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SIGN LANGUAGES AS RESILIENT ENDANGERED LANGUAGES

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In this contribution we review and assess the specificities of vitality and revitalization of sign languages in a context of atypical endangerment. The contribution focuses on concrete examples of revitalization measures, both implemented and not yet implemented, based on the Catalan Sign Language (LSC) community context, such as the important role of language documentation, the reasons of the precarious situation in education and a proposal to establish an inclusive educational model, and finally the potential of an open learning resource offering greater access to sign language education.

1. Introduction

Sign languages have not featured prominently in the domain of minority language endangerment and revitalization, partly due to their resilient nature. Despite the traditional minorization

and neglect by mainstream society in Western countries and the atypical language acquisition path for most signers, educational institutions for the Deaf¹ and networks of Deaf social clubs used to ensure transmission and vitality. However, changes in the demographic rates of deafness, questionable educational policies, the generalization of cochlear implants from a very young age and the impact of new technologies on social structure is quickly changing the traditional patterns of language transmission within Deafsigning communities. In this contribution we review a number of issues that tap into the specificities of vitality and revitalization of sign languages in a context of uncharacteristic endangerment, and we focus on the role of language documentation, education and new technologies for teaching, with special attention to the Catalan Sign Language (*llengua de signes catalana*, LSC) community.

2. Resilience of sign languages and their particular endangerment pattern

The transmission of sign languages as vitality indicator constitutes the most idiosyncratic property of this language type within the context of language endangerment and revitalization. Typically, the transmission of the languages of Deaf communities is mainly disrupted by other factors than the shift to majority language, which takes place in a rather particular way. It is usually accepted that in Western societies, only 5-10% of deaf children are born into deaf families, which means that most deaf infants receive no sign language input during their first years of life. For the rest of deaf children that may become signers (90-95%), acquisition will by default take place outside of their homes: at school and as result of contact with the Deaf community (Deaf clubs, social networking). This situation is rather peculiar when compared with the transmission of minorized spoken languages: the vast majority

1. Following a well-established convention, we use capitalized «Deaf» to refer to signers that identify themselves as belonging to a signing community and sharing their identity features. Lower-case «deaf» simply refers to the medical condition of lack of hearing.

of signers acquire a main language that their parents do not have, and they acquire it mostly from non-native models (teachers, other sign language learners, interpreters, language therapists) and are also often exposed to artificial varieties of signed codes in education, which can easily interfere in the acquisition of a full-fledged natural sign language (Johnston, 2002), as it facilitates grammatical and lexical replacement. Surprisingly, the path described is the opposite of an attrition process, as the individual builds sign language competence despite the adverse condition of not having access to the language in the immediate environment. Nevertheless, sign languages continue to be acquired and used generation after generation. This testifies to an unusual resilience level that should be ascribed to the fact that despite competence in the spoken ambient language, sign languages remain the most natural and effortless means of communication for deaf individuals.

Given this unique sociolinguistic setting, the main adverse factor for language transmission is not only the lack of natural input at birth for most deaf people, but also the dominant idea that the deaf should try to approach the hearing norm and «normality» by focusing on spoken language acquisition. Such position is a generalized social prejudice that leads many hearing parents of deaf children to deny access to sign language to their children, and it is widely supported by the medical and educational spheres that deal with early intervention in deaf kids. An external factor to the disadvantage of sign language transmission is that they have been long denied the status of natural languages till quite recently, when this misconception has been countered by the empowerment of Deaf communities and the results of linguistic research. In addition, sign languages are by default associated with disability by mainstream society and by policy makers as well. Consequently, sign languages are usually relegated to accessibility policies, not to language policies.² Academic work on language endangerment has systematically ignored sign languages as integral part of their empirical domain, with very few exceptions to date.

2. A clear exemple of this is the situation of Peruvian Sign Language (LSP) which, albeit official, is not included in the Indigenous Language Act (Ministry of Culture), and the relevant policies have been assigned to Ministry for Women and Vulnerable Populations.

