

Linguapax Review 2016
Digital Media and Language Revitalisation
Els mitjans digitals i la revitalització lingüística

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FOREWORD

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New technologies have become an ever more prominent domain for the promotion of endangered languages worldwide. Since the seminal article by Buszard-Welcher (2001), which explored the incipient use of the Internet by Native American language communities, there has been growing research with various strands based on the possibilities of new technologies for the revitalisation as well as for the documentation of minoritised languages. These languages are increasingly present on the web, a phenomenon that has gained attention for the potential benefits in language maintenance and revitalisation, particularly among youths (Moriarty 2011). The introduction of subordinated languages in what has been called ‘electronic mediation’ entails not only their actual promotion through functional expansion but also the transformation of their ‘ideological valuation’ (Eisenlohr 2004, also cited by Claudia Soria in this Review). In this sense, it is important to note that, unlike traditional passive consumption of traditional media, social media in particular offer a range of possibilities for active engagement by the user, who becomes both a consumer and a producer of contents. Thus, new digital media have become a prominent site for interaction and constant creation of contents (Cunliffe 2007) with a move from medium-related to user-related analyses, as noted by some authors (Georgakopoulou and Spilioti 2016). It has also been highlighted that electronic media and communication on the Internet is a

PRÒLEG

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Les noves tecnologies s’han convertit en un domini cada vegada més important per a la promoció de les llengües amenaçades a tot el món. D’ençà de l’article pioner de Buszard-Welcher (2001), que explorava l’ús incipient d’Internet entre les comunitats lingüístiques indígenes d’Amèrica del Nord, s’ha anat desenvolupant una recerca cada vegada més extensa sobre les possibilitats de les noves tecnologies per a la revitalització, així com per a la documentació de llengües minoritzades. Aquestes llengües són cada vegada més presents a la xarxa, un fenomen que ha incrementat l’interès pels beneficis potencials de mantenir i revitalitzar les llengües, especialment entre els joves (Moriarty 2011). La introducció de les llengües subordinades en el que s’ha anomenat “la mediació electrònica” implica no només la promoció real a través de la seva expansió funcional, sinó també la transformació de la seva “valoració ideològica” (Eisenlohr de 2004, també citat per Claudia Sòria en aquest llibret). En aquest sentit, és important assenyalar que, a diferència del consum tradicional passiu de mitjans tradicionals, les xarxes socials en particular ofereixen un ventall de possibilitats per a la participació activa per part de l’usuari, que es converteix tant en un consumidor com en un productor de continguts. D’aquesta manera, els nous mitjans digitals s’han convertit en una àrea important per a la interacció i la creació constant de continguts (Cunliffe 2007) i un canvi de les anàlisis relacionades amb el mitjà cap a les perspectives més centrades en els

productive and salient field for examining language choice, which include ‘translingual’ practices and vernacular literacies, among multilingual users (Leppänen and Peuronen 2012, Lee 2016). In spite of the promising opportunities offered by new technologies for language promotion, it is important to note their limitations, and even threats, as well (Prado 2012). Thus, as Dauenhauer and Dauenhauer (1998) argued almost two decades ago, too much confidence and hope is often given to the ‘technical fix’ offered by new technologies, even if these may not be enough for successful language revitalisation.

In any case, digital communication deserves closer inspection not only because of its centrality in contemporary communication but also because of its rapid evolution, continuous innovation, and extension, which may have practical consequences for the functional expansion of minoritised languages. Increasing availability and affordability of mobile phones, particularly smartphones, is a further issue that has a direct impact on both oral and literate use of languages, as is duly underlined by Djomeni & Sadembouo in this issue.

In short, the Internet and, particularly social networking sites have become a key domain that generates a myriad of linguistic uses, all of which are underpinned by language ideologies worth exploring in their own right. While specific research in this area is still incipient, particularly as regards minoritised languages, recent contributions on European regional languages such as Welsh (Cunliffe et al. 2013), Luxembourgish (Wagner 2013), and Frisian (Jongbloed-Faber 2014) are helping to fill that gap.

In this Review, we explore the presence of linguistic diversity on the Internet

usuàris (Georgakopoulou i Spilioti 2016). També s’ha posat en relleu que els mitjans electrònics i la comunicació a través d’Internet és un camp productiu i emergent per estudiar les tries lingüístiques, que inclouen pràctiques “translinguals” i literacitats vernaculars, entre els usuaris multilingües (Leppänen i Peuronen 2012, Lee 2016). Tot i les prometedores oportunitats que ofereixen les noves tecnologies per a la promoció de les llengües, és important tenir en compte les seves limitacions, i fins i tot les amenaces, també (Prado 2012). Així doncs, com Dauenhauer i Dauenhauer (1998) van argumentar fa gairebé dues dècades, sovint s’atorga massa valor i esperança en la “solució tècnica” que ofereixen les noves tecnologies, encara que aquestes poden no ser suficients per aconseguir la revitalització de les llengües.

En qualsevol cas, la comunicació digital mereix una inspecció més a fons, no només pel seu paper central en la comunicació contemporània, sinó també a causa de la seva ràpida evolució, contínua innovació, i extensió, que pot tenir conseqüències pràctiques per l’expansió funcional de les llengües minoritzades. L’augment de la disponibilitat i accessibilitat dels telèfons mòbils, especialment telèfons intel·ligents, és una altra qüestió que té un impacte directe tant sobre l’ús oral com escrit de les llengües, com remarquen Djomeni & Sadembouo en aquesta publicació.

En resum, Internet i, en particular les xarxes socials s’han convertit en un domini clau que genera una gran quantitat d’usos lingüístics, tots ells recolzats en ideologies lingüístiques que val la pena explorar per si mateixes. Si bé encara la investigació en aquesta àrea específica és incipient, sobretot pel que fa a les llengües minoritzades, les contribucions recents sobre les llengües regionals europees

(Claudia Soria), present a continental digital initiative for the promotion of indigenous languages in Latin America (Llanes Ortiz), and show two case studies of linguistic practices from Africa and South East Asia that illustrate the possibilities and limitations of new technologies and social media for the promotion of minoritised languages (Djomeni & Sadembou and De Falco & Cesarano respectively).

After a description of the current challenges that language diversity faces in the ‘offline’ world, Claudia Soria’s contribution highlights the importance of increasing what she calls ‘Digital Linguistic Diversity’, that is languages on the Internet, since this is a domain where salient inequalities of access to technology, services, and information between speakers of minoritised and dominant languages are still rife. To promote the presence of the former languages on the web, the author highlights the inextricable link between digital readiness and digital usability, an issue which is illustrated in detail by the case study of Cameroon in this Review. Soria further describes a project that aims at assessing the vitality of four European minoritised languages (Sardinian, Karelian, Basque, and Breton) and, more importantly, at boosting the presence of these languages on the web through a Training Programme and a set of bespoke tools called ‘Survival Kits’.

The following contribution by Genner Llanes Ortiz spells out the ways in which the Rising Voices project, coordinated by the organisation Global Voices, gathered detailed information about fifteen initiatives which aim to promote indigenous languages in the digital sphere. Pointing out the individual agency that arises from the grassroots in all the efforts described in this project, Llanes Ortiz further discusses both the meanings of key

com ara el gal·lès (Cunliffe et al. 2013), el luxemburguès (Wagner 2013), i el frisó (Jongbloed- Faber 2014) estan ajudant a omplir aquest buit.

En aquest llibret s’explora la presència de la diversitat lingüística a Internet (Claudia Soria), presentem una iniciativa digital continental per a la promoció de les llengües indígenes d’Amèrica Llatina (Llanes Ortiz), i mostrem dos casos d’estudi de les pràctiques lingüístiques d’Àfrica i el Sud-est Asiàtic que il·lustren les possibilitats i limitacions de les noves tecnologies i les xarxes socials per a la promoció de les llengües minoritzades (Djomeni i Sadembou i De Falco i Cesarano respectivament).

Després d’una descripció dels reptes actuals que la diversitat lingüística afronta en el món ‘offline’, la contribució de Claudia Sòria posa de relleu la importància d’augmentar el que ella anomena “la diversitat lingüística digital”, és a dir les llengües a Internet, ja que es tracta d’un domini en què les grans desigualtats d’accés a la tecnologia, als serveis i a la informació entre els parlants de les llengües minoritzades i els de llengües dominants segueixen sent profunda. Per promoure la presència de les llengües minoritzades a Internet, l’autora destaca el vincle indissoluble entre disposició digital i usabilitat digital, un problema que s’il·lustra en detall en l’estudi de cas de Camerun en aquest volum. Soria descriu, a més, un projecte que té com a objectiu avaluar la vitalitat de quatre llengües europees minoritzades (sard, carelià, basc i bretó) i, de manera més important encara, impulsar la presència d’aquests idiomes a la web a través d’un programa de formació i un conjunt d’eines fetes a mida anomenades ‘kits de supervivència’.

terms such as ‘activist’ and ‘militant’ and the scope and impact of these initiatives. Gaining visibility in a prestigious domain such as the net and destigmatising the use of minoritised languages, often derided as a ‘thing of the past’, through ludic, creative, and culturally pertinent activities are at the core of these efforts. Moreover, these individual projects, which are often carried out in tandem, have been crucial in the reactivation of the indigenous languages in question among these actors. Another strength of this online project lies in the transnational outreach, an important fact if we take into account the large number of speakers of these languages who have migrated and live in other countries. While these efforts bode well for the future of these languages, assessing the actual impact of these projects and their follow up is still one their main weaknesses. As Claudia Soria also warns in her text, Llanes Ortiz notes that the use of indigenous languages in the digital domain is a positive step in their functional expansion but may not be enough for their reproduction in other critical domains of use in the offline world.

From Latin America we move to Africa, one of the most linguistically diverse continents in the world, where colonial languages are still the main official languages and those which are used for literate purposes and in most public domains. Djomeni and Sadembouo discuss the urgent need to develop writing systems for African languages, which are mainly used in the oral form. They explain the main hurdles to overcome stemming from a combination of local linguistic ideologies, such as resistance from some native speakers to adopt literacy in their local languages, and entrenched national language policies which favour the use of colonial languages in prestigious and public spheres of life. While acknowl-

La següent contribució, de Genner Llanes Ortiz, explica en detall la forma en què el projecte Rising Voices, coordinat per l’organització Global Voices, ha recopilat informació detallada sobre quinze iniciatives que tenen com a objectiu promoure llengües indígenes en l’àmbit digital. Assenyalant l’agència individual que sorgeix des de la base de tots els esforços descrits en aquest projecte, Llanes Ortiz discuteix també el significat de termes clau com “activista” i “militant” i l’abast i l’impacte d’aquest tipus d’iniciatives. Guanyar visibilitat en un domini de prestigi com la xarxa i desestigmatitzar l’ús d’aquestes llengües minoritzades, sovint ridiculitzades com una “cosa del passat”, a través d’activitats lúdiques, creatives i culturalment pertinents són el nucli fonamental d’aquests esforços. D’altra banda, aquests projectes individuals, que sovint es duen a terme en parelles, han estat crucials per a la reactivació de les llengües indígenes en qüestió entre aquests actors. Un altre punt fort d’aquest projecte en línia rau en l’abast transnacional, un fet important si tenim en compte el gran nombre de parlants d’aquestes llengües que han emigrat i viuen en altres països. Si bé aquests esforços són un bon auguri per al futur d’aquestes llengües, l’avaluació de l’impacte real d’aquests projectes i el seu seguiment segueix sent una de les seves principals debilitats. Com Claudia Sòria també adverteix en el seu text, Llanes Ortiz assenyalava que l’ús de les llengües indígenes en el domini digital és un pas positiu en la seva expansió funcional, però pot no ser suficient per a la seva reproducció en altres àmbits d’ús crítics en el món ‘offline’.

D’Amèrica Llatina passem a Àfrica, un dels continents amb major diversitat lingüística al món, on les llengües colonials segueixen sent les principals llengües oficials i les que s’utilitzen per llegir i escriure i en

edging the importance of the vast oral tradition in African cultures, the authors maintain that the development of writing systems (and a further process of standardisation and creation of new terminology) are key for the introduction of local languages in digital domains. They point out smartphones (and mobile apps) as the main gadgets that could help spread the use of vernacular literacy in Africa. Indeed, social networking has proved to be a productive arena which helps to better understand the complex multilingual practices and ideologies of speakers of African languages (see Deumert 2014 for the use of isiXhosa and Rivron 2012 for the use of Eton on Facebook). According to Djomeni and Sadembouo, more institutional support in the form of language policies, introducing local languages in the education system, and the joint work of linguists, computer scientists, and research centres could also be beneficial for the visibilisation of African languages in digital domains. Besides these technical issues, the authors remind us that basic services, such as electricity, let alone broadband coverage, are still a luxury to many Africans living in rural areas.

It is precisely to social media that we turn in the last contribution for this Review. De Falco and Cesarano present a case study from South East Asia in which a minority group, the Kenya Lebu' Kulit, has turned to Facebook as a space to safeguard their cultural identity and promote their language. Along the lines of other multilingual environments such as Africa, speakers of Lebu' Kulit, a highly endangered language spoken on the island of Borneo, have begun using it on Facebook groups and blogs together with dominant languages such as English and Malay/Indonesian. While introducing the local language in social media has many advantages (functional expansion, bring-

la majoria dels dominis públics. Djomeni i Sadembouo discuteixen la necessitat urgent de desenvolupar sistemes d'escriptura per a les llengües africanes, que s'utilitzen principalment en forma oral. Expliquen els principals obstacles que cal superar, i que provenen d'una combinació d'ideologies lingüístiques locals, com ara la resistència d'alguns parlants nadius a adoptar la literacitat en la seva llengua, i les polítiques lingüístiques nacionals arrelades que afavoreixen l'ús de les llengües colonials en les esferes públiques i de prestigi. Si bé es reconeix la importància de la vasta tradició oral en les cultures africanes, els autors sostenen que el desenvolupament dels sistemes d'escriptura (i un procés addicional d'estandardització i creació de nova terminologia) són clau per a la introducció de les llengües locals en els dominis digitals. Assenyalen els telèfons intel·ligents (i les aplicacions mòbils) com els principals aparells que podrien ajudar a difondre l'ús de l'escriptura vernacle a l'Àfrica. De fet, les xarxes socials han demostrat ser una esfera productiva que ajuda a entendre millor les pràctiques multilingües complexes i les ideologies dels parlants de llengües africanes (vegeu l'ús de l'isiXhosa descrit per Deumert 2014 i l'ús de l'eton a Facebook descrit per Rivron 2012). Segons Djomeni i Sadembouo, més suport institucional en forma de polítiques lingüístiques, la introducció de les llengües locals en el sistema educatiu, i el treball conjunt dels lingüistes, informàtics, i centres de recerca també podria ser beneficiós per a la visibilització de les llengües africanes als dominis digitals. A més d'aquestes qüestions tècniques, els autors ens recorden que serveis bàsics, com ara l'electricitat, sense parlar de la cobertura telefònica de banda ampla, continuen sent un luxe per a molts africans que viuen en zones rurals.

ing speakers of different generations together, creating meaningful cultural knowledge, and even political activism), the authors underline the increasing pressure of other dominant languages on this digital domain and the need to actually promote this highly endangered language in other everyday offline environments such as the home or the school, which are crucial for language reproduction. Drawing from some speakers' posts on Facebook, De Falco and Cesarano analyse the linguistic ideologies involved in using Lebu' Kulit online, which show, on the one hand, a concern about producing written materials in the language with a view to 'preserving' it and on the other, about language 'correction', which seems to be a generational aspect (for similar issues of language purism, see Deumert 2014, also Cru 2015).

We hope that the reader enjoys this issue, the aim of which is to offer an array of international examples of language promotion in an ever more central domain in our lives.

Els mitjans socials són precisament al centre de la darrera contribució d'aquest llibret. De Falco i Cesarano presenten un estudi de cas del sud-est asiàtic en el qual un grup minoritari, els Kenya Lebu 'Kulit, ha trobat en Facebook un espai per salvaguardar la seva identitat cultural i promoure la seva llengua. De manera similar a altres entorns multilingües com ara Àfrica, els parlants de Lebu 'Kulit, una llengua en greu perill d'extinció parlada a l'illa de Borneo, han començat a utilitzar-la en grups de Facebook i blocs, juntament amb altres llengües dominants, com ara l'anglès i el malai/indonesi. Si bé la introducció de la llengua local en les xarxes de comunicació social té molts avantatges (ampliació funcional, posar en contacte parlants de diferents generacions, creació de coneixement cultural significatiu, i fins i tot activisme polític), els autors destaquen la creixent pressió d'altres llengües dominants en aquest domini digital i la necessitat de promoure realment aquesta llengua greument amenaçada d'extinció en altres entorns 'offline' quotidians com ara la llar o l'escola, que són crucials per a la reproducció de la llengua. A partir d'alguns 'posts' de parlants a Facebook, De Falco i Cesarano analitzen les ideologies lingüístiques implicades en l'ús de Lebu' Kulit en línia, que mostren, per una banda, una preocupació per produir materials escrits en aquesta llengua amb la finalitat de "preservar-la" i, per altra banda, per la "correcció" lingüística, que sembla ser una qüestió generacional (sobre el purisme lingüístic en aquest àmbit, consulteu Deumert 2014, també Cru 2015).

