



## Protection of Azerbaijani Language in e-government platform

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### Article info

**Received Date:** 22 February 2021

**Accepted Date:** 16 March 2021

**Published Date:** 31 July 2021

### Keywords:\*

Globalization; Linguistic diversity; Linguistic technologies; Language loss; Language protection.

### Abstract\*

*The protection of language diversity has become one of the topical issues in the rapidly globalizing modern world influenced by information technology. The article studies the protection of Azerbaijani language in e-government. The approaches to the impacts of globalization on lingua-cultural space and linguistic processes are explored. The protection of linguistic diversity and the application opportunities of linguistic technologies in e-government are analyzed. The approaches to the protection of Azerbaijani language in e-Azerbaijan segment of the global information space are provided. A conceptual model that provides effective mechanisms for the application of linguistic technologies is proposed. In general, there are various ideas and approaches related to language protection on the Internet. There are many factors endangering language in the globalization process, and it is not possible to maintain the language at the expense of controlling each of these factors. In this regard, the Internet can also be used to raise awareness about the language loss and language protection. The application of cloud-based linguistic technologies enables the provision of different services over the Internet (translation, cataloging, data storage, availability etc.). They can also be used to preserve the integrity of spoken language. Furthermore, many of these technologies used for sound and speech recognition can be applied to protect spoken languages. The use of linguistic technologies in e-Azerbaijan segment of the unique information space will contribute to the protection and development of Azerbaijani language by providing variety of e-services.*

## 1. Introduction

Nowadays, technological revolution that has emerged around ICT. Protection of language diversity has become one of the topical issues in the modern world, which is rapidly globalizing with the impact of information technology (Maurais, & Morris, 2003; Smetanina-Baldvin & Maslova, 2009). Achievements in the development of linguistic technologies will gradually lead to greater access of people to information and services in their own languages. The globalization process has a significant impact not only on technological and economic fields, but also on the

social, political and cultural spheres. This trend indicates that the globalization grounds on the English-American model of society and its economy, politics, culture. Obviously, this model is closely linked to English language, which plays the role of world language. The globalization process, as well as the changes in the language sphere require serious measures in the field of protection and development of Azerbaijani language in the electronic environment (Smetanina-Baldvin & Maslova, 2009; Gurbanova, 2010).

In the light of increasing efforts towards the formation of Information Society, most countries seek to develop e-government solutions through ICT application. Implementation of e-government initiative acts as a platform for the maintenance of tolerance, cultural, religious and linguistic diversity along with achieving effectiveness in public administration, and calls for taking serious steps at national, regional, and local levels.

Forming a new information environment and enhancing public sector activity, e-government has emerged as a means of increasing the effectiveness of services provided (Alshehri, & Drew, 2011; Alguliyev, & Yusifov, 2014; Vasilyeva, & Kononenko, 2016). At the same time, developing countries do not have full access to the advantages of e-government yet, and therefore, they are facing many challenges in implementing e-government projects. These problems include political-administrative, infrastructural, demographic, linguistic, and other social factors, which play an important role in the implementation of e-government projects. Demographic features of the citizens, their age, gender, education, language diversity, etc. refer to the factors significantly affecting behavior of users and their access to online services. In this regard, protection of language diversity is one of the topical issues in generating e-government services. Rapid development of ICT and gradual dominance of English language hinder the access of population and ethnic minorities to e-services (Mittal, & Kaur, 2013; Torgby, & Asabere, 2014). Particularly, in the countries, where multilingualism exists and other languages are used along with the official state language, such as in Latin America and Africa, India, and the People's Republic of China, the use of dominating language on e-government websites may restrict access of majority of population to services (Lata, & Chandra, 2010; Mittal, & Kaur, 2013; Torgby, & Asabere, 2014; Pérez-Salazar, Aguilar-Edwards, & Mata-Martínez, 2016). Emergence of dominant languages in e-government upsurges the relevance of language diversity and language protection issues.

## **2. Research Method**

A survey of research works in the field of protection of the Azerbaijani language in the electronic government platform was considered. The views and approaches to the impacts of globalization on lingua-cultural space and linguistic processes are reviewed. An overview of the factors that threaten language in the process of globalization is considered. The study of linguistic diversity and the application opportunities of linguistic technologies in e-government are analyzed. The conceptual approaches to the protection of the Azerbaijani language in e-Azerbaijan segment of the global information space are provided. A conceptual model that provides effective mechanisms for the application of linguistic technologies is proposed.

## **3. Discussion**

### **3. 1. The effect of globalization on linguistic space**

The concept of a unique information space is regarded as one of the key approaches to understanding the dynamics of linguistic changes. From this point of view, a unique information space enables the multifaceted activities of international and local media to be presented as a single and complete system.

