

Barysgul Kenges^{1*}, Nergis Biray²^{1*}Corresponding Author, Doctoral Student, L.N. Gumilyov Eurasian National University, Kazakhstan, Astana., ORCID: 0000-0002-5424-3505 E-mail: barysgul221196@gmail.com²Doctor of Philosophy (PhD), Professor, Pamukkale University, Turkey, Denizli, ORCID: 0000-0002-4168-220X E-mail: nergisb@gmail.com**SUFFIXES USED IN CREATING INFORMATION TECHNOLOGY TERMS
IN THE KAZAKH AND TURKISH LANGUAGES**

Abstract. Terms characterize the concepts of national science, culture and art. Methods of term formation are divided into such types as semantic term formation, morphological term formation, syntactic term formation, morphological-syntactic term formation, terminological exchange. The study examines terms created by morphological methods. It is known that in the practice of the peoples of the world there is a practice of widespread use of the language for special purposes by exchanging terms between related languages, creating a common terminology fund. The purpose of the article is to contribute to the formation of a common terminology by studying the suffixes used in creating terms in the terminology of the information technology sphere of related Kazakh and Turkish languages. In the formation of a common terminology, the capabilities of the two languages were determined, and what common suffixes were used in the creation of computer terms. In the study, the characteristics of each suffix were compiled, and it was given the definition of the functions performed. The terms formed by these suffixes were also shown. As a result of the analysis of the terms, the origin of the input words included in the two related languages was established. Until now, the terms of the Kazakh and Turkish languages in the field of information technology have not been fully considered in the morphological aspect. The article presents an overview of previously developed research works concerning the terminology of the Turkic languages. As a result of the study, it was determined common suffixes used in creating computer terms of the Kazakh-Turkish language, suffixes used only in the Kazakh language, and suffixes used only in the Turkish language. However, it was not defined terms characteristic of the Turkic languages and common to both languages, formed by a common root word.

Keywords: Kazakh language; Turkish language; term formation; term creation; suffixes; computer terminology**For citation:** Kenges, B., Biray, N. Suffixes Used in Creating Information Technology Terms in the Kazakh and Turkish Languages. *Tiltanyim*, 2025. №1 (97). P. 172-186.DOI: <https://doi.org/10.55491/2411-6076-2025-1-172-186>**Барысгүл Ерланқызы Кенес^{1*}, Нергиз Бирай²**^{1*}автор-корреспондент, докторант, Л.Н. Гумилев атындағы Еуразия ұлттық университеті, Қазақстан, Астана қ., ORCID: 0000-0002-5424-3505 E-mail: barysgul221196@gmail.com²философия докторы (PhD), профессор, Памуккале университеті, Түркия, Деңізлі қ., ORCID: 0000-0002-4168-220X E-mail: nergisb@gmail.com**ҚАЗАҚ ЖӘНЕ ТҮРІК ТІЛДЕРІНДЕ АҚПАРАТТЫҚ ТЕХНОЛОГИЯ
ТЕРМИНДЕРІН ЖАСАУДА ҚОЛДАНЫЛАТЫН ЖҰРНАҚТАР**

Аңдатпа. Терминдер ұлт ғылымының, мәдениетінің, өнерінің ұғымдарын сипаттайды. Терминжасам әдістері семантикалық терминжасам, морфологиялық терминжасам, синтаксистік терминжасам, морфолого-синтаксистік терминжасам, терминологиялық алмасым секілді түрлерге жіктеледі. Зерттеу жұмысында морфологиялық әдіс арқылы жасалған терминдер қарастырылады. Әлем халықтарының тәжірибесінде туыстас тілдер арасында термин алмасу, ортақ терминологиялық қор құру арқылы арнаулы мақсаттар тілін кеңінен пайдалану тәжірибесі бар екені белгілі. Мақаланың мақсаты – туыстас қазақ және түрік тілдерінің ақпараттық технология саласы терминологиясындағы терминдерді жасауда қолданылатын жұрнақтарды зерделей келе, ортақ терминқор қалыптастыруға үлес қосу. Ортақ терминқор қалыптастыруда екі тілдің қандай мүмкіншіліктері бар екенін, компьютер терминдерін жасауда қандай ортақ жұрнақтар қолданылғандығын анықтау. Зерттеу жұмысында әр жұрнаққа сипаттама жасалып, атқаратын функцияларына анықтама берілді. Сондай-ақ сол жұрнақтар арқылы жасалған терминдер көрсетілді. Терминдерге жүргізілген талдау нәтижесінде екі туысқан тілге енген кірме сөздердің шыққан тегі анықталып көрсетілді. Осы уақытқа дейінгі зерттеулерде қазақ тілі мен түрік тілінің ақпараттық технология саласындағы терминдері морфологиялық аспектіде толық қарастырылмады. Мақалада осыған дейін түркі тілдерінің терминологиясына қатысты жасалған зерттеу жұмыстарына шолу жасалды. Зерттеу жұмысы нәтижесінде қазақ-түрік тілдерінің компьютер терминдерін жасауда қолданылатын ортақ жұрнақтар, тек қазақ тілінде және тек түрік тілінде ғана қолданылатын жұрнақтар анықталды. Түркі тілдеріне тән және екі тілге де ортақ, ортақ түбір сөз

арқылы жасалған терминдер анықталмады.

Тірек сөздер: қазақ тілі; түрік тілі; терминжасам; термин жасау; жұрнақтар; компьютерлік терминология

Сілтеме жасау үшін: Кеңес Б., Бирай Н. Қазақ және түрік тілдерінде ақпараттық технология терминдерін жасауда қолданылатын жұрнақтар. *Tiltanyum*, 2025. №1 (97). 172-186-бб. (ағыл. тілінде)

DOI: <https://doi.org/10.55491/2411-6076-2025-1-172-186>

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СУФФИКСЫ, ИСПОЛЬЗУЕМЫЕ ПРИ ФОРМИРОВАНИИ ТЕРМИНОВ ИНФОРМАЦИОННЫХ ТЕХНОЛОГИЙ В КАЗАХСКОМ И ТУРЕЦКОМ ЯЗЫКАХ

Аннотация. Термины характеризуют понятия национальной науки, культуры, искусства. Методы терминообразования подразделяются на такие виды, как семантическое терминообразование, морфологическое терминообразование, синтаксическое терминообразование, морфолого-синтаксическое терминообразование, терминологический обмен. В исследовательской работе рассматриваются термины, созданные морфологическим методом. В мировой практике известно, что использование языка для специальных целей через обмен терминами и создание общего терминологического фонда среди родственных языков является распространенным опытом. Цель данной статьи – рассмотреть суффиксы, используемые при формировании терминов в терминологии информационных технологий родственных казахского и турецкого языков. Задачи включают определение возможностей обоих языков для формирования общего терминофонда и выявление общих суффиксов, используемых при создании компьютерной терминологии. В данном исследовании каждый суффикс описан с определением его функций. Также предлагаются новые термины, созданные с применением указанных суффиксов. В процессе анализа данных терминов было установлено происхождение заимствованных слов, вошедших в оба родственных языка. До настоящего времени термины казахского и турецкого языков в области информационных технологий не были полностью рассмотрены в словообразовательном аспекте. В статье также представлен обзор ранее выполненных исследований, связанных с терминологией тюркских языков. Результаты исследования позволили выявить общие суффиксы, применяемые при формировании компьютерной терминологии в казахском и турецком языках, суффиксы, характерные исключительно для казахского языка, и суффиксы, которые используются только в турецком языке. Не были выявлены термины, характерные для тюркских языков, общие для обоих языков и образованные от общего корневого слова.

