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Aidana Ainabek 

L. N. Gumilyov Eurasian National University, Kazakhstan

Bekzhan Abdualiuly 

L. N. Gumilyov Eurasian National University, Kazakhstan

Samal Zhuanyshpaeva 

M. Kozybaev North Kazakhstan State University,
Kazakhstan

Aliya Ongarbayeva 

Abai Kazakh National Pedagogical University, Kazakhstan

Aigul Aitymova 

M. Kozybaev North Kazakhstan State University,
Kazakhstan

Assem Belgibekova 

M. Kozybaev North Kazakhstan State University,
Kazakhstan

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The Effects of Teaching Toponyms and Folk Geography Terms with Information Technologies in Literature Courses

Aidana Ainabek, Bekzhan Abdualiuly, Samal Zhuanyshpaeva, Aliya Ongarbayeva, Aigul Aitymova,
Assem Belgibekova

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Abstract

Kazakh and Nogai peoples have shared many similar experiences throughout history. In the theoretical dimension of this study, the common features of Kazakh and Nogai communities in the fields of language, culture and geography are analyzed in a comparative perspective. In the research dimension, the common history of Kazakh and Nogai peoples, language kinship and similarities in the formation of place names were discussed in detail, and the cultural and linguistic ties of these two communities were taught with the support of information technologies. In this context, a pre-test post-test design with control group was applied in the study. Experimental applications were applied in Kazakh Language and Literature course. Toponyms and folk geography terms in Kazakh and Nogai languages were taught with the support of information technologies in the experimental group and traditional teaching in the control group (6 weeks). Kazakh and Nogai Language Achievement Tests and Attitude towards the Course Scale were used as measurement tools in the research. Mann Whitney U test, one of the Non-Parametric statistics, was used to analyze the research data. According to the research findings, a significant difference was found in favor of the experimental group in terms of Kazakh Toponyms and Folk Geography Terms. However, no significant difference was found between the achievements of the experimental and control groups in teaching Nogai Toponyms and Folk Geography Terms. Finally, it was found that the information-supported teaching activities applied in the study positively affected the students' attitudes towards the course.

Introduction

Names are used when referring to individual objects such as people, animals, buildings, organizations, artifacts and places. As indispensable elements of language, names have various functions, not only as expressions referring to specific objects, but also as a way of communicating cognitively, emotionally, ideologically and socially (Helleland, 2012). Kazakh and Nogai relations form an important part of the historical, ethnic and cultural

fabric of Central Asia. The history of these relations is complex and rich. Kazakhs and Nogais are two Turkic peoples of Turkic-Mongolian origin and have lived in vast regions of Central Asia. Both communities live within the geographical boundaries of Central Asia, especially in Kazakhstan, Russia, Uzbekistan, and Turkmenistan. The history of relations between the two peoples is closely connected with the history of Central Asia (Meirambekova & Dautova, 2021; Sandybayev, 2014).

Historical relations between Kazakhs and Nogais began to take shape in Central Asia after the fall of the Mongol Empire. After the fall of the Mongol Empire, these communities established their own independent principalities and settled in different parts of Central Asia. In the 16th century, there were sometimes alliances and sometimes conflicts between Kazakhs and Nogais (Tazhin, 2007). Especially the Kazakh Khanate and the Nogai Khanate emerged as important political units during this period. Towards the end of the 18th century, with the expansion of the Russian Empire into Central Asia, relations between the Kazakhs and Nogais became more complicated. Coming under the sovereignty of the Russian Empire, these communities sometimes cooperated under Russian rule and sometimes engaged in struggles for independence. In the 19th century, Nogais generally lived together with Kazakhs and led a nomadic life in the same geographies (Absadyk, 2023; Albekov, Alpysbayev & Auyesbayeva, 2017; Vurucu, 2008).

Toponyms are place names that reflect the geographical features, cultural background and historical importance of a region. Folk geographical terms are generally geographical expressions used by local communities in their daily lives (Handcock, 2011). The word "toponym" is a term that describes geographical locations, place names and other names related to geography. This term includes names that express the geographical features, cultural heritage or historical significance of a region. In other words, toponyms are words that indicate geographical locations, such as the name of a specific geographical place or the name of a settlement. The toponymic relations between the Kazakh and Nogai communities are a reflection of the long years of coexistence of these two peoples in Central Asia. Place names, such as geographical names, settlements, rivers and mountains, provide important clues reflecting the historical ties between Kazakhs and Nogais. For example, many place names are similar in Kazakh and Nogai, reflecting the linguistic and cultural similarities between the two communities. Also, the nomadic lifestyle of these communities may have led to similarities in toponymic terms. Geographical features important to Kazakhs and Nogais, such as rivers, migration routes and plateaus, form part of the toponymic heritage of these communities (Kurmanbekkyzy & Kaldybekovna, 2015; Meirambekova & Dautova, 2021; Theisen & Boakari, 1983). Kazakh and Nogai relations are deeply integrated into the rich history and cultural fabric of Central Asia. Their historical background, geographical proximity and similar languages have deepened the relations of these two peoples and enriched the history of Central Asia. These historical and toponymic foundations are part of the complex mosaic of Central Asia and provide future generations with an important resource for understanding this rich heritage (Egorov, 2020; Vurucu, 2008; Daredjan, 2015).