Esperem que el lector gaudeixi d'aquest número que pretén oferir una sèrie d'exemples internacionals de promoció de les llengües en un domini cada cop més central en les nostres vides.

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WHAT IS DIGITAL LANGUAGE DIVERSITY AND WHY SHOULD WE CARE?

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Introduction

The relationship between language and the Internet is a growing area of policy interest and academic study, see for instance (MAAYA 2012), (Paolillo et al. 2005), (Pimienta 2001), (Kornai 2013), (Pimienta et al. 2009), (Rehm and Uszkoreit 2012).

The emerging picture is one where language profoundly affects a person’s experience of the Internet. It determines how much – if any – information you can access on Wikipedia. It orients a person’s choices and decisions by shaping the results of a search engine, depending on the language used. It determines the range of services that can be available over the Internet, and therefore the amount of everyday tasks (such as buying a ticket, reviewing opinions about hotel and restaurants, purchasing books or other goods, etc.) that can be carried out virtually. Far from infinite, the Internet, it seems, is only as big as one’s language.

Should this hold true, it would be at odds with the original spirit of the Internet, which - according to the words of Tim Berners-Lee - would be a place “to cross barriers and connect cultures”.

But it is safe to argue that the extent to which a language can be used over the Internet not only affects a person’s experience and choice of opportunities; it also affect the language itself.

If a language is poorly or not supported to be used over digital devices, for instance if the keyboard of the PC is not equipped with the characters and diacritics necessary to write in the language, or if there is no spell checker for a language, then its usability becomes severely affected, and it might will never be used online. The language could become “digitally endangered”, and its value and profile could be lessened, especially in the eyes of the new generations.

These considerations call for closer examination of a number of related issues. First, the “digital language diversity”, i.e. the linguistic diversity of the Internet. Second, it is important to reflect on the conditions that make it possible for a language to be used over digital devices, and about what can be done in order to grant this possibility to languages other than so-called “major” ones.

Linguistic Diversity

According to linguists there are between 6.000 and 7.000 spoken languages (Lewis et al. 2013), and perhaps as many sign languages. The impressive language diversity of the world is reported to concentrate in some areas more than in others: for instance, Papua New Guinea (home to 830 languages over 400.000 km²), Indonesia (722 languages for 240M people), Nigeria (more than 500 languages), India (22 official languages, 400 languages, more than 4000 dialects). These areas of incredible concentration of different languages are called *language hotspots*: regions having not only the highest levels of linguistic diversity, but also the highest levels of endangerment, and often the least-studied languages (Harrison 2010a). The highest linguistic diversity tends to be located in areas of lesser economic development, that have endured little or no globalisation, have relatively well preserved the natural environment. This has been interpreted as a signal of the fact that linguistic diversity represents the normal or natural condition, while the monolingualism frequently observed especially in the Western countries is an artifact or a side effect of socio-political forces.

Although only recently, there is a growth of scholarly and public discourse about the value of linguistic diversity. The arguments in favor can be classified either as aesthetic, cognitive, anthropological or ecological.

From an aesthetic point of view, languages can be seen as living monuments of the peculiarly human way of forming societies, of communicating and transmitting experience.

The cognitive strand of argumentation maintains that from the point of view of the study of the human species, the variety of languages and its related variability of forms and structures (sound systems, syntactic patterns and morphological constructions) offer a unique view on the functioning of the human brain and the humanly peculiar language faculty.

In anthropological terms, language diversity is interpreted as one of the many responses of the human species to the extreme variability of its surrounding environment: the variety of the way in which human beings have adapted and responded to the various climates and challenges is uniquely embodied in languages. Along this argument, some authors argue that linguistic diversity embodies the resilience weaponry of the human species against the environment, by codifying the knowledge about surviving techniques, plants, animals, crops, preparation and use of medicinal food, as well as traditional methods of farming, fishing, and hunting, of land use and resource management. This enormous wealth of knowledge that was accumulated over the centuries may turn useful again and we cannot afford to lose it by eradicating language diversity. David K. Harrison, a linguist and advocate of linguistic diversity, expresses this view in a very powerful way: “What hubris allows us, cocooned comfortably in our cyber-world, to think that we have nothing to learn from people who a generation ago were hunter-gatherers? What they know - which we’ve forgotten or never knew - may some day save us. We hear their voices, now muted, sharing knowledge in 7000 different ways of speaking. Let’s listen while we still can.” (Harrison 2010b).

Another argument in favor of linguistic diversity is the ecological one. Language diversity tends to correlate with biodiversity, they underpin and mutually reinforce one another: it appears that those places with high species diversity (tropical forests in particular) tend to show higher linguistic diversity, while areas low in species diversity, such as deserts and tundra, also show lower linguistic diversity (Loh and Harmon 2014, Nettle and Romaine 2000, Loh and Harmon 2005). Exactly as it happens for biodiversity, language diversity is threatened with regions where this loss is more acute and faster (Loh and Harmon 2014), (Harmon and Loh 2010). Both are facing an extinction crisis, and both crises are consequences of similar processes. According to Sutherland (Sutherland 2003), the loss of languages goes at a faster pace than the loss of species. The reasons behind the loss of linguistic diversity are mostly concerned with social or economic reasons (commerce, migration, globalization of trade and media, but also unfavorable national policies and the prestige associated with one or more dominant languages); more rarely they are associated with natural phenomena such as a population's extinction.

Regardless of the point of view wherefrom language diversity is approached, there is consensus about its severe endangerment: all the different strands of argumentation converge in advocating for sustaining language diversity, either as a collective commitment to the sustainability of our planet and of humankind or out of reverence and respect for the value of languages per se.

The Digital Language Divide

The digital world has become an important battlefield for protection of linguistic diversity. Digital media and tools represent only one of the various possible contexts of language use, yet they are fundamental to secure survival for these languages (Crystal, 2010). As citizens' life makes an increasingly extensive use of digital devices, a language's digital presence is of utmost importance to be perceived as fitting the needs of modern world. Eisenlohr (2004), for instance, argues that a presence in new technologies facilitates better appreciation of a language, by establishing a positive association with modernity and relevance to current lifestyles.

In order to establish a sustainable policy for safeguarding and promoting linguistic diversity, the digital world cannot be ignored any longer. In a world that is increasingly being dominated by ICT, no language can afford to miss the digital opportunity if it aspires to be a vital language. As Mark Turin aptly says, "in our digital age, the keyboard, screen and web will play a decisive role in shaping the future linguistic diversity of our species" (Turin 2013). Languages are living entities that need to be used on a daily basis by humans in order to survive. With so much of our lives happening on the Internet and through digital devices, the digital space represents a context that cannot be ignored. Speakers of major languages can access apparently unlimited amounts of Web content, easily perform searches, interact, communicate through social media and voice-based applications. They can enjoy interactive ebooks, have fun with word games for mobiles, engage in multi-player video-games, or take advantage from innovative language learning facilities for other widely spoken languages.

According to a 2013 survey (LTIInnovate 2013), in 2012 digital content has grown to 2.837 zettabytes, up almost 50% from 2011, on its way to 8.5ZB by 2015. The community of social network users in Western Europe was set to reach 174.2 million people in 2013, which is about 62% of Internet users. A massive 800 million people are Facebook users, of which 170 are from highly linguistically diverse countries such as Brazil, India, Indonesia, and Mexico. The number of Twitter's active users is estimated around 200 millions. LinkedIn has 115 million users, and Google+ as many as 180 millions¹.

These numbers, as imperfect as they may be, give a flair of the depth and breadth of Internet. But what can be said about its linguistic diversity? How the enormity of Internet users behave, from a linguistic point of view? Which languages do they use? In other words, does the Internet reflect the linguistic diversity of the planet?

A study by W3Techs² shows that at the time of writing of this article, 55.9% of all content online is in English. Aside from English, Spanish and Portuguese, only five other EU languages (German, French, Italian, Polish and Dutch), out of 60 or more spoken in the Union, are published on more than 1% of the top million sites (LTIInnovate 2013).

With reference to domain names, a majority of domains (78%) are registered in Europe or North America: a finding that reinforces the dominance of those two regions in terms of Internet content production. Asia, in contrast, is home to 13% of the world's domains while Latin America (4%), Oceania (3%), and the Middle East and Africa combined have even smaller shares of the world's websites (2%). Globally, there are about 10 Internet users for every registered domain. The United States is home to almost a third of all registered domains, and has about one website for every three Internet users.

From the Wikipedia point of view, Wikipedia articles in 44 language versions of the encyclopedia are highly unevenly distributed. Slightly more than half of the global total of 3,336,473 articles are about places, events and people roughly concentrated in the European area, occupying only about 2.5% of the world's land area: the majority of content produced in Wikipedia is about a relatively small part of our planet.

The Internet, therefore, appear to be far from being linguistically diverse. English is still the language most used over the Internet, the one for which more content is produced, and also the privileged tongue of the majority of its users. With a handful of languages dominating the web, there is a *linguistic divide* that parallels and reinforces the digital one. Exactly as there are areas of the world deprived of access to the Internet, there are entire languages that cannot get to the Internet. The consequences of such a digital language divide are severe.

Since only the speakers of some dominant languages can hope to access the Internet, its use and usability is dramatically affected. The amount of information and services

1 Source: Language Connect: www.languageconnect.net

2 http://w3techs.com/technologies/overview/content_language/all

that are available in less widely spoken languages is reduced, thus creating inequality at several different levels:

- ♦ inequality of linguistic rights and digital opportunities for all languages and all citizens.
- ♦ inequality of information and access to services;
- ♦ unequal access to technological development and unequal digital dignity;
- ♦ unequal opportunities for language survival.

Let's briefly review them in more detail.

Inequality of information and access to services: with 55.9% of all online content estimated in English, it is plain that only those who can read English can access the majority of the information available on the Internet. Machine Translation is a way to get hold of the content available in another language, yet Google Translator is available - with very different degrees of accuracy - for ninety languages only, of which 39 from Europe, 38 from Asia, 10 from Africa, 1 from the Americas and 1 from the Pacific region.

The largest and most linguistically diverse online encyclopedia, Wikipedia, is available in 290 languages, a fairly remarkable number. However, there are striking asymmetries in the amount of information available for the different language editions. The German Wikipedia, which is the fourth largest after the English one, has less than half the number of articles that are available for English³. On the other side of the spectrum, there is a near absence of any content in many African and Asian languages⁴.

To use the Internet at its fullest means to get access to the whole array of available services such as social media, or reviews sites such as TripAdvisor, or marketplaces like Amazon, eBay, Etsy or Booking.com, to name just a few. But unless you are fluent in one dominant language, you will never be able to use these services: Facebook supports 147 languages⁵, Twitter 32⁶. TripAdvisor is available in 29 languages⁷, and Booking.com in 43.

Speakers of major languages can access apparently unlimited amounts of Web content, easily perform searches, interact, communicate through social media and voice-based applications. They can enjoy interactive ebooks, have fun with word games for mobiles, engage in multi-player video-games, or take advantage from innovative language learning facilities for other widely spoken languages.

So called “smaller” languages do not enjoy the same range of opportunities as more widely spoken languages. Occitan authors and publishers could not upload and sell ebooks in Occitan over Amazon's Kindle platform, because Occitan is not among the

3 German Wikipedia: 2.022.598 articles; English Wikipedia: 5.332.011.

4 www.zerogeography.net/2012/10/dominant-wikipedia-language-by-country.html

5 <https://www.facebook.com/translations/FacebookLocales.xml>

6 <https://dev.twitter.com/web/overview/languages>

7 <https://developer-tripadvisor.com/content-api/supported-languages/>

languages supported⁸. There is no Wikipedia for Mansi; speakers of Tongva have no localized interface for Facebook, and there is no Google translation for Sardinian, or Quechua, or Inupiaq⁹.

In addition to unavailability of Internet services in some countries and to poor digital skills of large parts of the planet, the lack of support for languages other than the major ones implies that speakers of 94% of the languages spoken cannot access Internet services unless they are fluent in one major language as well.

Unequal access to technological development and unequal digital dignity: latest technological development embedded in current, everyday digital devices such as smartphones or tablets are not accessible to speakers of less-widely spoken languages. For instance, Apple's Siri, one of the latest voice-enabled smart personal assistants for smartphones, has been developed for 25 languages only. It covers nine out of 30 EU official languages; an Irish speaker cannot use Siri in her language and has to turn to English instead, and still, problems with an Irish accent can be experienced. This inequality of digital opportunities further discriminates less widely spoken languages, by relegating them once more to the realm of family communication and restricted topics. Less digitally represented languages are under the serious risk of being marginalized, and eventually dialectalized over the years. According to Carlos Leñez (cited in Prado 2011), “the less valuable a language is [in the eyes of its speakers], the less it is used, and the less it is used, the more it loses value”. Shrinking contexts of uses can have a devastating effect, eventually leading to the abandonment of a language in favor of another, better supported one. Should this happen, the consequences for a language profile would be dramatic: any language that cannot be used over digital contexts will engage in a “digital diglossia” relationship with another, better supported language.

Unequal opportunities for language survival: less and less digital contexts of use is what can bring languages to digital extinction (Rehm et al. 2012). It is common to associate the concept of extinction with very exotic languages, or those spoken by a restricted minority. However, the concept of “digital extinction” describes a condition that could prove true for many languages, even those far from being endangered outside the digital world. This condition holds whenever a language is used less and less over the Internet because of lack of Language Technology support: then the range of contexts where it is used dramatically collapses and gradually brings the language to disappear from the digital space. Where there is no favorable environment for a language over digital tools, then its use over the Internet and through digital devices becomes cumbersome, communication is difficult, and usability of the language is dramatically affected. By pushing the naturalistic metaphor further, we can think of a “digitally hostile environment”: one where it is not possible to type, make searches, have translations, hold a conversation over digital devices. In such a context, a language easily language goes extinct.

According to the principles of the World Summit on the Information Society endorsed by the UN, the “Information Society should be founded on and stimulate

8 <https://kdp.amazon.com/help?topicId=A9FD00A3V0119>

9 http://translate.google.com/about/intl/en_ALL/languages/index.html

respect for cultural identity, cultural and linguistic diversity” (UN 2003). However, as new information and communication technologies are opening new frontiers for innovation, creativity, and development, not everybody is able to participate, contribute and benefit equally.

The digital language divide, thus, holds back entire societies from sustainable development, from the information and the means of communication necessary for health and education, from opportunities to engage in cultural, political and economic development. The imperative to bridge the digital language divide, therefore, is rooted in the basic right of all communities, languages, and cultures to be “first class citizens” in an age driven by information, knowledge and understanding.

How to increase and maintain Digital Language Diversity?

For a more equitable world, we need *digital language diversity*, in the same way we need language diversity to preserve the entire heritage of human culture.

Increasing the level of Digital Language Diversity requires to increase the representation of languages over the Internet, either in terms of available content and in terms of possible uses. Availability of content, although desirable, is a necessary but not sufficient condition in order to guarantee true language digital vitality. A typical case is when there is a Wikipedia in a given language, but not localized interfaces of most popular applications and programs. A user cannot really interact using the language over digital devices. He can only access some web pages: in order to access the Internet and take profit of the services available on it, a user must switch to another language.

The vast majority of regional and minority languages (RMLs) are poorly represented digitally (Rehm, 2014e), (LTInnovate).

A number of factors can be invoked to explain it. One is the low profile enjoyed by many regional and minority languages, which often are not officially recognised and rarely fully supported (as it is the case of the totality of the regional languages of France, for instance). Low prestige and a weak socio-political profile make it so that speakers turn to other languages when accessing the digital world. The presence of RMLs over digital media and their usability through digital devices is usually limited to instances of digital activism and/or by means of cultural initiatives focused on the preservation of cultural heritage.

Another reason, which is peculiar to Europe and other strongly monolingual States, is the fact that virtually no citizen is monolingual in a regional or minority language: everyone can always make use of an official major language instead of a minority one, thus making regional and minority languages not essential for communication purposes. This makes RMLs of little economic interest for companies developing language-based digital applications, since virtually no prospective customer would be unable to communicate if these languages were not supported. As a consequence, provision of state-of-the-art language-based applications, which would enable and foster their use over digital media and devices, is severely limited (Mariani 2015). In addition, for a

language to be used digitally, it has to be “digitally ready”, i.e. it must enjoy the range of tools and technical support available for other major languages.