Ключевые слова: казахский язык; турецкий язык; терминообразование; создание терминов; суффиксы; компьютерная терминология

Для цитирования: Кеңес Б., Бирай Н. Суффиксы, используемые при формировании терминов информационных технологий в казахском и турецком языках. *Tiltanyum*, 2025. №1 (97). С. 172-186. (на англ. яз.)

DOI: <https://doi.org/10.55491/2411-6076-2025-1-172-186>

Introduction

Terms act as keys that unlock the understanding of concepts. Anyone seeking to acquire knowledge in any scientific field can achieve this goal quickly and efficiently with the help of well-developed terms that accurately convey scientific meanings. Moreover, knowledge acquired through clear terminology tends to be more sustainable. Terms reflect the science, culture, and art of a nation. Each term conveys images and compact concepts formed in the minds of a nation's representatives, enabling their further development in various fields. Similar to general vocabulary, terms accumulate over long periods, preserving scientific data and cultural heritage, thus enriching the language (Pilav, 2008: 274). Terminology is a crucial part of specialized vocabulary. According to the explanatory dictionary of basic linguistic terms, a term is defined as a verbal designation of a specific concept within a specialized field. A term can be either a single word or a phrase that denotes a particular concept (Ozola-Ozolina, Svikey, 2023: 81). Russian scholars, after studying various definitions of the term, offer the following interpretation: “A term is a special lexeme denoting a generalized concept” (Grinev-Grinevich, Sorokina, Molchanova, 2022: 725). The effective use of these terms, as well as the successful implementation of terminology planning policies, directly depend on the overall state of the language (Karaman, 2014: 96).

The main difference between word creation and term creation – or, more precisely, the field of

terminology – lies in the fact that terminology development is carried out consciously and in a controlled manner. When new inventions and discoveries emerge in technology and science, it becomes necessary to develop new terms for newly introduced concepts. At this stage, scientists exchange opinions and collaborate on defining these concepts.

To create terms that accurately convey these concepts, scientists apply various methods and classifications. H.S. Sager, D. Dungworth, and O.F. McDonald categorizes linguistic methods of term creation into three groups: (1) using existing resources, (2) adapting existing resources, and (3) using new resources. Term creation based on existing resources involves processes such as polysemy, metaphorization, metonymy, and homonymy. The adaptation of existing resources includes abbreviation, suffixation, compounding, and the formation of terms involving proper names. Finally, the use of new resources includes the creation of neologisms and borrowings (Karaman, 2009: 46-53).

S.V. Grinev offers a different classification, identifying five types of term creation: semantic term creation, morphological term creation, syntactic term creation, morphological-syntactic term creation, and terminological borrowing. Similarly, O.P. Frolova, who specifically studied word formation in modern Chinese terminology, divides the methods of term creation into three groups: terminologization, creation of compound terms (including word formation, creation of fixed phrases, abbreviation, and suffixation), and borrowing (Kurmanbaiuly, 2009: 53).

O. Aitbaiuly classifies methods of term creation in the Kazakh language into four groups. The first group is the terminologization of certain words in the national language, i.e., the semantic method. This method is further divided into three types: (1) terminologization of archaic words from literary language, (2) terminologization of dialect words, and (3) transfer of terms from one field to another.

The second group includes word formation, which is divided into several subcategories: (a) the morphological or synthetic method (using suffixes), (b) the syntactic or analytical method (combining words), and (c) abbreviation (shortening). Notably, in addition to the national language elements, the analytical and abbreviation methods sometimes involve foreign introductory words. The third method is calquing, and the fourth is borrowing ready-made terms from other languages (Aitbaiuly, 2013: 161).

The creation of new words in Turkic languages is a dynamic process shaped by various linguistic mechanisms, including suffixation, cliticization, and borrowing from other languages. Due to the agglutinative nature of Turkic languages, complex words are easily formed through the addition of multiple morphemes. This morphological richness allows Turkic languages to generate new terms that reflect evolving social and cultural contexts. Suffixation, in particular, serves as one of the primary mechanisms of word formation, as new meanings or grammatical forms are created by attaching suffixes to root words (Major et al., 2023; Aldasheva, 2020).

In Turkish, the method of creating terms through suffixation is known as *takılama* or *türetme* (Karaman, 2009: 51). In Kazakh, the process of forming words using suffixes is referred to as the morphological or synthetic method (Kurmanbaiuly, 2014: 540). Suffixes that add lexical meaning and generate new words in Kazakh are called *zhurnaq*, while in Turkish they are known as *yapım eki* (Serifoğlu, 2015: 72).

In Turkic languages, suffixes perform multiple grammatical functions. They indicate tense, aspect, mood, and person in verbs, and mark case, number, and possession in nouns. For example, Turkish verbs are inflected with numerous suffixes that express person, number, tense, aspect, modality, voice, negation, and interrogation, illustrating the language's rich morphological system (Antonova-Ünlü, Sağın-Şimşek, 2014).

This article focuses on the morphological aspects of terminology formation in the field of information technology in two closely related languages – Turkish and Kazakh. It specifically analyzes the suffixes used to create terms in this domain.

The purpose of the article is to contribute to the development of a unified terminology database for Turkic languages by examining the suffixes applied in the formation of information technology terms in Turkish and Kazakh. It also aims to identify the most frequently used suffixes common to both languages.

The scientific and practical significance of this study lies in the comprehensive description of the functional roles of suffixes in both Kazakh and Turkish, alongside the identification of the most productive suffixes used for term creation. The article draws on specialized dictionaries of computer

terminology in Kazakh and Turkish, offering a detailed analysis of each identified suffix. It compares parallel terms found in both languages and highlights suffixes unique to Turkish and those unique to Kazakh.