Historical Foundations of Kazakh and Nogai Relations

Kazakh and Nogai relations are shaped by a combination of historical, geographical and cultural factors. These relations constitute an important part of the historical and cultural richness of Central Asia. The historical ties

between the two societies have contributed to the ethnic and cultural mosaic structure of Central Asia and these relations have been an important field of study and research for future generations (Baycaun Saule, 2002; Ibragimovna, 2022; Normanskaja, 2023).

Geographical Proximity: Kazakhs and Nogais live in similar regions of Central Asia. Kazakhs living in countries such as Kazakhstan, southern regions of Russia, Kyrgyzstan and Uzbekistan share geographical proximity with Nogais. This geographical proximity has historically formed the basis for interaction and contact between these two communities (Giraut & Holzschuch, 2016).

Language and Culture Similarities: Both Kazakhs and Nogais speak Turkic languages and have similar ethnic identities. Language similarities facilitated communication and cultural similarities contributed to the formation of common traditions (Novgorodov et al., 2019; Shamatov & Sainazarov, 2010).

Post-Mongol Empire Period: Following the collapse of the Mongol Empire, various Turkic peoples, such as the Kazakhs and Nogais, established their own independent principalities. During this period, there were occasional alliances and sometimes competitive relations between the two communities.

Nomadic Lifestyle: Both communities adopted a nomadic lifestyle throughout their history. This lifestyle led to similar migration routes, plateau areas and irrigation systems between Kazakhs and Nogais. Influence of the Russian Empire: In the 18th century, the Russian Empire's expansion into Central Asia complicated relations between the Kazakhs and Nogais. During this period, the two communities lived under Russian rule, but at the same time continued their struggle for independence (Matbek, Umirbekova & Kasymova, 2015; Umbetaliyeva, 2002).

Kazakh and Nogai Languages in the System of Turkic Languages

Kazakh and Nogai are two important languages belonging to the Kipchak group of the Turkic family of languages. These languages play a prominent role in the historical, cultural and linguistic context of Central Asia. Kazakh and Nogai belong to the Kipchak group of the Turkic family of languages. The Kipchak group represents a crucial subgroup in the family of Turkic languages. The languages in this group were historically spoken by the Kipchak Turks and later evolved into languages such as Kazakh and Nogai following the separation of these communities into different ethnic groups. Kazakh and Nogai have their own unique position within the Kipchak group. Both languages have similar grammatical structure and vocabulary, which makes them more closely related within the Kipchak group. However, there are also some linguistic differences and dialectal variations between Kazakh and Nogai. Kazakh and Nogai are two of the major languages spoken in Central Asia. They are especially widely spoken in Kazakhstan and parts of Russia. Therefore, they form part of the linguistic mosaic of Central Asia. Kazakh and Nogai reflect the historical changes within the Turkic language family. In particular, the historical nomadic cultures of Central Asia and the interaction of different ethnic groups have shaped the development of these languages. Therefore, Kazakh and Nogai are an important source for understanding the history and diversity of the Turkic language family (Kakzhanova & Abeuova, 2014; Rahimov, 2022; Shamatov & Sainazarov, 2010).

Historical Place Names in the Regions Inhabited by Kazakh and Nogai Peoples

Historical place names in the regions inhabited by the Kazakh and Nogai peoples are important signs reflecting the history, culture and nomadic way of life of these communities. For example, Semey is a city in eastern Kazakhstan and an important place that reflects the historical and cultural heritage of the Kazakh people. The city of Semey played an important role in the Kazakh struggle for independence and is therefore considered a historical symbol. Oral (Uralsk) is a city located in Western Kazakhstan. This region has an important place in the history of the Kazakh and Nogai peoples. The history of the city and the surrounding areas bears traces of the nomadic way of life. Aktobe is another important city in Western Kazakhstan.

The city provides an example of the interaction of Kazakh and Nogai cultures. Moreover, this region is located on a historically important trade route. Astrakhan occupies an important place in the history of the Nogai people in Russia. This city and its surroundings are known as a region where the Nogais maintained their nomadic way of life and preserved their cultural heritage. Qizilorda is a city located in the south of Kazakhstan and reflects the historical and cultural heritage of the Kazakh people. This region bears traces of nomadic culture and traditions. Kostanay is a city located in the northwest of Kazakhstan and bears traces of the historical relations of the Kazakh people. The city and its surroundings are an important reflection of Kazakh culture and traditions (Capra et al., 2016; Meirambekova & Dautova, 2021).

