_____

Internet-based resources and opportunities for minority and endangered languages

SABIRA STAHLBERG

Link to this article: https://dergipark.org.tr/en/pub/tdd
This electronic version was first published in July 2021.

_____

_____

Internet-based resources and opportunities

for minority and endangered languages

● Sabira Stahlberg, independent scholar

INNOVATIVE

Abstract: Online teaching and e-learning are growing trends today. In the past few decades both classrooms and learning in general have become increasingly varied through the use of multimedia, online platforms, apps and websites which offer a broad range of possibilities. The development of several new methods for digitally-based learning also contribute to changing education.

The opportunities the internet provides can be used also for many other kinds of language-supporting activities: websites, blogs and media; chat forums, discussion groups and social media; newsletters and e-mail lists; online meetings, conferences and events; learning and teaching, utilising and creating dictionaries, archives, databases and wikis; reading, writing and publishing; listening and watching as well as creating audio and video materials.

This article introduces different types of presently available internet resources and online possibilities which can be helpful for minority and endangered languages and support their maintenance, survival, transmission and revitalisation. Furthermore, the author argues that everyone can acquire at least some technical skills and adapt Information Communication Technology (ICT) tools to the needs of a community, and that working in a team with a long-term perspective and a good management plan for the project lead to more stable results.

Keywords: language learning, language preservation, language development, endangered languages, digitalisation, internet resources

Tehlikedeki diller için internet tabanlı kaynaklar ve olanaklar

Özet: *E-öğrenme veya çevrimiçi öğrenme artık büyüyen bir eğilim haline geldi. Son yıllarda, sınıflar ve eğitim; multimedya, çevrimiçi platformlar ve çok çeşitli olanaklar sunan web sitelerinin kullanımı ve dijital tabanlı öğrenmeye yönelik birkaç yeni yöntemin geliştirilmesiyle giderek daha çeşitli hale geldi.*

İnternetin bugün sunduğu olanaklar, diğer birçok dil destekli etkinlik için kullanılabilir: web siteleri, bloglar ve medya; sohbet forumları, tartışma grupları ve sosyal medya; haber bültenleri ve e-posta listeleri; çevrimiçi toplantılar, konferanslar ve etkinlikler; öğrenme ve öğretme; sözlük, arşiv, veritabanı ve wiki kullanma ve oluşturma; okuma, yazma ve yayınlama; dinleme ve izleme ve ayrıca ses ve video materyalleri oluşturma.

Bu makale, tehlike altındaki diller için yararlı olabilecek, halihazırda mevcut olan internet kaynaklarının ana türlerini ve çevrimiçi imkanları tanıtmaktadır. Yazar, teknik becerilerin herkes tarafından kazanılabileceğini ve ekip halinde çalışmanın daha istikrarlı sonuçlar doğuracağını savunmaktadır.

Anahtar kelimeler: *dil öğrenimi, dilin korunması, dil gelişimi, tehlike altındaki diller, dijitalleşme, internet kaynakları*

© Fazile Nasretdin 2021

Introduction

Online teaching and e-learning are an increasing trend since at least a few decades. Classrooms and education generally have become more varied and they are enriched through the use of multimedia, online platforms, audio and visual materials, interactive programmes, internet tools, mobile apps and websites. All these internet-based resources, Information Communication Technology (ICT) tools and the development of new methods for digitally-based learning and teaching offer a broad and growing range of possibilities for both teachers and students.

The opportunities the internet and new technologies provide can however be used for many other kinds of language-supporting activities: documentation, publishing texts, audio and visual resources, etc., and for the maintenance, support, transmission, development and revitalisation of endangered languages. In short: internet-based tools can contribute to the strengthening and survival of minority and endangered languages. Useful resources on the internet include dictionaries, archives, databases, wikis (short overviews about a specific topic) and other kinds of materials, which can be used, created and developed for different languages. Through the internet the speakers, the communities and everybody else interested in the language can be reached. The possibilities are manifold and they could be used to a much higher degree than today to support minority and endangered languages.

In the following, I will discuss shortly several types of presently available internet-based resources, tools and opportunities to apply them for the benefit of minority and endangered languages. As the internet landscape is very dynamic, resources and methods are constantly changing and new ones appear regularly. The materials and platforms in various languages are too many to be mentioned here (and several would soon be out of date), so readers must find the resources for their languages and also international platforms by themselves. Most are easily findable by a simple internet search.

Why do we need internet resources and tools for minority and endangered languages? There are dozens of reasons, but a few are listed here. Several others are explained as opportunities throughout the article:

- **Availability:** documentation, data collection, creation of data bases and publication of language materials in different forms make language materials available globally and for all users.