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Any information is transferred via the symbols related to this or that language and culture. In this aspect, linguistic space becomes the most important component of a unique information space. The range of English-American linguistic space is extending far beyond the borders of the states where it is used and forming a vast English-language information space (Dobrosklonskaya, 2012; Laletina, 2011; Crystal, 2001). Along with the socio-political changes taking place in post-Soviet countries, serious changes in the linguistic-cultural information environment are also noteworthy. From this point of view, the consequences of the globalization's effects on the linguistic sphere can be attributed to the fact that linguistic processes are subjected to quality changes more due to the application of new information technologies.

To evaluate the impact of online media on linguistic processes, three leveled (geo-linguistic, inter-linguistic and intra-linguistic) assessment methods are proposed in scientific literature (Dobrosklonskaya, 2012). Geo-linguistic level involves the analysis of media's impact on the status and development of linguistic processes in the world or in the region. Inter-linguistic level analyzes the relations among languages, interaction of languages, the effects of languages on one another, the functionality of languages and so forth. Intra-linguistic level includes the analysis of language processes, including norms and boundaries of spoken language, linguistic changes, and deficiencies in the spoken language within the linguacultural areal.

In the globalization process, the real threat to this or that language is undoubtedly provided by dominant languages, namely English, which is now believed to be a world language (Crystal, 2003; Gritsenko, 2011; Alakbarova, 2012). English-language resources, which are rapidly disseminated due to economic, political and socio-cultural reasons in the information space, significantly prevail the resources available in all other languages. Unquestionably, one of the main reasons for such a rapid spread of English is the availability of authoritative media tools.

As a result of the political, economic and technological changes taken place in Europe over the last decade, the role of English has significantly increased, becoming a language for communication and cooperation for Europe as well as for the West and East. Dutch linguist Olga Fischer believes that the role of language in the international communication has its own negative features, such as low level language proficiency, cultural diversity, differences in structural and meaning diversity, and the risk of losing its national identity and falling under the control of alien culture presented in English (Fischer, 2006).

The global impact of English in the modern world has been thoroughly investigated in the book, "English as a Global Language," by the famous British linguist David Crystal (2003). From the 90s, the concepts such as "linguistic imperialism", "cultural imperialism", "media imperialism" and "information imperialism" have emerged and resulted in extensive discussions (Dobrosklonskaya, 2012; Crystal, 2001, 2003). Given the fact that linguistic influences in the information society are mainly realized through media channels, the influence of the dominant English language on a unique information space, including its Azerbaijani segment, is evident. In this regard, protection of Azerbaijani language in a unique information space becomes essential, and its geo-linguistic, inter-linguistic and intra-linguistic assessment and the development of effective mechanisms are the demands of the day.

### **3.2. Linguistic diversity and linguistic technologies in e-government**

Multilingualism and freedom of expression are considered to be a basic value and one of the basic principles of e-democracy formation by many countries, including the European Union. For example, although European multilingualism has fundamental cultural and social values, language diversity can be a barrier significantly affecting the communication (Linguistic Diversity Roadmap, 2010; Language Cloud, 2015). From this point of view, preserving "unity and diversity" becomes very complicated issue. At present, this issue is also relevant for many

languages in relation to the dominance of English and requires taking serious measures to protect the languages of ethnic minorities.

The effects of linguistic fragmentation can be shown clearly in social media such as Twitter. If we review the scope of communication language, we can clearly see that conversations and discussions are mainly limited to national languages and geographical boundaries (Alguliyev, & Mahmudov, 2018). At present, the languages of the peoples settled in Azerbaijan are mainly related to several language groups, though Azerbaijani language, which belongs to Oghuz group of Turkic languages, is dominant at the modern ethnolinguistic background of Azerbaijan. Representatives of all nationalities, ethnic minorities and groups in Azerbaijan are forming an information environment within a family and mutual understanding. From this point of view, e-Azerbaijan segment of a unique information space is mainly limited to Azerbaijani language.

In the online environment, several technological solutions for preventing linguistic fragmentation or protecting language are available. Advances in language technology include machine translation, text analytics, semantic analysis, and speech recognition technologies that help to eliminate language barriers and preserve language diversity and promote multilingualism in the digital world (Gurbanova, 2010; Language Cloud, 2015; Alguliyev, & Mahmudov, 2018). As a result of the development of language technologies, people can read, write and speak their language on the Internet, while others have access to information in the languages understandable to them. The use of linguistic technologies in online environment will abolish the language barrier and create a unique information space among countries by developing language diversity in the field of language protection and e-government. For example, the availability of the content in multiple languages, which is presented in of the e-commerce environment capable of influencing the development of the country's economy, will enable the users to communicate and interact with each other without any interference (Alguliyev, & Mahmudov, 2018). This, in turn, serves to the development of country's economy and the efficiency of e-government services.

### **3.3 Protection of Azerbaijani language in e-government**

Language protection is to prevent the loss and endangering of languages, especially those of ethnic minorities. If a language is not taught to younger generations, it is exposed to endangering, and since language carriers are mainly spoken by older generations, their death leads to the death of language. On the other hand, the emergence of a dominant language in the context of globalization restricts the use of other languages. Language is an important element of any society and state, and people can communicate and express their thoughts through language. The death of language means that future generations lose a vital part of life that is essential for a comprehensive perception of culture. From this point of view, protection of language, as an important component of culture, is essential.

