# THE IMPACT OF TECHNOLOGY IN INSTITUTIONAL LANGUAGE ADVANCEMENT

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## ABSTRACT

Since social media and technology permeate contemporary life, activism and environmental protection are hot topics in the digital era. Our news feeds are flooded with pictures of a damaged environment, reports about climate change and its negative repercussions are everywhere, and the necessity of protecting our natural environment, including its plants and animals, is a constant worry. Communities that have a better grasp of the effects of industrialization and rapid development are more sensitive to environmentalist views and are embracing cleaner living and ethical behaviors. As a result of this, in perspective over the last few decades, language preservation should be included under the preservation umbrella in order to reach a wider audience. The challenges surrounding language preservation advancements will be discussed in this paper.

*Keywords*: language, technology, preservation, institutions, culture.

## INTRODUCTION

In order to promote education and entertainment in all languages of the globe, Language Preservation Technologies ("LPT") was established as a non-profit organization for the development of language technologies. In addition to creating cutting-edge products like multilingual television subtitling for the majority of languages, LPT also builds custom automation for text and about voice voice too, by permanently preserving all elements of these languages and making them appealing and making them accessible for such things as subtitles, voice replacement, games, etc. This helps preserve and support indigenous languages.

The technology focuses on fostering language immersion and offers a wide range of tools for adults and teenagers, bridging generational gaps to support and preserve already-existing languages as well as bring back languages that are on the verge of extinction.

The three main custom language and speech technologies required for language preservation, along with a variety of bespoke software for language revitalization, are created by LPT in collaboration with consortiums when voice technology is not yet available for a language. Time is of the essence and the level of global urgency demands that we act immediately.

The Elder Voices project, an interactive activity that involves documenting and directly preserving history through filming tribe elders, is a part of the preservation process.

## INTERNET AND LANGUAGE

There are 35 distinct languages used to write more than 99% of the information on the internet. Since the remaining 6,000 or so languages are confined to a small portion of the internet, digitalization is essential to language preservation as the internet grows more and more pervasive in modern life. It's important to consider how these efforts can support language revitalization because the National Endowment for the Humanities has awarded various grants for a large number of projects to digitize many indigenous languages all around the world, including Native American languages.

English is the most prevalent language on the internet, making up more than 62% of all written content. Spanish and Russian are the next most popular languages, with 5.9% and 3.7% . While English is spoken by about 18% of the world's population, Mandarin Chinese, which is spoken by around 14% of the world's population, makes up 1.4% of the content on the internet. These statistics are by no means an exact representation of how broadly each language is spoken.

Because of the prevalence of English (and a few other languages, including Persian), many others are underrepresented. This is especially true of less widely spoken languages that have fewer available resources. Because of the internet's central role in modern information consumption, it may shorten the life of a language that is already in risk of dying out.

Reviving a language was far harder before the advent of the internet and computers (which is saying something, given that it's still not simple now). Before the advent of digital tools, efforts to revitalize a language often involved linguists spending significant time in contact with the few remaining native speakers to compile written materials like dictionaries and grammars.
Although linguists must still put in equally arduous and time-consuming work, keeping the linguistic information online frees up space and makes resources more readily available. It is now much simpler for scholars and language communities to exchange knowledge about the language.

## PRESERVING LANGUAGES

Modern academics are concerned about the worldwide loss of linguistic variety, and they often reference the language surrounding biodiversity to illustrate their points. Many people have drawn direct parallels between the reported mass abandonment of languages and the extinction of a biological species, each of which losses would be devastating to humanity. This is done in light of a long-standing trend in linguistics dating back to Franz Bopp that compares languages to organisms (Crystal 2000). In recent professional articles on language extinction, cosmopolitan concerns about the decline in human knowledge anticipated by some linguists as a result of language loss have emerged as another major issue (Nettle & Romaine 2000). Popular Whorfianism suggests that the loss of linguistic diversity is linked to the eradication of intellectual heritage because each language reflects a distinct world view and culture complex, reflecting the way in which a speech community has formed its thinking and its understanding of the world (Wurm 1999). From this angle, language loss also denotes a progressive loss of a complete human worldview. The usage of metaphors like "endangered languages" or "language death," according to other scholars, likens languages to beings with agency and tends to conceal the sociocultural processes that ultimately account for language maintenance and loss (Gal 1996). The disconnect between professional discourses and local concerns regarding language revival is a result of the emphasis on languages as quasi-organisms. While cosmopolitan, popular Whorfian, and quasi-ecological concerns have been combined in expert discourses aimed at Western reading publics and funding agencies (Hill 2002), these justifications for language revitalization are much less prominent in the contexts of actual pro-minority language activism. In other words, several responses to the question "Why bother?" have been provided by academics and local activists.