This is not always the case, see for instance the recent battle for the adoption of a keyboard better supporting French regional languages ¹⁰. According to the META-NET study, the majority of European RMLs is affected by the problem of weak technological support, with the notable exceptions of Basque, Catalan, Galician, Welsh and to a lesser extent, Frisian.

The *digital readiness* of a language is inextricably linked to its digital presence: whenever a language is technologically supported and thus widely digitally usable, its digital representation flourishes. Digital data become easily and readily available to be exploited to develop new and better applications, which in turn will foster even wider use. This relationship between digital readiness and digital usability turns into a vicious circle for RMLs: development of language-based applications crucially depends on the availability of large quantities of good-quality open data (Soria, 2014), but this data can only become available if RMLs can start to be widely used digitally, and this requires the support of technology.

The majority of everyday tasks taking place over the Internet, from as simple ones such as writing emails to more complex ones such as listening to automatic speech translation, are supported by some kind of Language Technology (LT). This term broadly encompasses data and software that allow the automatic processing and recreation of natural language, such as spelling and grammar checkers, electronic dictionaries, localized interfaces, as well as search engines, automatic speech recognition and synthesis, language translators or information extraction tools. Language Technology can make content accessible, e.g. through cross-lingual information retrieval and machine translation. It can open up the possibilities for making purchases and perform transactions over the Internet across national boundaries. It can enable e-Participation, and thus contribute to social involvement. It can enable richer interaction among people from different linguistic backgrounds, and thus foster exchange of knowledge and social dialogue and cohesion.

Language Technology, thus, is a cornerstone of digital language diversity. It represents an *enabling technology* by means of which speakers can interact with machines and devices using their natural language (for a review of the crucial role of Language Technologies for fostering multilingualism and enabling the preservation of cultures and languages, see for instance Mariani 2015, and AA.VV. 2015). If we want to save and preserve language diversity, and especially minority and regional languages, we must necessarily let these lesser-used languages have access to the tools and resources of the same technological level as those of “bigger” languages.

However, despite its increasing penetration in daily applications, Language Technology is still under development for major languages. According to a research carried out by the META-NET Network of Excellence¹¹, culminated in the publications of 30 “Lan-

10 <http://www.afnor.org/liste-des-actualites/actualites/2015/novembre-2015/respect-de-l-ecriture-francaise-vers-un-nouveau-modele-de-clavier-informatique>

11 www.meta-net.eu

guage White Papers” (Rehm and Uszkoreit 2012), one for each official EU language, 29 European languages are at risk of digital extinction because of lack of sufficient support in terms of language technologies.

The study reports how Language Technology support varies considerably from one language community to another, and about dramatic and alarming differences in technology support between the various languages and areas are dramatic and alarming: in the four areas, English is ahead of the other languages but even support for English is far from being perfect. While there are good quality software and resources available for a few larger languages and application areas, others, usually smaller languages, have substantial gaps. Many languages lack basic technologies for text analytics and essential resources. Others have basic resources but semantic methods are still far away. A recently update of the study (Rehm et al. 2014), demonstrates, drastically, that the real number of digitally endangered languages is, in fact, significantly larger.

The META-NET study described above clearly shows that, in our long term plans, we should focus even more on fostering technology development for smaller and/or less-resourced languages and also on language preservation through digital means. Research and technology transfer between the languages along with increased collaboration across languages must receive more attention.

However, it must be recognized that this represents a big challenge as well, as fast development of high quality LT is required to keep up with the pace of technological development. If a language does not enjoy good quality Language Technology, it won't be used in the latest voice or language-based applications; it will be replaced by another language and may thus get into the loop eventually leading to digital extinction. On the other hand, if Machine Translation is available for that same language, it will keep being used, even in confrontation with much more widely used languages.

Despite having improved enormously over the last decades, Language Technology is still far from being a perfect solution for multilingualism. As everyone knows, there are striking imbalances in applications and the overall final quality is acceptable for a final user for a handful of languages only. However, it must be recognized that their level of development is good enough to justify for more investment and for enlarging the technology to more languages. Some major companies, mostly from the US, are now starting to recognize the importance of multilingualism for their business but they mostly invest in languages of some economic interest.

In order to increase the presence of languages on the Internet and digital devices, i.e. in order to increase Digital Language Diversity, language technology must be enabled for as many languages as possible. It is by no means simple, for a minority language, to get engaged in the digital world. Small languages need to be given the voice, in technological terms. The challenges - ranging from digital divide and connectivity access, problems in terms of scripts and their digital encoding, lack of terminology, etc. to availability and development of language technologies - can be daunting. However, going digital is not impossible for languages, as long as some minimal conditions are met. Careful consideration and planning are needed in order to develop a roadmap for advancing the sustainability of less widely used languages in the digital world.

The strategy we propose here starts from two assumptions. The first one is that under the current data-driven paradigm of development of Language Technologies, production of digital data represents a major bottleneck: the development of language-based applications crucially depends on the availability of large quantities of open data (Soria et al. 2014). The second assumption is that since lesser used languages are of little economic interest to the major players and developers of language-based digital applications, it cannot be expected these solutions be nicely offered to the public, at least not in the short term. At the same time, further delay in development would only deepen the language digital divide by making the possibility more remote for lesser used languages to keep up the pace of the technological development available for better-resourced ones. Therefore, the moment is now: if we don't act quickly and effectively now, if carefully planned and focused intervention is not immediately carried out, it might be too late.

The Digital Language Diversity Project: putting the fate of languages in the hands of their speakers

To increase the digital representation of smaller (i.e. regional, minority, or minoritised) languages, their use and usability over the Internet and through digital devices needs to be supported by Language Technologies. As we have argued, language-based technological support can be better provided if digital content in regional and minority languages becomes widely and easily available, but little public or private resources are devoted to the development of Language Technologies for smaller languages, as they are not of strong commercial interest for big companies. A way out of this can be offered by unleashing the power of speakers as data producers. We are digital “Tom Thumbs”: speakers produce data, at an incredible pace. It has been estimated that every minute, Twitter users tweet 277.000 times, Facebook users share 2.460.000 pieces of content, email users send 204.000.000 messages, and YouTube users upload 72 hours of new video¹². And this data has economic value since data is what is needed to develop Language Technology.

The long-term aim of the *Digital Language Diversity Project* (hereinafter DLDP) is to contribute to breaking the “low digital representation - low digital readiness” vicious circle by empowering speakers of RMLs with the intellectual and practical skills that will put them in the position of creating and sharing digital content, at the same time motivating them to achieve this goal.

The project is a three-year project started in September 2015 and funded by the European Commission under Erasmus+ programme as a strategic partnership in the adult education sector¹³.

The core of the project is represented by a Training Programme that will be made available online under the form of MOOC modules. Through the Training Programme,

¹² Source: <https://www.domo.com/learn/data-never-sleeps-2>

¹³ Detailed information about the funding programme and the DLDP Consortium is available from the project website: <http://www.dldp.eu>.

speakers of regional and minority languages will learn why and how to increase the presence of their language online, and how to practically do it: which tools and techniques are available, which media are more suitable, which aspects are to be addressed more urgently. Each module will be ranked so as to be suitable for variable levels of digital readiness of different languages/language communities and for different types of user categories.

Through a mixture of educational material and guidelines for practical activities, the Training Programme wants to teach basic strategies to increase the presence of minority languages online. It will be structured along the following lines:

- ◆ help in overcoming intellectual barriers: explaining speakers why is it important for a language to be digital and motivating them to collaborate;
- ◆ help in creation of textual contents;
- ◆ help in creation of audio materials such as podcasts, web radio, YouTube channels;
- ◆ help in basic Social Media management: focusing on the relevance of Facebook pages and groups and Twitter accounts managed in minority languages for the creation of a social community;
- ◆ bringing others on our side: software and interfaces' localization projects;
- ◆ edutainment: ebooks, videogames, etc.

Despite being a general problem affecting every regional and minority language, poor digital representation is obviously not the same for all of them. Similarly, the extent to which different languages can be used over digital media and devices (i.e., their *digital usability*) varies from language to language: on the one hand there are languages such as Karelian that appear to be hardly used on the Internet; on the other, there are languages such as Basque, Catalan, or Breton, for which digital use is stronger and more widespread.

A training programme must take this variability into account, in order to deliver appropriate measures for the different conditions and needs of languages with respect to their digital usability. Therefore, it was decided to develop a tool for measuring the degree of *digital vitality* of languages, which in turn is defined as the extent to which a language is present, used and usable over the Internet through digital devices (PCs as well as mobile phones, smartphones, tablets, satellite navigators, Internet TV, etc.).

The Digital Language Vitality measuring tool being developed by the DLDP project consists of a graded scale and a set of associated indicators. The Digital Language Vitality Scale is graded from 1 to 7, with 1 representing the 'pre-digital' level and 7 characterising a 'digitally thriving' language, one for which most if not all current digital uses are possible. The scale is inspired to linguistic vitality assessment (such as GIDS, Fishman 2001), updated by (Lewis and Simons 2010) as EGIDS, and the UNESCO “nine factors” (Brenzinger et al. 2003)), and is based on previous work in this area such as (Kornai 2013) and (Gibson 2015). The indicators associated with the scale are proxies representing both digital representation (presence) of a language and digital use. They are clustered into three groups: a first group of indicators refers to *digital usability* of a language, for instance, the existence of Internet connection or the avail-

ability of standardised fonts for writing the language. A second group of indicators is related to the *quality and amount of digital use* of a language: if and how much a language is used for texting and emailing, on websites, blogs, if there are e-books, Wikipedias, if the language is used on social media. The last group of indicators correlates with the *digital prestige* of a language, and are a sign of a language that not only is indeed used on digital media and devices, but it is so in a full-fledged way, enjoying the widest possible ranges of uses and applications (e.g. localised digital services, machine translation, education products and services).

During the time frame of the DLDP, the Digital Language Diversity Scale measuring tool will be applied to a limited number of case studies, representing very different degrees of digital language representation and use. Four EU regional/minority languages will be investigated in detail so as to precisely assess their position on the Digital Language Vitality Scale: Sardinian, Karelian, Basque and Breton.

The investigation will be performed by means of a survey that is currently being developed at the time of writing.

The survey is developed on the basis of previous work carried out in the area of ethnolinguistic vitality, such as the ELDIA Barometer (Åkermark et al. 2013), and other inquiries addressing specifically digital use of languages and availability and usability of digital resources and media.

The DLDP survey consists of a general part collecting basic information on the informant (age, sex, proficiency level in the language, frequency of use, etc.). The second part is focused on gathering information about his/her personal digital use of the language and about any known digital resource and services that make use of the language. We decided to give preference to questions that could give us information not easily retrievable in other ways. For instance, we deliberately left out questions addressing the existence of localised services or interfaces in the particular language, since this information is easily available and would make the questionnaire unnecessarily long. The results of the survey are to be published in February 2017.

In addition to the assessment tools and self-educational instruments described in the previous sections, the DLDP project will make available to regional and minority language communities a sustainable instrument to help them support the digital representation of their languages by setting the appropriate actions and measures for improving their language digital language vitality level.

This instrument - named “Digital Language Survival Kits” - is conceived as a set of “emergency packs” indicating the actions to be undertaken for improving the digital language vitality level, but also which are the challenges and difficulties, which areas need to be addressed first, which tools are available. The Digital Language Survival Kits will thus complement and support the content provided by the Training Programme.

The Kits can be conceived as actionable guidelines (as the emergency metaphor intends to suggest) for regional and minority language speakers and communities in order to identify current gaps and areas where action can and needs to be taken, and

learn about concrete actions and initiatives that can be put in place depending on the particular digital vitality level identified. As such, the two tools - the Digital Language Survival Kits and the Digital Language Vitality Scale) - are respectively the diagnostic and therapeutic phases of the same intervention measure. For instance, a minimal degree of digital vitality will require a level of “digital survival capacity”: to ensure connectivity, to develop and adopt a standardized encoding, to develop a standardized orthography, some basic language resources (at least a corpus, a spell checker, and a lexicon). Higher levels of digital vitality instead will require other types of measures, such as creating or enriching a Wikipedia in the language, having localized version of important sites, main operating systems and social media interfaces, and developing advanced language resources and tools (e.g. a Wordnet, multilingual corpora, or MT applications).

In the framework of the DLDP project, the Kit will be fully developed for Basque, Breton, Karelian and Sardinian; its model and structure, however, will be designed so as to be applicable to as many languages as possible, thus ensuring circulation and adoption beyond the languages investigated in the project and after the project's life-time.

Finally, DLDP will deliver a number of recommendations specifically addressed at language stakeholders and policy makers, the *Roadmap for Digital Language Diversity*. Its aim is to ensure that proper and adequate actions are taken in order to ensure an appropriate digital presence to Europe's regional and minority languages. The intention here is to prepare the ground for a EU-wide directive concerning the attainment of equal digital opportunities for speakers of all languages, in order to stop under-representation of some languages and create strong pressure on local policies in member countries.

These recommendations are therefore to be regarded as a contribution to concrete, tangible and far-reaching measures for strengthening Europe's linguistic diversity. The Roadmap is intended to complement other previous and ongoing initiatives, such as the NPLD European Roadmap for Linguistic Diversity ¹⁴, the META-NET Strategic Agenda ¹⁵, and the FLaReNet Blueprint for Actions and Infrastructures ¹⁶.

Its innovative character lies in its specific focus on the particular needs and challenges of regional and minority languages.

Conclusions

Using the words of John Hobson (quoted by Kevin Scannell, (Scannell 2013), “The internet and digital world cannot save us. They cannot save Indigenous languages. Of course these things have benefits but they are not the Messiah. We don't need another website or DVD or multi-media application, these are short term, quick fix solutions. What we really need is sustainable initiatives, to create opportunities for Indigenous

¹⁴ <http://www.npld.eu/uploads/publications/313.pdf>

¹⁵ <http://www.meta-net.eu/sra>

¹⁶ <http://www.flarenet.eu/sites/default/files/D8.2b.pdf>

language users to communicate with each other in their native tongue. To get people speaking again.”

It is only by using the languages through the Internet that they can be successfully revitalized and kept healthy, and this in turn is possible if current technology embeds language technology for a larger number of languages than those for which it is currently possible.

A widening of Digital Language Diversity is desirable and possible, as there is no limitation, in principle, to the number of languages accessing the Internet and content be provided in those languages.

Even if Digital Language Diversity will never be able to mirror the world’s linguistic diversity, we can and should aim at least at a partial reflection of it. International and national policy makers should support and foster the digital presence of minority languages in particular - those more at risk of digital extinction. The range of technical and political challenges involved is very vast, and must be addressed at once in order to endow languages with the minimal necessary instruments in order to access the Internet and start producing content. The development of reliable indicators of Digital Language Diversity is also desirable and we argue that such an initiative should be collectively and collaboratively pursued. These indicators could be used to build and Index of Digital Language Diversity, to be used as a monitoring tool to assess digital language diversity in a certain area and highlight areas where intervention is needed (for instance, by singling out where effort should be channelled and funding directed).

Although the destiny of a language is primarily determined by its mother-tongue speakers and its broader cultural context, a Digital Language Planning could help directing the technological development of an under-resourced language, thus affording the language the strategic opportunity to have the same “digital dignity”, “digital identity” and “digital longevity” as large, well-developed languages in the Web.

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INVESTIGANDO PROYECTOS DIGITALES EN TORNO A LAS LENGUAS INDÍGENAS DE AMÉRICA LATINA

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Un número creciente de promotores culturales y “militantes” de lenguas indígenas están adoptando las llamadas “nuevas” tecnologías de la información y la comunicación (TIC) para fortalecer sus idiomas y ejercer su derecho a una educación y una comunicación en lengua propia en América Latina. En el segundo semestre de 2015, la organización internacional Global Voices² hizo pública una convocatoria en la región para integrar un equipo de investigación sobre este tipo de iniciativas. Quien esto escribe fue seleccionado para coordinar un equipo multidisciplinario que estaría compuesto, principalmente, por profesionistas y activistas de pueblos originarios. A finales de noviembre de 2015, el grupo quedaría integrado por antropólogos, lingüistas, abogadas, y profesores, pertenecientes a los pueblos awajún, aymara, maya yucateco, misak, mixe y zapoteco.

El reto era aportar una mirada crítica y solidaria a los procesos de representación de las lenguas indígenas en la ciberesfera. Se proponía una investigación de tipo participativo que entablara un diálogo fructífero con las y los activistas involucrados en iniciativas que iban desde la administración de cuentas de Twitter, páginas en Facebook o canales de YouTube, a la localización de Wikipedia o Firefox a diversas lenguas originarias, entre otros. Se trataba de sistematizar, analizar y caracterizar las principales tendencias detectadas en la región a través de una muestra que, sin ser representativa en sentido estricto, diera cuenta tanto del rango de experiencias existentes como de aquellas iniciativas que por inusuales e innovadoras pudieran servir de inspiración a futuros y futuras activistas.