This research contributes to future scientific studies on terminology development across Turkic languages. Its practical relevance stems from the principle that when a nationally created term is unavailable, borrowing from a closely related Turkic language may serve as a viable alternative. This approach supports the harmonization and enrichment of terminology across the Turkic language family.

Materials and methods

The formation of computer terminology in the Kazakh language largely coincided with the period of Kazakhstan's independence. Prior to independence, in 1978, the Main Editorial Office of the Kazakh Soviet Encyclopedia (edited by N.T. Sauranbayev and G.G. Musabayev) published a two-volume Russian-Kazakh dictionary, which played a significant role in terminological development at the time (Shaikulova, 2020: 97). In 2014, within the framework of the State Program for the Development and Functioning of Languages for 2011-2020, a comprehensive 30-volume series titled Kazakh-Russian, Russian-Kazakh Terminological Dictionaries was published. As part of this series, the suffixes used in creating terms within the dictionary of computer science and computing were analyzed. In Turkey, the earliest work on the formation of computer terminology was conducted in 1966 by A. Köksal at Hacettepe University (Tümer, Ünsaçar, 2011: 110). The present article also analyzes the suffixes used in the creation of terms featured in the Computer Terminology Equivalents Guide (Bilgisayar Terimleri Karşılıklar Kılavuzu), published in 2013 under the supervision of the Turkish Language Institute (Akılın, 2013). The study employs a descriptive method alongside a synchronic comparative method to analyze and compare suffix usage in Kazakh and Turkish computer terminology.

Literature review

To date, comparative studies of related languages have been conducted across various fields of linguistics within the Turkic world, including terminology studies. Several works have focused specifically on the development of terminology in Turkic languages. In 1999, a special working group was established in Turkey with the support of the Information Technology Society to create a common terminology database for Turkic languages. In October 2001, the first forum on cooperation in the field of information technology among Turkic-speaking countries was held in Istanbul. This initiative was later continued in Azerbaijan, Turkmenistan, and Kyrgyzstan, each hosting forums on different topics. On November 19, 2011, the International Conference "Experience of Forming Terminology in Turkic-speaking Countries" was held at the Turkic Academy in Astana, marking the ninth such forum (Mamayeva, 2019: 133).

One important comparative work is the book "Guide to Grammatical Terms of the Turkic World", edited by E.G. Naskali (Naskali, 1997), which compares grammatical terminology across a wide range of Turkic languages, including Turkish, Azerbaijani, Turkmen, Gagauz, Uzbek, Eastern and Western Uyghur, Tatar, Bashkir, Kumyk, Karachay-Balkar, Nogai, Kazakh, Kyrgyz, Altai, Khakass, Tuvan, and Chuvash, as well as Russian.

G.A. Begimova (Begimova, 2012), in her monograph "Diplomatic Terms: Cognition and Meaning", examines the meaning and function of diplomatic terms and designations in Turkish and Kazakh. Another significant contribution is the monograph by D. Yskakuly (Yskakuly, 2014), "Fundamentals of Turkic General Terminology", which compares the terminology of Kazakh, Azerbaijani, Kyrgyz, Uzbek, Turkmen, and Turkish with English and Russian terms. This monograph also addresses the historical development of Kazakh terminology, its current state, and the process of standardizing international terms within a Turkic linguistic framework.

With the support of the International Turkic Academy, the collective work "Term-formation of Turkic Languages" (Term-formation of Turkic Languages, 2018) was published. This study outlines the key trends in terminology development across Kazakh, Azerbaijani, Uzbek, Tatar, Kyrgyz, and Turkish, highlighting the methods and providing examples of term formation.

In her doctoral dissertation, "Possibilities and Methods for Developing a Common Terminology for Modern Turkic Languages", A. Minsafina (Minsafina, 2020) compares 150 linguistic terms and 150 terms from physics and mathematics in Turkish, Azerbaijani, Kazakh, Tatar, and Uzbek. The study explores

term formation methods in these five languages, also identifying shared roots and suffixes.

The present article builds on this tradition by analyzing the features and commonalities of suffixes used in the creation of information technology terms in Kazakh and Turkish. By identifying similarities and productive patterns, the study contributes to ongoing efforts to harmonize and enrich terminology across the Turkic world.

Results and discussions

I. Suffixes that form nouns from nouns

1. +лық, +лік (+дық, +дік, +тық, +тік) ~ +lık, +lik, +luk, +lük.

In the Kazakh language, the suffixes +лық, +лік (+дық, +дік, +тық, +тік) are considered to be among the most productive for forming adjectives and nouns from nouns (Yskakov, 1991: 174). In the computer terminology of the Kazakh language, the suffixes +лық (+лік, +дық, +дік, +тық, +тік) are added to Kazakh and borrowed nouns, forming derivative adjectives. These suffixes are also added to nouns after the suffixes +ты, +ті, +ды, +гіш, forming new nouns.

a. Examples of terms formed with the suffixes +ті-лік: адрес-ті-лік (address), сыйым-ды-лық (capacity), түс-ті-лік (color) (KRRKTD, 2014).

b. Examples of terms formed with the suffixes +гіш-тік: асыраөткіз-гіш-тік (conductivity), шалаөткіз-гіш-тік (semi-conductivity) (KRRKTD, 2014).

Examples of terms formed using the suffixes +лық, +лік, +дық, +дік, +тық, +тік from Kazakh roots: ана-лық (motherhood), ақау-лық (defect), ағым-дық (current) (KRRKTD, 2014; DBWKL, 2019; Etymonline.com).

Examples of terms formed using the suffixes +лық, +лік, +дық, +дік, +тық, +тік from Arabic words adapted to the peculiarities of the Kazakh language: әлеумет-тік (social), амал-дық (practical), ақиқат-тық (reality) (KRRKTD, 2014; DBWKL, 2019; Etymonline.com).

Examples of terms formed using the suffixes +лық, +лік, +дық, +дік, +тық, +тік from Latin words borrowed through the Russian language: вектор-лық (vector), бинар-лық (binary), коммуникация-лық (communication) (KRRKTD, 2014; DBWKL, 2019; Etymonline.com).

Examples of terms formed using the suffixes +лық, +лік, +дық, +дік, +тық, +тік from Greek words borrowed through Russian or English: морфология-лық (morphological), орфография-лық (orthographic), динамика-лық (dynamic) (KRRKTD, DBWKL, 2019; Etymonline.com).

An example of a term formed using the suffix +тік from a German word borrowed through Russian: блок-тік (block) (KRRKTD, 2014; DBWKL, 2019; Etymonline.com).

In the Kazakh language, the suffixes +лық, +лік, +дық, +дік, +тық, +тік are also productively used to create terms in the Turkish language. In Turkish, the suffixes +lık, +lik, +luk, +lük are used, which form derivative nouns and adjectives from nouns. If the formed noun comes before another noun, it is also used as an adjective (Korkmaz, 2009: 56).

