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ORCID: 0000-0002-1352-9836 E-mail: zsuzsanna.olach@gmail.com**KAZAKH LANGUAGE IN THE CONTEXT OF GLOBALIZATION AND
DIGITAL TRANSFORMATION: LANGUAGE CHANGES**

Abstract. Currently, due to the course of globalization and the rapid process of digitalization, changes are taking place in the language. Almost all phenomena occurring in society manifest themselves in language. The article examines the sociolinguistic aspects of linguistic changes that have occurred in the Kazakh language in the context of globalization and digital transformation. The purpose of the article is to identify the impact and sociolinguistic features of the globalization process and the work on digitalization of Kazakhstan on the state language. The materials of the work include new language units, texts in Kazakh, on government websites egov.kz, astanahub.com, primeminister.kz, elicence.kz, new language uses found in the speech of Kazakh language speakers. This article discusses such problems as understanding and analyzing linguistic changes that have occurred as a result of digitalization, as well as finding ways to preserve and develop the Kazakh language in the context of globalization and technological progress. This article attempts to identify the main trends in the development of the modern globalized world and their impact on the development of the Kazakh language, which allows us to understand the direction of the dynamics of linguistic processes in modern society.

Keywords: new words; language contact; Kazakh language; globalization; digitalization; bilingual speech

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ORCID: 0000-0002-1352-9836 E-mail: zsuzsanna.olach@gmail.com**ЖАҢАҢДАНУ ЖӘНЕ ЦИФРЛЫҚ ТРАНСФОРМАЦИЯ ЖАҒДАЙЫНДАҒЫ
ҚАЗАҚ ТІЛІ: ТІЛДІК ӨЗГЕРІСТЕР**

Аңдатпа. Қазіргі таңда жаһандану барысы мен цифрландыруға қатысты үдерістер жылдам жүруіне байланысты тілде де өзгерістер орын алып жатыр. Қоғамда болып жатқан құбылыстардың барлығы дерлік тілде көрініс табады. Мақалада жаһандану процесі мен цифрлық трансформация жағдайында орын алған қазақ тіліндегі тілдік өзгерістер әлеуметтік лингвистикалық аспектіде қарастырылады. Мақаланың мақсаты жаһандану процесінің және Қазақстанды цифрландыру жұмыстарының мемлекеттік тілге әсерін, социолингвистикалық ерекшеліктерін анықтау болып табылады. Жұмыстың материалдары ретінде мемлекеттік сайттардағы: egov.kz, astanahub.com, primeminister.kz, elicence.kz қазақ тіліндегі мәтіндер, жаңа тілдік бірліктер, ауызекі тілде кездесетін жаңа тілдік қолданыстар алынды. Аталған жұмыста цифрландыру нәтижесінде пайда болған тілдік өзгерістерді түсіну және талдау, сондай-ақ жаһандану және технологиялық прогресс жағдайында қазақ тілін сақтау және дамыту жолдарын іздеу сияқты проблемалар қарастырылды. Аталған мақалада қазіргі жаһандану әлемінің негізгі даму үрдістері және олардың қазақ тілінің дамуына әсерін анықтауға талпыныс жасалды, бұл қазіргі қоғамдағы тілдік процестер динамикасының бағыт-бағдарын түсінуге мүмкіндік береді.

Тірек сөздер: жаңа сөздер; тілдік байланыс; қазақ тілі; жаһандану; цифрландыру; көстілділік

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КАЗАХСКИЙ ЯЗЫК В УСЛОВИЯХ ГЛОБАЛИЗАЦИИ И ЦИФРОВОЙ ТРАНСФОРМАЦИИ: ЯЗЫКОВЫЕ ИЗМЕНЕНИЯ

