenders socio-economic development, based on its status as a Cross-border language. Moreover, given the place of Ejagham as a storehouse of knowledge, intangible resources and driver of development, we aim to explore how Ejagham could be digitized, then find out the challenges and opportunities for digitization of Ejagham, to better determine ways and means of bridging the digital divide. The study seeks to answer the following questions: 1. How can Ejagham be digitalized as a cross-border language? 2. What are the challenges /opportunities of digitalizing Ejagham as a cross-border language? The study adopts a qualitative survey research design, with N=70, aged 15–70, respondents across social strata. Data is analysed using the content analysis approach. The study has implication for language preservation, storage, retrieval, and technological exploitation.

Keywords: Ejagham, digital divide, revitalization, ICT, digitization

Introduction

The world is grappling with the issue of the waning and disappearance of languages. Arguably, colonial legacy and linguistic imperialism have been the root cause of the continuous dismal situation of African languages. Despite the fact that African indigenous languages are imbued with intangible knowledge that can be advantageous to Africans, the vestiges of colonialism and imperialism as seen in the dominance of Euro-centric knowledge disseminated through European languages remains a cause for concern. It is the reason why Brock-Utne expresses discontent as follows:

The forms of knowledge fostered is knowledge built on European culture and tradition and delivered in European languages. The forms of knowledge that could have empowered the underprivileged would have to be built on African culture and tradition and be delivered in African languages. A genuine concern for social justice and democracy would lead African political leaders to work for a strengthening of the African languages. Donor pressure, as well as the impact of the capital led market economy, often called globalisation, however work to retain the Euro languages (Brock-Utne 2016: 1).

The impact of colonial and post-colonial politics has been quite detrimental to indigenous languages. This situation can be traced as far back as 1884–1915, when Kamerun was ruled by Germany as a colony. When Germany was defeated in 1916, Cameroon was divided between Britain and France as mandated territories of the League of Nations between 1916 and 1945 (Ngoh 1979). That was the origin of the post-colonial political prioritization of French and English as ‘official’ languages, particularly in education and administration. Even at independence, Cameroon adopted two exoglossic languages as official (English and French). This led to the relegation to the background of local languages such as Ejagham. The situation has been compounded by the near absence of resources to teach/learn these languages, so as to keep them vibrant.

Cameroon is inherently a multilingual nation with four distinct language families; Afro-Asiatic, Niger-Congo, Nilo-Saharan, and Indo-European, consisting of 250 ethnic groups, with 283 languages (Ojongnkpot 2015). In tracing the evolution of language policy in Cameroon, Echu (2003) relives the trend in the evolution of language policy in Cameroon, as he demonstrates that, since independence, there have been a number of languages in Cameroon. Nevertheless, the two colo-

nial masters were determined to impose their languages in the domains of education and administration; thus, even after independence, French and English have continued to thrive as official languages, to the detriment of indigenous languages. Ejagham, like other indigenous languages, is relegated and abandoned to the private realm, in favour of colonial languages (Ojongnkpot 2015: 4).

Digital divide of Ejagham

The term ‘digital divide’ has evolved through the ages; during the pre-20th century era, it pertained to the dichotomy between the ‘haves’ and ‘have nots’ of telephone access. Thereafter, it moved to refer to the gap between those with internet access, on the one hand, and those without, on the other. The present study uses ‘digital divide’ to describe the disparity between Ejagham and European languages in terms of access to digital technology. The study holds that such access within the Ejagham language will engender digital skills among its users in various ramifications. It is for this reason that the United Nations has embarked on an awareness-raising campaign aimed at bridging the global digital divide in the form of an annual commemoration of a world information day. It is hoped therefore that bridging the digital divide of Ejagham will not only avail users of digital skills to be able to explore the world economically, socially and otherwise, but also invigorate the language.

Findings from a study by Ojongnkpot (2015) put Ejagham at 65% endangerment, amongst languages in the Manyu Division in the South West Region of Cameroon. It has an alphabet, with publications, like the New Testament of the Bible and primers; it is used in folklore and religious music broadcasts on the South West Regional Radio station, and taught in some schools. However, owing to a language policy that promotes French and English as official languages, the future of Ejagham remains bleak. It is therefore important to examine how, through ICT, Ejagham could be revived, conserved, and promoted, especially as we are within the framework of the International Decade of Indigenous languages, which spans 2022–2032 as pronounced by UNESCO. Furthermore, the UNESCO (2003) seminal papers on “Education in a Multilingual world,” as well as the African Union’s revised 2006 language policy

document, dubbed “Language Plan of Action for Africa,” enjoin member states to adopt language policies that take into consideration the use of African languages in education and national development with the official languages as partners. The attempt to revitalize Ejagham is, therefore, to guarantee its transmission to coming generations (intergenerational transmission), especially through digitization, such that it could be used in diverse domains. The importance of digitizing Ejagham lies in its potential for advancing cross-border socio-economic integration, given that the intangible knowledge embedded in it could better be preserved to serve in ICT, for it to be competitive on the digital world scene.