Examples of terms formed with the suffixes +lık, +lik, +luk, +lük in Turkish: etkin-lik (activity), doğru-luk (truthfulness), açık-lik (openness), belge-lik (document), öz-nite-lik (attribute) (BTKK, 2013).

Examples of terms formed with the suffixes +lık, +lik, +luk, +lük from Arabic words in Turkish: hata-sız-lik (infallibility), mühendis-lik (engineering) (BTKK, 2013; Nişanyan sözlük). An example of a term formed by the suffix +lık from a Latin word borrowed through Italian: korsan-lık (piracy) (BTKK, 2013; Nişanyan sözlük).

2. Suffixes +лы, (+лі, +ды, +ді, +ты, +ті) ~ +lı (+li, +lu, +lü). In the Kazakh language, the suffixes are productive suffixes that form adjectives from nouns. They add a lexical meaning indicating the presence or quantity of a certain property or phenomenon (Yskakov, 1991: 173).

The suffixes +lı, +li, +lu, +lü in Turkish are also among the most frequently used suffixes for forming nouns from nouns and adjectives. They add several meanings when creating words. From nouns (sometimes from adjectives), they form adjectives with the meaning “to own, to have this property, to be relevant, to be authorized” (Korkmaz, 2009: 54).

In the terminological dictionary of the Kazakh language, related to the field of information technology, examples of terms formed using the suffixes +лы, +лі (+ды, +ді, +ты, +ті): ақау-лы (with a defect), бейім-ді (adaptive), қолданба-лы (applied), қолжетім-ді (accessible), пішім-ді (format), (active). Examples of terms formed from borrowed words with the suffix +ты: зият (Persian)-ты, оверли

оверлей (English)-лі, планард стандарт (French)-ты (KRRKTD, 2014; DBWKL, 2019; Etymonline.com).

Examples of terms formed from Greek words borrowed through Russian, with the suffixes +лы, +лі (+ды, +ді, +ты, +ті): автомат-ты (automatic), автоном-ды (autonomous), аналог-ті (analog) (KRRKTD, 2014; DBWKL, 2019; Etymonline.com).

In Examples of terms formed from Latin words borrowed through Russian, with the suffixes +лы, +лі (+ды, +ді, +ты, +ті): абонент-ті (subscriber), абсолют-ті (absolute), абстракт-ты (abstract) (KRRKTD, 2014; DBWKL, 2019; Etymonline.com).

Turkish, the suffixes +lı, +li, +lu, +lü are used to create terms in the field of computer technology: dalga-lı (wave), ilişki-li (related), gözetim-li (observed) (BTKK, 2013).

Examples of terms formed from Arabic and Persian words with the suffixes +lı, +li: renk-li (colored), destek-li (supported), devam-lı (continuous) (BTKK, 2013).

The suffixes +лы, +лі (+ды, +ди, +ты, +ти) in Kazakh and +lı, +li, +lu, +lü in Turkish are productive suffixes attached to nouns. However, they can also be attached to verbs to form terms, as in the following examples: белсен-ді (active), duyar-lı (sensitive), geçer-li (active), belir-li (definite).

Examples of terms formed using the suffixes +cı (+ci, +cu, +cü) and +çı (+çi, +çu, +çü): yardım-cı (assistant), yazma-cı (registrar), macroişlem-ci (microprocessor) (BTKK, 2013).

3. Suffixes +шы, +ші ~ +cı (+ci, +cu, +cü); +çı (+çi, +çu, +çü)

In Turkish, the suffixes +cı (+ci, +cu, +cü) and +çı (+çi, +çu, +çü) form names of professions and crafts. They form names associated with any work. In grammar, these suffixes are called "suffixes forming names of professions" (meslek eki). In addition, as in the Kazakh language, they form familiar names by joining nouns and adjectives. The suffixes +cı (+ci, +cu, +cü) and +çı (+çi, +çu, +çü) also add the meaning of possession. These suffixes can be used alone or in combination with the plural affixes +lar, +ler, expanding the meaning and forming names of places such as streets, districts, villages (Korkmaz, 2009: 42).

Examples of terms formed with the suffixes +cı (+ci, +cu, +cü) and +çı (+çi, +çu, +çü): yardım-cı (assistant), yazma-cı (registrar), macroişlem-ci (microprocessor) (BTKK, 2013).

4. Suffixes +ша, +ше ~ +ca, (+ce, +ça, +çe)

Suffixes +ша, +ше are added to nouns, forming derivative adverbs, and to adjectives, forming forms denoting diminution or degree of a feature. These suffixes also form diminutive forms of nouns (Yskakov, 1991: 161). In computer terminology, examples of terms formed with the suffixes -ша, -ше: аунақ-ша (small lump), тақтай-ша (small board), қабық-ша (small shell) (KRRKTD, 2014). In these examples, the suffixes give the words a diminutive meaning.

In Turkish, the suffix +ca (+ce, +ça, +çe) is widely used to convey the meanings of equality, similarity and proportionality (Zülfikar, 1991: 62).

An example of a term formed with the suffix +ca (+ce, +ça, +çe): sözlük-çe (dictionary) (BTKK, 2013).

5. Suffixes +sal, +sel

Adjectives such as siyasi (political) and ticari (commercial) came into Turkish from Arabic, and after the Tanzimat period, words such as natural, nasyonal (national) and sosyal (social) came from Western languages. The suffixes +l (+ıl, +il, +ul, +ül), +al (+el), +sal (+sel) were used to create Turkish equivalents of these adjectives.

The suffixes +sal, +sel give the nouns the meanings of "related to", "relative to", "belonging to". They also add the meaning of "to possess" (Zülfikar, 1991: 139).

Examples of terms formed with the suffixes +sal, +sel in Turkish: abecesayı-sal (alphanumeric), yapı-sal (structural), bilişim-sel (computational) (BTKK, 2013).

Examples of terms formed from Greek roots with the suffixes +sal, +sel: alfabe-sel (alphabetical), fizik-sel (physical).

Examples of terms formed from Arabic roots with the suffixes +sal, +sel: daire-sel (circular), karar-sal (decisive), mantık-sal (logical) (BTKK, 2013).

An example of a term formed from a Persian root with the suffix +sal, +sel: sütun-sal (columned) (BTKK, 2013).

6. +l, +al, +el. These suffixes form adjectives from nouns (Zülfikar, 1991: 55). Examples: yer-el (local), ulus-al (national), san-al (virtual) (BTKK, 2013).