- **Communication:** connections, social networking, exchange, distribution of information within the speaker community, diaspora and to the world is quick and mostly free over the internet.

- **Awareness:** creating and spreading understanding and knowledge about the language inside and outside the community. The internet reaches billions of people.

- **Support:** language support for learners and speakers through language courses, events, cultural and literary materials in audio and video format are can be created on different kinds of platforms and used by many kinds of users.

- **Up to date:** the attractiveness of a language improves in the eyes of the next generation when there are for instance websites, books and videos on the internet. A growing number of children and youth use electronic devices from an early age and they "live" very much on the internet.

- **Prestige:** today online materials raise the prestige of a language. Especially for the younger users internet presence is essential. The possibility to use the minority or endangered language online makes it more interesting and important.

- **Visibility:** when an endangered or minority language takes the leap into the internet, its local and global presence, visibility and status rise with several degrees.

- **Development:** probably the most important of all is the enlarged use of the language and the application of it to new domains. Through the internet the language is challenged in new ways and it develops to reflect the present situation.

Earlier research on digital materials and minority and endangered languages is very scarce as yet and not really up to date (see for instance Rau & Yang 2007). Therefore I am left with the option to discuss the tools and resources based mainly on my own experience. I have for more than two decades used and created many kinds of multilingual and multicultural online resources: academic research, e-book publishing, media, websites, information distribution, teaching and e-learning materials, blogs, audio and video resources, etc. Through studying, exploring and experimenting I have gained technological skills my earlier linguistic, historical and cultural education did not offer. In the Bokpil[1] activities, among others, I have applied several of the internet-based tools I discuss in this article. I hope the discussion about project management and types of internet-based tools and resources here will be of use for other minority and endangered languages projects.

---

1   See for instance https://bokpil.eu, https://villa.bokpil.eu, https://edu.bokpil.eu, https://haiku.coloritrf.eu, and video channels https://www.youtube.com/channel/UClR_FI9VsHay7DakUU-GalA and https://www.youtube.com/channel/UCEITcpkQ5NcFc0jJG0fQbDQ

Internet and minority and endangered languages

For the support of any language, reading, writing, publishing, listening and watching are important methods. The internet and modern technologies offer a wide range of tools, platforms and methods, of which some have been and others could be adapted to minority and endangered languages. This article introduces several types of presently available internet resources and online opportunities, which could be useful for speakers, learners, researchers and activists working with minority and endangered languages. In the future there certainly will be many more tools online; in fact, all who work with minority and endangered languages can contribute to their development and adaptation to the specific languages.

In recent years many multilingual web platforms have launched projects for minority and endangered languages. They collect data, document and publish information. Translation platforms are enriching their language base and more efficient algorithms for translation are being developed. Dictionaries and language information websites also increase the language diversity by regularly introducing new languages. Both old and new dictionaries are now available online through digitalisation projects. Among the new languages finding their way into the internet there are many minority languages and endangered languages. Other web tools and websites focus on research, publishing materials about and in the languages or on specific topics such as language learning or literature.[2] Different kinds of media, magazines, journals, newspapers, radio, TV, etc., also act as tools for language support (for a discussion, see Cormick 2007: 52–68).

In addition to these resources, the internet offers also more individualised tools. Websites and blogs, chat forums, discussion groups and social media, newsletters and e-mail lists can be helpful when connecting with speakers, scholars, learners and all others who are interested in a specific language. Online meetings, conferences and events can reach stakeholders (those with interest in the language) to a higher extent than physical events, especially if they are targeted at a diaspora or geographically dispersed group of participants. Some forms of communication are mainly informative and passive (not requiring active participation) while others are more active and for instance engage participants by discussion, interaction, etc. (see Cunliffe 2007: 135).

For languages with a worldwide diaspora the internet is highly useful: online materials published in one country can be used to support speakers and learners everywhere; the electronic format of the materials enables easy modification to local needs. Also for languages with very few speakers the

---

2   See for example http://www.endangeredlanguages.com/ and a website mainly focused on Eurasia,
    Mercator: https://www.mercator-research.eu/en/knowledge-base/endangered-languages-and-archives/

tools and platforms presented here can be helpful not only for the community, but also for scholars and other stakeholders. This is one of the main characteristics of the internet: sharing information and materials benefit all.

Learning new technologies

Using online materials is just a click away, but preparing them requires time, resources, knowledge and skills. Ideally an expert can be employed for a project but sometimes (or often) it is not possible. In my experience technical skills can be developed over time. The preparation of electronic materials today does not require engineer or computer specialisation (although it might help): only interest, time and courage are needed to take the jump into the world of technology.