Geographical Terms in Kazakh and Nogai Languages

Geographical terms in Kazakh and Nogai languages can generally be classified as separate categories of natural and human geography. Kazakh and Nogai geographical terms have a rich linguistic structure to express different aspects and features of natural and human geography. These terms help to understand geographical locations and features within these two Turkic languages (Freeman, 1985).

Figure 1. Geographical Terms in Kazakh and Nogai Languages

Terms of Natural Geography
a. Mountains and Hills:
Aiyr tau (Kazakh) / Airyş tav (Nogai): Mountain
Aq Biik (Kazakh) / Ak-Biik (Nogai): Hill
b. Rivers and Lakes:
Qara jılğa (Kazakh) / Kara ilga (Nogai): River
Aqsai (Kazakh) / Aksai (Nogai): Lake
c. Forests and Steppe:
Elbürğan ağaşy (orman) (Kazakh) / Elburgan ağaşy (oran) (Nogai): Forest
Tömengi el (Kazakh) / Tömen el (Nogai): Steppe
d. Plains and Valleys:
Qajy toğai (Kazakh) / Äji Togai (Nogai): Plain
Aru qyz (Kazakh) / Äriv kyz (Nogai): Valley

Human Geography Terms:
a. Cities and Villages:
Qara aǵaş (Kazakh) / Kara aǵaş (Nogai): City
Aqsaq auyl (Kazakh) / Aksak avyl (Nogai): Village
b. Roads and Transportation:
Aq jol (Kazakh) / Ak iol (Nogai): Road
Jaña jol (Kazakh) / Īany iol (Nogai): Railroad
Terms of Direction and Climate:
d) Weather:
Tymyqai (Kazakh) / Tymykai (Nogai): Air
Karly tau (Kazakh) / Karly tav (Nogai): Snow

Territorial Terms in Kazakh and Nogai Languages

In languages spoken in Central Asia, such as Kazakh and Nogai, folk geography terms related to land and geography are well developed. These terms have developed in accordance with the traditional lifestyles, geography and climate of the Kazakh and Nogai peoples. Traces of activities such as nomadic life, animal husbandry and agriculture can be seen in these terms and reflect the geographical diversity of the region. In Figure 2, folk geography terms related to land in Kazakh and Nogai languages are categorized with examples:

Figure 2. Terrain-related Folk Geography Terms in Kazakh and Nogai Languages

Terrain Types:
Qūralai jol (Kazakh) / Kuralai İol (Nogai): Desert-like steppe
Nomadism and Livestock Terms:
Sary auyl (Kazakh) / Sary avyl (Nogai): Village or nomadic tent community
Baital şapqan (Kazakh) / Baital şapkan (Nogai): Sheepfold or stable
Geographical Places:
Aulaq (Kazakh) / Avlak (Nogai): Sandy or desert land
Qara tau (Kazakh) / Kara tav (Nogai): Karatau Mountains
Local Plant and Animal Names:
Tobylǵy jer (Kazakh) / Tobylgy er (Nogai): Cactus plant
At soqpaq (Kazakh) / At sokpak (Nogai): Horse
Teke tūrǵan qystauy (Kazakh) / Teke turgan kyslav (Nogai): Sheep
Direction and Navigation:
Tömengı jaq (Kazakh) / Tömen bet (Nogai): Direction or showing direction
Soltüstik auyl (Kazakh) / Syrt avyl (Nogai): North direction
Qūbyla auyl (Kazakh) / Kubyla avyl (Nogai): Southern direction

Terms Related To Water Bodies in Kazakh and Nogai Languages

Central Asian languages, such as Kazakh and Nogai, express a rich and diverse range of folk geographical terms related to bodies of water. These terms include information about water sources, rivers and lakes, water qualities and uses (Donada & Reinoso, 2014). Figure 3 shows the system of folk geography terms related to water bodies in Kazakh and Nogai languages.

Figure 3. Folk Geography terms related to Water Bodies in Kazakh and Nogai Languages

Rivers:
Qoban (Kazakh) / Koban (Nogai): River
Zagedan özenı/sağa (Kazakh) / Zagdan suvy (Nogai): Dry river bed

Lakes:
Qara köl (Kazakh) / Kara köl (Nogai): Lake
Sülık köl (Kazakh) / Sülik köl (Nogai): Salty lake
Ülken köl (Kazakh) / Uiken köl (Nogai): Semi-freshwater lake

Seas:
Teñız (Kazakh) / Teniz (Nogai): Sea
Qara teñız (Kazakh) / Kara teniz (Nogai): Black Sea
Kaspi teñız (Kazakh) / Kaspi teniz (Nogai): Caspian Sea