Аннотация. В настоящее время, в связи с глобализацией и стремительным процессом цифровизации, происходят изменения в языке. Практически все явления, происходящие в обществе, проявляются в языке. В статье рассматриваются языковые изменения в казахском языке, происходящие в условиях процесса глобализации и цифровой трансформации, в социолингвистическом аспекте. Целью статьи является выявление социолингвистических особенностей, влияния процесса глобализации и работы по цифровизации Казахстана на государственный язык. В качестве материалов работы на государственных сайтах представлены: egov.kz, astanahub.com, primeminister.kz, elicence.kz, приобретены тексты на казахском языке, новые языковые единицы, встречающиеся в речи носителей казахского языка. В данной работе рассмотрены такие проблемы, как понимание и анализ языковых изменений, произошедших в результате цифровизации, а также поиск путей сохранения и развития казахского языка в условиях глобализации и технологического прогресса. В данной статье предпринята попытка выявить основные тенденции развития современного глобализированного мира и их влияние на развитие казахского языка, что позволит понять направленность динамики языковых процессов в современном обществе.

Ключевые слова: новые слова; языковой контакт; казахский язык; глобализация; цифровизация; билингвизм

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Introduction

In contemporary Kazakh, various changes are occurring due to socio-political, cultural, and other factors. Such linguistic changes are frequently observed in both formal and informal speech among Kazakh language speakers. The aim of this article is to examine how globalization and digitalization processes, which are currently significant global phenomena, are impacting the Kazakh language, to identify the types of linguistic changes occurring as a result of these processes, to analyze the characteristics of spoken language, and to highlight their sociolinguistic aspects. Language undergoes continuous changes influenced by society, technology, culture and living conditions. These changes in language are an important indicator of socio-cultural shifts and can serve as a means of intergenerational connection that reflects evolving societal interests and values.

Due to the rapid progression of globalization and the digitalization of the state, linguistic changes are occurring dynamically. Digital transformation refers to the integration of modern digital technologies into various areas of public life and production. Recently, the term “global digitalization” has also begun appearing in media sources. Globalization and digital transformation are two interconnected processes that significantly impact contemporary society, the economy, and culture. They interact within the socio-economic environment and bring changes that facilitate various aspects of life. These changes in the socio-domestic sphere also influence linguistic communities at different levels. Globalization is the process of integration and mutual dependence among countries, peoples, and economies through trade, investment, technology, culture, and communication. Digital transformation is the process of incorporating digital technologies into all areas of business and society. That has led to shifts in the ways of working, interacting, and preserving values. English, as the leader of linguistic globalization, holds a leading position. This fact is frequently discussed and written about in research within the social sciences and humanities.

Despite the existence of many works on this topic, there are gaps in research regarding the Kazakh language. In order to fill them out, we conducted a sociolinguistic study. New linguistic units in the Kazakh language on a number of state websites, new linguistic usages found in the speech of the people are studied by using sociolinguistic tools. The impact of the globalization process and the digitalization

of Kazakhstan on the state language are given through specific examples.

Materials and methods

The primary linguistic materials for this study include Kazakh-language texts from official websites such as egov.kz, astanahub.com, primeminister.kz, and elicence.kz, as well as newly emerging linguistic units in contemporary Kazakh and new language usages observed in public speech. Additionally, linguistic units used in both formal and informal speech situations were considered.

To assess the impact of the digitalization process on the Kazakh language, the method of linguistic observation was applied. It was used for: a) in the selection of advertising texts on social networks that offer paid help services for online access to services provided on the egov.kz website; b) in the external control of dialogues between service recipients and service specialists in the Kazakh language in public service centers in Almaty. For collecting linguistic units in the speech of Kazakh language speakers relevant to the research objective, the continuous sampling method was employed. The frequency of usage of the collected linguistic units was determined using statistics from relevant data in information retrieval systems. To identify the factors contributing to the emergence of new linguistic units, the modeling method was utilized, while phonetic-phonological analysis was applied to examine the peculiarities of language use in public speech.