Sign languages are legally recognized in many countries nowadays, particularly in the domain of education and access to interpretation services (Murray, 2015; De Meulder, 2015, 2016). However, actual policies promoting sign language education tend to fall short (Sánchez Amat, 2015), thus hindering decisive steps in language revitalization. To this we must add the conflicting attitudes within the deaf populations, which encompasses both «oralists» (deaf citizens who embrace spoken language as the only way to integration in mainstream society, leading to (ideological) linguistic assimilation in practice) and signers (deaf individuals who consider signing as part of their Deaf linguistic and cultural identity). Such a split has direct consequences for the policies adopted with respect to deaf individuals. The most decisive one has to do with their schooling, as will be discussed in section 4, since mainstreaming policies or even bilingual education for deaf children without proper provisions have weakened one of the strongest pillars of language transmission: deaf schools. In parallel, the traditional social structure of Deaf communities built around Deaf clubs is undergoing rapid change because of the role of new technologies in communication: face-to-face sign language communication is now possible remotely and this shift weakens the need for community meetings.

Demography also plays a non-negligible role in the threats to the survival of sign languages. The prevalence and incidence rates of deafness in children has been declining significantly in Western countries due to the eradication of medical conditions that led to it in childhood (Johnston, 2006), and in practice the reduction in the size of the signing communities can influence decisions about language policies addressed to them. Even more importantly, the prescription of cochlear implants in Western societies for very young children has generalized, which often leads the rather general exclusion of sign language from the language input for deaf children. Paired with it goes the idea that deafness can be reduced or erased, thus making sign languages unnecessary in the end. This ideological stand does further contribute to the endangerment of sign languages. What often goes unmentioned is the variability and unpredictability in the ultimate «repair» of audition and, most importantly, the final attainment in spoken language competence, which can result in irreversible delay in the process of language

acquisition past the very first years of life. Moreover, these technologies are not so widely available in developing countries. The growing bilingualism and multilingualism of Deaf signers (spoken ambient language, English, other sign languages) should not be at the expense of the sign language of their communities, either.

Despite all these adverse factors, in the last decades there have been advances concerning legal protection and social recognition of sign languages. Certain progress has been made in the broadening of the areas of social life where sign languages are present, which has led to widening of functions of use. Their presence in the media has advanced, but it is still quite anecdotal, due to the reliance on subtitling of the spoken language for access to content by Deaf people.

The crucial revitalization factor reduces to actively supporting the right to guaranteed language acquisition by means of full-fledged sign language input from birth: this is the only way to secure sufficient sign language input for deaf children, whether implanted or not. Work needs to be carried out on the social perception and the medical discourse of deafness and sign languages: offering sign language to implanted children does not mean making them deaf again, but allowing them to acquire a language in the critical period, thus making them signers (in addition to speakers). At bottom it is not simply the right to language choice, but the right to language in its most basic sense (Trovato, 2013). Only from this perspective will we be able to get rid of the systematic language assimilation imposed on most deaf children from birth. Forced language shift in infancy for potential signers should not be taken for granted as a «reasonable» or acceptable default. The extreme diglossia signers are confronted with (all formal uses are in spoken written language) is not an acceptable situation from a linguistic, social and ethical point of view.

Enhancing the vitality of sign languages needs to rely on the strongest factor of their resilience: the need for deaf and hard of hearing to use the most natural, transparent language modality for them. Sign languages are resilient because at bottom it is not a matter of language choice, but the only really unrestrained path to language for deaf individuals.

3. Language documentation as a tool for sign language revitalization: The case of LSC

As a consequence of traditional neglect, sign languages have not been studied as extensively and consistently as the spoken languages they coexist with. Most studies of sign languages start out with lists of bilingual vocabularies often produced by non-professional lexicographers, and hardly ever is there a comprehensive grammatical description of the language available or a textual corpus. In this section we introduce the challenges of sign language documentation in general and the ongoing projects on LSC that have been undertaken in order to contribute to its revitalization, namely the development of a comprehensive grammar, and the creation of a reference corpus and a lexical database.