From time immemorial, Ejagham has linked people from two great countries; it is spoken in Manyu Division, South West Region of Cameroon as well as in the Cross River State of Nigeria. It is thus a cross-border language with potentials. However, in both countries, Ejagham is rendered endangered by the languages of wider communication, like English and French. Hinton therefore concludes: “A language that is not a language of government, nor a language of education, nor a language of commerce or of wider communication is a language whose very existence is threatened in the modern world” (Hinton 2011: 3). For Chumbow (2012) and Ojongnkpot (2015), such a language is better described as a Private Realm language, hence, the apprehension of the imminent disappearance of Ejagham, based on factors such as education, migration, prejudice, attitude, etc. Consequently, it is mandatory to revitalize Ejagham, through digitization such that it could not only be used in all aspects, but also passed on to the next generation.

Despite the import of digitization in supporting indigenous languages, Holton (2011) notes that “it can also be a hindrance to those efforts if not considered carefully.” Lately, digital Indigenous Language Revitalization (ILR) activities “are emerging as a response to mitigating colonizing effects of exclusion, discrimination and annihilation of indigenous languages and peoples ways of life” (O’Neal 2014). Such online technology use in Indigenous Language Revitalization (ILR) initiatives had been stratified according to periods, as demonstrated by Meighan (2021).

The present study observed that irrespective of all such efforts, it is important to explore opportunities and challenges of digitizing African languages. Thus, reporting on activities marking the International Day for Maternal Languages, UNESCO notes: “In Africa, cross-border lan-

guages constitute bridges between arbitrarily fractured communities. Indeed, they are the bearers of a multi-secular e-community, the foundation of collective entities that have been built over a long period of time” (UNESCO 2020: 1).

The world of today is characterized by technology, wherein all aspects of life are digitized, for use and growth. Languages in general, and indigenous languages in particular, also need to be digitized in order to increase their functions. In fact, Meighan (2021) traces the presence of technology since the Fire Era, through the Stone Age, to today’s use of cellphones characterized by social media. Consequently, there is a dire need for continuity, which in this case is the digitization of African indigenous languages, especially, if these languages have to be secured. It cannot be gainsaid that indigenous languages in general, and Ejagham in particular, constitute the intangible heritage (medium of transmission of culture and traditions inherited from ancestors) of a community, as, through them, information and knowledge are disseminated. Meighan (2021) thus groups the various stages of technology into six, as follows:

Types and stages of technology	Examples	Relationship	Evolution
1. Facilitation technologies	Crockery, pots, guns, agricultural machinery, and tools	Individual and group → local environment	<i>Facilitation</i>
2. Communication technologies	Writing systems (e.g., pictographs), writing implements, mass media (e.g., television), telephone, typewriter, computer	Individual, group and state → mass audience	<i>Communication</i>
3. Web 1.0 Digital and online technologies (~1990–2005)	Digital cellphone, multimedia (e.g., DVD, CD-ROM)	State and group → mass audience	<i>Digital Information</i>
4. Web 2.0 Digital and online technologies (~2005–2015)	Social media, smartphones, video games, the Cloud, broadband	State and group ↔ mass audience; Peer-to-peer (P2P)	<i>Digital Negotiation</i>

Types and stages of technology	Examples	Relationship	Evolution
5. Web 3.0 Digital and online technologies (~2015–present)	Augmented reality (AR), virtual reality (VR), blockchain	P2P; Peer ↔ mass audience	<i>Digital Creation</i>
6. Semantic technologies: (The future)	Internet reality, artificial intelligence (AI), 3D and 4D avatars	Technology ↔ human audience ↔ environment	<i>Digital Simulation</i>

Tab. 1: Types, stages and evolution of technology use (Source: Meighan 2021)

Irrespective of the numerous languages spoken in Africa, with the advent of a digital age, a host of African indigenous languages stands the risk of extinction, if nothing is done to ensure continuity in use. Particularly, Ejagham is a cross-border language used in certain domains like traditional folklore, music, religious songs, and local radio broadcast. However, given the fact that it is an embodiment of intangible knowledge, it could have added value through digitization, which gives it the opportunity not only for development as a cross-border language, but also preservation. Hence, Scannell postulates that “there is a general insufficient digitization of African languages, but there has been an increasing presence in local languages on the web through channels such as blogs and online publishing fora” (Scannell 2011: 14).