Criteria for identifying new linguistic units related to the digitalization of Kazakhstan: a new program adopted by the state in response to digitalization, linguistic units that denote a new concept or phenomenon that began to be used among native speakers of Kazakh language in the implementation of the concept.

Literature review

The challenges of digitizing these areas, as well as their impacts and risks for the state and its citizens, have not escaped the attention of experts across various fields. The benefits and challenges of digitalization have been frequently discussed and studied by specialists in the social sciences and humanities (Aitymbetov, 2023). E. Ormakhanova explored digital journalism (Ormakhanova, 2023), while educators and psychologists have examined the advantages and challenges of using digital technologies in education. Overall, globalization and digitalization are interconnected, overlapping, and closely linked processes. Globalization has led to the emergence of the concept of “linguistic globalization” in sociolinguistic research, while digitalization has resulted in the process of “language digitalization”.

The idea of globalization is closely tied to the concept of a common language uniting the world's population. English has become the leading language of linguistic globalization. It serves as the global language of communication. Studies on English's role as a lingua franca in international communication have emerged. Donald C. Bailey has investigated issues related to languages and dialects, including the use of English as a lingua franca (Bailey, 2006). Suzanne Gregorich has researched the experience and impact of English as a lingua franca in international business communication (Gregorich, 2018). C. Lancaster, in his work “English as a Lingua Franca: A Study of Its Role in English Language Teaching”, examines the role of English as a lingua franca in linguistics and sociolinguistics. Jennifer Jenkins, in “English as a Lingua Franca: Theorizing and Teaching English”, discusses in detail the aspects of using English as a lingua franca, its characteristics, and its impact on global communication (Jenkins, 2000).

In the sociolinguistic context, scholars such as B. Khasanov (Khasanov, 2006) have explored the linguistic situation in Kazakhstan, theories of language contact, interference in bilingual individuals, and issues of bilingualism. E.D. Suleimenova (Suleimenova, 2011) has examined various aspects of bilingualism in Kazakhstan, including historical, linguistic identity, sociocultural, and political factors affecting language practices. A.K. Kenzhebayeva has studied the features of bilingualism in Kazakhstan, focusing on the sociocultural aspects of language learning and use in Kazakh society (Kenzhebayeva, 2014). M. Isayev has investigated language and identity within the context of bilingualism, addressing bilingual education (Isayev, 2004). D.B. Akynova (Akynova, 2014) has explored Kazakh-English language contact, code-switching in bilingual contexts, and linguistic characteristics of bilingual Kazakhs, while Sh.K. Zharkynbekova (Zharkynbekova, 2022) has discussed the issue of code-mixing in the context of ethnic bilingualism in Kazakhstan.

David Crystal (Crystal, 2010), J. Anis (Anis, 2007), N. Baron (Baron, 2008), J. Androutsopoulos

(Androutsopoulos, 2010) and others have explored linguistic changes caused by the influence of technology and the internet at the levels of phonetics, grammar, and syntax. Their research highlights that internet discourse often incorporates text represented through emojis, emoticons, and other symbols, which undergo graphical and abbreviative modifications, revealing distinctive encoding features.

Despite the growing body of research on the impact of technology and the internet on language, studies focusing on the Kazakh language remain limited. To address this gap, we conducted a sociolinguistic investigation examining linguistic changes influenced by digitalization and globalization in Kazakhstan.

Our study explored new linguistic units in the Kazakh language found on various state websites and innovative language usages observed in everyday speech, using sociolinguistic tools. These changes often involve graphical and abbreviative transformations, including the use of emojis, emoticons, and other digital symbols that reshape written communication.

Modern linguistics calls for examining such language changes in online environments as part of a unified multimodal system that integrates visual (graphics, symbols, emoticons) and auditory elements alongside text. This perspective aligns with established linguistic concepts, such as the synthesis of heterogeneous texts (Suleimenova, 2011), creolized texts, multi-coded texts, and cyber-semiotic texts, among others. Through specific examples, we illustrate how Kazakhstan's digital transformation has influenced the state language at the levels of phonetics, grammar and syntax.