En esta contribución para Linguapax, más que repetir lo ya expresado en el detallado reporte final que se entregó a Global Voices y la Fundación Ford (y que se encuentra publicado ya en la página “Lenguas Indígenas” de Rising Voices³), intentaré desarrollar una serie de reflexiones respecto a los alcances del estudio y a los retos relacionados

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- 2 La red de activistas Global Voices, con sede legal en Amsterdam, Países Bajos, busca agrupar, conservar y amplificar la conversación global en línea – arrojando luz a los lugares y gente que otros medios de comunicación a menudo ignoran. La organización trabaja para desarrollar herramientas, instituciones y relaciones que ayuden a todas las voces, en todas partes, a ser oídas.
- 3 Ver: <http://rising.globalvoices.org/lenguas/investigacion/informe/introduccion/>

con la investigación futura en torno a los esfuerzos de activistas indígenas por revitalizar sus idiomas a través de medios digitales.

Antecedentes de la investigación

Como se expuso líneas arriba, la investigación fue llevada a cabo a través de un proyecto financiado por la Fundación Ford y administrado por Global Voices, a través de su iniciativa de compromiso con la comunidad (*outreach*) denominada Rising Voices. Desde la convocatoria misma, el estudio proponía una exploración del “Activismo Digital de Lenguas Indígenas” en la región latinoamericana. El encabezado revelaba, por una parte, las maneras propias de nombrar el trabajo que Global Voices venía desarrollando en la región, principalmente a través de encuentros con promotores de lenguas indígenas, así como a través de micro-financiamientos para el inicio de proyectos digitales en torno a éstas mismas. La noción de “activismo” en relación al uso de tecnologías de la información y la comunicación (TIC’s) no me resultaba por completo ajena ya que entre 2008 y 2010 había colaborado con la organización *Tactical Technology Collective*⁴ (conocida también como *Tactical Tech*) entonces con sede en Brighton, Reino Unido. *Tactical Tech* tiene entre sus principales tareas facilitar el uso de tecnologías digitales a ambientalistas, defensores de derechos humanos, documentalistas y organizaciones políticas de base para la consecución de sus objetivos político-culturales. El foco de estas actividades es, sin embargo, el “infoactivismo”, es decir, la captura, el manejo, el análisis y la representación de información de forma estratégica, sea a través de medios digitales o análogos, tanto para entender mejor la problemática de fondo como para avanzar mejor las causas defendidas por los y las activistas⁵. En el caso del “activismo digital” que interesaba a Global Voices, el ángulo de abordaje era más impreciso y, más tarde encontraría, relativamente nuevo entre los protagonistas de las iniciativas que conformarían el estudio.

El equipo que se integró a la tarea de abordar y analizar las características principales de este indeterminado campo de “activismo digital” de las lenguas originarias de América Latina fue diverso⁶. Si bien cada una y cada uno de los integrantes de éste tenía experiencia desarrollando algún tipo de iniciativa digital en relación con su idioma materno; carecía, por otro lado, de experiencia investigando y reflexionando sobre estas actividades como formas de “activismo digital”. Esto incluye a quien esto escribe quien, a pesar de trabajar comúnmente como investigador, no había realizado nunca una investigación sistemática sobre el fenómeno de la apropiación indígena de medios digitales.

4 El nombre puede traducirse como “Colectivo de Tecnología Táctica”.

5 Una descripción más amplia de la inspiración y objetivos del colectivo puede consultarse en “Tactical Tech: A short history”; ver <http://tacticaltech.org/tactical-tech-short-history>

6 El equipo estuvo conformado por: Pedro Cardona Fuentes, ingeniero zapoteco e investigador de la Universidad Autónoma de Querétaro, México; Liseth Atamain Uwarai, abogada awajún de la región San Martín en la Amazonía peruana; Yásnaya Aguilar Gil, lingüista ayuujk, de Ayutla Mixe, Oaxaca, México; Duvan Calambas Almendra, estudiante misak de antropología, del cabildo Kurak Chak-Misak Misak en Colombia; Rubén Hilare Quispe, lingüista y traductor aymara, de Omasuyos en el altiplano boliviano; y Mónica Bonilla Parra, estudiante colombiana de lingüística.

La herramienta principal utilizada para capturar la complejidad de las experiencias en torno al “activismo digital” de lenguas indígenas fue la entrevista semi-estructurada. Esta se realizó a partir de un guion elaborado por quien esto escribe a partir de una serie de discusiones con el equipo de investigadores-activistas. Este resultó ser el principal ejercicio de carácter participativo del estudio, es decir, la incorporación directa de las preocupaciones de activistas y promotores indígenas al diseño de la investigación. Las entrevistas se realizaron a través de Skype, Hangouts, WhatsApp y en un par de ocasiones a través de llamadas a teléfonos celulares. Por las características del apoyo económico recibido y los tiempos establecidos por la agencia internacional para la entrega de resultados, no se contó con recursos suficientes para hacer entrevistas cara a cara, o para visitas de campo. Por lo tanto, la información que compone el estudio se basa exclusivamente en los testimonios de las personas entrevistadas, sus propias valoraciones sobre el nivel de avance y progreso de la experiencia que encabezaban, y su particular diagnóstico de la situación enfrentada por su lengua materna en el contexto nacional.

El equipo de investigación inició actividades en noviembre de 2015 y concluyó en junio de 2016. A lo largo de estos meses, condujimos discusiones colectivas a través de Skype y utilizamos diversas herramientas de coordinación en línea para dar seguimiento a las tareas (Slack, Trello, Google Drive, entre otros). Cada integrante del equipo se unió a la tarea colectiva desde sus lugares de residencia: Bolivia, Perú, Colombia, y tres regiones distintas en México. Nuestro principal contacto institucional, por el lado de Global Voices, fue Eduardo Ávila. *Eddie* ha resultado un aliado invaluable de diversos proyectos digitales en torno a las lenguas indígenas latinoamericanas. A partir del rol desempeñado como principal contacto de organizaciones y activistas indígenas con Global Voices, Eddie ha desarrollado una forma particular de entender el “activismo digital” la cual influyó en la selección de los casos que formaron nuestra muestra.

Definiendo “activismo” y “digitalidad”

En cierto momento de la investigación, la principal diferencia de enfoque entre un servidor y la visión planteada por Eddie Ávila respecto al “activismo digital” consistió en la definición de la unidad de análisis para el estudio. Mientras quien esto escribe estaba más interesado en entender los procesos que habían llevado a la aparición, adopción e innovación de ciertas iniciativas de trabajo digital, el foco propuesto por Eddie apuntaba a entender el activismo a partir de las trayectorias individuales de sus protagonistas. La diferencia de fondo, desde mi punto de vista, podría expresarse como dos maneras diferentes de comprender el “activismo”: una en la que éste se define por el/la “activista”, y otra en la que se define por el proyecto. Ambas maneras de entender el activismo se corresponden con ejemplos claramente identificables en el universo de casos disponibles. Buena parte de las iniciativas puestas bajo la lupa cuentan con claros liderazgos, en ocasiones, incluso “militantes”, a favor de la lengua originaria. Los más destacados son incluso proyectos personales, contruidos a partir de las intuiciones, experimentos, contactos y capacidad de negociación de individuos notables (por ejemplo, Rodrigo Pérez en México, o Irma Álvarez en Perú). Sin embargo, los liderazgos individuales se corresponden también con contextos sociales específicos y, por lo general, se apoyan

en formas colectivas de organización, donde la visión de los individuos encuentra resonancia y concreción. Al final, fue a partir del reconocimiento de esta última dinámica que se condujo la selección de los casos de la muestra, aunque el principio de destacar el proceso más que el individuo tuvo también sus excepciones.

Al revisar el universo de las iniciativas consideradas como “activismo digital” en el sitio web de Rising Voices se notaba que éste tendía a entenderse casi exclusivamente como aquello que tenía una vida “en línea”, es decir, que tenía presencia en internet, a través de las llamadas “redes sociales”. La mayoría de las iniciativas se presentaban como proyectos para la creación de páginas y sitios web (blogs, portales, páginas con diccionarios) y/o para el uso de las redes sociales (y casi exclusivamente, de Facebook). Otras iniciativas de registro audiovisual digital del legado lingüístico de las comunidades y pueblos aparecían con mucha menor frecuencia, y cuando algunas aparecían, éstas se proponían únicamente el uso de cámaras digitales como una adición a las tareas de documentación lingüística y cultural que ya se realizaban por medio de textos escritos. Se notaba así que “lo digital” en el activismo indígena identificado hasta entonces raramente incluía estrategias más creativas como, por ejemplo, la creación de video blogs (o “vlogs”), videos musicales, cortos documentales, publicaciones interactivas, libros electrónicos, programas informáticos, animaciones, entre otros posibles formatos que caracterizan el campo mediático⁷. Aún más escasas eran las propuestas de diseño de programas o sitios interactivos para la promoción y/o enseñanza de lenguas indígenas. Una decisión que se tomó entonces tendería a ampliar el espectro de las iniciativas digitales tratando de identificar formas inusuales que sirvieran para ilustrar posibilidades poco exploradas hasta entonces.

Una vez definidos los parámetros generales de “activismo” y de “digitalidad” para el estudio, el universo de casos elegibles se disparaba significativamente. Esto se debe a que existen decenas de intentos de registrar o expresar cierto tipo de conocimiento o práctica lingüística indígena a partir del uso de medios digitales. Entre las que pudimos identificar inicialmente destacaban aislados intentos de enseñar la pronunciación de palabras o frases en podcasts y en videos, la distribución de canciones de variados géneros (tradicional, hip hop, cumbia, entre otros), la ocasional expresión de opiniones o la publicación de memes, poemas o narraciones breves en Twitter o Facebook, la existencia de estaciones de radio indígena en línea, la generación de listas de palabras y sus equivalentes presentadas como diccionarios, entre otros. Un primer reconocimiento de posibles casos para la investigación encontró también que, desde el punto de vista geográfico, existía una significativa concentración de iniciativas digitales en México y la región andina. Reconociendo que su importancia numérica debía ser reconocida

7 “Lo digital” o “la digitalidad” se refiere, en estricto sentido, a aquellas señales, aparatos y/o medios electrónicos que basan su funcionamiento en el registro, producción, recepción y/o transmisión de señales basadas en un sistema binario, consistente en dos dígitos (el 0 y el 1), para dar lugar a textos, sonidos, e imágenes, así como a operaciones y funciones diversas. Los equipos que hoy día funcionan de manera “digital” incluyen las computadoras, pero también las cámaras de video, las cámaras fotográficas, las tabletas, los lectores de libros electrónicos, las pantallas de anuncios electrónicos, y los teléfonos celulares, particularmente los llamados teléfonos inteligentes o “smartphones”. Los medios digitales más comunes incluyen, desde luego, programas computacionales de diversos tipos (conocidos también como “software”, o también “apps”, diminutivo del término en inglés “applications” = utilidades, programas, software), imágenes digitales, video digital, juegos de video, páginas y sitios web (incluyendo las llamadas “redes sociales”, como Facebook, Twitter, Wikipedia, Tumblr, Instagram, Soundcloud, Spotify, etc.), datos y bases de datos digitales, audio digital (mp3, entre otros), y libros electrónicos en diversos formatos (los llamados “ebooks”, que cuentan con diversos formatos como .pdf, .awz, .epub, .mobi, etc.).

dentro de la muestra, el estudio se propuso también localizar ejemplos significativos en regiones menos representativas, como Centroamérica y el Cono Sur.

Las iniciativas digitales bajo la lupa

Finalmente, después de varias revisiones, negociaciones y auto-selecciones⁸, la muestra quedó conformada por un grupo de quince iniciativas que trabajan con las lenguas guaraní, kichwa, mapuche, maya tz'utujil, maya yucateca, mixteca (variantes diversas), náhuatl salvadoreña, náhuatl mexicana (variantes diversas), quechua, uitoto (variante *minka*), wayuunaiki y zapoteca (variante *diiste*). Los casos elegidos (y el foco particular de cada uno de ellos) fueron los siguientes: la cuenta de Twitter en maya yucateco @ *ElChilamBalam*, la página de Facebook del *Colectivo Tzunbejékat* que difunde materiales en náhuatl salvadoreño, el portal *Kichwa.Net* que integra diversos materiales en kichwa ecuatoriano, las redes sociales integradas en el proyecto *Kimeltuwe* de lengua mapuche, la localización de Firefox al quechua chanka realizada a través de *Llivillopaq Runasimi*, las iniciativas digitales del proyecto Maya *Tz'utujil*, el portal *Ndatiakun Tu'un Savi* que agrega redes sociales y medios producidos en variantes diversas de mixteco, los *Quechua Memes* en la variante peruana, la radio digital en maya yucateco *Radio Yúnyum*, la localización al guaraní de Wikipedia *Vikipetã*, la aplicación digital para dispositivos móviles *Vamos a Aprender Mixteco* en una de las variantes oaxaqueñas, el canal de YouTube *Wayuunaiki* para el Mundo para la enseñanza del wayúu colombiano, la revista digital *Yolitia* que publica materiales en distintas variantes del náhuatl y otras lenguas mexicanas, el proyecto *Yadiko Ukuri* que trabaja en la repatriación digital de materiales grabados de forma análoga en la lengua uito colombiana, y, por último, la iniciativa *Zapoteco 3.0* que integra esfuerzos varios de localización, creación y difusión de materiales en este idioma. Las actividades relacionadas con el mundo digital que estos proyectos representan incluyen: localización de aplicaciones, navegadores y sitios web, creación de materiales digitales de enseñanza, respaldo digital de materiales lingüísticos desde formatos análogos, desarrollo de video-blogs y videos educativos, creación de portales de agregación de contenidos en lenguas indígenas, desarrollo de aplicaciones para enseñanza de idiomas, transmisión radial en línea de lenguas indígenas, diseño y difusión de memes y otros gráficos digitales, animación de grupos en redes sociales, y publicación digital de textos, videos y podcasts.

Del análisis de los quince estudios de caso se desprende un complejo retrato del trabajo que encabezan actores indígenas y no indígenas para que los idiomas nativos del continente ganen espacios y se visibilicen en la esfera digital. Este se encuentra contenido en el reporte que, como se mencionó líneas arriba, se encuentra disponible en extenso en la página de Rising Voices y del cual estuve a cargo. En él se exploran y exponen las características comunes y diversas de estas iniciativas, partiendo de su auto-identificación, sus motivaciones y sus objetivos. El documento reflexiona sobre los procesos de implementación, identifica formas varias de operación e intentos de evaluación y

⁸ Cinco casos inicialmente propuestos para integrar la muestra tuvieron que ser desechados debido a las circunstancias personales en las que se encontraban sus promotores (fuertes cargas de trabajo, irregular acceso al internet, entre otros), o simplemente debido a que sus protagonistas decidieron ejercer su derecho a no tomar parte en el estudio.

ubica las colaboraciones que hacen posible la existencia de estos proyectos. También reporta los retos tecnológicos que enfrentan, las respuestas que los activistas han dado a estos obstáculos, la relación que los proyectos guardan respecto de sus contextos comunitarios, los logros y los aprendizajes. Estos elementos sirven para hacer una serie de recomendaciones encaminadas a hacer más relevante el apoyo que Global Voices se propone brindar en la región, principalmente a través del proyecto de micro-fondos Rising Global Voices.

Entre las especificidades que se exploran en este documento sobresalen aspectos que deberían ser ahondados a partir de nuevos y mejor equipados esfuerzos por entender el potencial de la apropiación de tecnologías digitales para la revitalización lingüística. A continuación, se describen brevemente algunos de los más significativos hallazgos de la investigación, los cuáles se describen en mayor detalle en el informe mencionado.

Entre activismo, activación y revitalización

Como se mencionó líneas arriba, ciertos proyectos individuales logran en ocasiones destacar por su empuje y creatividad. En nuestra muestra, este tipo de liderazgo se refleja claramente en casos como Zapoteco 3.0 y Maya Tz’utujil. Otros proyectos se auto-definen más como esfuerzos colectivos, aunque es notorio también en estos el destacado papel de ciertos individuos. Por lo general, los casos que integran la muestra suelen auto-definirse como “proyectos colectivos”. Sin embargo, una de las formas de trabajo que más destacaron por su dinamismo fue la colaboración en pareja, notable en los casos de Kimeltuwe, Wayuunaiki para el Mundo, Yadiko Uruki y Vikipetã.