There are many ready-made platforms which can be used for different kinds of digital purposes. Also, websites do not need to be complicated, mobile phones can be used for recording video and audio materials, and a mobile phone or a simple camera is enough to take photographs for the internet. Publishing books is also much easier with computers and internet: intuitive programmes for writing, preparing pictures and layout exist nowadays. The possibility to publish in electronic format online removes several issues from the project agenda, especially questions such as financing the printing of paper books, covering intercontinental sending costs and finding storage space for the books.

There are several methods for learning how to use different technologies. They can be applied also for the implementation of a successful project:

- **Study:** studying and exploring different technologies and what others write about the platforms, programmes, etc. on the internet and in books. Literature and online materials such as technical guides, manuals, handbooks, support sites for programmes and apps, discussion forums about technological questions and videos are valuable ways to gain basic skills. The internet is full of good (and some not so good) advice. If one suggestion to solve a problem does not work, another will.

- **Learn from others:** learning from others is a fundamental method for acquiring new information and understanding. When practices, methods, ICT (Information Communication Technology) tools, computer programmes, apps, etc. have been tested and found useful by several people (best/good practices) somewhere in the world, the chances are higher that they may be helpful for us, too. When preparing a new website, for instance, looking around what and how others have done can save a beginner at least from the biggest pitfalls.

- **Teamwork:** working in a team supports success and sustainability: when people work together, not everybody needs to learn everything in the technological processes. The team members contribute with their individual skills and knowledge, which can be combined to achieve bigger results. The team can also together find new solutions, each adding information and ideas which support the work and the learning of the technology. A team does not necessarily need to be located in the same geographical area but can use the internet to communicate and work together. There are several platforms and computer programmes both for communication and technical help.

- **Networking:** connecting with other stakeholders on the regional, national or international levels is important for the flow of ideas, technological improvement and creating better understanding how internet-based resources reach readers, listeners or other users. Connecting with people who work with similar communities or languages also support the activities by raising the motivation and giving new impulses. By involving all kinds of stakeholders, from academics to local people, the results from the project and the use of technology will be richer and answer more deeply to the needs of the language users.

Language project management

A minority or endangered languages project, both academic and outside universities, usually requires a long-term strategy to be sustainable. It is important to emphasise here that pilot, short or small projects also contribute significantly to the support and survival of endangered languages. Without the personal engagement of several individuals, their dedication, time and often also private funds, many endangered or minority language speakers would today have access to much less literature, music, grammars, dictionaries and other language materials and education. A longer perspective is however beneficial for stability, and for language revitalisation it is absolutely necessary.

Plan. Projects succeed best when they have been planned and prepared after surveying and mapping out the present situation, the target group's needs and possibilities and the skills and knowledge of the participants. The project's expected results should be realistic and clear.

Apply and adapt. Applying any new method for a minority or endangered language requires checking if this approach or its adaptation or variation can be used at all for the language and its community. Some methods could be discarded immediately, as they require too vast human or financial resources which are not available. Applying for funding might be necessary and the finances will influence the scope and size of the project and the team, and also require a different kind of management.

Explore and test. When preparing a project for the internet, the first step is to use, explore and test online resources. A critical eye and some previous experience as an internet user are required, but more experience with specific platforms or programmes is gained through testing. Platforms, apps and programmes can be too complex and challenging or for some reason just not suitable. When I start a new website, I often first create a dummy (test site) and upload some texts and pictures to see what it will look like. For the real website I then use the knowledge and experience I gained from the dummy website. The same method is applied also to other tools and programmes.

Test group. For a quality check of the project it is useful to have a test reader or user group instead of allowing comments by anybody (see article about Easy to Read books by Stahlberg & Nasretdin, in this issue). Comments generally do not focus on quality and they might become a security problem for instance on a website. The test group members who know that they are expected to pay attention to certain features can give regular and helpful feedback.

Sustainability. Stability and sustainability are essential when starting a project: from the beginning a strategy should be created. The resources created for the project should be available on the internet for several years ahead, both for the convenience of the users and also because we put a lot of work, energy and time into creating them. There is no reason to take them off the internet within a year or two. At the same time, the strategy must have the possibility to develop, grow and change according to changing conditions. What once began as a small project can become a substantial global activity. This must be taken into account from the beginning and for instance data could be formatted in such a way that it can be reformatted whenever needed.