Until recently, unless the information was memorized by succeeding generations, a people's record of their traditions, culture, and very perspective on the world expired with the eldest member of the community.

This dilemma could not be resolved even with the use of a written record (Villa, 2002). Writing down a story does not adequately convey the language abilities or the expertise with which excellent storytellers transmit cultural heritage.

The development of new technology, however, removed that restriction. The invention of Edison's phonograph towards the close of the 19th century made it possible to record sound, making it potentially viable to preserve oral traditions and languages. So that their lives and their memories did not end with their death, an older generation's voices could still be heard, as many times as one desired.

The new technologies were not, and still are not, infallible and unbreakable. For instance, some of the early linguists employed magnetic recording devices, which are now extinct but for perhaps in museums. While some of the oldest recordings were produced on magnetized steel wire, the recording medium has also lost its usefulness. Even if a device that can play the original recordings can be located, some of the magnetic coatings are so delicate that using them could cause the recording to be lost.

Thanks to technological advancements, it is now possible to record ancestors' voices in a quick and low-cost manner. It used to be challenging and expensive to permanently capture a voice, but that is no longer the case (Villa, 2002). Because of how swiftly computer design has developed, it is now possible to buy a system for maintaining languages at a reasonable price. Yet, in order to use and execute recording and digital storage technologies, people who can work with the appropriate hardware, software, and other essential elements of these electronic breakthroughs and who are aware of the linguistic challenges they provide are needed.

# LANGUAGE, EDUCATION AND TECHNOLOGY

Due to their role in fostering student engagement and promoting effective language learning outcomes, educational technology tools are very appealing to language instructors. At today's educational institutions, the ability to use technology is regarded as a vital requirement. It's now an essential part of education both in and out of the classroom.

Technology used in modern language teaching and learning, such as language labs, digitalization, multimedia devices, mobile phones, audio/visual multimedia content, EdTech solutions, and social media, can help students advance their language skills more quickly and thoroughly. Multimedia content might include print texts, video, games, and the internet in a way to help each student become comfortable with linguistic vocabulary and structure.

Flexible classroom environments enable the combination of individual, small-group, and, at times whole-class learning that can be seen as vital to students' success. These settings are characterized by the interweaving of linked devices, audiovisual tools, and functional furniture (EdTech staff, 2018).

Traditional methods of teaching languages tend to make students feel passive and get bored easily, but modern methods of teaching languages make use of multimedia, a variety of resources, and educational games to provide students with meaningful opportunities in order to increase the needed exposure to the target language and thus making their own knowledge of it.

Teachers now have the means to bring more of what we witness of the outside world into their classroom through the use of videos, photographs, and software applications. Students are more likely to put their theoretical knowledge into practice and deepen their interest in the language when it is applied to authentic contexts.

Students can interact with native speakers and other language students of varying ability levels in and out of the classroom thanks to technological advancements. Because to the proliferation of digital tools, mastering a new language is now within everyone's reach.

Utilizing gadgets with language-practice capabilities, including voice recognition as well as interactive multimedia activities, can stimulate students to become active language learners who are enthusiastic about the process and willing to devote more time and effort to their language studies.

There is a lot more leeway for students to study the language in whichever way they see fit, and to acquire the language at any time and any place outside of class. More in-depth and fulfilling linguistic immersion is achieved when the learner exercises autonomy and takes responsibility for their actions.

One of the most important first steps in learning a language is mastering the pronunciation of new words and phrases. Students might be given thorough instructions on how to use their tongue and jaw to generate a particular sound by watching instructional videos, which could be displayed to them. With the use of speech recognition technology, students may accurately pronounce common words and expressions while receiving personalized feedback and score to ensure they are making the right sounds.