Results and discussions

Multilingualism in the context of Linguistic Globalization

In the context of linguistic globalization, the most significant factor of multilingualism is the language interaction itself, which leads to linguistic interference. Any multinational state should be viewed as a natural laboratory for studying linguistic processes (Karlinsky, 2011). The linguistic situation in Kazakhstan is a valuable research environment for studying language processes from this perspective. “Linguistic processes, including bi-/multilingualism, do not lend themselves to direct regulation; these are complex, contradictory phenomena that respond sensitively to both objective (primarily geopolitical, socio-functional) and subjective (value orientations, ethnic self-consciousness, etc.) factors of national-linguistic development. Ethnic consciousness and self-consciousness are powerful and effective factors, particularly evident in language planning. Currently, the influence of ethnic consciousness and self-consciousness on the functional status, standardization, and spread of the state language and the increase in the degree of multilingualism (bilingualism) in the country can be observed through the example of the Kazakh language” (Suleimenova, 2011).

Socio-analytical study on the Linguistic Situation

The Language Policy Committee of the Ministry of Science and Higher Education of the Republic of Kazakhstan conducted a socio-analytical study in 2023 to assess the linguistic situation among the population. The study aimed to determine the level of proficiency in the state language, Russian, English, and trilingualism. A sample of 4,000 people participated in the assessment of the language situation in the Republic of Kazakhstan. The population participating in the study was selected by region, by gender, age, and ethnicity. According to the sample of the study, 48.2% were men and 51.8% were women. Respondents were divided by age as follows: 18-29 years old – 27.9%; 30-45 years old – 35.9%; 46-60 years old – 28.1%; 60 years old and older – 8.4%. (Social and analytical studies on language policy issues in the Republic of Kazakhstan, 2023: 16).

The results showed that 81.0% of the population had knowledge of the state language. According to the findings, almost half of the respondents (48.7%) had good proficiency in the state language. 18.5% spoke and read Kazakh fluently but wrote poorly, 7.0% understood and could explain in Kazakh, and 6.8% had a good understanding but could not speak. The proportion of those who did not know the state language was 19.0%, of which 7.4% did not know Kazakh at all, and 11.6% understood only some words. The level of Russian language proficiency was 90.6% among the population. The proportion of respondents who had good proficiency in Russian was 51.8%. Conversely, 11.2% could speak and read fluently but wrote poorly. 20.3% of respondents understood and could explain in Russian, while 7.2% had a good understanding but could not speak. The proportion of people who did not know Russian was 9.4%, of which 8.9% understood some words, and 0.5% did not know the language at all. The proportion

of respondents with fluent English was 29.0%, including only 5.0% who had good proficiency, 1.0% who could speak and read fluently but wrote poorly, 10.2% who understood and could explain, and 12.8% who had a good understanding but could not speak. 35.8% of the population did not know English at all, while 35.2% only understood some words. The study results showed that 96.7% of respondents had knowledge of their ethnic language, with 70.6% demonstrating good proficiency. 8.5% could speak fluently but wrote poorly, 5.2% understood and could explain, and 12.4% had a good understanding but could not speak. Only 3.4% of survey participants understood some words in their ethnic language (Social and analytical studies on language policy issues in the Republic of Kazakhstan, 2023).