Risk management. Naturally we cannot foresee every development, but it is useful to download for instance website and database backup copies regularly and store them on an external hard disk, cloud or computer. Also the conditions and circumstances might change for the project. Members of the team can leave and new people must be found. Also, technology changes and new opportunities are being created all the time. Flexibility is the keyword for any project.

> **Teläk bulsa, beläk bar.**
> **If there is a will, there is a way.**
> *Tatar mäkale / proverb*

Websites

Websites are an important tool for making language resources available. There are both paid and free web hosting, so a website can be created even when no or little funding is available. A unique domain (name of the website) usually costs, but there are lots of easy-to-use, multilingual and freely available website platforms which enable the user to create a website literally within minutes. The address of the free website is then usually the platform name plus your website name. When launching a new website, it is essential to decide on a few critical questions:

- Who is the website made for (target groups)?
- What are its goals?
- How can these goals be met in the best way possible (strategy)?
- What is the best structure and outlook for the website? How can it be made attractive and at the same time simple to navigate for the users?
- Can it be updated regularly and how often should there be new information?
- How can the website best serve the users?
- Can the users access it from everywhere and with all devices (computers, mobile phones, tablets)?

Choosing a domain name is important: it should be easy to remember and not too long. Most web hosting sites offer ready templates for the website and there are also free templates for download on many websites. The template can be changed whenever needed, but if it is changed too often the users feel lost when not recognising the website outlook. Websites can be in one language only, but multilingual websites are very common nowadays. Several minority languages are presently available for websites and new languages are being added.

One important rule for websites is: *keep it simple*. A clear layout of the website makes it easy for the users to find data, news and other information. Categories and tags can be used for clarifying where the posts (published texts) belong. Categories could be, depending on the website, "Blog", "Language documentation", "Language practices", "Books", "Events", "News", etc. A calendar can help users to find events. In any case, it is better to start with a simple website and add to it, than to begin with a complex website which requires a lot of attention, updates and technical skills.

Pictures and other elements on the website should not be too complicated or require too long time to load. Picture resolution and size can be modified easily with free programmes and apps. A slow website often causes users to lose interest. Many people read websites on their mobile phones with mobile internet and the website should therefore be adapted for mobile devices, too.

Blogs

Blogs are a popular form for sharing visual and audio information. They usually contain longer texts than social media, but often not more than one page A4 and some pictures. Often a blog discusses one theme in several posts (texts). Many people write blogs about topics such as cooking, pets, travel or music. Others use blogs for talking about business or for teaching students. Some bloggers discuss languages and also invite guest writers like the Endangered Languages Blog by Peter Austin (EL Blog).[3]

For minority and endangered languages, a blog about and/or in the specific language can support the language and the community. It can also inform and raise awareness about the language to the world outside the community. A blog can be separate or integrated into a website.[4] Many free blog hosts on the internet offer templates and the user only needs to create a profile, choose the template and start publishing texts and pictures, and inform the readers about it. A blog is often written or kept by one individual, but it can also be prepared by a team or a network.

Media

Online media include news in different forms: text, pictures, videos, podcasts, etc. Preparing a daily media website can be very time-consuming and requires a larger team, and a clear strategy, policy and ethical rules. News can be published not only on a website but also on social media (see below), which is a lighter form for distributing information. The pressure to publish is much bigger on a news website than in a blog or an ordinary website; news websites are expected to publish information daily. For publishing online in Europe, the European Union GDPR (General Data Protection Regulation) must be considered. This regulation specifies, among others, what kind of pictures with people and what kind of personal data can be published.[5]

Important questions for an endangered language news website concerns the intensity of publishing – does the community need a daily, weekly or monthly newsfeed? Also the question if and how does it support the speakers and the community must be answered. Instead of creating a news site, would it be better to prepare audio and video materials for a video channel? Would a local or international TV or radio station or online news portal be interested in daily, weekly or monthly programmes or posts in or about the minority or endangered language?

---

3   EL Blog: http://www.el-blog.org/
4   An example is the Bokpil blog about Easy Language and reading: https://bokpil.eu/en/category/blog/
5   GDPR: https://gdpr-info.eu/

Chat groups and discussion forums

Chat groups and discussion forums are very light forms for distributing written texts, information and pictures. Only short and simple texts are required which means that the impact of the reading and the use of the language is minimal. To use these formats of communication sensibly and attract the interest of more users, the chat groups and discussion forums must have a good moderator.

Another issue is that not everybody has or wants to participate in a chat group (requires a modern mobile phone, tablet or computer and knowledge how to use it). Many individuals avoid discussion forums and social media for different reasons. Safety is a major problem, but also a lack of language skills or experience in using the apps or websites influences the use. A lot of platforms offer to "talk" to the user in their languages, but most of the minority and endangered languages in the world are not (yet) present.