Un número importante de las iniciativas se estructuran a partir de la producción de medios y contenidos digitales con una innegable intención pedagógica. Los medios digitales producidos por estos proyectos tienen como objetivo principal servir de apoyo, inspiración y guía para el aprendizaje y la práctica de la lengua indígena. Para otros proyectos el objetivo más importante es promover un tipo de comunicación cultural y lingüísticamente significativa. Aquí se trata de usar la lengua materna en contextos negados o poco frecuentes, como los medios masivos de comunicación (radio), las publicaciones académicas y las redes sociales. Este empeño se resuelve de maneras diversas, algunas con más o menor talento, pero las que más destacan cuentan con la participación de diseñadores y artistas, que logran hacer visual y estéticamente atractivos sus proyectos (por ejemplo, Colectivo Tzunhejékat, Kimeltuwe y Vamos a Aprender Mixteco). Por otro lado, sólo de manera muy puntual y generalmente a través de alianzas estratégicas se ha podido contar con programadores especializados para algunos de los proyectos.

Significativamente, la mayoría de los protagonistas del “activismo digital de lenguas indígenas” no suelen identificarse como “activistas”. No obstante, el término comienza a generar cierta tracción, en buena medida a partir de los eventos y la reflexión promovida por el programa Rising Voices en torno de las lenguas indígenas en los últimos dos años. Uno de los términos usados para auto-definirse más cercanos a la noción de “activista” fue “militantes de la lengua” (Kichwa.Net). Este término está,

por otra parte, asociado a espacios de reflexión, capacitación e intercambio organizados por la Universidad del País Vasco, en el estado español. Otras maneras frecuentes de auto-identificarse fueron: educadores, promotores, dinamizadores, comunicadores, conscientizadores y localizadores. Pero el término más comúnmente usado en este ejercicio de auto-presentación fue el de “revitalizadores”. El término “activismo”, cuando se empleaba en espacios de reflexión, tendía a ser entendido en relación con la idea de “activación” de las lenguas en el mundo digital. De ahí que la forma quizás mejor de entender estos esfuerzos sea en relación a la forma creativa de apropiarse de la tecnología digital para conseguir objetivos diversos. Así, para ciertos actores como el lingüista nahua Victoriano de la Cruz (Yolitia) publicar de manera electrónica en su lengua constituye un acto de desafío ante el racismo que sigue imperando contra los hablantes de lenguas indígenas.

Existe una amplia capacidad e inventiva entre los actores indígenas que animan los proyectos de nuestra muestra (así como generalmente en todos los demás proyectos que el estudio identificó en América Latina). Cuando los activistas indígenas acometen la tarea de iniciar un proyecto digital, el principal reto que encuentran reside en la ausencia de espacios de capacitación para el manejo de herramientas y la producción de medios digitales atractivos con un foco específico en lenguas indígenas. Donde los equipos son básicos, los activistas sustituyen la sofisticación tecnológica con trabajo colaborativo, alianzas estratégicas, talento creativo y un sofisticado conocimiento de la lengua y cultura de sus pueblos. En casos donde la generación más joven es la que está al frente de las iniciativas digitales, se generan procesos de re-aprendizaje de la lengua que en sí mismos demuestran el potencial e impacto que este tipo de activismo tiene.

Algunas de las iniciativas que registran un mayor impacto cuantitativo destacan por explotar aspectos lúdicos. Por ejemplo, Quechua Memes, que hace evidente la importancia de esta estrategia desde el saludo mismo de su página en Facebook: “es broma nomás, todos son bienvenidos”. Hacer publicaciones y producir contenidos con sentido del humor también ha surtido efecto en la iniciativa Maya Tz’utujil y ha resultado particularmente entretenido en el caso Wayuunaiki para el Mundo. Sobre este último proyecto de los “youtubers” wayúus Karmen Ramírez e Ignacio Epinayu, lo que resulta atractivo es que las conversaciones no son solemnes ni ceremoniosas, ni se corrige estrictamente la pronunciación del wayuunaiki. Ambos han logrado que sus diálogos en el video blog tengan un aire natural y ameno, a pesar de ser evidente que se trata de una secuencia grabada en lugares y tiempos distintos. Por otro lado, la temática que resulta más querida y popular, tanto para los activistas como para sus seguidores es la que tiene que ver con las tradiciones, las prácticas ceremoniales, la música, las fiestas y las historias propias.

En el diseño de estas estrategias y contenidos cuenta mucho la creatividad y el talento de los integrantes indígenas del proyecto, pero la colaboración con aliados, simpatizantes y miembros no-indígenas parece aportar algo especial. Son los intercambios de perspectiva y la alianza de puntos de vista entre éstos los que suelen generar innovaciones y respuestas creativas en las iniciativas. Éste es significativamente el caso de Kimeltuwe, donde se alían el conocimiento de la lengua y cultura de Víctor Carilaf con la creatividad y destreza de Fiestóforo. O del proyecto Yadiko Ukuri, donde el cono-

cimiento técnico de Laura Areiza y los lazos comunitarios de Ever Kuiru han hecho viable el proyecto conjunto. O aún más del proyecto Vikipetã, donde se registra una extraordinaria comunicación y colaboración transoceánica entre Paraguay y Lituania para dar contenido a la versión guaraní de Wikipedia. Queda claro que sin los conocimientos y habilidades técnicas de unos o sin los conocimientos lingüísticos y culturales de otros, ninguna de estas iniciativas hubiera podido alcanzar su potencial. Buena parte de los proyectos se han basado en el uso de herramientas básicas, por lo que su capacidad de maniobra y la calidad de los medios digitales producidos (imagen, video, audio, etc) no siempre es la más alta ni la más versátil. Los proyectos que son más creativos y técnicamente más logrados tienden a ser aquellos donde las herramientas digitales en uso provienen del mundo del software libre. Pero para eso hace falta estar familiarizado con dichas herramientas de acceso gratuito. La imaginación, la creatividad y el compromiso suplen con creces las limitaciones tecnológicas, pero la brecha digital persiste aún y muchas comunidades indígenas continúan teniendo pésimas conexiones de telefonía celular y de internet.

Una de las características que se advierten interesantes en la mayoría de los casos es que los activistas digitales, que son hablantes de alguna lengua originaria, por lo general residen, por razones laborales o por migración económica, en un contexto donde no se habla cotidianamente la lengua propia. En los otros casos, la residencia en alguna comunidad hablante de la lengua originaria puede ser permanente o temporal. De cualquier forma, y se esté donde se esté, los proyectos digitales tienden a ser, por su naturaleza “virtual”, de una u otra forma “desterritorializados”. El trabajo de El Chilam Balam, Kimeltuwe, Ndatiaku Tu’un Savi, Quechua Memes, Radio Yúuyum, Vamos a Aprender Mixteco, Wayuunaiki para el Mundo, Yolitia, Yadiko Ukuri y Zapoteco 3.0 ha sido recibido con mucho interés y entusiasmo por hablantes de las respectivas lenguas en los lugares más insospechados. De hecho, son las comunidades transnacionales de migrantes indígenas en las capitales regionales y en los Estados Unidos, las que más uso y respuesta le dan a los materiales, contenidos y publicaciones que se originan en estos proyectos. Un caso significativo es el de Radio Yúuyum, que reporta una respuesta muy entusiasta de los mayas yucatecos residentes en la Bahía de San Francisco, quienes incluso han ofrecido ayudar a la radio con donativos en especie, con tal de seguir contando con sus transmisiones en línea y con los podcasts que van quedando en internet. Una reacción similar ha tenido el proyecto Kimeltuwe entre los hablantes de mapuche que residen en Buenos Aires, en Barcelona y en París.

Por último, si bien la mayoría de los proyectos incluidos en el estudio tienen, como dijimos antes, una clara intención pedagógica e incluso revitalizadora, casi ninguno de los proyectos tenga muy clara la manera de evaluar el impacto o el éxito de sus proyectos. Para medir la efectividad de estos proyectos de activismo digital, el estudio solicitó a los propios protagonistas hacer una auto-evaluación de los alcances de su trabajo. Es posible afirmar, a partir de las conversaciones sostenidas con los promotores de estas iniciativas digitales que entre sus principales éxitos se encuentran, sin duda, tanto su propia continuidad pese a las adversidades y la falta de apoyo técnico y económico, así como la cada vez mayor visibilidad, autonomía, experiencia y adopción que sus propuestas han logrado en un periodo relativamente corto. El estudio revela, sin embargo, otras pistas que deberán ser seguidas en estudios posteriores. Entre estas se encuentran

aspectos como la adaptabilidad de las herramientas digitales, la consolidación de los proyectos mismos, o la utilidad de contenidos, materiales y medios para audiencias diversas. Todas estas son formas de evaluar los alcances de la revitalización promovida por estos actores.

A manera de conclusión

El estudio que se describe de manera sucinta en esta contribución para Linguapax representa apenas una primera aproximación al campo del llamado “activismo digital” de lenguas indígenas en América Latina. No se trata, en absoluto, de la primera investigación que se encargue del tema. Existen otros trabajos que se han ocupado de los procesos de apropiación de las “nuevas” tecnologías de la información y la comunicación, sobre todo en la etapa previa a la web 2.0 y a la explosiva expansión y hegemonía de las “redes sociales” en la segunda mitad de la década de 2010s . El presente momento responde a una lógica de acción más fragmentada, pero al mismo tiempo mucho más dinámica. El abaratamiento de la tecnología y su masiva difusión en comunidades y regiones indígenas no ha sido suficiente para superar la brecha digital, pero como se ha expuesto aquí, diversos actores indígenas están desarrollando nuevos modelos creativos de capturar, comunicar y promover sus prácticas lingüísticas y los derechos relacionados con éstas.

Sin embargo, entre la serie de recomendaciones entregadas a Global Voices se encuentra una advertencia respecto a que por sí mismo, el uso de tecnologías digitales para registrar, enseñar y difundir las lenguas originarias de América no garantiza su revitalización. Para entender mejor la relación entre digitalidad y revitalización hace falta información y herramientas de análisis dentro de procesos más amplios de organización y reflexión, así como de investigación colaborativa. Ciertamente, el foco de este estudio ha sido en la dimensión más pragmática, tanto técnica como organizativa, y menos en la problemática específica de la documentación y la pedagogía de la lengua, o en los complejos procesos de representación de los saberes lingüísticos y culturales implicados. Este campo tiene una importancia tanto o más grande que los procesos de traducción y apropiación tecnológica y está pendiente de desarrollarse. Por ejemplo, existe un claro interés entre quienes encabezan las iniciativas analizadas por entender mejor la efectividad pedagógica de los medios digitales producidos en sus idiomas. Algunas iniciativas han logrado tener un alto impacto en redes pero aún falta determinar si su efectividad también se expresa en el mejoramiento del aprendizaje de un idioma indígena como segunda lengua, particularmente entre el público no-indígena que tiene un interés genuino en aprenderlo. Existe también un interés en identificar estrategias de influencia en la formación de políticas públicas relacionadas con los derechos culturales y lingüísticos de los pueblos indígenas, un objetivo compartido por buena parte de los activistas indígenas participantes en el estudio pero que no se encuentra explícitamente vinculado a su trabajo digital.

Finalmente, más allá de la técnica didáctica o la mayor visibilidad lograda en el ciberespacio, el punto que considero crucial para evaluar el éxito de estas iniciativas reside en su eficacia simbólica para romper el estigma de ser hablante de las lenguas originarias

del continente. De no lograrse esta meta, es probable que el prestigio de las lenguas hegemónicas y la perniciosa asociación entre indigeneidad, inferioridad, subdesarrollo e inviabilidad, continúen afectando la transmisión intergeneracional de los idiomas originarios de América Latina incluso a pesar de contar una mayor producción de materiales y medios digitales.

AFRICAN LANGUAGES AND DIGITAL MEDIA: PRACTICE, CHALLENGES AND PERSPECTIVES IN CAMEROON

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Abstract

This paper aims at accounting for the use and challenges of African languages in the digital media in Africa. With focus on the case of Cameroon, it demonstrates that it is difficult for most African languages to easily access cyberspace without filling some prerequisites among which the existence of reliable writing systems, the promotion of a literate environment in African languages, the development of websites, keyboards and mobile applications in African languages among others. In describing the current practices with regard to most Cameroonian languages on the digital media, the paper unveils that though there are commitments noticeable here and there, although some young people and some language committees are trying to make their languages visible on the digital media, there are still a lot of challenges like those related to keyboards encoding and mobile application development to overcome. The paper draws attention on the necessity to create an interdisciplinary collaborative network at the national, regional and pan African levels, with the involvement of linguists, culture and computer science specialists, in order to be able to tackle the problems faced by African languages users on the web from their very roots.

Introduction

The coming and popularisation of digital media has given a new impetus to the development and promotion of languages. However, so far, in Africa, those languages that have been benefitting a lot from the advantages given by the cyberspace are still foreign and international languages, which have been inherited from colonisation, and which were later adopted as African states' official languages. African languages are almost absent in that domain contrary to those foreign languages that have a high degree of digitalisation. In fact, as pointed out by Amoussougbo (2015:15), less than one per cent of African languages was digitalised and was present on the Internet in 2005. Though most of the younger generation of Africans cannot spend a day without communicating via the internet and notably via social media, which has become an addiction, they often do it in official foreign languages in which they have been schooling exclusively. The dying out of the oral practice of African mother tongues among the youth is one of the consequences of such language in education policies in formal education. In fact, Africans have long been weaned off their mother tongues through exclusive language policies, which do not take into account local languages in public

communication and formal education. Nowadays, it urges that African governments, in connections with their development partners and all the local stakeholders in languages and cultures and education-training work in communion to reverse the current language policies prevailing on the continent. In this respect, they will pave more ways to revitalise African mother tongues intergenerational transmission, which will eventually contribute to the development of African countries.

Yet, with the widespread of the digital and social media, a lot is still to be done by African governments to make the native languages of their countries present on the cyberspace through digital media. It is however noticeable that although a few African countries are gradually making their local languages part of formal education, most African government lack practical and sustainable decisions with regard to the use of African languages in education and other key domains of the state development's life. As a matter of fact, those languages do not find adequate channels to respond to the hegemony of colonial languages used almost everywhere in African countries.

Therefore, there is a need for African governments to critically react to this situation they have been nurturing consciously or unconsciously, by taking rigorous decisions and ensuring follow-up. From the aforesaid, a number of questions arise: What would be the prerequisites for African languages to be present and visible in digital media? What are the current practices in Africa by internet users in African languages on the cyberspace? What perspectives can we envisage for a widespread of African languages in digital media? The answering to these questions will shape and guide the directionality of our thought in this paper.

1. Some prerequisites for African languages to be visible on digital media

For African languages to be effectively and efficiently present on digital media, some prerequisites need to be met. Among them, the development of practical writing systems for those African languages which do not have one, the promotion of a literate environment in those languages through formal and informal education, the production of diversified literature and literary genres in African languages and the development of websites and mobile applications.

1.1. Development of practical writing systems

Standard languages have practical and one writing system. Digital standardisation requires that the rules for writing and reading a language are computerised so that the language can be easily used on the internet and on any computer with orthography correctors. Yet, many African languages are still on the verge of attrition while others have already reached a certain degree of development. Those whose level of development is appreciable have, for some, a well-established writing system while the writing system of others is still embryonic and even controversial because some have more than one. Where there is no controversy, because of a long exposure through formal education and administration to the colonial languages (English and French in Cameroon), which have shaped people's / African's mentality about what a writing system should be, there are still some stereotypes impeding some Africans to cope with the

writing systems of their languages. It is even ridiculous to observe that in Cameroon for instance, most youth find it difficult to learn the writing systems of their languages, not because it is hard, but because of their mindset. In effect, there is no need for them to sit in a classroom and learn how to write and read their mother tongues that they consider automatically readable without any prior literacy training to this end. Conversely, they are enthusiastic to learn Chinese in any of its two writing systems and do not find it difficult in any way. There is a serious problem of prestige planning of those local languages by African Governments. Therefore, native speakers think that they are naturally empowered or rather endowed to write and read in their mother tongues, particularly when they are literate in official languages. This justifies why those who are literate in official languages do not want to “waste their time” in literacy classes learning how to write and read their languages. In this vein, Mba (2009) points out that in spite of the scientific and practical nature of the alphabets and orthographies developed for African languages, some native speakers, willingly or unwillingly express a certain degree of resistance towards the orthographic principles because of the aforementioned reasons.

There is now a strong reason to argue that for African languages in general and Cameroonian ones in particular to be practically and permanently present in digital media, they need well-established orthographies overall when the presence is underpinned by a pedagogic aim. In some countries, these orthographies are harmonised or, instruments for harmonisation are set, while in others, each language has a different way for writing. There is therefore an urgent need for harmonisation of the writing systems of the languages of each country and that of the cross-border languages in order to ease the job of computational linguists. In Cameroon, Tadadjeu and Sadembouo (1984) set a general framework for harmonising the writing system of Cameroonian languages. A similar undertaking has been made by ACALAN (African Academy of Languages) since 2009 with the challenge to harmonise the writing systems of African trans-border languages.