Regional Distribution of Language Proficiency

In terms of regional distribution, the level of proficiency in the state language was as follows: the highest percentages of people with good knowledge of the state language were found in Turkestan (70.5%), Kyzylorda (62.8%), Mangystau (62.7%), Ulytau (59.0%) regions, and the city of Shymkent (66.2%). Conversely, the highest percentages of people who did not know the state language at all were in Pavlodar (27.4%), Kostanay (14.5%), and Karaganda (13.2%) regions. The highest level of good proficiency in Russian was observed in the North Kazakhstan region (73.0%). Residents of the Abai region (88.0%) had fluent knowledge of their ethnic language. The proportion of people fluent in English was highest in the Abai (13.0%) and West Kazakhstan (10.4%) regions. The highest percentage of people who did not know English at all was found in the Kyzylorda (47.6%) and Ulytau (47.4%) regions. Comparative analysis showed that the level of proficiency in the state language was higher in the southern regions and lower in the northern regions. This is explained by the predominance of the Russian ethnic group in the northern regions and the predominance of the Kazakh ethnic group in the southern and western regions, justifying the correlation analysis conducted in this research (Social and analytical studies on language policy issues in the Republic of Kazakhstan, 2023).

New Linguistic Units Emerging from Digitalization in Kazakhstan

As linguistic changes and phenomena take place, new concepts, terms, and expressions related to globalization and digitalization continue to appear in the Kazakh language. Digitalization has significantly impacted language and communication. Since Kazakhstan's digitalization program aimed to integrate digital systems into all areas of society, the outcomes of these processes have also influenced the Kazakh language.

Currently, due to the rapid development of IT technology, all demands related to meeting the social and material needs of the population are transitioning to an electronic digital format. This process has significantly simplified people's lives and public services; financial transactions have become digitized, and electronic money has emerged. All the achievements of widely spread IT technologies are carried out through language, indicating the high potential of language. Researching the development, function, potential, and status of the state language within the framework of Kazakhstan's digitalization helps identify new aspects and nuances of the state language in a digital format. One notable feature of the Kazakh language in the digital age is the formation of new expressions and concepts from words that previously did not combine in the language's word formation system (Serikbayeva, 2023a).

Let's take the example of the egov.kz, the Electronic Government portal of the Republic of Kazakhstan. A citizen of Kazakhstan can use the internet from anywhere in the world to access necessary documents, data, and information with an electronic digital signature. In other words, electronic service provision is carried out through a mechanism involving the citizen or legal entity, a computer, and the Electronic Government of Kazakhstan. The launch of the Electronic Government portal has introduced several new words and expressions, such as electronic digital signature, electronic government, virtual consultant, electronic application, electronic licensing, obtaining or renewing a digital signature, online certificate retrieval, and the mobile application of the electronic government, which have become common linguistic usages among different social groups (Fazylzhanova, 2019).

The egov.kz site was launched in 2006 and has undergone various modernizations since then. New types of services were introduced in line with the requirements of the time, most of which are now offered online. Correspondingly, new linguistic units, concepts, and usages emerged in these areas.

A number of new words have entered the Kazakh language related to the digitalization process, such as: *tsifrlyq sauattylyq* (digital literacy), *tsifrlyq memleket* (digital state), *tsiflyq industriya* (digital