Social media

Chats and discussion forums are often closed to outsiders, but social media offer the opportunity to publish information so that anyone can read it. Social media can be useful ways especially for smaller groups to connect and interact. Through social media communities can for example inform about and arrange online events, talk about publications, language and other topics (see article about a Finnish Tatar literature group on social media, by G. Bedretdin & Stahlberg, in this issue), and carry out many other activities which require communication, spreading of information, etc. Security is also an issue here, especially global social media have been the target for several attacks and personal information has been stolen from accounts.

Social media are a way to attract younger speakers to use their language online, alongside the other languages they use on the internet. Elderly people might however have problems when using chats, discussion forums or social media, if they do not possess the necessary devices (phone, tablet, computer) and skills. Still, they can learn to use at least the basic features. In several countries there are courses and technology support for pensioners. In areas where no technical support for elderly is available, the younger members of the community can be engaged. Also the elderly people can meet and help each other out with the technical issues. Both are perfect opportunities to use the family and community language in several ways and enjoying time together.

Newsletters, bulletins and e-mail lists

Newsletters, bulletins and e-mail lists are useful for informing about news, events and other vital issues to a limited group of people. This is exceptionally efficient for reaching speakers of minority or endangered languages personally. The newsletters or bulletins arrive in the recipients' e-mail boxes which raises the chances of the person really reading the e-mail. Receiving a newsletter or bulletin requires less effort from the recipient than to follow social media, chats or forums. Participants in an e-mail list can sign up or leave the e-mail list, according to their interests, on a website or by sending an e-mail to the sender. Naturally, sending e-mails requires that the recipient has an e-mail address and uses it.

A combination of website and newsletter can attract many more people than a simple e-mail list, but for small endangered language communities, an e-mail list is usually enough. Newsletters can be sent at any interval and do not need to appear regularly. Newsletters, bulletins and e-mails often reach hundreds of people, but if the list exceeds a few dozen, it is better to send them from a newsletter platform or through a website where a newsletter plugin (small add-on to the website) has been installed.

Online meetings, conferences, seminars, workshops and events

Today, online meetings and all kinds of events, conferences, seminars and workshops enjoy a great variety of platforms. During an online meeting, discussions, panel discussions, lectures, presentations, videos and audio materials can be presented. Conferences, seminars and workshops are increasingly organised online. Further, many new platforms offer informal meeting possibilities such as breakout rooms or platforms that simulate cafés where the participants can talk more privately. Meetings can be also cultural events which support the language, such as readings by authors, lectures, singing and playing and many others.

Online meetings about and in minority and endangered languages can contribute to sharing ideas, thoughts, experiences and understanding, especially if there are also participants from outside the community. In online meetings the participants do not need to be physically present in the same place and they can join from anywhere in the world. The travel time spent on the road is saved; instead the participants listen or communicate from their homes, through their computers, mobile phones or tablets. Certainly, a live meeting is essential, but when people speaking the same language

are scattered throughout the world, an online meeting can offer a place to talk, socialise and get to know each other. Some events are for listening and watching only, while others offer an opportunity to join in the discussion through chat or live speech.

In online meetings presentations can be recorded for future use and published as videos or podcasts. For minority and endangered languages this is a very significant opportunity to use, as for example recorded lectures can be distributed online. It is also possible to create events where the speakers broaden their language use in many different and innovative ways, for instance through games or competitions; this is especially popular among younger participants.

Online teaching and e-learning

Online teaching and e-learning offer a broad range of new possibilities which bring language learning to a completely different level. Chats, forums, video lessons, presentations, articles, online meetings, language learning apps and the possibility to use online materials provide both teachers and students with a lot of exciting opportunities. Online teaching is any teaching/learning situation which happens on the internet. On the other hand, e-learning is defined as a structured course, module or other kind of teaching delivered electronically (the student can learn also when the teacher is offline).

There are many tools, platforms, courses and apps for language learning, both free and paid on the internet. The teacher can recommend, use and adapt them to the needs of the class (for a discussion about transferable contents, collaboration, sharing, assessment, benefits, costs and other questions related to e-learning, see Hugo 2015: 95–112). Most materials on the internet are however created for majority languages. The tools and programmes for English and other world languages such as Spanish, French and German dominate the markets and also the free tools on the internet. Minority and endangered languages are now more present than ever before on websites, language-teaching platforms and in language-learning applications (apps), but like for the world languages, they teach chiefly basic grammar and words. The increasing presence of minority and endangered languages however presents a chance for the survival, development and more extensive use of these languages. Creating apps or online courses for an endangered language can be a way to encourage learners of the language.[6] The courses and online teaching materials can support both classes and individual learners and they do not require necessarily the presence of the teacher.