The harmonisation of orthographies is one of the strength and strong prerequisite which shall aim to contribute to the ease of the promotion and development of African languages in digital media. The urgent needs to meet with the challenges of harmonisation shall be addressed by African linguists, hand in hand with local communities or local academy of languages. In Cameroon, these local communities are organised around what is called language committees or language academies.

1.2. Development and promotion of a literate environment in African languages

It is a good undertaking for researchers to develop suitable and harmonised writing systems for African languages. Yet, we shall foremost acknowledge that the impact of a long tradition dominated by oral literature, which has characterised Africa, is still very perceivable in the behaviour of most Africans until today. Though oral literature has many undeniable advantages, it shall be pointed out in the digital domain that its shortcomings are immeasurable.

The promotion of a literate environment in African languages and within the African communities inside and outside of the continent relies on some foundational arguments. In fact, a lack of a culture of literacy is a negative factor, which limits socio-economic development. Illiteracy has been proven as a key factor to underdevelopment.

Due to the fact that rural population is mostly illiterate in official (colonial) languages, they are denied access to democratised knowledge. This access cannot be possible if these people are denied their right to use their languages as a tool of empowerment. Linguistic empowerment of Africans means training them in reading and writing their languages so that they become capable to use their languages to foster change and become agents for change.

In order to root the culture and practice of reading and writing in their local languages, African governments are urgently invited to make them languages of education and administration. The compulsory teaching / learning in/of African languages is a firm step towards a perennial development of African languages and by implication its use by its speakers in all domains of social and economic life of their nations. In fact, language is power and no community or no country has ever reached development using exclusively a foreign language. This means that people's mother tongue has a very stressful power for socialisation, technology development, education, etc.

In making African languages essential tools for knowledge transfer and sharing, African governments shall be giving impetus to local communities to think and nurture an idea of development built from within, a development based on the bottom-up top-down approach. There is no more need to prove the role of African languages in the development of African communities. That is why literacy in those languages leads to the boosting of such development. The literacy activities need to be carried out in the formal (school/classroom) and informal (adult literacy, alphabetisation) settings. The teaching shall extend to digital literacy so that language users or speakers should also be empowered to use computers or to have adequate computer knowledge.

The development of a literate environment also requires the making use of traditional media networks such as radio, television, newspapers in African languages. Anyway, the door to digital media is opened to African languages provided that Africans are trained to be both traditionally and digitally literate. This literacy should contribute to the production of diversified literature.

1.3. Production of diversified literature

When a suitable literate environment is set, the literate people have the required arguments and tools to produce different types of literatures. Literature here does not refer only to literary works such as literary genres, but takes into account any written production whose content could be published online.

The production of an initial practical literature, which includes the use of flyers, printed T-shirts, slogans, sign boards, notice boards, etc., in African languages is an "important action" for the promotion of a literate environment as purported by Sadembouo

(2001:75-85). He also noted that other documents such as inter-personal letters, minutes of meetings can also be added to this category.

On the other hand, the production of book content, the development of didactic materials of all types from basic to higher education fall within pedagogical literature. It is worth noting that the domain of pedagogical literature is the most developed for some Cameroonian languages. The production of common and public literature within which can fall newspapers, novels poetic and theatrical works, i.e, the minor and major literary genres constitute another domain in which literature shall be produced. In Cameroon, some language committees do produce or publish, though irregularly, newspapers in their local languages. The case of the Fe'efe'e language committee (Nufi), with its local newspaper in Fe'efe'e called Nufi Nsienken-Ngwe' (Messenger), the Fulfulde language committee with its Huubarudji (News) is just illustrative. The Karang with its local newspaper called (Biyo: News) and the Lamnso' language committees do alike occasionally.

The production of poems, proverbs, lullabies, story-telling, ect., in their written form, is a channel to revitalise and revive the ancestral cultural values. Dictionaries, audio and video CD-roms shall not be excluded from this list. So do tutorials or coursewares.

Scientific and technical literature together with translated documents from other languages, are other channels for promoting and reviving literature production in African languages.

The different types of literature discussed here can easily integrate the digital media, a modern channel for revitalizing African languages, but this requires existing platforms for such promotion and the required terminology.

1.4. Terminology development

It is not possible for a speech community to publish web content without a prior development of the adequate terms to express their linguistic and cultural realities. In fact, the vocabulary required to express terms related to computer knowledge needs to be developed and popularised. This vocabulary development shall include both terms related to hardware and software, drove from the cultural stream of the people because the terms are non-traditional to the culture. Terminology development shall extent to mobile gadgets (Djomani, 2013).

The aim of the terminology development will be to respond to new inventions and realities. The reality of the computer knowledge, cyberspace, and digital media has to be clearly expressed in any African language for them to respond to the new-done in technological innovations. Permanent practice by the speech community and channeling through media will make the newly created words accessible and known to everyone as argued by DikiKidiri (2008:15), "Terminological development is a continuous, permanent activity which will be increasingly practiced by the speech community itself as it develops its own growing cyberspace culture".

As demonstrated by Djomeni (2013), it is possible to create new terms in any new domain in any African language. However, this should not be the job of the language specialist alone. Terminology development should be the outcome of a synergy of actions and thoughts among the language specialist(s) and the language committee whose role is to care about the promotion and development of their languages at all levels. In fact, the development of new terms in a language to name new realities requires sound cultural knowledge of the traditional society of the language under development. This is what the Cameroonian model, through ERELA (Ecole rurale Electronique en Langues africaines) purports and applies. Terminology development is part of ERELA objectives indeed. Currently, some Cameroonian languages, via their language committees, are addressing this issue of terminology development for computer and cyberspace following some workshops organised within the framework of ERELA.

1.5. Development of websites and mobile applications

In order for the literature to be used on cyberspace, there should be existing platforms such as website, mobile applications, etc. The development of the websites themselves requires a synergy among linguists and computer scientists, in order to design adequate web contents. It also entails regular and thorough monitoring of the sites for them to be live and active. Though according to Prado (2012), “Despite a significant increase in online multilingualism since the 90s, only a handful of languages maintain a significance online presence”, there is an increase of the languages of the world on the web. The codification and monitoring of the websites in African languages shall be the result of cooperation among stakeholders.

Normally, each language committee shall have a website where they showcase the teaching in the language through publication of common web contents and audio and video files with a teaching/learning purpose. In short, the websites shall be designed to revive the language and its culture through digital didactic materials, soft copies of local newspapers in African languages and any other form of literature discussed above in pdf versions. Exposing these materials on the Internet allows and favours a large or universal access to the contents accessible both by people from home and abroad, to the native and non-native speakers and learners of the language.

The younger generation of language learners in Africa is becoming addict to new technologies and notably digital media. However, most of them are facing more and more problems with using their mother tongues on the internet and on their mobile gadgets. This is mostly due to the fact that in general, most Africans do not often care about what is part of their identity. They are often seen as mere consumers of the product of globalisation with the incapacity to bring their own stone to the building of the edifice. Yet, the situation can only and perennially be remedied by Africans themselves. The development of mobile applications for tablets, Android phones, iPhones and others shall be one of the firm steps towards digitalising African languages because the use of mobile gadgets is overpowering that of computers (desktops or laptops). The mobile apps that will include the writing systems of the languages in presence will allow

African mobile gadgets users to perform on social media such as facebook, tweeter, whatsapp, youtube, viber, imo, etc., in their mother tongues and to be exposed to the writing systems of their languages for those who are still illiterate in their mother tongues. By doing so, they will be able to acquire digital self-literacy techniques. Developing mobile apps containing the writing systems of these languages will eventually solve the problem of special fonts used to write some of those languages and which are not currently integrated in the existing tools. It might however be pointed out that over almost 2000 African languages, for the time being, only four (Hausa, Kiswahili, Somali and Kinyarwanda – We do not include Afrikaans in this list-) are integrated in the Facebook linguistic platform, one of the mostly used social media in Africa (www.monpulsar.com).

The development of mobile apps will undoubtedly ease access to the digital world in African languages to a large extent. If Africans in general and Cameroonians in particular are able to type in their mother tongues on any device, it will be an exciting, encouraging and enthusiastic contribution to the promotion of African languages and widening of the scope of its users not only in its oral form, but also, in its written form on old and new media and digital media as well, which is impacting the life of language users today. There is an urgent need for developing mobile applications that contain keyboards or that can install special fonts for a specific or specific African language(s) on the mobile tools. There are existing virtual keyboards (Cameroon keyboard, Microsoft keyboard with their Unicode fonts, namely Doulos Sil and Charis Sil) created by the SIL-Cameroon to help local language(s) users type in their mother tongues. The outcome of a series of workshops on creating a keyboard for typing in Cameroonian languages organised by the Goethe Institute in Cameroon some years ago now is still awaited by the public. Even if this problem of keyboard is solved, remains that of mobile applications.

By the same token, some major attempts, although they are still to be fine-tuned, are to be mentioned in this study. More recently, some IT specialists, from Cameroon or abroad, have attempted to develop android mobile applications to the end discussed above. However, we notice that their apps still exhibit some shortcomings on which we raised their attention after a try. For instance, it is difficult to use the application on the earlier versions of android (Jelly Bean) what means that the applications are conceived to suit the needs of only those who possesses the latest versions of android (Lollipop for instance) who are actually fewer than those who use the earlier version in Cameroon. Among these applications, we can name *sulang* (under experimentation, developed by a Cameroonian IT specialist with the assistance of his language committee), *African keyboard* (Built on the bases of countries harmonised alphabets, within which one can access particular keyboards like that of the General Alphabet of Cameroonian Languages). These two applications can respectively be accessed on the following link or via googleplaystore: <https://drive.google.com/open?id=OB9HpHGB6cqzeVFjZE1WZUdla3c> and <https://play.google.com/store/apps/details?jd=eu.dominicweb.africankeyboard>.

It shall however be noted that South African African languages for instance do not face the challenges for graphic systems on the cyberspace because they make use of

Latin scripts and do not take into consideration any special character, even tone marking.

Once the prerequisites discussed above are met, African languages can be able to be completely present on digital platforms and media with a possibility for automatic translation. Though a lot is still to be done for the languages to be thoroughly present in digital media, the ongoing observation leads to notice that some of them are disparately used in digital media.

If it is true that the internet has considerably altered not only the way knowledge is produced and managed, but also the way it is communicated, in order to be able to manage real-time digital social media data in a short span in African languages, they must be shaped and developed to respond to the challenges so that any information of any kind could be shared in any African language without any difficulty taking into account that it is often a field for “fun writings”.

2. Digital media and African languages: Current practices in Cameroon

For the time being, though very limited and scarce, there are some activities undertaken to establish a permanent link between African languages and digitalisation. Among these activities, we can name ERELA (Electronic Rural School in African Languages), isolated individual practices on the web, and language committees’ efforts to digitalise their languages.

2.1. The ERELA experience in Cameroon

ERELA, known as Electronic Rural School in African Languages is the application of the recommendation of the network of scholars working on the development of languages and which stressed that African governments should further the informatics systems of African local languages and make them tools for education alongside the official languages in the formal education system of African countries. It aims at experimenting a generalisable model for ICT education and ICT skills in rural schools in Africa. This idea is underpinned by the hypothesis that the long process for digitalising African rural schools in African languages shall lead to a generalisation of computer knowledge in the rural areas, thus contributing to the reduction of the digital gap between rural and urban African centres.

In its experimental pilot phase between 2006-2011, ERELA was successfully applied in four rural schools in Dschang (for the Yemba language), in the West Region, two rural schools in Bafang (for the Fe’efe’e language), West Region, and two rural schools in the Ewondo language area, Centre region of Cameroon. The degree of training and empowerment of the learners by ERELA is a very decisive step in the promotion of a digital literacy environment in Cameroonian languages.

The project was initiated in Cameroon in 2005 by Tadadjeu, the then president of the National Association of Cameroonian Languages Committee, on the eve of the second phase of the world summit of information society which took place in Tunis. It was approved by the UN economic commission for Africa, which financed the initial phase that started in 2006.

In spite of some significant contribution to the localisation and digitisation of Cameroonian languages as pointed out by Tadadjeu and Kouesso (2015: 163-179), ERELA has been facing challenges such as the difficulties of being inserted in the current or normal school curricula, inadequacy of existing infrastructures, shortcoming of appropriate human resources and lack of financial resources. To these difficulties, could be added a poor or a very limited access to electricity.

2.2. Practice on the web and in the social media

As already pointed out earlier on, it is generally observed that most African language users do not lack ingenuity to challenge the many existing difficulties surrounding the use of African languages in the cyberspace and make them visible on the web and in social media. Although the pace of their digitalisation is still very slow, maybe also due to fonts' related issues, those people or those language committees who want to be visible in the cyberspace have attempted many strategies to overcome the limitations. One of the challenges relies on the lack of encoded keyboards for those languages like in many other languages of larger communication. In general, there is urgency for the normalisation of keyboards configuration in most developing nations, namely in Africa where there is still a lot to do in this vein.

In spite of all the challenges, digital literacy rate in African languages is gradually increasing and the attempt by the governments to allow the formal teaching of African tongues shall be viewed as a very important argument towards the promotion of those languages in the machine-readably encoded format.

Deumert (2010, 2014) who has extensively worked on language practice in social media in South Africa demonstrated that mobile phones are central to many literacy activities of youth cultures. She looks at digital literacy as something linked to non-standard language. On the other hand, talking about language use in social media by the youth in South Africa, she notes that applications give people the possibility to remain into touch with one another, through a friendly and interactive environment using informal, playful and enjoyable manner. This is also true of Cameroon. Her lack of mentioning the problem of graphic systems is due to what we have already mentioned above, that is; the fact that the African languages of South Africa do make use of only Latin scripts. They do not take into account the peculiarities of those languages like tones (for those that are tonal languages) and other special letters in their written form.

Still in the perspective of language practice in social media, Rivron (2012), discussing the use of Facebook by the Eton of Cameroon points out that Facebook is used by the speaker of this variant of the Beti-Fang linguistic continuum on social media to affirm traditional culture and by extension, to promote their mother tongue outside

its habitual context and uses, and the correlated development of its graphic system. He argues that the writing system of Eton remains uncodified, but fails to inform the reader about the type of graphic system used by the participants/Facebookers to communicate. As a matter of facts and like in many other cases, social media are used by the speakers of this language as a channel to revitalise their language.

Though a few of them, the youth in Cameroon have been very active in using their mother tongue content on the internet since 2010. This can simply be observed through groups created in common social media where members practise to their best their language via interactive cyberspace which includes: e-mails, chat rooms, forums, discussion boards, etc. Some groups are created to showcase the language and the culture of the people and to contribute to their promotion among members. Users make use of virtual keyboards that help them type in their mother tongues to publish adequately written materials in their languages on the web via desktops. We have been experimenting this approach on the web since 2014, by publishing proverbs on a page named “Ghə pí Ntúángweǀ pǎFe’efe’e (Nufi) : Language and culture of the Fe’efe’e people” that we created on facebook, to see what will be the reaction of the members. In general, they “like” the page, but do not have the knowledge we have to respond or sent their comments and questions in Fe’efe’e, the language of the page. Those who would like to do so, face the problem of keyboard encoding and lack of appropriate mobile applications. In a different perspective, it is possible to download the Nufi newspaper online via the website of the language committee (www.nufi-cameroun.org). A similar experience is been carried out by Ewondo speakers through their Facebook page named: Mayége nkóbo Ewondo. However, we did not find it active and animated. In a similar perspective, other websites (tough very scarce) are created by the youth with the objectives to promote and revitalise their mother tongues on the cyberspace: www.nuficanada.ca, www.resulam.com, etc.

Most of the web contents published online in Cameroonian languages are mostly done via desktops and laptops because there are computer programmes that assist in creating virtual keyboards and typing in African/Cameroonian languages. This is not the case with mobile gadgets where for most of the languages, there are not existing mobile applications downloadable on playstore, istore or anywhere else to type in local languages. Therefore, those who want to publish their content online via their computers do not face the same level of difficulties like those who via Android mobile phones, iPhones, tablets, etc.

Some language committees or language academies like Nufi (Fe’efe’e language committee) have created their websites where they promote either only their language or promote at the same time their language and the official languages. It is the case of the Nufi website (www.nufi-cameroun.org), designed to promote the Fe’efe’e language and culture, not only in Fe’efe’e, but also in English and French to allow a larger access and encourage self-literacy for those who are literate in the official languages. Here it is possible to find contents dedicated to grammar, common conversational practices, and practice exercises, digital audio and video lessons. There are also some quizzes in some languages developed in the form of mobile apps to help learners acquire some linguistic or cultural knowledge of their language wherever they are in the world. In

this category, we can find for instance “je vais compter en ewondo” available on Microsoft store –Ewondo is a trans-border Beti-Fang dialect spoken in 4 Central African countries: Cameroon, Gabon, Equatorial Guinea and Congo-.