7. Suffix +sız (+siz, +suz, +süz). This suffix is the opposite in meaning to the suffix +lı (+li, +lu, +lü). It forms adjectives with a negative meaning, denoting the absence, deficiency, or lack of something (Korkmaz, 2009: 341). Examples of computer terms formed with this suffix: bakışım-sız (asymmetrical), zaman uyum-suz (asynchronous), uyum-suz (incompatible).

8. +ıt, +it, +ut, +üt.

These suffixes form adjectives and nouns from nouns (Zülfikar, 1991: 144). Examples: boy-ut (size), koş-ut (parallel).

9. +ay ~ +ай

This suffix forms nouns from nouns. In some cases, it is attached to verbs to form new terms. During the Republican period, this suffix was used for Turkification. The function of the suffix is not always clear. The suffix +ay (+ай) adds the meaning of “relating to” (ilgili olma) to the word. The suffix +ay (+ай) is also used to create terms in mathematics and geometry (Zülfikar, 1991: 61). Examples of terms formed with the suffix +ay (+ай) in Turkish computer terminology are yüz-ey (surface), yön-ey (vertical).

According to Z. Korkmaz (Korkmaz, 2009: 36), the suffix +ay in Turkish is used in the words “kuzey” (north) and “güney” (south) to indicate direction. Since these words are also found in Azerbaijani and Turkmen, the suffix +ай should be considered an old suffix. Only in these languages, as in Turkish, the south means “sunny side” and the north means “shady side”.

In Kazakh, the suffix +ай is also used to create terms and is considered a suffix that forms nouns from nouns (Kurmanbaiuly, 2009: 55).

10. +шық, +шік ~ +cık, +cik, +cuk, +cük

In Kazakh, the suffix +шық is used to form diminutive nouns (Kurmanbaiuly, 2009: 66). In Turkish, these suffixes add the meanings of diminutiveness, intensification, endearment, and compassion to nouns and adjectives (Korkmaz, 2009: 42).

Examples of terms: in Kazakh: ұя-шық (nest), in Turkish: kabar-cık (vial), kutu-cuk (box).

II. Suffixes that form nouns from verbs

1. +м (+ым, +ім) ~ +m (+Im, +Um) suffixes are among the most productive suffixes for forming nouns from verbs (Yskakov, 1991: 153; Kurmanbaiuly, 2009: 62). These suffixes form names of various abstract concepts, places and concrete objects from transitive and intransitive verbs in both Kazakh and Turkish (Yskakov, 1991: 153; Korkmaz, 2009: 89).

Examples of terms in Kazakh are formed with this suffix: сұрат-ым (request), тіркел-ім (registration), құрыл-ым (structure) (KRRKTD, 2014).

Examples of terms in Turkish formed with the suffix +m (+Im, +Um): eyle-m (action), eriş-im (access), iletişim (communication) (BTKK, 2013).

2. +ма +ме (+ба, +бе, +па, +пе) ~ +ma, +me: Homonymous suffixes that are used both to form nouns and adjectives, and to form negative forms of verbs. They differ in both meaning and phonetics. Suffixes that form nouns from verbs have the following meanings: 1. Names of tools, objects, places, various dishes, diseases, formed from transitive verbs. 2. Abstract concepts formed from various transitive and intransitive verbs (Yskakov, 1991: 153). In recent years, the suffixes +ма, +ме have become one of the most productive for creating terms in the Kazakh language (Kurmanbaiuly, 2009: 62).

In Turkish, suffixes form nouns from verbs (Korkmaz, 2009: 91). In Turkish, words formed with the suffixes +ma, +me denote the following concepts: tool, food, disease, names of places (Zülfikar, 1991: 119).

Examples of terms in the Kazakh language formed with the suffixes +ма (+ме, +ба, +бе, +па, +пе): бүрке-ме (covering), есепте-ме (counting), бала-ма (assessment), түсінікте-ме (explanation) (KRRKTD, 2014).

Examples of terms in Turkish formed with the suffixes +ma, +me: ata-ma (appointment), gecik-me (delay), koru-ma (protection) (BTKK, 2013).

Examples of terms formed from Arabic and Persian words in Turkish using the suffixes +ma, +me: zayıfla-ma (weakening), eşzamanla-ma (synchronization), destekle-me (support) (BTKK, 2013; Nişanyan sözlük).

Examples of terms formed from French loanwords in Turkish using the suffixes +ma, +me: programla-ma (programming), kopyala-ma (copying), kodla-ma (coding), depola-ma (storage) (Latin root), tampon-la-ma (buffering) (French root) (BTKK, 2013; Nişanyan sözlük).

3. +(y)шы, +(y)ші ~ +ıcı (+ici, +ucu, +ücü)

The suffixes +(y)шы, +(y)ші are among the most productive suffixes in the Kazakh language for the formation of derivative nouns. These suffixes are added to verbs and are used to denote the names of professions, people engaged in a certain activity, as well as the names of skills and abilities, actions that have become a habit, participants in public organizations, and supporters of social movements or views (Yskakov, 1991: 150). Examples of Kazakh terms formed with the help of these suffixes: есепте-у-ші (computer), программала-у-шы (programmer), пайдалан-у-шы (user), тас(ы)-у-шы (carrier). In addition, Greek words borrowed through Russian, such as “программа”, are given the suffix +la, turning the word into a verb, and then the suffix +y is added, forming hybrid nouns, such as “программалаушы” (programmer). Similarly, the Arabic borrowed word “пайда” is given the suffix +lan, forming a verb, and then the suffix +y is added, forming the word “пайдаланушы” (user). A noun formed with the suffix +ушы, +уші, when combined with another noun, acquires a qualitative meaning and is used as an adjective. For example: the term “есептеуші машина” (computing machine) (DBWKL, 2019: 403).

The suffix +ıcı (+ici, +ucu, +ücü) in Turkish forms names of actions and professions from verbs (Zülfikar, 1991: 93). Examples: çevir-ici (translator), sür-ücü (driver), sun-ucu (server) (BTKK, 2013).

A term formed from a Greek root with the suffix +la turned into a verb and then adding the suffix +y-ıcı: programla-y-ıcı (programmer). A term formed from a Latin root with the suffix +la turned into a verb and then adding the suffix +y-ıcı: kodla-y-ıcı (coder). A term formed from an Arabic root with the suffix +la turned into a verb and then adding the suffix +y-ıcı: temizle-y-ıcı (cleaner).

4. +қыш (+кіш, +ғыш, +гіш) ~ +gıç (+giç, +guç, +güç); +kıç (+kiç, +kuç, +küç)

The suffixes +қыш (+кіш, +ғыш, +гіш) are homonymous suffixes. They are used both to form nouns (сыпырғыш – broom, секірткіш – jumper) and to form adjectives (білгіш – knowledgeable, байқағыш – observant, көргіш – seeing) in the Kazakh language. However, in terminology they mainly form nouns. Examples of terms in the field of information technology formed with these suffixes: жетілдір-гіш (amplifier), нұсқа-ғыш (pointer), ажырат-қыш (switch) (KRRKTD, 2014).