Digitization for revitalization

Digitization is more than just using digital platforms. Digitization concerns practical applied knowledge, skills, and networks which are continually evolving to provide arenas for language archiving and language education that have the potential for wider dissemination and flexible access. Akinde defines digitization simply as “the conversion of analogue media to digital form” (Akinde 2007: 1). He further underscores the importance of digitizing African languages because foreign concepts are often imposed on Africa such that the African heritage is overpow-

ered. On their part, Gibbon et al continue that it is pertinent to digitize endangered languages (Gibbon et al 2004: 5).

According to Note (2011), digitization encompasses the steps: “selection, assessment, preparation, digitizing, quality control, and data management to create, manage and preserve digital objects efficiently.” She adds that there is a dire need for “strategic planning, project management and adherence to best practices to ensure long-term consistency and relevance of digital materials.”

As for Beri (2023), digitization will “facilitate the free movement of capital, people and services, which is in line with the African Continental Free Trade Area (AfCFTA).” On that score, digitization stands the advantage of harkening to African Union (AU)’s clarion call of exploring inherent challenges in “transforming the African digital space.” Digitization of Ejagham will thus align with AU’s agenda 2030, with regard to the free flow of goods and services, capital and people.

Going by the foregoing, this paper explores the concept of digitization of Ejagham, in order to enhance in-depth knowledge of the issue; examining opportunities and challenges, in the hope of paving the way for development, especially as it is relatively new with respect to Ejagham.

The most powerful of all digital platforms is the internet, especially with Web 2.0 technologies, which helps greatly, not only in empowering endangered languages, but also bringing new patterns of global flows for the languages. That is why Meighan (2021) postulates that “the internet offers endangered languages a chance to have a public voice in a way that would not have been possible before. Digitization is a package which includes the writing system, mass media, television and more” (Meighan 2021: 6). In today’s tech-driven era, the digitization of Ejagham will offer more opportunities for the revitalization of cross-border activities like trade and culture.

Revitalization is a process aimed at safeguarding a language that has reduced function in a community by developing programs of re-establishing it in all walks of life. Going by Meighan (2021), technology has been used to reinvigorate waning indigenous languages. This, he continues, is demonstrated by the Web 1.0 Period (1990–2005), characterized by the new world wide web affordances and digital technologies such as desktop and CD-Rom. This is exemplified by the Te Wahapu (The Estuary), being the first computer-based communications system created in

1990 with focus on the revitalization of the Maori language in New Zealand. It therefore demonstrates that English may not be a monopoly of language in advanced technology.

Apart from the Maori experience, Leoki (Powerful Voice), as reported by Warschauer (1998), uses an electronic bulletin board system established in 1993, which made available culturally responsive materials and delivered entirely in the Hawaiian indigenous language, thus according online support to Hawaiian language use in the immersion schools, and the larger community.

Activities on revitalization and reclamation at the Web 1.0 era hinged on the recordings of oral and written expressions of elders in their indigenous languages, which were later recorded and produced for subsequent broadcast. Hence, the prevalence of examples such as modern-day television soap opera, the Scottish Gaelic (Cormack 1994) and the CD-ROM, referred to as ice hockey in Ojibwe (Freeborn 2024). Another example of technology to document, archive and learn indigenous languages using text, sound and video clips, is by the first nations of Canada, as explained in the First Peoples' Cultural Foundation (2003) as well as the web-based resource (First Voices) founded in Britain. It is worthy to note that these have developed such that, today, users interact on the site, which includes an archive, chat facility, games, videos, story-books and language tutors. It is the reason why Winter and Boudreau state that such revitalization efforts have been able to help "connect youth and elders to help promote intergenerational knowledge transmission, while encouraging language revitalization (Winter/Boudreau 2018: 45).