Water Quality:
Taza su (Kazakh) / İany su (Nogai): Clean water
Las su (Kazakh) / Kirli su (Nogai): Dirty water
Tüşşy su (Kazakh) / Tatli su (Nogai): Fresh water

Irrigation and Water Use:
Aryq, özen (Kazakh) / Suv (Nogai): Irrigation canals
Qüdyq (Kazakh) / Куйы (Nogai): Water well
Toğan (Kazakh) / Köl (Nogai): Irrigation area

Terms Related to Animals and Plants in Kazakh and Nogai Languages

Central Asian languages, such as Kazakh and Nogai, express a wide range of folk geography terms related to animals and plants. These terms reflect various natural features, ecosystems and traditional lifestyles of the region. These terms contain a wealth of information about the traditional lifestyles of the Kazakh and Nogai peoples, their agricultural and animal husbandry activities, their natural environment and wildlife. These terms are used to communicate and share information on issues related to geography and nature.

Figure 3. Folk Geography Terms related to Animals and Plants in Kazakh and Nogai Languages

Animals:
Jylqy töbe (Kazakh) / İyky barvai (Nogai): Horse
Aq tüie şökken (Kazakh) / Ak tue şökken (Nogai): Camel

Wild Animals:

Böriniñ üiindisi (Kazakh) / Böri uia töbe (Nogai): Wolf

Tülki töbe (Kazakh) / Tülki tobe (Nogai): Fox

Plants:

Aq terek (Kazakh) / Ak terek (Nogai): Tree

Adyraspan töbe (Kazakh) / Adyraspan töbe (Nogai): Grass

Jambai terek (Kazakh) / Jambai terek (Nogai): Leaf

Agriculture and Horticulture:

Moiyl töbe (Kazakh) / Maiyl töbe (Nogai): Bird cherry

Qūlpynai töbe (Kazakh) / Kösik tobe (Nogai): Strawberry

Qyzanaq töbe (Kazakh) / Badrajan kurgan (Nogai): Tomato

Forest and Vegetation:

Qara/Ülken ağaş (Kazakh) / Kara ağaş (Nogai): Forest

Ataidyñ jeri (Kazakh) / Ataidyn yeri (Nogai): Steppe

Grammatical Structure of Place Names in Kazakh and Nogai Languages

The grammatical structure of place names in Kazakh and Nogai languages contains several important elements when analyzed from a linguistic perspective. These elements help us understand the function and use of place names in the language (Kurmanbekkyzy & Kaldybekovna, 2015; Tamir, 2007).

- *Definiteness:* In Kazakh and Nogai languages, the definiteness or indefiniteness of place names is a grammatical feature. Place names can be definite if they refer to a specific place, and indefinite if they refer to a general location. The definite ones usually take the suffixes "-dı/-dı" or "-tı/-tı". For example, "Almaty city" (definite) is expressed as "A city" (indefinite).
- *Case of the Noun:* Place names can take different forms depending on the context in which they appear in the language. The nominative case indicates whether there is something in, on or near the place. For example, it is expressed as "from Almaty" (coming from Almaty), "to Almaty" (orientation towards Almaty).
- *Plural and Singular:* Place names can be used in plural or singular form. The plural form refers to more than one part of a given territory, while the singular form usually represents a single geographical location. For example, "Mountains" (plural) is expressed as "Mountain" (singular).
- *Locative Suffixes:* Various suffixes attached to place names provide additional information about the location, orientation or relationship of the place. These suffixes extend the function of the place name in the language, providing more context to users. For example, "before Almaty", "towards Almaty".

Lexical-semantic Basis of Place Names in Kazakh and Nogai Languages

The lexical-semantic foundations of place names in Kazakh and Nogai languages are often derived from the historical, cultural, geographical and social context of the language. These foundations include various factors that determine the meaning and use of place names (Giraut & Holzschuch, 2016).

- *Historical and Cultural Context:* Place names are often directly related to the historical and cultural past of a region. These names can reflect past events, the culture, beliefs and lifestyles of the settlers. For example, historical events or important cultural elements can be influential in the formation of a place name.
- *Geographical Features:* The lexical foundations of place names are often based on geographical features. Mountains, rivers, lakes or other geographical features can be key elements in the name of a place. These features can shape the names that people give to the region.
- *Social Function and Life:* The use of place names can be related to the social function and way of life of a region. For example, activities such as agriculture, animal husbandry, trade or industry can be the determinants of a place name. At the same time, place names can reflect the lifestyle and daily activities of the local community.
- *Ethnic and Linguistic Origins:* The ethnic and linguistic origins of place names may reflect the origin and languages of the peoples living in the region. The naming of ethnic groups and linguistic structures can be decisive in the formation of place names.
- *Mythology and Belief Systems:* Place names can also be linked to mythological stories or local belief systems. These names may be associated with mythological beings, heroes or sacred places.