3.1. Documentation of sign languages

Language documentation includes fieldwork for the study of a language, the collection and subsequent recording of data, storage and access to such data, as well as the creation of linguistic, didactic and terminological materials (dictionaries and glossaries). For the case of sign languages, some important challenges have been present all along the way. First, sign languages are young languages of minority communities that do not have a standardized writing system, nor the developed correction standards that often accompany literacy (Johnston, 2010). Second, as explained in section 2, they present a discontinuous transmission between generations due to the different stigmata related to deafness and to the fact that sign languages have a very small number of native signers (Costello, Fernández & Landa, 2008). Lastly, the traditional annotation of signed examples often becomes inaccessible, since not all researchers share the same annotation conventions and because in some cases the recorded data does not accompany the published works. For these reasons and with the goal of having a solid basis for linguistic research and for the creation of didactic materials, in the last ten years different corpus projects for sign languages have been set up.

Sign language corpora consist in annotated video collections containing written material aligned and synchronized with

the main data in sign language (Schembri & Crasborn, 2010). The benefits that sign language corpora present are, on the one hand, to make available to the scientific community and society in general a set of data that contains a broad and representative sample of the language in question, which are characterized by presenting an important dialectal variety. On the other hand, sign language corpora preserve these languages as an important part of the social and linguistic heritage of a particular society. Sign language corpora are conceived not only as a broad representative sample of the language at a specific time, but also as a tool for the description and subsequent analysis of the grammar and the lexicon that should contribute to the different linguistic planning activities, such as the development of teaching materials and tests (Quer & Quadros, 2015: 134).

With respect to the description and investigation of sign languages, although the level of knowledge we have is not comparable to that of some well-studied spoken languages, it has advanced enormously in the last years and it has achieved different levels of linguistic and grammatical analysis. This is shown by the various reference works, which include overviews of research and analyses of the different grammar levels, starting with phonology and phonetics, going through morphosyntax and reaching the discourse level (Sandler & Lillo-Martin, 2006; Pfau, Steinbach & Woll, 2012; Baker, van der Bogaerde, Pfau & Schermer, 2016; Quer, Pfau & Herrmann, to appear).

3.2. The case of LSC

LSC has a valuable but limited number of lexicographic works, which are available to study and practice the language (see Barberà & Ribera, 2010 for an overview). Some dictionaries have also been published (Perelló & Frigola, 1998; Illescat, 2004; Martín & Alvarado, 2004; Ferrerons, 2011). While these works represent important tools, they also present some drawbacks related to the dependency on the written language: the entries are usually organised following the alphabetical order of the corresponding translation of the sign, and they also lack a search by phonological parameters of the sign, namely the possibility to search by handshake, movement or orientation of the hand (Barberà &

Ribera, 2010). The ongoing projects on LSC presented in what follows stick to the specificities of the visual-gestural modality of the language and profit from the advantages offered by new technologies.

3.2.1. Grammar works

In 2005 the first basic reference grammar of LSC was published (*LSC Basic Grammar*, Quer *et al.*, 2005). The description of the contents is presented in LSC, Catalan, Spanish and English and it is available online (<http://blogs.iec.cat/lsc/>). While this work offers the theoretical version, the practice activities will be available soon online too (*LSC Basic Grammar: The activities*, Frigola *et al.*, to appear).

In addition, sign languages recently have a reference model for developing reference grammars: *SignGram Blueprint. A Guide to Sign Language Grammar Writing* (Quer *et al.*, in press). The *SignGram Blueprint* is a tool designed to guide language specialists and linguists setting out to write a reference grammar of a sign language. This tool will contribute to complete and thorough descriptions of sign languages, which will have consequences for the linguist studying a certain phenomenon, but also for a whole range of professionals who must rely on a comprehensive description of the language such as sign language teachers, interpreters, and speech therapists, among others. A digital version of the *SignGram Blueprint* will be available online as part of the ongoing SIGN-HUB project (<http://www.sign-hub.eu/>).