---

6   For example the Living Tongues and Living Dictionaries websites offer a variety of educational materials, data and possibilities for interaction, see https://livingtongues.org/ and https://livingdictionaries.app/

Research findings show that online learning can be as efficient or even better than in the classroom. When online teaching is flexible and combines individual e-learning and interactive sessions with the teacher and the other students, the results are similar or sometimes higher than in the classroom. Working online the teacher can create all kinds of materials for individual and group work. The teacher must however compress and fit the materials into the format of the online classes. This task takes time and effort, because it requires the teacher to restructure the materials from classroom-based to often shorter online teaching, and also to include individual tasks on an e-learning platform.

An advantage of e-learning is that the students can study the materials in their own time, even at night, and they can repeat the lessons as many times as they need to understand the contents. If they missed a lesson they can catch up later. Individual learning experiences and habits of the students influence the way they pick up a language. Every individual possesses a differently structured brain which processes language in its unique way. Still, there are students who need live teaching and who perform poorly in e-learning. Both teachers and students must have at least some experience and technical skills to benefit from e-learning. Those who already have some experience with online work usually profit more. E-learning gives the students much freedom but also individual responsibility for their learning.[7]

Another advantage of e-learning is that students can be located anywhere in the world. No resources and no extra time for travel are needed. One-to-one or group teaching can be organised through apps, platforms on the internet or social media. For minority and endangered languages, which usually do not collect big groups of students in one place, reaching out to international students can be a way to gather more participants for a class. When the students interact online, their linguistic, cultural and other perspectives and experiences contribute to the diversity of the course. Sharing didactic and other materials on the internet is an additional way to attract more students. Foreign language learners and minority learners both profit from a great variety of language materials online (Stahlberg 2020: 21, 60).

So far basic language courses dominate, but for minority and endangered languages it is important to publish language materials which serve the language learners who are past the first level and want to continue to the intermediate or advanced language levels. Often there is a lack of materials on these levels and the learners have to take the quantum leap from basics to ordinary language which is still too difficult for them.

---

7   See articles for instance in the *Journal for Online Learning Research*. It studies since 2015 the impact of technologies on primary and secondary education; endangered languages have not yet been researched. https://www.aace.org/pubs/jolr/

Dictionaries and online translation

The number of dictionaries and translation platforms on the internet has exploded during the past few years. With the increasing digitalisation of books, many dictionaries and older language-related literature are now available online. Some can be searched through a search function, while others are simply scanned and must be searched manually. Also dictionaries in minority and endangered languages are digitised and they offer much important information to scholars, translators, writers, language users and language learners. Dictionaries can also be created, for instance as databases, and uploaded online.

Algorithms for machine translation are becoming more precise and many new languages are added to translation platforms nowadays. Several minority and endangered languages can however offer much entertainment to the user, when they are translated by a machine.[8] Human translation remains the most reliable way of translating, but machine translation can support the understanding of a text in a language the reader does not know or has only basic knowledge of.

Archives and databases

Language documentation data are usually stored in digital archives and databases. They contain all kinds of materials: language data, publications, photographs, whole libraries etc. They are used for research, language learning and all sorts of other language activities. Books, brochures, manuscripts, transcriptions of audio and video materials, travel narratives, fieldwork reports and older publications no longer available in paper format can provide information also about minority and endangered languages. Speaker communities can discover more about their language, history and traditions and also contribute to the databases, or create their own.[9] There are also "umbrella" websites which function as search sites gathering information from millions of other websites. Instead of looking up every website or database separately, these umbrella sites can be used to locate and gather information. Regional databases also exist, where for instance words and other language materials can be found on an interactive and collaborative atlas. Also users can sometimes contribute words or other language materials.[10]

---

8   Try for instance translating the Tatar language Latin script texts from the website https://bokpil.eu/tt/ through a machine translation platform.

9   See for instance SOAS Endangered Languages Archive https://www.elararchive.org/

10   An example is Verba Alpina https://www.verba-alpina.gwi.uni-muenchen.de/en/? page_id=133&noredirect=en_US&db=202

Similar collective sites are the ones gathering information about certain topics which they explore in depth and tell "stories" about.[11] This approach has been used and could be employed much more often for documenting and presenting endangered languages and their communities, and for providing in-depth presentations of aspects in the language, culture, community or other topics, such as fashion, sports, literature, local stories, history etc.