Linguistic-Statistical Characteristics of Place Names and Correspondence in Kazakh-Nogai Languages

Linguistic-statistical analyses are effective tools for a deeper understanding of the linguistic features of place names in Kazakh and Nogai languages and for determining the role of geographical names in these languages (Koç & Doğan, 2004). Here are some of the main elements that emphasize the linguistic-statistical features of Kazakh-Nogai languages:

- *Frequency Analysis:* Frequency analysis of place names in Kazakh and Nogai languages provides important information on how often certain names are used and which names are more common. This analysis can reveal patterns of language use and help identify important geographical locations in the region.
- *Morphemic Structure Analysis:* Analyzing morphemic structures in place names can help us understand grammatical features. Morphological analysis provides information on understanding the roots, affixes and other grammatical elements of place names.
- *Phonological Features:* Phonology focuses on the sound structure and pronunciation features of place names. Linguistic analysis can identify phonological similarities or differences, which can offer insights into how place names have evolved.
- *Etymological Analysis:* Investigating the etymological origins of place names can help us understand the historical development of the language. This analysis can reflect past cultural interactions and language change.
- *Toponymy Classification:* Toponyms can be classified according to their geographical location, characteristics or historical context. This classification can provide a categorical approach used in linguistic analysis.
- *Regional Comparisons:* Comparing the features of Kazakh and Nogai place names across different

regions can help us understand the geographical and cultural diversity of the language.

It is noteworthy that the Ministry of Education in Kazakhstan, especially in recent years, has supported the use of technology in activities and applications inside and outside the school, and has an innovative approach that supports the use of technology in the achievements and activities of literature/language and expression lessons. The use of technology in literature teaching is of great importance due to its advantages (Marczak, 2014; Pareja-Lora, Rodríguez-Arancón & Calle-Martínez, 2016; Wekke & Hamid, 2013). In this context, the study tried to examine the place of information technologies in the teaching of Kazakh and Nogai languages.

The Use of Information Technologies in Language and Literature Teaching

Computers, telephones with mobile communication systems, satellite systems, internet and all kinds of internet-connected tools and equipment, as well as electronic media such as television, cinema, music CDs and DVDs, newspapers and magazines used by the masses for communication and communication purposes are among the information technologies. The history of information technologies dates back to the mid-20th century when computers began to be used in scientific research (Heeks, 2008). Computers, which were used only in official institutions for many years, started to be used in the business world in the 1980s and then in different segments of society. The rapid advances in this field have led to significant social, cultural and economic changes in people, organizations and societies. The convenience and opportunities provided by information technologies in accessing and disseminating information have also affected teaching and learning processes. The impact and application area of the developments in Information Technologies has expanded with the invention of the Internet in the early 1990s. Thanks to the use of the Internet in the field of education, changes in the traditional teacher model have accelerated, learning has moved away from being dependent on time and place, and it has become easier for students to create their own knowledge. The ease of access to electronic books and libraries through the Internet and the ability of communication tools to deliver instant developments to people without intermediaries and without delay have contributed to the spread of new educational approaches such as student-centered learning, autonomous learning and lifelong learning. Another reality of this new world, where information and documents are as close to us as the touch of a finger and the borders between people, societies and countries disappear in the virtual environment, is that English is the language of communication (Wagemaker, 2013; Ben Youssef et al., 2022).

The field of language teaching needs scientific innovations and technological inventions more than other branches of social sciences. The main reason for this is to first produce audio and video recordings of the speakers of the language to be taught and then use them as teaching materials in language classes and laboratories. This is because, as Daniel Coste (1996) points out, learning a language can only be possible by discovering the behavior and lifestyle of the speakers of that language, in short, their culture. With the use of information technologies in language teaching, many studies have been conducted on this subject and it has been concluded that using information technologies significantly affects learning (Chen, Belkada & Okamoto, 2004; Wang & Vasquez, 2012). With the integration of technology, the field of language teaching has been opened to a wider audience and has become more profitable. In addition, when the historical development of the methods and approaches used in

language teaching is considered, it is seen that almost all of them have emerged due to technological inventions and scientific developments. Because all audio-visual technological materials have a great impact on language teaching as long as they are used in the right place and at the right time (Aslan, 2016; Jarvis & Krashen, 2014; Kourtis-Kazoullis, 2013).