industry), *tsiflyq Jibek joly* (digital Silk Road), *tsiflyq ekosystem* (digital ecosystem), *tsiflyq ekonomika* (digital economy), *virtualdy zhurgizushi* (virtual driver), *kiberzhurgizushi* (cyber driver), *neirozheli* (neural network), *tsiflyq tugyrnama* (digital platform), *tsiflyq infrastruktura* (digital infrastructure), *memlekettik basqarudy tsifrlau* (digitalization of public administration), *tsiflyq quzhat ainalymy* (digital document circulation), *tsiflyq transformatsiyalau* (digital transformation), *digital by default and digital first qagidattary* (digital by default and digital first principles), *ozin-ozı tsifrlau servisteri* (self-digitalization services), *memlekettik qurylymdardyn ishki ozara is-qimyly – G2G* (internal interaction of state structures – G2G), *azamattarmen ozara is-qimyly – G2C* (interaction with citizens – G2C), *biznespen ozara is-qimyl – G2B* (interaction with business – G2B), *tsiflyq transformatsiyalau* (digital transformation), *elektrondyq sauda* (electronic trade), *elektrondyq kommertsia* (electronic commerce), *elektrondyq tugyrnama* (electronic platform), *krosshekaralyq sauda* (cross-border trade), *elektrondyq tolem* (electronic payment), *elektrondyq tsiflyq qoltanba* (electronic digital signature), *elektrondyq aqshalar* (electronic money), *mobildik banking* (mobile banking), *mobildik tolemder* (mobile payments), *tsiflyq orta* (digital environment), *venchurlyq qarzhylandyru* (venture funding), *venchurlyq kapital* (venture capital), *venchurlyq sala* (venture sector), *blokchein* (blockchain), *kiberquipsizdik* (cybersecurity), *biznesti onlain zhurgizu* (conducting business online), *ozine-ozı qyzmet korsetu rezhimi* (self-service mode), *elektrondyq билет беру zhuiessi* (electronic ticketing system), *smart mektep* (smart school), *smart qala* (smart city), *smart emkhana* (smart clinic), *smart koshe zharygy* (smart street lighting), *aqyldy qala* (smart cities), *tsiflyq kun tartibi* (digital agenda), *onlain orta* (online environment), *tsiflyq dagdylar* (digital skills), *tsiflyq startup* (digital startup), *biznes inkubator* (business incubator), *onlain zhumys* (online work), *front-ofis* (front office), *ziyatkerlik kolik zhuiessi* (intelligent transport system), *elektrondyq deklaratsiya* (electronic declaration), *internet banking* (internet banking), *3D-printer* (3D printer), *ADSL – asimetriyaly tsifrlı abonenttik zheli* (asymmetric digital subscriber line), *API* (application programming interface), *B2B* (Business to Business), *CDO* (chief digital officer), *bas tsiflyq ofitser* (chief digital officer), *G2B* (Government-to-Business), *G2C* (Government-to-Citizen), *G2G* (Government-to-Government), *ICT* (Information and communications technology), *IoT* (Internet of Things), *STEM* (Science, technology, engineering, and mathematics).

Formation of new words in the Kazakh language through borrowings and word formation

New words that emerged during the digitalization process show the active use of affixes that form adjectives from nouns, such as *-lyq*, *-lik*, *-dyq*, *-dik*, *-dy*, *-di*, *-ty*, *-ti*. Examples include *venchurlyq kapital* (venture capital), *venchurlyq sala* (venture sector), *mobildik banqing* (mobile banking), *mobildik tolemder* (mobile payments), *tsifrlıq memleket* (digital state), *tsifrlıq sauattylyq* (digital literacy), *tsifrlıq dagdy* (digital skill), *tsifrlıq infrastruktura* (digital infrastructure), *tsifrlıq Jibek joly* (digital Silk Road), *tugyrnama* (platform), *tsifrlıq quzhat ainalymy* (digital document circulation), *tsifrlıq orta* (digital environment), *elektrondyq memleket* (electronic state), *elektrondyq sauda* (electronic trade), *elektrondyq kommertsia* (electronic commerce), *elektrondyq tolem* (electronic payment), *elektrondyq aqshalar* (electronic money). Many new words in the Kazakh language during digitalization are formed by combining words. Directly borrowed English words are mainly terms that entered the Kazakh language without translation, such as *ADSL* (asymmetric digital subscriber line), *API* (application programming interface), *B2B* (Business to Business), *CDO* (chief digital officer), *G2B* (Government-to-Business), *G2C* (Government-to-Citizen), *G2G* (Government-to-Government), *ICT* (information and communications technology), *IoT* (Internet of Things), *STEM* (Science, Technology, Engineering, and Mathematics) (Serikbayeva, 2023b).