Wikis

Wikis are short, informative online texts which have been produced as the result of collaboration between several people. The users manage the wikis and the texts can be either open or limited to a community. The wikis explain different topics in a simple way for a general audience. Several wiki-type web platforms offer information in many languages, including some endangered languages. This supports the use of the language, but often the texts are short and not always reliable in its contents. The bigger the editor community is, the better the texts usually become, as more writers do the fact and language checks.

E-books

Reading is an important method for language learning, language use and language development. We learn to read as children but our language knowledge increases throughout life when we continue to read actively (Stahlberg 2020: 14, 42). Today there is a vast quantity of electronic books (e-books) in several languages on the internet, and several minority and endangered languages are represented among them. Reading a paper book and an e-book is much the same reading process, but the different technology might require some adaptation time. For younger readers with less motivation to read paper books, reading an e-book on a mobile phone, computer, tablet or an e-book reader can be the first step to explore more books and take the step into the world of books.

The relatively straightforward process of e-book production offers many possibilities for communities. In the case of many endangered languages, there are textbooks and schoolbooks for learning, but not enough interesting literature to read besides the educational literature for children and youth. The prose and poetry their elders read might also be in older language with words mostly forgotten or

---

11 See among others Europeana, new version https://www.europeana.eu/en/ and older version https://classic.europeana.eu/portal/en?utm_source=new-website&utm_medium=button

never learned by the younger readers, or the literature might be written in a script the younger generations cannot read. Most young people surf the internet today and the language needs to be presented to them in an interesting and interactive way. They also need modern books and stories which connect to their everyday lives and teach them the words for their surroundings. If they do not know the words for computer, climate change etc., they prefer to discuss them in another language, usually the school or majority language.

Several minority or endangered language speaker communities find it difficult to publish books; there might be no publisher, or the publisher asks for sums they community cannot pay. Here the possibility to publish online can be utilised. Creating e-books is not very difficult when the text is ready. Today most ordinary word-processing computer programmes are quite enough for preparing e-books in different formats (PDF, EPUB, etc.). Guides to using these programmes can be found in abundance on the internet. The e-books can be published as freely available books on the internet, uploaded on a website or published as a blog.[12] If a commercial publisher is involved, the publisher usually sells the book in their webshop and in international and national online book stores.[13]

E-books in minority and endangered languages should not be expected to sell like majority-language books. The market is too small also for paper books: small quantities of a few dozen print-on-demand books to a few hundred books are usually printed. Although the financial profit might be modest, the benefits on the side of language support are high. Every published book in a minority or endangered language is a step towards making that language a little less endangered.

The advantages of e-books are several:

- they are much cheaper to produce than paper books
- simple word processing programmes can be used (no need for expensive software)
- there is no need for storage space for e-books
- e-books can be corrected and uploaded again at any time
- e-books can be printed when needed (print-on-demand) in quantities required
- the users can print the e-books themselves for classes or if they prefer a paper book
- free e-books reach a wider audience, as they do not require payment or sending the book by post.

---

12 The Tatar Easy to Read books by the non-profit publisher Bokpil, for instance, are free on the internet. https://villa.bokpil.eu/tt/
13 See for instance http://www.verlag-tintenfass.de/ and article by Éva Csató, this issue.

Audio materials

Audio materials include audiobooks, theatre, music, radio, podcasts, etc. Audiobooks are essential for both language learners and fluent speakers for language development and maintenance. Especially for children and youth, listening to the language and to books improves their language skills and vocabulary. Also adults profit from listening, as their ears and brains are thus trained in hearing the language (Stahlberg 2020: 34, 41). "Reading with the ears" and parallel with the eyes on a computer screen (audiobook video) or from a paper book while listening is especially beneficial for language skills improvement.[14]

Theatrical plays, poetry and prose, performances, songs and music can be recorded and published online on a website or other platform and shared worldwide. Even short recordings made public can support the prestige of the language: children and youth are especially sensitive to the lack of diverse materials in their minority or endangered language. They often see it as a sign that the language is less valuable than the majority language in their environment (Stahlberg 2020: 21–23).

Internet radio stations combine all forms of media: texts, pictures, podcasts and videos.[15] Podcasts can be audio recordings ranging from a few minutes to more than an hour. They discuss a topic and are similar to radio programmes; sometimes there is a series on a specific topic. In contrast to the traditional form of radio, podcasts can be uploaded on the internet by the speaker or producer and listened to at any time (modern radio stations also often upload their programmes online). Many podcasts, especially the longer ones, include interviews, panel discussions or other elements such as music, while others are short and simple. For minority and endangered languages podcasts can be a way to document language and life in the community or introduce new topics.