According to Utari (2012), the use of ICT in language and literature classes enriches students' learning experience and makes it more effective. Students can access a wide range of literary resources online, from classical texts to contemporary works. Digital libraries and e-book platforms allow students to access works quickly and easily, which supports in-class analysis and discussion. Moreover, thanks to various software tools, students can manage grammar checking, spell checking and editing processes more effectively when creating their own writing (Utari, 2012; Carnoy, 2004). Virtual classroom environments allow students to participate in online discussions across geographical boundaries and evaluate literary works from different perspectives. Information technologies enrich literature courses by providing students with the opportunity to experience literature in a more interactive way, while at the same time supporting them to conduct in-depth research and develop creative projects (Ross et al., 2010). Using ICTs, teachers can provide students with interactive learning materials, create online discussion forums and monitor student performance through digital portfolios (Allegra et al., 2001). Thus, language and literature classes become more participatory and student-centered, while at the same time contributing to the development of students' skills in using technology effectively. Although the importance of using information technologies in language teaching is clear, current educational practices do not benefit sufficiently from advances in technology (Chun, Kern & Smith, 2016; Kessler., 2018; Pennington, 2004). In order to make maximum use of information technologies, which have an important place in the expansion of learner-centered education, there is a need for model application examples under the guidance of appropriate educational programs.

In this study, the effect of the use of information technologies on students' learning products in teaching toponyms and folk geography terms in Kazakh and Nogai languages in the literature course was examined. In this context, answers to the following questions were sought in the study in relation to the purpose of the study:

- To what extent does the use of information technologies in teaching toponyms and folk geography terms in Kazakh and Nogai languages affect students' achievement levels?
- To what extent does the use of information technologies in teaching toponyms and folk geography terms in Kazakh and Nogai languages affect students' attitudes towards the course?

Method

The study was conducted in the second semester of the 2022-2023 academic year in the Kazakh Language and Literature departments at the university level. In order to determine the experimental and control groups in the study, the Kazakh Language and Literature department of a university in Almaty, Kazakhstan was selected. Kazakh Reading Comprehension test and Achievement test were applied to 3rd grade students studying in this department. According to the results of the Kazakh Language Literature academic achievement test, it was seen that there was no significant difference between the experimental and control groups and that the two groups were equal to each other. In the experimental applications of the research, 56 students, 28 in the experimental group

and 28 in the control group, participated. There were 15 female and 13 male students in both groups.

Pre-test post-test control group design was used as the research design. In the study, the effect of information technology supported activities on student achievement and attitudes in teaching toponyms and folk geography terms in Kazakh and Nogai languages was investigated. The subjects of toponyms and folk geography terms in Kazakh and Nogai languages were taught with the support of information technologies in the experimental group for six weeks, while traditional teaching methods were used in the control group. Three stages were followed in the lessons and applications organized according to information technologies. In the first stage, lesson plans were prepared to integrate the subject matter with information technologies. In the second stage, information technologies were frequently used during the lesson in line with the lesson plans prepared. In particular, smart boards, projection and technological materials in the classroom were the biggest supporters in this regard. Educational, cultural and literary websites containing Kazakh and Nogai languages were used continuously during the course. Texts, videos and visual elements on these websites supported the activities.

In the last stage, online evaluations, diaries and research projects were conducted with the students after the lesson practices. Students were asked to conduct research using information technologies on the topics they learned during the course and the results of these researches were discussed in the classroom environment. In the control group, the lessons were taught according to the teacher-centered, lecture and question-answer methods most commonly used by Kazakh Language Literature instructors. Both groups were given equal number of applications. After the end of the application process, that is, after the completion of the 6-week process, the academic achievement test of toponyms and folk geography terms in Kazakh and Nogai languages and the course attitude scale were applied to the experimental - control group as a post-test. Since the instructors of the experimental and control groups carried out the acquisition realization periods together, the experimental application was completed at the same time in both groups.

Data Collection Tools

In the study, two tests, Kazakh and Nogai Test, were developed to measure students' achievement levels. On the other hand, the Attitude Scale towards Kazakh Language Literature was used to measure attitudes.

Nogai Achievement Test

This test consists of two sub-topics: toponyms and folk geography terms in Nogai. In order to ensure content validity, questions related to each topic were included. A 5-choice pre-test consisting of 25 items was created. The developed test items were presented to the opinions and criticisms of subject area experts in terms of accuracy, comprehensibility, suitability for students and content validity and necessary corrections were made. The corrected pre-test was administered to 56 students who had previously taken this course. After this trial application, the answers received from the items in the test were analyzed in the light of the answers received from the items in the test and the difficulty level and discrimination indices of each item were calculated and 22 items were selected and the final test was obtained. The reliability of the test was calculated with Kuder

Richardson-20 (KR 20). The reliability coefficient was found to be 0.84.