Efforts in Cameroon

The precarious situation of indigenous languages in Cameroon prompted various researchers to embark on revitalization endeavours aimed, particularly, to enhance intergenerational transmission of languages to increase use in multiple social domains. Thus, there have been models of indigenous language revitalization in Cameroon in the last three decades in the form of research methods, indigenous language revitalization inquiry and literature, such as: CABTAL (Cameroon Association for Bible Translation & Literacy), NACALCO (National Association of

Cameroon Languages Committees), led by Maurice Tadajeu (1997), a federation of over 70 language committees and NGOs, and the PRO-PELCA (2004) project (The Operational Research Programme for Language Teaching in Cameroon). The present study is guided by the following questions:

1. How can Ejagham as a cross-border language be digitized?
2. What are the opportunities/challenges of digitizing Ejagham as a cross-border language?

Methodology

The study embarked on a qualitative exploratory survey, as well as literature sourcing, to measure the reasons, processes, opportunities and challenges of digitizing Ejagham as a cross-border language, in order to initialize steps on the use of Ejagham in ICTs; internet, computer skills and e-commerce, so as to serve the needs of not only people along the Cameroon-Nigeria borders, but also give Ejagham the impetus to be competitive in the digital space.

Sampling

Non-probability Sampling Technique was adopted; purposive and snow-ball sampling were used to obtain N=70 respondents, age 24 and above, cutting across all spheres of life (Graduate students, teachers, researchers, business operators, policy-makers, etc.), of Manyu origin, living in and out of Cameroon, believed to have expertise and substantial knowledge on issues of language digitization in general, and Ejagham, in particular. The constitution of the sample, thus, aimed at representing salient characteristics and features relevant to the subject under investigation. The individuals were disposed to providing answers to the various questions, based on a number of factors: the instructions were made clear, the topic that developed the questionnaire was relevant to members of the sample, the format of the questionnaire was straightforward and concise and the purpose of the questionnaire was made abundantly clear.

Respondents were subjected to structured interview surveys and focus-group discussions, to collect data aimed at getting a deep insight on the issue of digitizing Ejagham, following Begner et al (2009), who maintain that one with expert knowledge is the one who is able to express technical opinion on an issue in a related area of expertise. Thus, the selection of the 70 respondents was guided by an understanding of their profound knowledge of the reasons, processes, opportunities, and challenges of digitization.

Data collection

The surveys were carried out between August and January 2023 at the background of the chain referral approach of Biernacki and Waldorf (1981). The study made use of the interview protocol, while assuring respondents of anonymity. Questions were divided into parts as follows:

- Part 1 focused on demographic particulars of the respondents, which sought to find out background information and know-how in relation to the subject at hand.
- Part 2 concerned respondents' knowledge of language digitization.
- Part 3 aimed at determining the reasons, advantages, processes, and general overview of digitizing Ejagham. It also sought to understand the role of government and stakeholders in the digitization of Ejagham.
- Part 4 hinged on opportunities and challenges of digitizing Ejagham.
- Part 5 sought to know the future of Ejagham in digitization.

Nature of content analysis

Questions were asked, such that codes emerged as follows:

- Digitization – what is digitization and its role in society?
- Language revitalization – the importance of digitization on the revitalization of Ejagham.

- Economic impact of digitization – how digitization would help Ejagham as a cross-border language.
- Processes of digitization – what are the steps of digitizing Ejagham?

An analytical guide was then developed based on the research questions. The study made use of Content Analysis, whereby code lists that summarized the major concepts of the study were derived. Codes are matched with descriptions to enhance understanding of the key issues. That notwithstanding, quotations are attached to them and presented as code-quotation-grounding Tables (Tables 1–3).

Findings and Discussion

Code	Quotation
Digitization of Ejagham (40)	“Transforming Ejagham into digital technological tools” (Computer, internet, social media handles and large data). “Using Ejagham online” “Enabling Ejagham to be used in the internet” “Using Ejagham on the world wide web” “Using Ejagham on computers, cellphones and social media” “Using Ejagham virtually, so people can communicate with it in real-time”
Role of digitization of Ejagham in society (37)	“Ejagham will be given great opportunities with regard to technological development” “It will promote participation of Ejagham users in handling societal issues.” “It will enhance connectivity among Ejagham users.” “It will enhance trade and financial inclusion.” “Easy access to trade” “Will equalize people and increase their congregation across long distances” “Will enhance cross-border trade”

Code	Quotation
Push factors of digitization of Ejagham (27)	“When stakeholders adapt the use of new technologies” “Stakeholders need to transform Ejagham from analog to digital space.” “The preparedness for Government to collaborate with the community, in order to push the digital process” “The will for business agents to transform businesses from analog to digital” “Ejagham Development and cultural associations” “Ejagham researchers”

Tab. 2: What is Digitalization of Ejagham as a Cross-border Language?