+gıç (+giç, +guç, +güç); +kıç (+kiç, +kuç, +küç)

Suffixes +gıç (+giç, +guç, +güç); +kıç (+kiç, +kuç, +küç) are added depending on the harmony of vowels and consonants. These suffixes are usually used with monosyllabic words. Although they are rarely used, they are very convenient for creating terms (Zülfikar, 1991: 88). Example: başlan-gıç (beginning).

5. +уыш, +уіш

The suffixes +уыш, +уіш are complex suffixes formed from the suffixes -y and -ыш. These suffixes are added to verbs in the Kazakh language, forming the names of various tools and other abstract concepts (Yskakov, 1991: 155). Examples of terms formed with the help of these suffixes: автожүкте-уіш (autoloader), бейімде-уіш (adapter), жүкте-уіш (loader) (KRRKTD, 2014).

6. +y

The addition of the suffix +y to verb stems to create terms that combine material and procedural meanings began with Akhmet Baitursynuly and became one of the productive ways of forming terms in modern Kazakh terminology (Kurmanbaiuly, 2014: 104).

a. Examples of terms formed by adding the suffix +y to verbs with stems ending in +ла, +ле, +да, +де, +та, +те: меншікте-у (privatization), сұрыпта-у (sorting), бұғатта-у (blocking):

Terms formed from Greek roots borrowed through Russian, with the addition of the suffixes -ла, -ле, -да, -де, -та, -те and then the suffix +y: программала-у (programming), синтезде-у (synthesis), синхронда-у (synchronization).

Terms formed from Latin roots borrowed through Russian, with the addition of the suffixes: абстрактыла-у (abstraction), индексте-у (indexing), трансляцияла-у (translation), верификацияла-у (verification) (KRRKTD, 2014).

Terms formed from Arabic words adapted to the peculiarities of the Kazakh language, with the addition of the suffixes +ла-у, +ле-у, +та-у, +те-у, +да-у, +де-у: мұрағат+та-у (archiving), шифр+ле-

у (encryption). Terms formed from French roots borrowed through the Russian language: буфер+ле-у (buffering), стандарт+та-у (standardization), монтаж+да-у (montage) (KRRKTD, 2014).

b. Examples of terms formed by adding the suffixes +ла-н (+ле-н, +да-н, +де-н, +та-н, +те-н) және +ла-с (+ле-с, +да-с, +де-с, +та-с, +те-с) to the stems of verbs, with the addition of the causative suffixes +тыр (+тір, +дыр, +дір) and then the suffix +у: қалып+тас-тыр-у (formation), қисын+дас-тыр-у (combination), айна+лан-дыр-у (mirroring).

Terms formed from Latin and Greek roots borrowed through the Russian language: инициал+дан-дыр-у (initialization), автомат+тан-дыр-у (automation), компьютер+лен-дір-у (computerization).

Terms formed from Arabic and German words: ақпарат+тан-дыр-у (informatization), мұрағат+тан-дыр-у (archiving), трасса+лан-у (tracing) (KRRKTD, 2014).

Suffixes +ла-н-дыр-у (+ле-н-дір-у, +да-н-дыр-у, +де-н-дір-у, +та-н-дыр-у, +те-н-дір-у) and +ла-с-тыр-у (+ле-с-тір-у, +да-с-тыр-у, +де-с-тір-у, +та-с-тыр-у, +те-с-тір-у) are used to convey meanings similar to the suffixes -изация, -ирование, -ировка in Russian.

7. The suffixes +атын, +етін, +йтын, +йтін + are formed by adding the suffixes -а, -е, -й and the state verb with the past participle +ған. For example: кел-е тұр-ған > кел-е тұ-ған > кел-е тұ-ғын > кел-етін(coming))

Suffixes атын, (-етін, -йтын, -йтін) are added to verb stems with suffixes +ла-н- (+ле-н-, +да-н-, +де-н-, +та-н-, +те-н-) in the Kazakh language, forming future participles, which are used to create terms. Borrowed words first turn into verbs with the suffixes +ла-н- (+ле-н-, +да-н-, +де-н-, +та-н-, +те-н-), and then the suffixes +атын, (+етін, +йтын, +йтін) are added to them to form adjectives with the meaning of the future tense: коммутация+ла-н-атын (switched), программа+ла-н-атын (programmable), масштаб+та-л-атын (scalable) (KRRKTD, 2014).

8. +ған, +ген, +қан, +кен ~ +ан, +ен

In the Kazakh language to the suffixes +ла-н (+ле-н, +да-н, +де-н, +та-н, +те-н) or +ла-с (+ле-с, +да-с-, +де-с, +та-с, +те-с) are added the suffix -тыр (+тір, +дыр, +дір) and the suffix -ыл (-іл, -л) of the intransitive verb with the suffix of the past tense of the pronoun +ған (+ген, +қан, +кен).

Examples: автомат+тан-дыр-ыл-ған (automated), маман+дан-дыр-ыл-ған (specialized) (KRRKTD, 2014).

These suffixes are also added to nouns with the suffixes +та-л, +да-н, +т-іл, +ле-н, forming verb forms, to which the suffixes +ған, +ген, +қан, -кен are then added, creating terms: : индекс+те-л-ген (indexed), интеграл+да-н-ған (integrated), кеңейт-іл-ген (extended) (KRRKTD, 2014). In Turkish, the suffix +an (+en) corresponds to the Kazakh suffix +ған ((+ген, +қан, +кен).

Suffix +an (+en).

It forms nouns and adjectives from verbs, as well as nouns from nouns (Zülfikar, 1991: 57-58). Examples: düz-en (arrangement), böl-en (divisor), çarp-an (multiplier) (BTKK, 2013).

9. +с (+ыс, +іс) ~ +іс (+іс, +уs, +үs)

Suffixes +с (+ыс, +іс) form nouns from verbs in the Kazakh language (Kurmanbaiuly, 2009: 64). Examples of terms: іркіл-іс (stop), үдеп-іс (process) (KRRKTD, 2014). In Turkish, the analogue of the Kazakh suffix +с (+ыс, +іс) is the suffix +ış (+іс, +уs, +үs).

+іс (+іс, +уs, +үs)

The suffix +іс forms nouns from verbs, denoting actions or processes. It is not suitable for forming names of objects but is more often used for abstract nouns. During the Republican period, this suffix was used in Turkish for many Western concepts. Examples: davranış (behavior), anlayış (understanding), direniş (resistance). This suffix was also used for Turkish versions of some Arabic words, such as “icat”(invention) > “buluş” (discovery) (Zülfikar, 1991: 96).