Linguistic changes caused by the interaction of Kazakh and Russian languages

In addition, there are linguistic usages in everyday life that are frequently used among the population: *Egov-qa tirkelu* (registration on Egov), *Egov-qa kiru* (logging into Egov), *Egov-tan anyqtama alu* (getting a certificate from Egov), *Egov-tan zhiberu* (submitting via Egov), *Egov-tan qarau* (checking on Egov), *Onlain qyzmet korsetu* (online service provision), *Onlain qyzmet alu* (receiving online service), *Onlain anyqtama alu* (obtaining online certificate), *Onlain anyqtama беру* (issuing online certificate), *Onlain qyzmetke tapsyrys беру* (ordering online service), *ETsP kilt* (digital signature key), *ETsP-men qol qoyu* (signing with ETsP), *ETsP paroli* (ETsP password), *ETsP-men (qol qoiyp) zhiberu* (submitting with ETsP), *ETsP merzimin uzartu* (extending ETsP validity), *ETsP alu* (obtaining ETsP), and so on.

“ETsP” (*Elektronnaya tsifrovaya podpis*) is an abbreviation from the Russian term for an electronic digital signature and is commonly referred to as “ETsP” in the local spoken language. Another such term that is frequently encountered in internet searches is “ASP”. Various usages are associated with this term, such as: *ASP alu* (obtaining), *ASP tagaiyndau* (assigning), *ASP-ga anyqtama zhinau* (collecting documents for), *ASP toleu* (paying), *ASP-ga quzhat tapsyru* (submitting documents for), *ASP-ga otinish beru* (applying for), *ASP toqtatu* (canceling), etc.

ASP refers to targeted social assistance provided by the government for certain social groups. In Russian, it is known as “*adresnaya sotsialnaya pomoshch*” (ASP). In Kazakh it is “*arnauly әлеуметтік көмек*” ([æ] – special Kazakh letter «ә») and abbreviation should be “*АӘК*”. But Russian term has become commonly used in Kazakh speech. Google search statistics show the following:

- *Obtaining АӘК* (Kazakh abbreviation) – 29,200 results,
- *Obtaining ASP* – 68,800 results,
- *Assigning ASP* – 13,000 results,
- *ASP assignment* – 130,000 results.

We explored the reason for this: firstly, pronouncing the abbreviation *АӘК* in Kazakh requires more effort from the acoustic-articulatory apparatus:

- A – vowel, back, open, non-rounded;
- Ә – vowel, front, open, non-rounded;
- K – voiceless consonant, phonetic transcription [aæki].

On the other hand, pronouncing *ASP* [a es py] is easier than pronouncing *АӘК*. In Russian, the phonetic transcription of *ASP* is [a ehs pe], and among Kazakh speakers, the practice of pronouncing vowels with fronting and non-rounded articulation is common, for example, “*zhaman*” (becomes “*zhæmæn*”), “*zhai*” (becomes “*zhæi*”), “*shai*” (becomes “*shæi*”), “*aruq*” (becomes “*æruq*”), etc. Therefore, for ease of articulation and to conserve effort when pronouncing sounds, the S [ehs] sound is pronounced as [es]. In Kazakh, the “s” sound is usually pronounced as [sy]. The pronunciation of the *ASP* word as [aespy] and the change to [es] can be attributed to the influence of the Russian language.

According to one of the postulates of contemporary diachronic linguistics, all linguistic changes start with speech. In this context, speech mutations observed in bilingual speech can, under certain conditions, enter the linguistic system of one of the languages (linguistic diffusion) and become the source of structural reconstruction. A speech mutation is understood as the result of the synchronous interaction of languages observed in bilingual communication for communicative purposes. A. Karlinsky divides speech mutations into two types: interference and intercalation (Karlinsky, 2011). Interference refers to the influence of the first language on the second in bilingual speech, while intercalation refers to deviations from the norm in bilingual speech influenced by the second language. For example, the use of *ASP* for bilinguals whose first language is Kazakh falls under intercalation, while the pronunciation of “*teñge*” (not “*tenge*” or “*mehngeh*”) for bilinguals whose first language is Russian falls under intercalation. Additionally, the pronunciation of “*teñge*” as “*mehngeh*” by native Russian-speaking bilinguals falls under interference. All bilingual speech practices that implement language contact are conveyed through interference.