Software solutions can match together students for spoken engagement and improve communication in addition to enabling solo practice. As a result, teachers may better manage language classes and provide students more time for speaking and active learning.

To help L2 learners develop their listening abilities, teachers might use a variety of graded listening materials. Based on what the students have already learned and their interests, a variety of websites and authentic listening materials, such as TED speeches and news broadcasts, could be used. Even though students are studying the same subject, they might each have a wholly unique learning experience.

The ability to master fundamentals, language, and higher-order thinking skills are prerequisites for reading comprehension. Instructors can choose from a variety of resources, including those for vocabulary development and exam preparation, to gradually increase their pupils' reading comprehension. Software programs track students' progress, enabling them to better understand their areas of strength and weakness. As a result, they can receive reading materials that are specifically designed to help them improve their deficiencies.

Software for language learning may help students organize their material, brainstorm ideas, and visualize concepts. Students' typing is automatically checked for spelling using tools, which makes it simple to find and

swiftly correct mistakes. Students can use blogs to express themselves better in their own writing or to conduct peer reviews on shared writing drafts. To develop kids' writing abilities, it is effective to use all program options.

## INSTITUTIONAL APPROACH

While educational possibilities can be crucial for young people's success in contemporary society, it is also crucial that local languages, as well as their community's identity and cultural values, are preserved. According to Joshua A. Fishman, a pioneer in the field of language revitalization, people maintain their languages far beyond what might be expected, not always because they are useful in their daily lives but rather because they hold significance as a symbol of identity and a key to their continued existence as a people (Hinton, 2011). When linguists feel unable to do so, museums, libraries, and archives have a great deal of potential to foster this "language loyalty" and restore a sense of pride and identification in home languages as keepers of cultural knowledge and institutions of public service (Hinton, 2011).

Languages are essential components of complex ecologies that must be fostered if global biodiversity is to be maintained, according to linguist Suzanne Romaine (2007), who says this succinctly. In the larger effort to protect cultural history, knowledge, and identity—all of which are ideally recognized by museums—preserving languages is a crucial component. Museums have an intrinsic responsibility to preserve and promote both tangible and intangible cultural heritage as public stewards serving their local communities.

At least 43% of the probable 6,000 languages that can be spoken worldwide, according to the UNESCO Atlas of the World's Languages in Peril, are in danger. This number is probably low because there are numerous languages for which there is not enough information to determine their risk..

## CONCLUSION

There has been a rise in the usage of artificial intelligence (AI) for language acquisition, and major tech firms are pouring resources into developing AI-powered language learning systems with human-like conversational interfaces. But even with these advances, Eric Schmidt, a former executive chairman of Google, has said that AI is biased towards languages that are not commonly spoken. In addition to a diminishing native speaker population, endangered languages face threats from technical systems that favor the world's most frequently spoken languages.

Several efforts are being made to analyze and catalogue audio recordings of extinct Indigenous languages using artificial intelligence (AI). At the ARC Centre of Excellence for the Dynamics of Language (CoEDL), there is a striving to conserve and record endangered languages. Using traditional methods, transcribing all of the audio in CoEDL's collection would take about two million hours. To solve this problem, in 2017, CoEDL and Google joined forces to develop machine learning technologies to analyze the audio files. To date, this information has been used to train AI systems to understand 12 Indigenous Australian languages.

While exponential technologies like AI and others present opportunities for language preservation, they also bring with them intrinsic challenges. Many Indigenous languages are based on oral history and are therefore not written down. The act of committing these languages to paper could alter them or leave out essential details.

The very process of removing them from their contexts and cultures would certainly lead to a loss of significance. In addition to the written word, there are many other ways to communicate effectively in any given language. The tone of voice, expressions on the speaker's face, surrounding circumstances, and other factors all play a role in shaping the meaning of a message. While capturing endangered languages and using those recordings to train AI tools is important, it may not be sufficient for the preservation and revitalization of endangered tongues. Indigenous languages have managed to preserve an enormous amount of information and culture, but all of this can be lost if we fail to accept the fact that language is not just a set of letters and sounds.

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