3.2.2. Reference Corpus of LSC

By the end of 2012 the creation of the first reference corpus project of LSC started. This project consists in a broad representation of LSC and its varieties (Barberà, Quer & Frigola, 2015; Quer, 2017). The parameters of variation that the Corpus of LSC aims to present are the following (<http://blogs.iec.cat/lsc/corpus/>): 1) geographic variation, by presenting data from 6 cities/regions from Catalonia, which are representative of both the territory and of the Deaf community in Catalonia; 2) intergenerational variation, by including data from different ages (three groups of 18-30; 31-50; 51-80 years old); 3) discourse genre (narration, argumentation, description, exposition, dialogue) and type of data (elicited and

spontaneous); 4) gender variation, by including couples of male and female signers. For each location, three pairs of signers are chosen from the three age groups planned and of both genders. Therefore, the final version of this phase of the corpus will have data of 42 deaf signers. Given the large variation in the age of acquisition of the sign language, native or quasi-native deaf signers are selected, that is, the signers recorded have acquired LSC during the first years of life and have used LSC as their main language throughout their life.

The data is being annotated with the multimodal annotation tool ELAN, which allows synchronisation of the signed video and the corresponding annotation, as well as complex and simple searches of the annotations. ELAN is currently the most used annotation tool within the sign language research community, which has the advantage of easy exchange of files. With the aim of providing a systematic and coherent annotation, the link between the annotated data and a lexical database is crucial, as exposed in the following section.

3.2.3. Lexical Database

The lexical database project aims at creating a query tool of LSC lexical units based on the parameters that govern LSC, namely the basic components of the sign such as handshape, movement, orientation, and place of articulation (Barberà & Ribera, 2010; Ribera, 2007). The lexical database will provide a source for the elaboration of lexicographic works and establish the basis for the normative lexicon in LSC. The characterisation of the data will include a phonological description that will allow the search by parameters, gloss, definitions of signs with examples in LSC, syntactic information, such as category, transitivity, etc., types of variants (dialectal, register, specialized vocabulary, etc.), morphology (number, aspect, agreement, manner, quantity, classifiers), synonyms/antonyms, and sources where the sign is found. The link between the corpus annotations and the lexical database is essential in order to provide unification and coherence of annotations, as well as an increased number of entries of the database.

The interrelationship between the three domains presented in this section, namely grammar description, corpora and lexical

database, has proven to be very beneficial for the advancement of research and for the validation of hypotheses. This interconnection provides direct advantages in language teaching, use, standardisation and the status of LSC itself.

4. The (weak) role of education in the (re)vitalization of sign languages: the case of Catalonia

Sign languages play a very minor role in education in general, and in the education of the deaf in particular. In Catalonia, sign bilingual projects (in which the languages of instruction are both LSC and spoken languages) are not offered to hearing children of deaf (signing) adults (CODAs), and few deaf children are exposed to LSC. Only 9% of the total of 1.939 deaf students in Catalonia in 2016-2017 were in sign bilingual programs,³ and they were not distributed homogeneously across educational levels (see Figure 1).

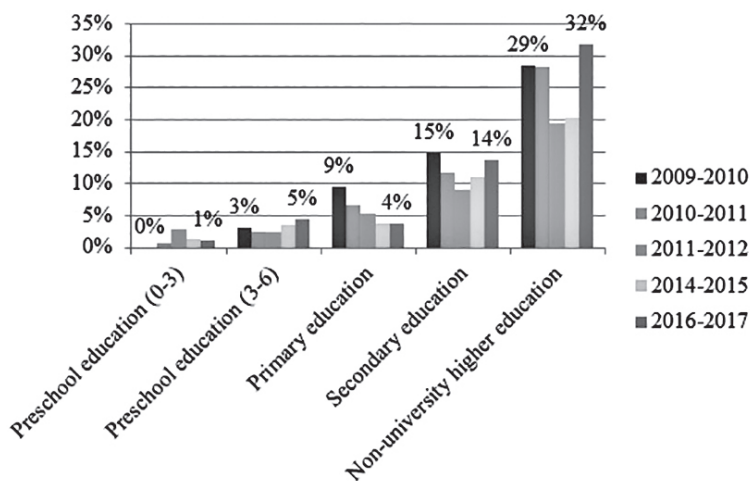


Figure 1: Percentage of Catalan deaf students enrolled in sign bilingual programs by course and education level.