Examples of terms: açıl-ış (opening), kurul-uş (institution), söyle-ş (chat) (BTKK, 2013).

10. +ай (+ай)

This suffix forms nouns from nouns. In some cases, it also forms new terms by attaching them to verbs, giving them a meaning related to a certain characteristic indicated by the verb. Examples of terms in Turkish computer terminology with the suffix +ай (+ay): yap-ay (artificial), yat-ay (horizontal), düzey (level) (BTKK, 2013).

11. +ç, +аç (+еç)

The suffixes +ç, +aç, +eç give words the meanings of increase and decrease (Korkmaz, 2009: 34). They form nouns from nouns, giving words the meaning of similarity. In addition, they form nouns and adjectives from verbs (Zülfikar, 1991: 51). Examples of computer terms with the suffixes +aç, +eç: yükselt-eç (amplifier), birik-eç (storage), ay(ı)r-aç (bracket) (BTKK, 2013).

12. +dı, (+di, +du, +dü, +tı, +ti, +tu, +tü)

1. This suffix forms verbs in the past tense. 2. The past tense suffix +dı, without being attached to personal endings, are also used as a suffix forming nouns. The meanings that the suffix +dı gives to words are completed work and product (uydu), name of food (külbastı), transport (kaptıkaçtı), performer of an action (mirasyedi) (Zülfikar, 1991: 80-81). Examples of computer terms with this suffix: bağlan-tı (communication), görün-tü (picture), toplan-tı (meeting) (BTKK, 2013).

13. +ıl (+il, +ul, +ül)

This suffix forms nouns from onomatopoeia (Zülfikar, 1991: 95). Examples: say-ıl, koş-ul.

14. +gı (+gi, +gu, +gü, +kı, +ki, +ku, +kü)

The suffix +gı is one of the most frequently used suffixes. It gives words the meanings of a tool, equipment, intensive action, the result of work. It also forms nouns denoting the product of an action (Zülfikar, 1991: 87-88). Examples of terms with this suffix: bil-gi (information), çiz-gi (line), sil-gi (eraser), diz-gi (line) (BTKK, 2013). The suffix +gı (+gi, +gu, +gü, +kı, +ki, +ku, +kü) in the Kazakh language corresponds to the suffixes +ғы, +гі, +қы, +кі. In the Kazakh language, they also form nouns from verbs (Kurmanbaiuly, 2009: 57).

15. +ga (+ge, +ka, +ke) ~ +fa (+re, +ka, +ke)

This suffix forms terms by joining them to verb roots and stems (Zülfikar, 1991: 83). Suffix is also used in Kazakh but has not been used to create computer terms. Examples of computer terms in Turkish with this suffix are yon-ga (chip), bel-ge (document), çiz-ge (diagram) (BTKK, 2013).

16. +k (+ık, +ik, +uk, +ük)

This suffix forms nouns and adjectives from verbs. It gives words the meanings of frequency, character, essence, and continuity (Zülfikar, 1991: 53). Examples: yaklaş-ık (approximately), yerleş-ik (stable), karmaş-ık (complex) (BTKK, 2013).

17. +k (+ak, +ek)

This suffix forms nouns and adjectives from verbs and nouns. It gives words the meanings of strong impact, location, instrument, character, essence, habit, speed, and concentration in one place, density, smallness (Zülfikar, 1991: 54). Examples: belle-k (memory), kayna-k (resource) (BTKK, 2013).

18. +r (+ır, +ir, +ur, +ür, +ar, +er)

The suffix +r (+ır, +ir, +ur, +ür, +ar, +er) forms nouns from verbs. It gives words the meaning of property, quality, name of a person, tool, action (Zülfikar, 1991: 54). Examples of computer terms in Turkish with this suffix: yaz-ar (recorder), bilgisayar-ar (computer), süz-er (filter). The suffix -r ~ -p is also used in Kazakh to form nouns from verbs (Kurmanbaiuly, 2014: 552).

19. +mış, (+miş, +muş, +müş)

1. In Turkish, this suffix forms the past tense of an unknown perfective aspect. 2. It also forms nouns and adjectives from verbs. The suffix +mış, (+miş, +muş, +müş) gives words the meanings of “done earlier, completed, result”. It can also give meaning to a person’s name (Zülfikar, 1991: 127).

Adjectives formed with the suffix +mış, (+miş, +muş, +müş) in Turkish are similar to those formed with the suffix +ed in English. Examples: advanced ~ geliş-miş (advanced), allocated ~ ayrıl-mış (allocated), kutulan-mış ~ boxed (BTKK, 2013).

20. The suffix +t (+ıt, +it, +ut, +üt) forms nouns from verbs. This suffix, although rarely used, was used to create many terms during the Republican period. The suffix +t (+ıt, +it, +ut, +üt) gives the word the meanings of “place”, “created or offered object, product”, “result of a completed action”, “name of food and drink”, “tool or equipment” (Zülfikar, 1991: 127). In Turkish computer terminology, terms formed with this suffix are: ölç-üt (criterion), say-ıt (counter), yan-ıt (answer) (BTKK, 2013).

21. The suffix +mak, +mek is an infinitive suffix (mastar) in Turkish. It forms names of abstract actions from verbs (Korkmaz, 2009: 96). In Kazakh, the analogue of the infinitive suffix is represented by the suffix +y, while in Turkish, the suffix +mak is used.

Examples of terms formed with the suffix +mak, +mek: ata-mak (purpose), varsay-mak

(assumption), başvur-mak (application) (BTKK, 2013).

22. +anak, +enek

The suffixes form nouns from verbs. In the Republican period, they were used to create new words in the process of Turkification. These suffixes give the meanings of “continuity”, “long-term existence”, “territory”, “transport”, “the presence of a certain property” (Korkmaz, 2009: 79). An example of a computer term: seç-enek (choice).

23. +gaç, +geç, +kaç, +keç

The suffixes form nouns and adjectives from verbs in Turkish.

When forming nouns, they create names for various tools and equipment. Examples of computer terms: kısı-kaç (clamp), süz-geç (filter). Depending on the meaning of the verb, they can form adjectives expressing character traits and essences (Korkmaz, 2009: 79).

24. +la, +le

The suffixes +la, +le have been used in all Turkic languages from ancient Turkic times to the present day. They form transitive verbs from nouns, conveying the meaning of action or exposure (Korkmaz, 2009: 116).

Examples: denet-le (to check), doğru-la (to confirm) (BTKK, 2013).

25. +gın, +gin, +kın, +kin

The suffixes +gın, +gin, +kın, +kin form adjectives from nouns, indicating the features of objects. These are productive suffixes (Korkmaz, 2009: 16). Example: seç-kin (distinctive).