Video materials

Videos are a productive way to transmit speech, text and picture together. There are many free video channel hosts where videos can be uploaded and shared and playlists created. Videos can be used for language learning and teaching, improving and maintaining the language, developing it and raising its prestige and for many other purposes.

---

14   On a new Bokpil Tatar-language video channel (forthcoming), books are read aloud and the text is shown on the screen in the videos, so that the reader/listener can follow the text while listening.

15   See for instance the Tatar- and Bashkort-language Azatlıq Radiosı: https://www.azatliq.org/

Recording sound and videos can nowadays be made with most smartphones and many models also offer basic editing possibilities. Learning how to create more complex sound and video files requires studying and training, but the fundamental functions are not that difficult to learn. Experts on audio and video production can be consulted or employed for the production of a video when needed.

Audio and video materials which are uploaded to the internet offer many features and opportunities for minority and endangered languages. They can document and transmit the language, improve and develop the vocabulary and expressions of the speakers and provide information, education and entertainment. The materials can also be created to inform the world about the speaker community, its language, life, cooking, traditions and history and any other themes. For all languages a broad variety of topics and a connection to the present day is crucial. Variety creates interest and interest creates motivation to learn and use the language.

Conclusions

The internet has speeded up globalisation, revolutionised communication and added to the visibility of minority and endangered languages. The languages can now be taught, talked in and published online. The dialogue between new technology and minority and endangered languages has not yet been much explored, and far more needs to be done before we can acquire a complete picture of the opportunities online work offers and the challenges it poses.

This article has presented some opportunities which can be considered when preparing a project for the online presence of a minority or endangered language. Combining different types of resources and instruments often brings better results; each community or group must decide for themselves which tools are the most useful and suitable for them and how they use them. The internet is vast and there are many methods and tools available.

Necessary for all online work is variety and that the materials are engaging, meaningful and relevant for the community. An increased presence of minority and endangered languages on the internet raises awareness about them and supports the transmission to the next generations and ultimately: the survival of the languages.

Thanks

References

[websites accessed 02.07.2021]

Azatlıq Radiosı: https://www.azatliq.org/

Bokpil websites: https://bokpil.eu, https://villa.bokpil.eu, https://edu.bokpil.eu

Bokpil Easy to Read videos: https://www.youtube.com/channel/UClR_FI9VsHay7DakUU-GalA

Bokpil Multilingual videos: https://www.youtube.com/channel/UCEITcpkQ5NcFc0jJG0fQbDQ

Edition Tintenfaß: http://www.verlag-tintenfass.de/

Endangered Languages: http://www.endangeredlanguages.com/

European Union GDPR: https://gdpr-info.eu/

Europeana: https://www.europeana.eu/en/
https://classic.europeana.eu/portal/en?utm_source=new-website&utm_medium=button

Haiku Colorit: https://haiku.coloritrf.eu

Journal for Online Learning Research: https://www.aace.org/pubs/jolr/

Living Dictionaries: https://livingdictionaries.app/

Living Tongues: https://livingtongues.org/

Mercator: https://www.mercator-research.eu/en/knowledge-base/endangered-languages-and-archives/

SOAS Endangered Languages Archive: https://www.elararchive.org/

Literature

Cormack, Mike (2007). "The Media and Language Maintenance". Cormack, M.J. & Hourigan, N. (eds), *Minority Language Media: Concepts, Critiques and Case Studies*. Cleveland / Buffalo / Toronto: Multilingual Matters Ltd. p. 52–68.

Cunliffe, Daniel (2007). "Minority Languages and the internet: New Threats, New Opportunities". Cormack, M.J. & Hourigan, N. (eds), *Minority Language Media: Concepts, Critiques and Case Studies.* Cleveland / Buffalo / Toronto: Multilingual Matters Ltd. p. 133–150.

Hugo, Russell (2015). "Endangered languages, technology and learning: Immediate applications and long-term considerations." Jones, M.C. (ed.), *Endangered Languages and New Technologies*. Cambridge: Cambridge University Press. p. 95–112.

Rau, D. Victoria & Yang, Meng-Chien (2007): "E-learning in Endangered Language Documentation and Revitalization". Rau, D.V. & Florey, M. (eds), *Documenting and Revitalizing Austronesian Languages.* Honolulu: University of Hawaii Press. p. 111–133.

Stahlberg, Sabira (2020): *Multicoloured language*. Helsingfors / Helsinki: Bokpil.

**Tel keçkenä bulsa da,
dönyaga sıya.
Minor languages
fit into the world, too.**
Tatar mäkale / proverb