3. Source: own elaboration based on data from Attention to Diversity and Inclusion Service, Department of Education (Generalitat de Catalunya).

If «sign language is the only language that is fully accessible to the deaf child (with or without an implant)» (Ormel & Giezen, 2014: 93), why do deaf signing children constitute a minority compared with an overwhelming majority of strictly orally raised deaf children in Catalonia? In section 4.1 we tackle the reasons of this situation, and in section 4.2 we consider proposals for the revitalization of sign languages in education.

4.1. Reasons for the precarious situation of LSC in education

The reasons for the low presence of LSC in education are of diverse nature. Firstly, history shows that sign languages do not need revitalization, but rather *vitalization*. In the work of the otolaryngologist Verdós Mauri (1892) (extracted from Torres & Gallardo, 2016: 90), the author shows the situation two centuries ago:

The teaching method by means of signs has been banned at the International Congress, held in Milan in 1880, the important meeting in which the indisputable superiority of the oral method was proclaimed.

The situation of sign languages prior to this Congress was not even better. There had been some methodologies that used sign language elements in the education of the deaf as a tool for teaching the spoken language.⁴

Secondly, sign languages have characteristics that differentiate them from minority and minoritized spoken languages. Sign language users are not concentrated in a territory, due to the uniqueness of their transmission (see section 2): they are not primarily transmitted from parents to children, but among peers in educational settings (Fernández-Mostaza, 2003). In this context, public administration plays a crucial role in providing the regional sign language to deaf children. However, in Catalonia, linguistic immersion in LSC for deaf children is not considered. Parents

4. Actually, the aim of the forefather of the French gestual method, the abbé Charles-Michel de l'Épée, was to teach French to the deaf (Gascón Ricao & Storch de Gracia y Asensio, 2004: 213).

must choose the languages their deaf children will be exposed to. To do so, receiving complete and neutral information is essential. Evidence has been found so far showing that this is not guaranteed (Sánchez Amat, 2015: Chapter 6). However, at least in Barcelona, the situation seems to be changing, albeit slowly, as a result of the movement of the platform *We want to sign and to listen* (Volem Signar i Escoltar) and the change of the management team of CREDAC Pere Barnils.⁵

4.2. *Proposals for the revitalization of LSC in education*

Revitalization of sign languages is crucial to ensure the *right to language* of deaf people (Humphries *et al.*, 2013) and their *right to psychophysical integrity* (Trovato, 2013), which is a universal right (Trovato, 2009). Exclusively spoken language programs do not ensure language acquisition: outcomes are very variable (Geers, Moog, Biedenstein, Brenner & Hayes, 2009; Ganek *et al.*, 2012) and unpredictable (Faulkner & Pisoni, 2013).

In Catalonia, a new model of intervention must be designed to ensure the rights of the deaf and the high quality of sign bilingual projects. Firstly, early intervention policies should be redesigned so that they consider exposure to LSC as a preventive measure to ensure language acquisition and the communicative and cognitive development of the deaf child. If sign bilingual immersion is provided, the child will be guiding the subsequent intervention:

In environments where the deaf child encounters both spoken and signed language separately –as whole languages– during the course of natural interactions, it has become apparent to both parents and professionals that the child will be the guide regarding his or her predisposition toward a more oral or a more visual language. (Mahshie, 1997: 8)

Therefore, it is necessary to decouple the early linguistic intervention from the subsequent educational path. Parents should not be forced at the very beginning of their child's life to choose

5. There are 10 Educational Resources Centres for Hearing Loss (CREDAs) in Catalonia, which are in charge of the intervention with deaf children and children with language impairments.

the educational modality for the child. For this approach to be effective, professionals in charge of initial counselling for families and early care should be highly competent in LSC. In addition, rich signing contexts should be created where deaf children could naturally acquire LSC.