26. +man, +men

The suffixes form new words from transitive and intransitive verbs, as well as verb stems in Turkish. They are rarely used. In addition, it gives the words the meanings of “redundancy” and “continuity”. In the process of Turkification, these suffixes were also used to create names denoting people who perform certain actions. Examples: çevir-men (translator), danış-man (consultant). (Korkmaz, 2009: 98).

An example of a computer term: et-men (factor).

The article analyzes the suffixes used to create terms in the field of information technology in the Kazakh and Turkish languages. The results of the analysis show that some suffixes are used only in Kazakh, others only in Turkish, and some common suffixes are used in both languages.

Suffixes used only in Kazakh to create computer terms +атын, +етін, +йтын, +йтін, +у, +уыш, +yiш.

Suffixes used only in Turkish to form computer terms: +man, +men, +gın, +gin, +kın, +kin, +la, +le, +gaç, +geç, +kaç, +keç, +anak, +enek, +mak, +mek, +t (+ıt, +it, +ut, +üt), +mış, (+miş, +muş, +müş), +r (+ır, +ir, +ur, +ür, +ar, +er), +k (+ak, +ek), +k (+ık, +ik, +uk, +ük), +ga (+ge, +ka, +ke), +gı (+gi, +gu, +gü, +kı, +ki, +ku, +kü), +ıl (+il, +ul, +ül), +dı, (+di, +du, +dü, +tı, +ti, +tu, +tü), +ç, +aç (+eç), +ay, +ıl, +al, +el, +sal, +sel, +cı (+ci, +cu, +cü); +çı (+çi, +çu, +çü).

Common suffixes used in Kazakh and Turkish to form computer terms: +c (+ыс, +ic) ~ +ış (+iш, +uш, +üş), +ған, +ген, +қан, +кен ~ +an, +en, +кыш (+кіш, +ғыш, +гіш) ~ +gıç (+giç, +guç, +güç); +kıç (+kiç, +kuç, +küç), +(y)шы, +(y)ші ~ +ıcı (+ici, +ucu, +ücü), +ma +me (+ба, +бе, +па, +пе) ~ +ma, +me, +m (+ым, +ім) ~ +m (+Im, +Um), +шық, +шік ~ +cık, +cik, +cuk, +cük, +ша, +ше ~ +ca, (+се, +ça, +çe), +лы, +лі (+ды, +ді, +ты, +ті) ~ +lı, +li, +lu, +lü, +лық, +лік (+дык, +дік, +тык, +тік) ~ +lık, +lik, +luk, +lük.

The article examines both noun-forming and adjective-forming suffixes. According to the scholar M. Teresa Cabre, terms can be classified based on the categories of concepts they represent. Concepts themselves can be grouped into classes and subclasses according to their common characteristics and interrelations. There are several types of such relations: concepts, processes, and states arising from their interaction can all be classified as concepts. Considering this, the main conceptual groups can be identified as follows:

1. Objects and entities – nouns.
2. Processes, operations, actions – verbs and verbal nouns.
3. Properties, states, qualities – adjectives.
4. Relations – adjectives, verbs, and particles (Cabre, 1999: 88).

The scholar Sh. Kurmanbaiuly emphasizes the special role of adjectives in terminology formation,

noting that both relative and qualitative adjectives are equally used in this process. Although adjectives most commonly appear within word combinations, Kurmanbaiuly also highlights that adjectives can become terms independently, without combining with other words. For instance, in legal terminology, the word *cezіktri* (suspect) refers to “a person detained on suspicion of committing a crime.” In this case, the adjective itself functions as a noun, becoming a standalone term. In linguistics, the phenomenon of linguistic economy (or reduction) often leads to the omission of the second component in phrases, resulting in the adjectival form acquiring the meaning of a noun, thus becoming a term in its own right (Kurmanbaiuly, 2018: 36). Based on this observation, the article considers adjective-forming suffixes alongside noun-forming suffixes as productive term-forming elements.

Conclusion

The article examines the suffixes used in the formation of information technology terminology in the closely related Kazakh and Turkish languages. The aim of the study was to identify common patterns in term formation by analyzing the suffixes applied in the creation of information technology terms in Kazakh and Turkish, thereby contributing to the development of a unified terminological database for Turkic languages.

The suffixes were categorized into two main groups: suffixes that form nouns from nouns and suffixes that form nouns from verbs. The research employed descriptive and comparative methods. As a result, 10 suffixes forming nouns from nouns and 26 suffixes forming nouns from verbs were identified within the information technology terminology of Kazakh and Turkish. In total, 36 suffixes were described and analyzed.

The following suffixes were identified as common to both Kazakh and Turkish in the formation of computer-related terms: +лық, +лік (+дық, +дік, +тық, +тік) ~ +lık, +lik, +luk, +lük; +лы, (+лі, +ды, +ді, +ты, +ті) ~ +lı (+li, +lu, +lü); +шы, +ші ~ +cı (+ci, +cu, +cū); +çı (+çi, +çu, +çü); +ша, +ше ~ +ca (+ce, +ça, +çe); +шық, +шік ~ +cık, +cik; +м (+ым, +ім) ~ +m (+Im, +Um); +ма, +ме (+ба, +бе, +па, +пе) ~ +ma, +me; +(y)шы, +(y)ші ~ +ıcı (+ici, +ucu, +ücü); +с (+ыс, +іс) ~ +ış (+iş, +uş, +üş); +ған, +ген, +қан, +кен ~ +an, +en.

Although these suffixes are common to both languages, no identical terms were found, as the root words themselves differ in each language. English remains the primary language of the information technology field. English terminology itself contains a significant proportion of loanwords from other languages, particularly Latin, Greek, and French. The article also identifies the roots of terms borrowed into English from these languages, highlighting their active use in modern English. The dominance of English in the field of information technology has contributed to its global spread and has influenced terminology development in other languages. Arabic has also historically influenced both Kazakh and Turkish. Therefore, the article identifies Arabic loanwords that have become so assimilated in both languages that they function as native terms. The limitation of this study is that it focuses exclusively on suffixes used in term formation within the field of information technology in Kazakh and Turkish. In the future, morphological studies of terminology from other scientific fields will be necessary, as additional suffixes may be employed in other subject areas. The findings of this research can be applied in future collaborative projects between Kazakh and Turkish scholars aimed at developing a shared terminology database for the two languages.

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Abbreviations:

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Information about the article / Мақала туралы ақпарат / Информация о статье

Entered the editorial office / Редакцияға түсті / Поступила в редакцию: 07.08.2024.

Accepted for publication / Жариялауға қабылданды / Принята к публикации: 20.03.2025.

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