Findings in Table 2 present digitization and its role in society. The major code has to do with digitization of Ejagham, role of Ejagham as a digitized language and push factors of the digitization of Ejagham, which definitely impact the revitalization of Ejagham, as well as its promotion as a Cross-border language.

With respect to the first code in Table 2, which registered 40 voices, the quotations state that digitizing Ejagham entails transforming it into digital tools such as computers, internet, social media, and even large data, which will enable the language to be used online. With regard to the second code (Tab. 1), quotations state that as a digitized language, Ejagham will avail opportunities in various ramifications; increased participation of stakeholders in societal issues, enhancement of free trade along the borders, inclusivity and easy congregation of people.

The third code sought to find out push factors of Ejagham digitization. Going by the quotations, the willingness by stakeholders to adapt to new digital technologies, especially when analog systems are transformed to digital space, it is crucial for successful digital transformation, as it enables organizations to leverage the benefits of digital technologies, improve efficiency and enhance overall performance. For that to be enhanced, there must be collaboration between the powers that be within the larger community. Of course, the will of business and policy makers to embark on the digitization of Ejagham was quoted. Last but not the least, development and cultural associations, researchers and policy makers were noted to be important drivers of digitization of Ejagham.

Code	Quotation
Creation of social networks (35)	<p>“Social networks among Ejagham speakers should be created.”</p> <p>“Make us to come together when it comes to talking.”</p> <p>“It is important to create social networks of Ejagham speakers.”</p> <p>“Create social networks.”</p> <p>“The creation of social networks”</p>
Unification of efforts by Ejaghams from Nigeria and Cameroon (25)	<p>“Concerted efforts of Ejagham in Nigeria and Cameroon”</p> <p>“Put Cameroon Ejagham and Nigeria Ejagham together.”</p> <p>‘Make use of both Ejaghams in Nigeria and those in Cameroon.”</p> <p>“Make use of Ejaghams in Cameroon and those in Nigeria.”</p> <p>“Bring the two Ejaghams together.”</p>
Bridging intergenerational gaps (5)	<p>“Both the youth and adults must work together.”</p> <p>“It is important for all generations to work together.”</p>
Including Ejagham into Data-base (5)	<p>“Including Ejagham into search engines”</p> <p>“Planning Ejagham database entries like dictionary entries to be able to export into various formats, including Rich Text Format (RTF) that can be read in a word-processing programme such as Microsoft Word”</p>

Tab. 3: How can Ejagham be availed of digitization?

Findings in Table 3 present data are based on how Ejagham can be digitized. The major code is the creation of social networks among Ejagham speakers (35), which is backed by respondents, making use of factual arguments such as: “Social networks among Ejagham speakers should be created.” The code that followed closely is Unification of efforts by Ejaghams from Nigeria and Cameroon (25), which is also backed by various view-points such as: “Concerted efforts of Ejagham Nigeria and Cameroon,” “Put Cameroon Ejagham and Nigeria together,” “Make use of both Ejaghams in Nigeria and those in Cameroon”, “Make use of Ejaghams in Cameroon and those in Nigeria,” “Bring the two Ejaghams together.” The unification of efforts by Ejagham speakers, both from Nigeria and Cameroon, will better enhance the digitization of Ejagham as a cross-

border language. The other codes on the digitization of Ejagham focused on “bridging the intergenerational gaps and including Ejagham into the data base. As far as the former is concerned, elders and youth must be involved in the process of digitization programmes, in order to bridge the intergenerational gap. As for the latter, respondents thought that, for Eagham to be digitized, the language must be included in the database, such that school-based language teaching, like generating pedagogic contents such as poetry, and other literary content will be stored and retrieved for posterity. In that way, virtual language communities will be created, with an additional impetus of creating learning modules such that they could help to promote Ejagham as a cross-border language, where speakers could be brought together even from great distances. This is in line with Rikowski (2011)who postulates that digitization must be part of a collaborative process within the language community, this means language end-users must be included.