Kazakh Achievement Test

This test consists of two sub-topics: toponyms and folk geography terms in Kazakh language. In order to ensure content validity, questions related to each topic were included. A 5-choice pre-test consisting of 25 items was created. The developed test items were presented to the opinions and criticisms of experts in the field of Kazakh Language Literature in terms of accuracy, comprehensibility, suitability to the curriculum and students, and content validity, and necessary corrections were made. The corrected pre-test was applied to 60 students who had previously taken this course. After this trial application, the answers received from the items in the test were analyzed in the light of the answers received from the items in the test and the difficulty level and discrimination indices of each item were calculated. In the item analysis, 25 items were included in the final test. The reliability of the test was calculated with Kuder Richardson-20 (KR 20). The reliability coefficient was found to be 0.89.

Attitude Scale towards Kazakh Language and Literature Course

In the study, an 'Attitude Scale' was developed by the researchers to measure students' attitudes towards the course and activities. The Attitude Scale towards Kazakh Language and Literature Course is a 5-point Likert-type scale consisting of a total of 20 items. The questions of the scale are answered as "strongly agree", "agree", "undecided", "disagree", "strongly disagree". The other 2 items consist of demographic characteristics such as gender, school type and grade level. The limits of the options in the Likert-type rating scale are as follows: 1.00-1.79 strongly disagree; 1.80-2.59 disagree; 2.60-3.39 undecided; 3.40-4.19 partially agree; 4.20-5.00 strongly agree. Development Stages of Likert Type Attitude Scale: Stage 1: In the development of the scale, an item pool was created by utilizing the relevant studies in the literature (22 items). Stage 2: The prepared attitude statements were presented to students and experts and examined for content validity. Stage 3: The 20-item scale in the trial form was applied to 94 students studying in the Department of Kazakh Language and Literature. Stage 4: Validity and reliability analyses were conducted on the application data. As a result of the analysis, a total of 2 items, which were determined to negatively affect the reliability and factor structure of the scale, were removed from the scale. Stage 5: In order to determine to what extent each item in the Likert-type scale is sufficient to distinguish individuals in terms of attitude level, the significance of the difference between the item scores of the lower 27% and upper 27% groups according to the scale scores was examined. Then, as a result of the factor analysis conducted to reveal the construct validity of the scale, a one-factor scale consisting of a total of 20 items was obtained.

Data Analysis

The Mann-Whitney U test, one of the nonparametric tests, was used in the analysis of the Kazakh Language and Literature course (Kazakh and Nogai) academic achievement tests and attitude scale. Nonparametric tests are more useful when there is a small sample group and the data do not meet the strict assumptions required by parametric tests (Pallant, 2007). Mann Whitney U Test tests whether the scores obtained from two unrelated

samples differ significantly from each other. In other words, this test tests whether two unrelated groups have similar distributions in the population in terms of the variable of interest (Pallant, 2007). This test is a nonparametric alternative of t-tests for independent samples. The data obtained were tested according to .05 significance level. The data obtained from the measurement tools were analyzed with SPSS 25.0 statistical program.

Findings

Before starting the experimental application, pre-achievement tests and attitude scale were applied to determine whether the experimental and control groups were equivalent to each other. These achievement tests and attitude scale scores were compared with Mann Whitney U test, which is one of the non-parametric statistical techniques. Descriptive findings of the pretests are given in Table 1.

Table 1. Descriptive Analyses of Pre-Test Scores of Experimental and Control Groups

Pre-Test	Group	N	Minimum	Maximum	Mean	Std. Deviation
Kazakh Language Achievement	Experimental	28	6	15	9.68	2.47
	Control	28	7	18	10.57	2.50
Nogai Language	Experimental	28	3	13	7.61	2.73
	Control	28	6	11	7.93	1.88
Attitude	Experimental	28	1.5	5.0	2.95	1.06
	Control	28	2.0	5.0	2.96	1.04

When Table 2 is examined, it is seen that there is no significant difference between the preliminary Kazakh Language Literature achievement test scores applied to the experimental and control groups since $p=0.08>0.05$. The rank average of the pre-test achievement scores of the students in the experimental group was 24.75, while the rank average of the pre-test achievement scores of the students in the control group was 32.25. Considering the results, it can be said that the groups were similar in terms of Kazakh Language Literature achievement before starting the experimental application. The fact that the experimental and control groups are close academically means that there is no difference that will affect the result of the study.

Table 2. Mann-Whitney U Test Results for the Pre-Test Kazakh Language and Literature Achievement Scores of the Experimental and Control Groups

Pre-Test	Group	N	Mean Rank	Sum of Ranks	Z	P
Kazakh Language Achievement	Experimental	28	24.75	693.00	-1.75	0.080
	Control	28	32.25	903.00		

When Table 3 is examined, it is seen that there is no significant difference between the pre-Nogai Language achievement test scores applied to the experimental and control groups since $p=0.08>0.05$. The rank average of the pre-test achievement scores of the students in the experimental group was 27.68, while the rank average of the pre-test achievement scores of the students in the control group was 29.32. Considering the results, it can be said

that the groups were similar in terms of Nogai Language test achievement before the experimental application. The fact that the experimental and control groups are close in terms of Nogai language achievement means that there is no difference that will affect the result of the study.