If we analyze the model of the emergence of linguistic usages related to terms like *ASP* and *ETsP* in popular speech, it starts with the adoption of a government program aimed at solving societal issues. The concepts and terms defined in the program are then introduced. As the program is implemented, new services offered by the government introduce new terms and concepts into public usage. This leads to new usages and words appearing as a result of interaction between the state and the public.

Linguistic changes in Kazakh cover all levels of the language: vocabulary, grammar, phonetics, and semantics. These changes are a natural social process influenced by various factors such as social and cultural changes, interaction with other languages, and technological development. Language change in Kazakh is a complex, multi-faceted process driven by both internal and external factors. These processes reflect changes in society, culture, and technology and help to understand how the Kazakh language adapts to modern conditions while maintaining its universality and uniqueness.

Today, the development of information technology has accelerated the advancement of artificial intelligence (AI). In the media and mass communication sectors, the concept of the “neural network

market” has been introduced. Various types of neural networks now perform services such as text, media, audio, photo, and content creation, as well as chatbot installation and feedback interaction. Moreover, the IRBIS GPT // IRBIS AI neural network has been launched to provide information in Kazakh. The functionality of Irbis is similar to that of other language models but with the advantage of understanding Kazakh. The model also comprehends Russian and English and provides grammatically correct responses in Kazakh, making it suitable for sensitive sectors and offline scenarios (Irbisgpt, 2024). According to experts, IRBIS GPT is considered one of the first neural networks that “understands” Kazakh. The inclusion of the Kazakh language in neural networks is a significant achievement for the digital world as it suggests that a dedicated model for the Kazakh language will continue to evolve within these networks. This development could pave the way for the emergence of Kazakh-language neural networks and foster competition among them.

Additionally, Kazakhstan is developing its own artificial intelligence model called KAZ-LLM (Kazakh Large Language Models). This language model provides a promising opportunity to protect the Kazakh language from assimilation amid global challenges. “Most AI systems are designed for high-resource languages such as English, Spanish, or Russian, creating a significant language gap and depriving many, including Kazakhstani citizens, of access to advanced technology in their native language necessary for development and improved quality of life in countries with low-resource languages. In Kazakhstan, the issue of language disparity in AI is being addressed by a research team led by the Institute for Smart Systems and Artificial Intelligence at Nazarbayev University (ISSAI NU). They are working on creating the KAZ-LLM, a large language model that will cover key languages for Kazakhstanis: Kazakh, Russian, and English, allowing everyone to use digital technology in their native language. This foundational model will be publicly available as a basis for developing local services and products” (profit.kz).

Conclusion

Globalization has had a significant impact on language, bringing both positive and negative changes. The adoption of new words, the emergence of new terms, and the mixing of languages create a dynamic linguistic environment while posing a threat to overall linguistic diversity (influence of major languages on minority languages, challenges emerging over time). Understanding such linguistic changes is essential for preserving languages and cultures in the globalized world. In today's world, digitalization encompasses all aspects of life, impacting not only the economy and education but also communication and language itself. The Kazakh language, like many others, has encountered new challenges and changes under the influence of new technologies and mass media. Digitalization has facilitated the emergence of new forms of communication. That affects the structure and system of the language. In recent years, we have observed the active adoption of loanwords, the emergence of new words and usages, and changes in grammatical structures. It is important to note that these processes have both positive and negative consequences, including the risk of losing linguistic identity and cultural heritage.

The study identified the main trends of globalization and digitalization's influence on the development of the Kazakh language. It highlighted the importance of understanding these changes to create strategies aimed at preserving linguistic diversity and cultural heritage. The findings are practically significant for developing state language policies, supporting national identity, and creating digital content in the Kazakh language.

Future research should focus on a deeper analysis of the mechanisms of interaction between globalization and language. This will enable the development of effective approaches to preserving linguistic richness while addressing the challenges and leveraging the opportunities provided by digitalization.

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