According to the UNESCO publication *Atlas of the World's Languages in Danger* (2010), about 6,000 languages are spoken all over the world, and half of the world's population speak in 8 wide-spread languages. Approximately, 425 languages are expected to be endangered (Alguliyev, & Mahmudov, 2018; UNESCO *Atlas of the World's Languages*, 2016; Krasikova, 2010; Gurbanova, 2015).

There are various factors that endanger languages. The main reasons for the language loss include emergence of dominant languages, globalization and migration. Moreover, language loss often occurs due to imbalanced distribution of languages among population. Massive migration of people results in forgetting to speak their own language after a certain period of time. In addition, political and military conflicts can also threaten the language loss. In the rapidly

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globalizing world, the development of the Internet, formation of information society and emergence of a unique information space, including the dominant status of English are the key factors accelerating the process of language loss.

Implementation of relevant programs and projects on the realization of initiatives for language protection in e-government should be carried out on phases.

From this point of view, the following issues are scheduled to be solved for the protection of Azerbaijani language in the e-government:

- Integrating e-services into a unique information space, and forming e-Azerbaijan environment;
- Standardizing e-services based on international standards, and supporting multilingualism, providing access to services to all citizens regardless of their national identity, communication language, and location;
- Developing mechanisms to ensure e-services accessible for all categories, taking into account language diversity.
- Creating a virtual language teaching platform;
- Developing a national terminological information system;
- Developing linguistic technologies (machine translation, text analytics, semantic analysis, language sanitization, speech recognition);
- Creating transliteration systems;
- Taking measures to develop language industry;
- Establishing dialectical base, and forming language culture in online environment, etc.

In Fig. 1 shown the conceptual model of Azerbaijani language protection in e-government. The application of cloud-based linguistic technologies to protect the Azerbaijani language in e-Azerbaijani segment of the global information space will eventually create an effective mechanism for geo-linguistic, inter-linguistic and intra-linguistic assessments.

#### **4. Conclusion**

In general, there are various ideas and approaches related to language protection on the Internet. There are many factors endangering language in the globalization process, and it is not possible to maintain the language at the expense of controlling each of these factors. In this regard, the Internet can also be used to raise awareness about the language loss and language protection. The application of cloud-based linguistic technologies enables the provision of different services over the Internet (translation, cataloging, data storage, availability etc.). They can also be used to preserve the integrity of spoken language. Furthermore, many of these technologies used for sound and speech recognition can be applied to protect spoken languages.

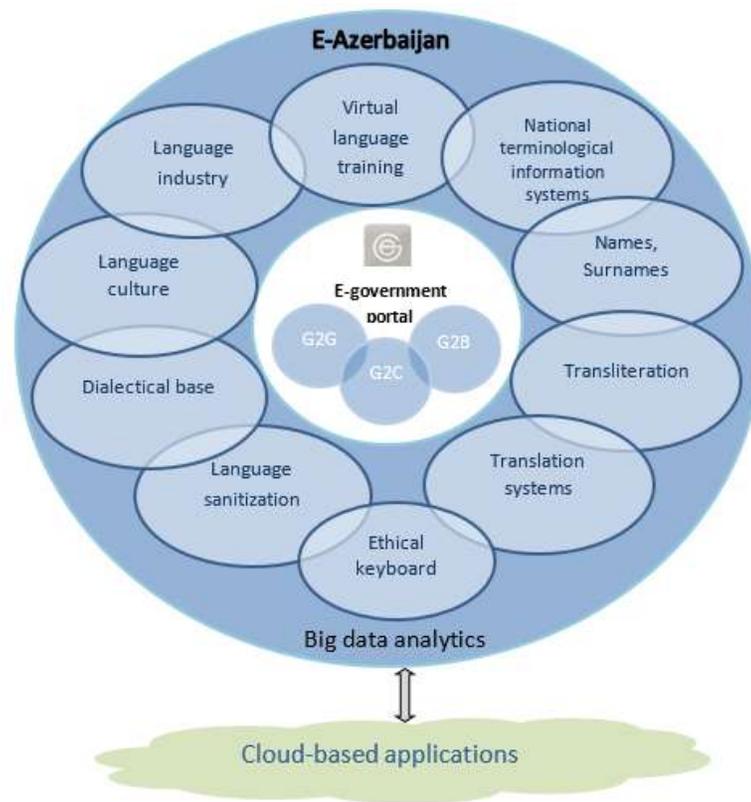


Fig. 1. Conceptual model of protection of Azerbaijani language in e-government

The use of linguistic technologies in e-Azerbaijan segment of the unique information space will contribute to the protection and development of Azerbaijani language by providing variety of e-services.

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