Secondly, in (post)compulsory schooling stages, it is necessary to break the current segregation of the sign bilingual programs and the exclusively oral programs, as well as to promote the role of LSC in education. Learning LSC as a second language should be possible in the *preferentially* spoken language programs (they should no longer be *exclusively* spoken language programs), as established in article 6.2 of the preliminary draft of Law 17/2010, of June 3, on Catalan Sign Language (Generalitat de Catalunya, 2010). Unfortunately, this article disappeared during the processing of the law (Segimon & Ferrerons, 2010: 5).

Thirdly, regarding the situation of the few sign (pre)bilingual projects, the permanent training of LSC among the professionals involved is needed, as well as an increase of deaf signer professionals in the schools. In addition, it should be ensured that all children in Catalonia have the same opportunities to be educated, regardless of their place of residence. This new approach would impact on the way to implement the inclusive educational model. The grouping of deaf students is essential, due to the benefits of having deaf peers.⁶

In parallel, policies to promote the learning of LSC regardless of the student's auditory status should be implemented: an LSC subject should be offered to hearing students, as well as sign bilingual projects to CODAs. Finally, the possibility that Deaf teachers teach both hearing and deaf children directly in LSC should also be considered.

6. «The fact that there are deaf peers in the school allows the deaf child to create a more faithful self-image, s/he can infer how s/he will be when he is older, s/he can think of how s/he was when s/he was younger, etc.» (Laborda & Valero, 2002: 18).

5. The impact of technology on the teaching/learning of sign languages and their revitalization

Besides the efforts in the fields of documentation and education, revitalizing endangered languages also includes the acquisition of the language by adults, the creation of a socially integrated population of active speakers/signers and the informal use of the language among people of all age groups (Fishman, 1991). LSC is an endangered language and its revitalization demands a set of actions to ensure that it can be learned by different populations and in different educational settings, including formal, non-formal, and informal ones.

5.1. *Traditional models*

Formal, non-formal, and informal types of education were popularized as institutional general learning categories (Coombs *et al.*, 1973; Trajovik *et al.*, 2016) and they are fundamental when learning any language, LSC included. Traditional sign language teaching is based on formal and non-formal education, at the university and higher vocational levels, and it includes basic training and sensitization. The general model focuses on one-way transmission of knowledge by a deaf teacher in a classroom. This model is by necessity local and limited to the basic levels of instruction, from A1 to B2 of the Common European Framework of Reference for Languages (CEFRL). The consequences of this traditional model are predictable: face-to-face teaching to small groups makes it difficult to increase the number of signers, and it also implies some time and place restrictions, which complicate the access of language by adults, as well as its internationalisation and dissemination. Moreover, one-way transmission slows progress, does not facilitate self-study, and is dependent on the teacher's planning abilities. The quality of teaching suffers because materials are created ad hoc, technology is used as a depot for the teacher and there are few opportunities for updating materials. Thus, students are limited to basic levels of CEFRL, with a focus on acquisition of vocabulary, poor contents about grammar, and little perspective about the language as a whole. These traditional models have

begun to give way to more innovative proposals, in part due to the use of technology. Technology by itself is not transformative, but for sign languages the inclusion of technology has allowed a significant change from static to dynamic representations of information in the last ten years.