The introduction of Cameroonian local languages in the school system these past years as subject has considerably and even significantly contributed to the prestige planning of those languages and has also shifted people’s attitude and perception of their languages, though slightly, from the negative to the positive pole. This justifies why some groups of young people are committed to contribute to the promotion of Cameroonian languages by creating audio contents that are widespread through CD-Roms and cyberspace. In that vein, the success of “proclaimer programme”, a mother tongue based audio programme, developed by the SIL (Summer Institute of Linguistics), in Ghana and Cameroon to promote the use of Bible in local languages has incited a lot of local people to join literacy classes in order to learn how to read/write their mother tongues and use it in day-to-day communication in the oral, written and digital forms.

3. Perspectives

Due to the many difficulties existing for the digitalisation of most African languages and their effective presence in the cyberspace and digital media, some prescriptions could be proposed to reverse the situation. If we agree that language is power, as stated before, we shall also emphasise the need for Africans to stand up firmly and work hand-in-hand for the promotion of their languages at all levels to enable their mother tongues to adequately respond to the current and further challenges of their digitalisation. Some of the proposals are herein discussed.

3.1. Commitment of African governments

African governments shall play a catalytic role in the promotion of African languages on the continent. Initial or basic promotion in formal education is the main channel whereby people will be aware of the pivotal role of mother tongue in education and capture the goodwill of such education.

a) Setting integrative language policies

African governments shall ensure that they design integrative language policies for their nations. In fact, the accurate language policies to be developed in African nations will be the one giving priority to the native languages of the citizens in education. The laws and regulations adopted and applied by the governments shall clearly stress this point. In developing and nurturing a favourable environment both in the formal and the informal settings in African languages, the stakeholders will enhance learner’s attitudes what will facilitate the development of literacy in the local language through a more polished view users attached to their mother tongues. Once learners have acquired the traditional literacy skills and computer knowledge, they can easily transfer

them to the acquisition of digital literacy skills, which will be part of the tools for the revitalisation of their L1. Not only the promotion shall be done in the education sector, but shall also be extended to other key domains of the life of the Nation such as public and private administration as well.

b) Creating interdisciplinary research agencies

The creation of government research agencies on the development and promotion of the languages and cultures of Africa by each African government, with a synergy of action among language-culture-computer sciences specialists shall be an imperative in the setting of a collaborative network. In fact, in such interdisciplinary institutions, all ideas and practical solutions shall be discussed, amended and adopted. One of the key problems to be solved by the team should be that of digitising African languages by Africans to ensure the presence of these languages on the web.

The collaborative network expected from them must be set to challenge all the difficulties encountered and propose practically reliable solutions to address them in such a way that Africans, whatever their mother tongues, shall be able to publish on the web, type in their languages and publish any digital content without difficulties. Such ideas shall be extended to the regional and pan-African levels through some well-known African institutions such as ACALAN, CODESRIA, CERDOTOLA, etc.

c) Tackling the problem of access to broadband Internet and electricity in rural areas

In allowing a larger and cheap access to broadband internet, African governments will give their citizens possibilities to meet with the challenges of digitalising African languages by regularly accessing internet. Another yet very important point on which the government shall commit themselves is the broadening of electricity network in rural areas and the ease to access electricity. In fact, it is regrettable to notice that even in the 21st century; access to electricity remains a luxury to many Africans in the rural or urban areas as well. The situation is rather worst for those living in rural areas in countries like Cameroon. However, the coming of renewable energies offers an alternative. The governments can invest in renewable energy such as solar energy by constructing solar plants in villages in order to allow rural people to access electricity and the internet both at home and at school. In Cameroon for instance, mobile phone operators are gradually extending their network to rural areas, which also offer internet connexion possibilities. With an easy access to electricity, local people can extent their access to internet and web contents in their mother tongues where they exist. In fact, there is always an excitement from the people in the village to discover the language they speak over the internet and the widespread use of smartphones today should ease this process, mostly in social media where the users have and share a certain freedom of speech and creativity through “fun” and “licence” language.

If rural areas could be electrified, rural schools would also get access to electricity and this would favour access to computer teachings or development of schools/community's multimedia centres where students and/or community members will be taught

computer knowledge that will henceforth allow them to have digital knowledge usable for setting and using digital media.

3.2. Commitment of African national and regional institutions

The key role of national, sub-regional, regional and pan-African institutions shall be strongly emphasised in the implementation of strategic plans for the promotion and revitalisation of African languages in digital media.

By subsidising research activities, establishing collaborative networks among researchers and states in institutions such as ACALAN whose role is to promote and revitalise African tongues, CODESRIA with its focus on the development of social sciences over the continent, CERDOTOLA with its project on digitalising African languages and cultures (ALORA), regional, sub-regional and pan African institutions, governmental or non-governmental, shall also be at the forefront of the promotion of African languages and cultures in the cyberspace and in digital media.

In fact, the ACALAN project known as “African Languages and Cyberspace”, which aims at ensuring the use of African languages on the World Wide Web through conferences, workshops, development of various softwares, in-training of webmasters, falls within this perspective. Though this project has not started up, it is a step towards contributing to the digitalisation of African languages. CERDOTOLA’s project known from its French acronym as ALORA (Archives numériques des Langues et des Ressources orales d’Afrique) as an outcome of digital humanities, aims at safeguarding and revitalising even dying African oral languages and cultures on a server, accessible to internet users. However, the abovementioned projects are still to be turned into programmes that practical impact the use of African languages on the World Wide Web in generally and their presence in digital media coupled with the promotion of digital literacy, which will help widespread the use of African languages on social media.

3.3. Establishing a synergy among linguists and computer scientists on the continent

Africans know exactly what their difficulties are and can work to find out the accurate panacea to solve them. Therefore, the generalisation of access to internet coupled with the urging advocacy and need for African languages to be present on the digital media and cyberspace requires from stakeholders to work in collaboration. As demonstrated by Diki-Kidiri (2003), in a sample of about 1, 374 African websites, only 3.22% of them used as language of communication an African language. Today, the situation might have changed a bit, but the truth is that a lot is to be done for African languages to be really visible on the web with attractive contents and to be easily used in social media.

We earlier mentioned the imperative need for establishing and nurturing collaborative networks and a synergy of actions among language specialists and computer scientists

on the continent in order to be able to train a new-generation of Africans devoted to making their languages and cultures an important tool for development and make them visible on the internet, more usable in social media.

It is unfortunate that for the time being, most often, linguists and computer science specialists do not work in communion. The sporadic and isolated actions taken here and there have many limitations. Therefore, the encoding of the languages for digital purpose, the development of accurate and practical mobile apps, the development of good web contents, the creation and nurturing of a digital literacy environment all in African languages and the strengthening of digital literacy as well shall be the end result of the synergy. That is why; it is urgent for Universities and research institutions or centres through linguists and computer scientists, within the framework of this synergy, to establish training programmes which will include computational linguistics modules. This programme will be developed to respond to the challenges faced by African languages to be present on cyberspace and digital media.

The outcome of the collaborative research studies should be used to upgrade the market value of African languages. The higher the price of African languages on the language market, the more the interest paid to them by non-Africans and Africans themselves. If Africans continue to depreciate their languages, no one else will care about their value on the language market. With the new trends in the globalisation of knowledge and multilingual digitalisation aiming at reducing the digital gaps among continents, only good marketing policies set by Africans for their mother tongues will drastically change the perspective foreigners look at the languages and how far they think those languages can influence their economic activities in Africa. Let us imagine for instance android phone brands created in Africa by Africans, which include language modules that enable people, notably those in the rural areas to communicate in their languages (sending sms, listening to telephone operators, possibility to hear any audio message received in the local language just by selecting an option on the phone); they will foster change and telephone makers all over the world will be compelled to use the same technology and even improve it when they are targeting a larger African market. This is one of the strategies for enhancing digital language prestige in Africa as a whole and in Cameroon in particular.

Conclusion

Though in a very slow pace, African languages are gradually becoming present in the digital media. Their progressive inclusion in formal education is also accelerating and formalising this presence. The degree of traditional literacy in/of African languages by Africans will determine the pace of this presence. The more people would be literate in their language, the more they would like to access web content in those languages and the harder they will work to make their dream a reality. Yet, the current challenges met by those languages in order to be effectively and efficiently present on the internet or on digital media need to be addressed through a synergy of actions. Therefore, national regional, sub-regional, panAfrican and University institutions shall constitute the backbone for the reflexions on the solving of the general problems of access to

electricity both in the rural and urban areas and access to broadband internet over the continent. Access to these two types of facilities is sine qua non conditions for allowing and increasing access to digital data in African languages. The need for computational linguists in African languages on the continent and the promotion of digital literacy in African languages through development of mobile applications for African languages and in African languages, the development of websites, etc., involve working in collaboration with local language committees or agencies. Though social media is viewed as a place of license-language, it provides space in which users (mostly the youth) relate to themselves and others in a playful way (Deumert, 2014), it has also to be nurtured as a place where minority languages' forums can help revitalise minority languages in all the possible ways. In spite of the fact that a lot is still to be done, the train for digitalising African languages has already left the station and the drivers shall be cautious enough to avoid derailment.

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ENDANGERED LANGUAGES IN THE ERA OF SOCIAL MEDIA: THE CASE OF THE KENYAH LEBU' KULIT LANGUAGE

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Abstract

In the era of web 2.0, social media is widely used as an instrument for connecting people all over the world, and for exchanging information. Social media has truly reached the most remote areas, and within them, certain ethnic groups such as the Kenyah Lebu' Kulit of Borneo, located in the geographic area of Sarawak, Malaysia. Kenyah Lebu' Kulit is a minority ethnic group living on the edge of the Asap river in Sarawak, and speak an endangered language. Thanks to the creation of several communities within a social media network (in this case Facebook), the group has been using social media to its advantage. The Lebu' Kulits communities on Facebook are mostly divided into private groups and public pages, where they share cultural content and information between those who still live upstream, and those living in the new village downstream, following their relocation.

The aim of this paper is twofold: first, it analyses the usage of social media by a threatened linguistic identity and the significance it has for them. Second, it attempts to study what happens to the language of a minority ethnic group (in this case Lebu' Kulit), when it joins a virtual environment; for instance when there is an external linguistic influence, referencing statistical data regarding the usage of Lebu' Kulit, in both the private and community groups they have created.

However, there are additional questions to explore : Can a social network be seen as a way of preserving and documenting an endangered language? If so, how?

Keywords

Endangered languages, Kenyah, Lebu' Kulit, Sarawak, Malaysia, Social Media, Social Network, Community, Language documentation.

Introduction

In the inland area of the island of Borneo, there is an ethnic group identified as the "Kenyah". Many theories have been written regarding their origin. The "Kenyah" people developed their settlements in the inner areas of the current Eastern and Northern Kalimantan provinces, in Indonesia.

For the Kenyah people, the term "Kenyah" in itself represents a toponym, as is the case of the word "Kayan," of the Kayan ethnic group, which is derived from the name of

the river where they settled. Another theory assumes that the answer can be found in the etymology of the term itself.

“*Kenyah*” may indeed be derived from the word ‘*kenya*’ (He/She says), composed by the verb-say *ken* + 3SG pronoun, *ia* as written in Soriente (2014: 72-73). Thus, “*Kenyah*” should be considered more an exonym than an endonym.

There are around 40,000 Kenyah speakers recorded in 110 different communities (King 1978, 92). Most of them are located in the Eastern and Northern Kalimantan provinces, which belong to the Indonesian government. Although there are Kenyah communities settled along the Kayan, Mahakam and Malinau rivers in the Kalimantan provinces of Indonesia, there are also a few settlements along the Baluy, Baram and Rajang rivers in the Sarawak State, Malaysia.

The subsistence of the Kenyah people is strictly based on rice farming. Other means of subsistence are hunting and fishing. In the past, the Kenyah people lived in large wooden buildings, known as ‘long houses’. This kind of building hosted the entire village, as well as all the village’s activities (such as religious ceremonies, cultural events and discussions), which were also organised there. Today the ‘long house’ is no longer used, since many people moved to nearby cities or, as is the case of the Kenyah Lebu’ Kulit of Sarawak (Malaysia), people have been relocated in different areas, where new villages were built without the traditional house.

Many minority languages in Indonesia are endangered or dying due to their under-use by the youngest native speakers, often more comfortable speaking in Malay or Indonesian. Thus, the Kenyah languages are also considered to be threatened.

From the large Kenyah ethnic group, this paper has chosen to focus on Kenyah Lebu’ Kulit.

The Kenyah Lebu’ Kulit language belongs to the linguistic family of Austronesian languages (Soriente, 2004). There is very often a tendency to classify all these ethnic groups under a macro-name, ‘*Kayan-Kenyah*’¹. However, this tendency is detrimental to all the communities, which are so different from each other, both culturally and linguistically speaking.

Thanks to the spread of social media (and related networks) the Lebu’ Kulit of Sarawak have developed a ‘network’ between their cultural identity and the outside world, by using Facebook.

The Sarawakan Lebu’ Kulit are very aware of their current cultural situation, and they know that if it is not enhanced, or promoted through festivals, workshops and ceremonies, it will be totally lost. Indeed, the search for further information about the Lebu’ Kulit people of Sarawak online is very easy, since they have created blogs, such as *lebukulit.com*, which offer a vast amount of cultural information and updates about the events organised in their villages. Unfortunately, this is not the case for the Kalimantan Lebu’ Kulit, who are not so involved and active on the web or with social

1 Glottolog 2.7- Kayan-Kenyah. (n.d.). Retrieved 18th September 2016, from <http://glottolog.org/resource/languoid/id/kaya1332>

media, probably due to the fact that internet connection is not as widely available as in the Sarawak State.

The endangered languages

As recorded by Woodbury (2006), there are around 6,500 languages spoken in the world, half of which may not actually make it to the next century. An endangered language is a language which will die out in the near future, because its usage is threatened by a major language.

The question is, how might this happen?

There are various possible reasons, as summarised below:

- ♦ Bottom-up: when the language change starts from within a family context. For instance, parents that are speakers of the 'X' language, decide not to pass it on to their children.
- ♦ Top-down: when the language change starts from the government. In a multilingual environment, the Government adopts a national unifying language.
- ♦ Linguicide: when a forced colonisation occurs, as was the case of Anglophone groups in North America, that reduced the number of Native American ethnic groups, and with the Aboriginal people in Australian territories. Likewise, Spanish-speaking groups in Central and South America almost led to the complete disappearance of the Mayan, Aztec and Inca civilisations.
- ♦ Language attrition: when a new generation of speakers of the 'A' language start to borrow syntactic, phonetic, and lexical patterns from a 'B' language, leading to a process of decay in the first².

However, we might also ask, how this relates to Ancient Greek and Latin. Were these languages considered endangered in the past?

Woodbury (2013) says:

'No. These languages are considered dead because they are no longer spoken in the form in which we find them in ancient writings. But they weren't abruptly replaced by other languages; instead, Ancient Greek slowly evolved into modern Greek, and Latin slowly evolved into Romance languages.'

The presence of a majority language (i.e. a national language with the status of 'standard' language) can be another reason minority languages tend not to be spoken anymore, or are limited to a few contexts. Such is the case in Indonesia, where the national language, *Bahasa Indonesia*, is the language established for the government, media (radio, TV, newspapers, etc.), and education. In Indonesia there are about 300 different ethnic

² This can be seen in the Lebu' Kulit language used by the users of the 'Kenyah Lebu' Kulit' Facebook group, where the daily use of words such as 'family' (LK panak or pengelamin), has been replaced by the more common Malay/Indonesian word 'keluarga'.

groups considered to be ‘Native Indonesian ancestry’³ and more than 700 different languages⁴ are spoken throughout the archipelago⁵. After the Youth Pledge (Sumpah Pemuda) on 28th October 1928, Bahasa Indonesia was proclaimed ‘the language’ of the country by the new-born nationalist movement. From this moment onwards, and following their independence from the Dutch Colonial Government (on 17th August 1945), one of the goals of the new Indonesian government was to promote the use of the Indonesian language despite the existence of local languages. It was at this moment that the ‘local languages’ became ‘minority languages,’ producing a language shift. Note that ‘minority language’ does not necessarily mean ‘endangered language’. For instance, the Javanese language in Java is currently spoken by 98 million people⁶, thus it is not endangered, but still considered minority because it does not share the same status as *Bahasa Indonesia*. However, the Lebu’ Kulit language, spoken by around 8,000 people (2007 A. Soriente) is considered an endangered language for the aforementioned reasons.