Codes	Quotation
Opportunities for digitalizing Ejagham	“Existence of indigenous knowledge” (45) “Ejagham comprises intangible knowledge.” “Ejagham is a heritage language.” (10) “Ejagham consists of cultural content” (15) “Ejagham can be used to convey traditional practices. (27) “Accelerate pace of socio-economic development through increased cross-border integration with Nigeria.” (35) “Extend the reach of health services and improve the social well-being of users of the language.” (29) “Healthcare services could be delivered in the Ejagham language, resulting in effective communication between service users and healthcare professionals.” (30) “Preservation of traditional knowledge, particularly in the field of medicine and its use in the delivery of healthcare will improve health outcomes for the population.” (40) “Market expansion for goods and services as product-branding, packaging and advertising will be in the language understood by potential consumers.” (22)

Codes	Quotation
Opportunities for digitalizing Ejagham	<p>“Speakers of the language, especially the youths, will deepen their knowledge of, and improve their, digital skills, which could in turn increase their access to the tools of the global economy, like phones, computers and the internet-the real benefit being equal opportunity.” (27)</p> <p>“The individual and collective identity of the speakers of the language will be revived.” (37)</p> <p>“The Ejagham language will be used to express complex and changing local identities, in a way that reflects the lived realities of the people.” (11)</p>

Tab. 4: Opportunities of digitizing Ejagham

Findings from Table 4 indicate a number of opportunities presented by respondents, as based on opportunities for digitizing Ejagham as a Cross-border language. There is evidence from Table 4 that the greater majority (N=45) of respondents affirmed that there is indigenous knowledge embedded in Ejagham, which is an opportunity for digitization. Closely followed is the aspect of “Preservation of traditional knowledge, particularly in the field of medicine and its use in the delivery of health-care will improve health outcomes for the population” (40).

Another argument used to back the opportunity of digitizing Ejagham is that “The individual and collective identity of the speakers of the language will be revived” (37).

Based on the findings in Table 4, digitization of Ejagham will accord flexibility and fluidity, not only in the movement of goods and services, but also people, which will no doubt facilitate economic development. That apart, there will be the creation of jobs in the perspective of digital technologies. There will also be easy communication. In all that, there will be the preponderance of innovation in socio-politico economic activities for easy governance and inclusivity. Practically, such innovations will translate into e-banking, e-health, and new jobs in cyberspace.

The findings of this study conform to Meighan (2021) who believes that indigenous languages have a number of opportunities for digitization, given that they are not only embedded with indigenous knowledge, but also have content that could be used in several domains of life.

Codes	Quotations
Challenges of digitizing Ejagham (45)	“Technological know-how of the users, lack of knowledge, lack of access to the internet, lack of electricity” (40) “Unavailability of IT resources” (56) “Unavailability of high-speed internet” (34) “Lack of proficiency in Ejagham” (28) “The notion that only the rich can effect digitization” (11) “Government tends to work on behalf of indigenous people, rather than get the indigenous people at the centre of technology” (15) “Inadequate infrastructure, both digital, such as total absence of internet, and non-digital, such as the limited number of teachers of the language, its absence in the school curriculum etc.” (44) “Commercial viability and cost effectiveness, as the project cannot be funded wholly by public sector (government); private sector may not agree to participate, given the market value of the Ejagham population” (16) “Absence of support from policy makers who rely more on exoglossic languages” (35) “Lack of support/interest from speakers of the Ejagham language, due partly to the effect of ‘colonial mentality’; negative attitudes towards Ejagham (37)

Tab. 5: Challenges of digitizing

Findings in Table 5 are based on the second part of Research Question 2 that sought to understand the challenges involved in digitization of Ejagham as a Cross-border language.

Challenges of digitization of Ejagham are backed by viewpoints such as: “Unavailability of IT resources”(56); “Technological know-how of the users, lack of knowledge, lack of access to the internet, lack of electricity”(40); “Lack of support/interest from speakers of the Ejagham language, due partly to effect of ‘colonial mentality’; negative attitudes towards Ejagham (37); and “Absence of support from policymakers who rely more on exoglossic languages”(35).

This means that the unavailability of IT infrastructure is one of those aspects that stand on the way of bridging the digital divide of Ejagham

as a cross-border language. The aspect of lack of support from speakers of Ejagham is equally a thorny one, owing to the colonial mentality that has been imbibed by speakers of indigenous languages who regard their heritage languages as primitive and backward. Inadequate infrastructure is another barrier to digitization, as this is seen in both material and human; while there is limited internet and electricity to pilot the internet, there is the scarcity of gadgets, like cellphones and computers, which are for a privileged few in the urban areas. It should be noted that most of those who are proficient in Ejagham live in the rural areas. As if that is not enough, there is also the lack of skilled language users, to champion the aspect of digitization. Lack of support from policy makers compounds the problem because of the tendency to hold tight onto colonial legacy, which puts the two official languages on the fore, to the detriment of Ejagham.