5.2 Technological models

Technology contributes to the change from models based on *teaching* to models based on *learning*. In fact, this change makes teachers and learners aware of their own role, it increases the possibilities of informal learning, it facilitates blended and online learning, and it increases students' engagement and motivation by allowing them to learn at their own pace. Technological models, in turn, can be based on media, on teacher-centered education, and on student-centered education (Duart & Sangrà, 2000). Models based on *media* are toolbox-based and do not imply learning or teaching with a specific approach (to have a web intranet or a virtual campus, for instance, does not guarantee a real change). The key word in *teacher-centered education* models (such as video-conference) is *instruction*: students focus on the teacher, who does not modify his or her teaching strategies, and does not put emphasis on interaction or cooperation. Only *student-centered education* can transform a teaching model into a learning model. In that context, the keyword is *construction*, where students can focus on skills and practices that enable lifelong learning and independent problem-solving. Student-centered education emphasizes the learner's critical role in constructing meaning from new information and applying it to earlier experiences.

Choosing one technological model or another does not imply a value judgment of other models; each model allows for significant learning. For instance, the decisions to make asynchronous materials available to learners, teach a master class by videoconference, and plan a learning pathway are not incompatible, and should all be part of a quality learning process in formal, non-formal, and informal settings. But moving from an all-traditional learning model in LSC to a new one demands new teachers who can convey new attitudes and capabilities to the learners. Learners must develop with autonomy, cooperation, and interaction. And teachers must

adopt a position as facilitators of the learners' process and move away from their comfort zones.

Adopting the use of technologies in sign language teaching and learning can help expand and diversify the curricula and make them more sustainable by responding to the communication needs of deaf and hearing users. Making digital materials available online and visually interacting from a distance can give rise to a variety of innovative educational content while enhancing the potential for self-learning, which is still underutilized.

5.3 *The LSC MOOC experience*

From this perspective, LSC-UPF Actua, the Center of Studies for Catalan Sign Language at Universitat Pompeu Fabra, has developed several open educational resources for LSC, with each unit of content in an autonomous block that should be reusable in various learning scenarios. Each block is composed of 6 different resources (video presentation, comprehension activity, production activity, cooperation activity, document upgrade, and evaluation activity) and its contents can be assembled and connected in many ways to build a variety of learning outputs.

These educational resources are adapted to be used both online and in blended learning scenarios, within the frame of formal, non-formal and informal learning. For instance, in formal education they are used as a part of compulsory courses in the degrees of Translation and Interpreting and Applied Linguistics as complements to face-to-face activities.

In the contexts of non-formal and informal education, open learning resources, which may be offered both online and in blended format, found in MOOC (Massive Online Open Courses) an opportunity to adapt to the different needs of various groups without many of the limitations of traditional education. *Speaking with your hands and hearing with your eyes. Introduction to Catalan Sign Language* is a 6-week MOOC with more than 300 videos, launched in the FutureLearn platform (<https://www.futurelearn.com/courses/lsc>) in 2016 with great success. The MOOC has now opened up the possibility of using a private version of the FutureLearn MOOC within a blended learning design of a Small Private Online Course (SPOC). Likewise, selected online contents

can be embedded in a Basic Signs course, reinforcing the use of contents for informal learning.

In any case, in order to revitalize sign language learning, it is essential to expand the signers' base and make educational tools and resources publicly available. Technology can reach more learners in a shorter period of time –and as a bonus they can learn at their own pace. That's why learning online resources are so important especially in non-formal and informal learning. Technology offers an unparalleled opportunity to increase learning resources, in a variety of formats. Opening linguistic resources and offering greater access are equally crucial to increase the set of learning materials. This reorientation is not only possible, but rather necessary in order to revitalize sign language learning.

6. Conclusions

In this contribution we have discussed the main peculiarities of the endangerment factors for sign languages, which differ in significant respects from those affecting minorized spoken languages: the atypical language acquisition path and the association of the language with disabilities determine a unique type of language endangerment. At the same time, we have identified the most decisive revitalization initiative for this group of languages: securing sign language input to any deaf or hard-of-hearing child from birth. In addition, we have described the situation of language documentation, education of the deaf and the impact of new technologies on sign language learning in the context of the LSC community in Catalonia, as concrete examples of the revitalization measures that can be taken to counter sign language endangerment.

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