According to Sallabank (2010, 65-66), there are two types of attitudes regarding her area of study: the language of Guernsey (an island located in the English Channel), positive and negative.

In the case of the latter, and most likely not a peaceful situation, the local language is ‘stigmatised’ and speakers may be ashamed to use it, therefore do not transmit it to their children. In addition, the local language often takes a back seat because it is not considered ‘useful’. The language becomes useless when there is an environmental shift from a rural to urban context.

A positive attitude could be the community’s effort to keep their linguistic identity alive through cultural festivals, or the media, such as online newspapers, or as is the case for Sarawakan Lebu’ Kulit, the social networks.

The Lebu’ Kulit community on Facebook

The Lebu’ Kulit community has created several social groups on Facebook, which they use as a means of communication, a place to exchange information, or simply to share their cultural roots.

A social network is an ideal tool to address the current problems concerning cultural and linguistic identity. This study will focus specifically on the use of an endangered language in a social network by questioning if it could represent a means to safeguard a certain cultural identity, as in the case of the Sarawakan Lebu’ Kulit. As far as the Lebu’ Kulit people’s presence on social networks is concerned, we have two main

3 East, K. F. (1999). *A world of difference*. 99.

4 Lewis, M. P., Simons, G. F., & Fennig, C. D. (2009). *Ethnologue: Languages of the world (Vol. 16)*. Dallas, TX: SIL international.

5 Not yet documented or not well-documented languages are not included.

6 Statistik, B. P. (2011). *Kewarganegaraan, suku bangsa, agama, dan bahasa sehari-hari penduduk Indonesia: Hasil Sensus Penduduk 2010*. Jakarta: BPS.

references: a public page entitled “Lebu’ Kulit,” which is linked to the website, *www.lebukulit.com*, and the private group, “Lebu’ Kulit, Asap”.

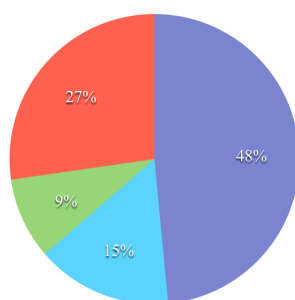
The “Lebu’ Kulit” public page has 1485 users. This page appears as the representative of the the Asap river Lebu’ Kulit community. The posts on the page are written in Lebu’ Kulit, Malay, and sometimes English. There is a very high use of Lebu’ Kulit on this page. However, active users are exposed to a number of different linguistic inputs, including Malay and English. As such, the situation does not represent one sole language in operation, but a multi-lingual environment, most likely due to factors such as the increased presence of more recent generations of speakers. In fact, in multi-lingual contexts such as within Indonesia and Malaysia, where most of the speakers are bilingual, or even trilingual, it is necessary to offer a likely statistic for the real use of Lebu’ Kulit as the language of choice when responding to a post on a large social network. In this case, one might think that as a linguistic minority, which has a specific meeting place aiming to preserve its cultural identity, to reply to a post written in language ‘X’ in the same language, may be an obvious choice to stimulate its usage, but it is not always so.

As such, we decided to collect qualitative data from 10 posts, with at least three comments from second and third generation speakers. Using this information, we compiled a statistical diagram to help us better understand the effective usage of the language by the new bilingual or trilingual generations. We chose to base our analysis on qualitative data from the public Facebook page, due to the lack of large numbers of “comments” in the Lebu’ Kulit language that might have matched our aforementioned criteria. Given that the pattern of Facebook groups enables us to list and analyse “posts” chronologically, (from the very first to the latest “posted”), we checked them all until we found those that corresponded to our criteria and needs. It is presumably for this reason, that the number of posts analysed here is not high in number, but significant to our purposes all the same.

Replies to posts

LANGUAGE	REPLY
Lebu’ Kulit	16
Malay	5
Mixed (LK + ML)	3
Other	9

● Lebu’ Kulit
 ● Malay
 ● Mixed (LK + ML)
 ● Other



To analyse the usage of an endangered language (Lebu' Kulit) within a social media environment, we will look at both the public (“Lebu' Kulit”) and the private (“Lebu' Kulit, Asap”) Facebook pages.

Having analysed data from the two aforementioned “virtual environments”, it can be assumed that:

1. Beside the Lebu' Kulit language used on this page, members are exposed to different linguistic inputs such as Malay and English.
2. We also noticed that orthographic patterns are not as well-unified as the Kalimantan ones, maybe due to the lack of a ‘standardised’ writing system.
3. A linguistic comparison can be made between two generations of speakers (aged 18-30 versus 30-50).

The following diagram outlines an example of a ‘mixed’ reply found during the analysis:

<i>Salam</i>	<i>takziah</i>	<i>met</i>	<i>me'telu</i>	<i>harap</i>
Regards	condolences	from	1PLEXCL.PAU	hope
<i>Tuhan</i>	<i>ti</i>	<i>nak</i>	<i>se=pedenak</i>	<i>tawai kume</i>
God	DEM.that	FUT	NUM=decoy	peace for
<i>keluarga</i>	<i>ja'au</i>	<i>pui</i>	<i>Sampun</i>	
family	big	grandfather	PN	

Salam takziah (Condolences), *harap* (hope), *Tuhan* (God), *nak* (want/would), *keluarga* (family) are Malay words, whereas *met* (from), *me'telu* (we inclusive pronoun), *ti* (that), *sepedenak* (decoy), *tawai* (peace), *kume* (for), *ja'au* (big), *pui* (grandfather) are Lebu' Kulit words.

The second reference point for the Lebu' Kulit communities of Sarawak is the “Lebu' Kulit, Asap” private group (accessible via application form only). The group description provides a small text written in the Lebu' Kulit language, which is translated below:

“For us. [With the aim of] sharing and receiving news from the river Asap/Long Jawe', Belaga. In order to deliver news to those who live in the cities, those who live downstream, and those who live upstream. It would be good to share photos, videos, news and important issues for all of us.”

This private group is composed of about 551 people. Founded on 22nd March 2011, the aims of the group are: to deliver information to those who are far from the community, and to share photos, videos, readings as well as to plan discussions on topics

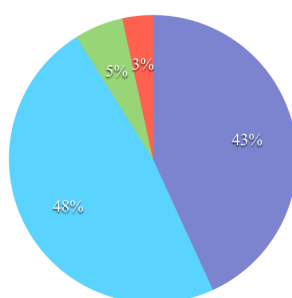
such as local politics. All activities are strongly recommended by the founder and active users.

As with the data obtained from the “Lebu ‘Kulit” public page, we have likewise compiled data from the private group, with a diagram representing the usage of Lebu’ Kulit in post responses. However, in this case the method is quantitative, with the analysis of 20 replies rather than 10. The entry “other” was substituted with “English”. Furthermore, we also analysed all the posts ever published in the group, from its creation until the latest post written at the moment of study.

Replies to posts

LANGUAGE	REPLY
Lebu’ Kulit	63
Malay	70
Mixed (LK + ML)	8
English	5

● Lebu’ Kulit
 ● Malay
 ● Mixed (LK + ML)
 ● English



The graph shows a difference of 5% between the usage of LK and ML. This is likely to be related to whether a certain post was originally written in LK or ML. In fact, we noticed that in a post originally written in ML, users would reply in ML, and vice versa for posts originally written in Lebu’ Kulit. This pattern is presumably tied to a matter of linguistic coherence.

Why a social network?

There are numerous examples of efforts “made” by social networks to support the revitalisation process of an endangered language.. Recently, Aili Keskitalo, President of the Sami Parliament in Norway, began a project to revitalise the ‘Sami’ language, in Northern Europe. Keskitalo proposed an innovative project where speakers will actually use and write in the Sami language on Twitter. By using ‘hashtags’⁷ such as *#sámásmuinna*, *#saemesthmnjnien*, *#sámástamujna*, *#snakkesamisktema*, and *#speaksamitome*, native Sami speakers are encouraged to write even single words or sentences in Sami

⁷ A type of label or metadata tag used in social networks and microblogging services, which makes it easier for users to find messages with a specific theme or content. (Source: <https://en.wikipedia.org/wiki/Hashtag>).

on one of their social media profiles, attaching a picture and/or voice-note⁸. In a related interview the Sami President explained the reasons behind the project,

“We wanted to motivate young people to see social media as an arena for the Sami language, and to show them that even if you can only write one word in your own language, you can still make a difference.”

Another interesting project was created by Kevin Scannell. “The Crúbadán Project” is a corpus of metadata related to ‘uncommon languages’, which has been extracted from open (free) sources and on-line platforms, and is available for users interested in developing new software applications (Scannell, 2007). The idea behind this project is to take advantage of the huge amount of free ‘text’ available online, and to benefit limited groups (in terms of numbers) of speakers of a certain language. Initially, the project was designed for six Celtic languages, but in the last ten years additional support was offered for more than 2000 different languages worldwide. Thus, it is now possible to obtain information for all these languages, and even to download data-sets for each. Furthermore, information is provided on the tools that have been developed, thanks to such web-corpora.

Yet, what are the pros and cons of using social networks as tools for preserving cultural and linguistic identity?

Using our experience with the Lebu’ Kulit groups and people as reference, some pros might be: 1) a feeling of unity between minority cultural identities; 2) discussion between two different generations of speakers; 3) language practice; 4) spreading knowledge (folk tales, myths, etc.); 5) political activism strictly related to the recognition of the ‘X’ cultural identity, etc.

The cons might be: 1) ‘spam’ within the group that may lead to the actual closure of the group itself⁹; 2) increased exposure to external (linguistic) influences such as English or other widely-spoken languages due to the ‘virtual’ nature of the environment, and the lack of boundaries within that environment; 3) the risk of taking advantage of just one brand-new virtual environment, in detriment to the actual usage of the language itself on a ‘real’ daily basis and context (at home, school, etc.).

The aforementioned advantages are strictly related to language ideology issues. Indeed, as written in Hornsby (2015: 125): *“the language ideologies can represent an important means for constructing individual and group identity. [...] as far as the social hierarchies of languages is concerned, commonly held ideological positions relating to minority languages include the inevitability of language shift, the link between majority languages and progress/mobility, and the claim that minority languages are only good for “identity” purposes (May 2005). [...] These ideologies often translate into perceptions about the language in question and its associated speakers. [...] a sense of endangerment may not be perceived in quite the same way by a minoritized language community as it is by outside commentators, particularly academics, since as Makoni and Pennycook (2008: 26) have*

8 Billock, J. (2015). How Social Media Is Helping to Save Endangered Languages. [online] Mental Floss. Available at: <http://mentalfloss.com/article/68609/how-social-media-helping-save-endangered-languages> [Accessed 22 Sep. 2016].

9 In the case of the Lebu’ Kulit, for instance, the privacy settings of the group itself have been changed to ‘hidden’ from ‘private’ following ‘spamming’ issues.

noted, 'promoting the continued use of indigenous languages constitutes a retrospective justification of colonial structure'."

Returning to the fact that a social network is able to dissolve geographical barriers, the Lebu' Kulit's linguistic community group effectively demonstrates an exchange of information between those who live downstream of the Asap River and those who live in the city or upper area of the river. All information is shared on a common interface available to anyone.

We asked 10 members of the private group "Lebu' Kulit, Asap" to complete a questionnaire which focused specifically on the daily usage of their language, the context within which it is used, and their opinions on the use of a social network as a means to safeguard an endangered language.

Firstly, we questioned the individual founders of the "Lebu' Kulit, Asap" group and the blog *lebukulit.com*, about the kind of tools which should be used (other than social media) to preserve their endangered language. Their answers and corresponding translations are outlined below:

"Selain media sosial, seharusnya diwujudkan/diperbanyak lagi kamus dan buku-buku tentang bahasa dan kebudayaan lebu' kulit untuk dijadikan sebagai rujukan generasi yang muda."

"In addition to social media, there need to be increasing incentives, dictionaries and books about the language and the culture of Lebu' Kulits in order to give the newest generations further references[about it]."

"Mengumpul daftar kata, menghasilkan kamus, mengumpul cerita lama, mengekal budaya / kesenian lagu, mengadakan sesi khusus mengenai bahasa."

"[We need to] collect vocabularies, make dictionaries, collect folktales, eternalise our culture, arts, and songs, and host special sessions concerning our language."

The founder of the "Lebu' Kulit, Asap" group was asked,

"What is your opinion on the use of social networks as a means to preserve a minority language at risk of extinction?"

His answer and translation in English is outlined below:

"Harus digunakan secara lebih kerap untuk mempertahankan bahasa-bahasa daerah kerana melalui sosial media komunikasi berlaku di antara semua ahli.ahli yang muda boleh belajar dari ahli yang tua jika terdapat kesilapan menggunakan bahasa."

[A social network] should be used more frequently to support local languages. Through social media, communication between the younger and older speakers becomes easier because they [the older ones] can see, for example, what mistakes the younger ones make while using the language, and therefore they[the younger ones] can be led towards a more correct use of it."

However, there was a certain conflict in data arising from the results of the questionnaires, completed by older generation speakers with regards to the value of the local language compared to the national one. On a scale of zero to ten, two speakers aged 61 and 65 gave ratings of 5 and 3, while ratings given by younger generation speakers were much more positive. Such data, albeit limited, leads us to consider the reason a previous generation has less confidence in the fate of their own language, in comparison to the younger one. It is a worthwhile topic to explore in greater depth and detailing the future.

Ironically, we noticed that there is indeed, a sort of coherent pattern regarding the link between the usage of the Lebu' Kulit language, and the age of the speakers; the younger generations barely use the Lebu' Kulit language in daily contexts, and the 'middle-age' generation of speakers' usage of the Lebu' Kulit language appears to be very weak. The older generations are the only group whose usage of the Lebu' Kulit language can still be considered 'standard' (within a familiar and daily conversation context) at this time, along with the usage of the Malay language for more public-oriented contexts.

So we can conclude by saying that from an emic perspective, (from the native speakers' point of a view), in the case of Kenyah Lebu' Kulits, a social network unites people of all ages, provides a place to learn new things, a means of communication and an exchange of information between individuals separated by distance (geographically speaking), and is a means to keep their cultural identity alive, from the very moment the community feels it is endangered.

Conclusion

This paper has discussed the issue of endangered minority languages and social networks as a possible tool to safeguard them from disappearance. As such, we observed the 'discussion groups' of the Kenyah Lebu' Kulit communities in Sarawak, Malaysia, on Facebook. These 'groups' are used as a tool for exchanging information between linguistic communities, and in particular, as a communication tool between the Lebu' Kulit group living downstream, those living in the city (and thus outside the rural context), and those who live in the upper area of the Asap River, in the Belaga District, Sarawak State of Malaysia. The discussion group therefore represents a means to unify the various geographically distant groups. In regards to the theme of this research, we have also reported other examples of projects focussing on the revitalisation of endangered languages through the use of social networks, mostly developed by European scholars for minority languages currently spoken in European territories, such as Norway or the UK.

The Lebu' Kulit community's support has been very helpful, and users seemed to be very happy to cooperate with us in this quest. However, our focus in this project was mainly the Sarawakan Lebu' Kulit linguistic community, rather than those in Kalimantan, Indonesia. This was due to very limited materials available for these particular communities as well as the lack of participation from the Kalimantan Lebu' Kulits

members in the “Lebu’ Kulit, Asap” discussion group, which appeared problematic for our purpose.

A sociolinguistic survey was conducted using questionnaires submitted to the speakers themselves, and produced results that, although preliminary, are enough to be able to define the linguistic situation and approach of the speakers towards the issue here analysed. Facebook has been used as an effective ‘database,’ where it is possible to analyse the usage of the Lebu’ Kulit language through statistics composed from the international platform.

Statistical analysis was undertaken by counting the ‘comments’ (aka replies to written ‘posts’ or ‘status’), in the Lebu’ Kulit language, based on various inputs. In this case all the content shared on the main page of the discussion groups themselves. We have chosen ‘comments’ because they enabled us not only to compile statistical information on the usage of the language itself in such a non-naturalistic context, but also, from a linguistic point of view, it has been possible to highlight certain hypothetical language mutations, thanks to the help of the speakers themselves. This revision of comments containing language mutations in the virtual environment compared to the language spoken on a daily basis in the village, was not studied in-depth because of the complexity of the issues involved, but is certainly a sound starting point for a future project to embrace the usage of the Lebu’ Kulit language in both naturalistic and non-naturalistic environments (i.e., in ‘real life’ versus a ‘second’ or ‘virtual life’).

Further future research based on this paper, will focus on a more in-depth analysis of the use of a social network as a tool to safeguard an endangered language, with a more complete and detailed study including other widely-used online platforms such as Twitter, Blogger, YouTube (for oral materials) etc. Moreover, fieldwork will be necessary to collect increasing amounts of data on the Lebu’ Kulit language and culture, in order to compare naturalistic and/or elicited ‘oral’ data alongside the written data available online.

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