The totality of quotations from Table 5 imply that many jobs and petty businesses will face competition that could put them out of business, owing to a mismatch between the skills and resources required to compete in a rapidly changing market, and the current capabilities of these jobs and businesses. This mismatch could lead to significant disruptions and challenges for individuals and communities reliant on these industries.

Literacy in Ejagham is yet to have a solid backing, to make digitization realistic. Limited skills in digitization could be a drawback, especially to the vulnerable; those without digital skills may lag behind the rest. Digitization may introduce insecurity in data information, which may be released without confidentiality. For example, some cultural aspects, like the 'Expe' cult, that have been guarded for centuries may be exposed and thus become loose and mundane; the secrets that have held the cult supreme may be compromised.

The lack of political will and inadequate literacy skills in Ejagham as it is not properly incorporated into the school system, are among the challenges that must be abated in order for the benefits of digitization of cyberspace to be experienced.

Conclusion

Ejagham, like most indigenous languages in Cameroon is largely outside the digitization landscape, and this may likely be the case for many more years to come. Nevertheless, there have been sporadic attempts to digitize the language (for example, The Holy Bible in Ejagham), but these efforts may have been driven more by other reasons, like the desire to convert the natives to Christianity, rather than the need to valorize the language and preserve the Ejagham culture.

The population of Cameroon has been observed to grow at a rate of over 15% per annum (Mbaku 1993; Kouega 2007; Ojongnkpot 2015; Cameroon Population Movement 2023; UNDESA 2024). Should this trend continue, the population of the speakers of Ejagham is likely to increase exponentially, thereby making the language a viable instrument for commercial transaction. Perhaps, it is at this point that a proactive interest in digitizing the Ejagham language could be perceived. Digitizing Ejagham will continue to revitalize and accord it status, increase its corpus and use, learning and teaching. Who knows, there may be an added value of change of attitude towards the language. Albeit, digitization of Ejagham is not a one-stop shop; rather, it must be an integrated activity with the larger context of community efforts and collaborative activity. If one thing is evident, it is that digitization has the potential of uniting and fostering secondary linguistic communities. New speakers of Ejagham may not be created in the digitization process, but it may contribute to the development and appreciation of the language.

It is therefore wished that members of the Ejagham community engage with digitization, which means language users become, not merely consumers of digitization, but also practicing creators of digitization. It is at this point that this study conforms to Fishman (1991) who states that “although cyber-space can be put to use for (reversing language shift) purposes, neither computer programmes, e-mail, search engines, the web as a whole, chat boxes or anything directly related to any or all of them can substitute for face-to-face interaction with real family imbedded in real community.”

References

- Akinde, T. A. 2007. "Digitizing African local content: the way forward." *Continental Journal of Information Technology* 1: 44–50.
- Beri, P. B. 2023. "Challenges and opportunities of digitalization on the future of work in Africa economics." *Affair Publication* 6(1). <https://nkafu.org/challenges-and-opportunities-of-digitalisation-on-the-future-of-work-in-africa/>.
- Biernacki, P., and Waldorf, D. 1981. "Snowball sampling: Problems and techniques of chain referral sampling." *Sociological Methods & Research* 10(14): 141–163. doi.org/10.1177/F00491218101000205.
- Brock-Utne, B. 2003. "The language question in Africa in the light of globalization, social justice and democracy." *The International Journal of Peace Studies* 8(2): 1–21.
- Cameroon Population Movement. 2023. *DREF Operation No. MDRCM035*. Situation Report. <https://reliefweb.int>report>cameroon-population-movement>.
- Chumbow, B. S. 2012. "The challenge of linguistic diversity and pluralism: The tier stratification model of language planning in a multilingual setting." In *Social sciences and humanities: Applications and theory*, ed. by A. Lopez-Varela, 11–23. IntechOpen. doi.org/10.5772/52167.
- Chumbow, B. S. 2013. "Mother tongue-based multilingual education: Empirical foundations, implementation strategies and recommendations for new nations." In *Multilingual education in Africa: Lessons from the Juba language-in education conference*, ed. by H. McIlwraith, 37–55. British Council.
- Cormack, M. 1994. "Programming for cultural defence: The expansion of Gaelic television." *Scottish Affairs* 6(32): 114–131.
- Echu, G. 2003. "The language question in Cameroon." *Linguistic Online* 18(1). doi.org/10.13092/lo.18.765.
- First Peoples' Cultural Foundation. 2003. <https://fpfc.ca>initiatives>programs-w-fund>.
- Freeborn, J. 2024. *Ted Nolan*. *The Canadian Encyclopedia*. <https://www.thecanadianencyclopadiahistorica>.

- Gibbon, D., Bow, C., Bird, S., and Hughes, B. 2004. "Securing interpretability: The case of Ega Language documentation. Proceedings of the 4th international conference on language resources and evaluation." In *Proceedings of the Fourth International Conference on Language Resources and Evaluation (LREC'04)*, ed. by M. T. Lino, M. F. Xavier, F. Ferreira, R. Costa and R. Silva, 1369–1372. European Language Resources Association (ELRA). <http://www.lrec-conf.org/proceedings/lrec2004/pdf/138.pdf>.
- Hinton, L. 2011. "Revitalization of endangered languages." In *The Cambridge handbook of endangered languages*, ed. by P. Austin and J. Sallabank, 291–336. Cambridge University Press.
- Holton, G. 2011. "The role of information technology in supporting minority and endangered languages." In *The Cambridge handbook of endangered languages*, ed. by P. K. Austin and J. Sallabank, 371–401. Cambridge University Press.
- Kouega, J. P. 2007. "The language situation in Cameroon." *Current Issues in Language Planning* 8: 1–94. doi.org/102167/clp10.0.
- Mbaku, J. M. 1993. "Foreign aid and economic growth in Cameroon." *Applied Economics* 25(10): 1309–1314. doi.org/10.1080/00036849300000098.
- Meighan, J. P. 2021. "Decolonizing the digital landscape: The role of technology in indigenous language revitalization." *AlterNative: An International Journal of Indigenous peoples* 17: 397–405. doi.org/10.1177/11771801211037672.
- Microsoft Asia News Center. 2018. "Coding for culture: Connecting digital skills with australian indigenous heritage." <https://news.microsoft.com/apac/features/coding-culture-connecting-digital-skills-australian-indigenous-heritage/>.
- Ngoh, V. J. 1979. *The political evolution of Cameroon, 1884–1961*. Doctoral dissertation, State University Portland. doi.org/10.15760/etd.2924.
- Njock, H. B. 1996. "Le probleme linguistique au Cameroon." *Afrique et Asie* 73: 3–13.
- Note, M. 2011. *Managing image collections: A practical guide*. Elsevier. doi.org/10.1177/155019061100700123.
- O'Neal, J. 2014. "Respect, recognition, and reciprocity: The protocols for native American archival materials." In *Identity palimpsests*:

- Archiving ethnicity in the U.S. and Canada*, ed. by D. Daniel and A. Levi, 125–142. Litwin.
- Ojongnkpot, C. O. 2015. *Assessing the nature and degree of endangerment: The case of Manyu indigenous languages*. PhD thesis. University of Buea, Cameroon.
- Osborne, S. 2010. *The new public governance: Emerging perspectives on the theory and practice of public governance*. Routledge.
- Rikowski, R. 2011. *Digitalisation perspectives* [Educational futures: Rethinking theory and practice 46]. Sense Publishers.
- Scannell, K. P. 2011. “Statistical unicodification of African languages.” *Language resources and evaluation* 45(3): 375–386. doi.org/10.1007/s10579-011-9150-3.
- Tadajeu, M. 1997. *National language education programme in Cameroon*. Yaounde, N.P.
- The African Capacities Building Foundation. 2021. *Communiqué of the 10th African Think Tank Summit*. <https://elibrary.acbfpact.org/acbf/collect/acbf/index/assoc/HASH01b8/524e32be/f72bf1a7/38d2.dir/2021%20Africa%20Think%20Tank%20Summit%20Communique.pdf>
- United Nations Department of Economic and Social Affairs (UNDESA). 2024. *Population division. world population prospects: The 2024 revision*. www.un.org/development/desa/en/.
- UNESCO. 2020. *The promotion of cross-border languages as tools for sustainable societies*. <https://www.UNESCO.org/articles/promotion-cross-border>.
- UNESCO. 2003. *International expert meeting on the UNESCO Programme: Safeguarding endangered languages. Language vitality and endangerment*. CLT/CEI/DCE/ELP/P/2003/1.
- Warschauer, M. 1998. “Technology and indigenous language revitalization: Analyzing the experience of Hawaii.” *The Canadian Modern Language Review* 55(1): 140–161. doi.org/10.3138/cmlr.55.1.139.
- Winter, J., and Boudreau, J. 2018. “Supporting self-determined indigenous innovations: Rethinking the digital divide in Canada.” *Technology Innovation Management Review* 8(2): 38–49. doi.org/10.22215/timreview//38.