Table 3. Mann-Whitney U Test Results for the Pre-Test Nogai Language Achievement Scores of the Experimental and Control Groups

Pre-Test	Group	N	Mean Rank	Sum of Ranks	Z	p
Nogai Language Achievement	Experimental	28	27.68	775.00	-0.38	0.702
	Control	28	29.32	821.00		

When Table 4 is examined, it is seen that there is no significant difference between the pretest attitude scale scores applied to the experimental and control groups since $p=0.91 > 0.05$.

Table 4. Mann Whitney U Test Results Regarding the Pre-Test Kazakh Language and Literature Course Attitude Scores of the Experimental and Control Groups

Pre-Test	Group	N	Mean Rank	Sum of Ranks	Z	p
Attitude	Experimental	28	28.27	791.50	-0.11	0.910
	Control	28	28.73	804.50		

The rank average of the pretest attitude scores of the students in the experimental group was 28.27, while the rank average of the pretest attitude scores of the students in the control group was 28.73. Considering the results, it can be said that the groups were similar in terms of their attitudes towards the Kazakh Language and Literature course before starting the experimental application. The fact that the experimental and control groups are close in terms of attitudes means that there is no difference that will affect the result of the study.

After the experimental procedures, post-test achievement tests and attitude scale were applied to the experimental and control groups. These achievement tests and attitude scale scores were compared with Mann Whitney U test, one of the non-parametric statistical techniques. Descriptive findings of the post-tests are given in Table 5.

Table 5. Descriptive Statistics Results for Post-Test Scores of Experimental and Control Groups

Post-Test	Group	N	Minimum	Maximum	Mean	Std. Deviation
Kazakh Language Achievement	Experimental	28	13	22	17.82	1.76
	Control	28	6	19	13.86	3.36
Nogai Language Achievement	Experimental	28	14	15	14.75	0.44
	Control	28	6	16	12.96	3.70
Attitude	Experimental	28	2.0	5.0	3.89	0.92
	Control	28	1.9	5.0	3.18	0.91

When Table 6 is examined, it is seen that there is a significant difference between the post-test Kazakh Language Literature achievement test scores applied to the experimental and control groups since $p=0.000 < 0.05$. The rank

average of the post-test achievement scores of the students in the experimental group was 37.86, while the rank average of the post-test achievement scores of the students in the control group was 19.14. Looking at the results, it was found that the groups showed a significant difference in terms of Kazakh Language Literature achievement after the experimental procedures. According to the rank mean of Kazakh Language Literature achievement scores, the experimental group students achieved a higher level of achievement compared to their peers in the control group (Kazakh Language and Literature test achievement).

Table 6. Mann-Whitney U Test Results for Post-Test Kazakh Language and Literature Achievement Scores of Experimental and Control Groups

Post-Test	Group	N	Mean Rank	Sum of Ranks	Z	P
Kazakh Language Achievement	Experimental	28	37.86	1060.00	-4.35	0.000
	Control	28	19.14	536.00		

When Table 7 is examined, it is seen that there is no significant difference between the post-test Nogai Language achievement test scores applied to the experimental and control groups since $p=0.339>0.05$.

Table 7. Mann-Whitney U Test Results for Post-Test Nogai Language Achievement Scores of Experimental and Control Groups

Post-Test	Group	N	Mean Rank	Sum of Ranks	Z	p
Nogai Language Achievement	Experimental	28	30.50	854.00	-0.96	0.339
	Control	28	26.50	742.00		

The rank average of the pre-test achievement scores of the students in the experimental group was 30.50, while the rank average of the post-test achievement scores of the students in the control group was 26.50. Considering the results, it was found that the groups did not differ significantly in terms of Nogai Language achievement after the experimental procedures.

When Table 8 is examined, since $p=0.006>0.05$, it is seen that there is a significant difference between the post-test Kazakh Language Literature attitude scale scores applied to the experimental and control groups.

Table 8. Mann-Whitney U Test Results for Post-Test Kazakh Language and Literature Course Attitude Scores of Experimental and Control Groups

Post-Test	Group	N	Mean Rank	Sum of Ranks	Z	P
Attitude	Experimental	28	34.21	958.00	-2.77	0.006
	Control	28	22.79	638.00		

The rank average of the post-test attitude scores of the students in the experimental group was 34.21, while the rank average of the post-test attitude scores of the students in the control group was 22.79. Looking at the results, it was found that the groups showed significant differences in terms of attitudes towards the Kazakh Language Literature course after the experimental procedures. According to the ranking mean of the attitude scores, the

experimental group students had a higher and more positive attitude towards the course due to the experimental procedures compared to their peers in the control group.

Discussion and Conclusion

Kazakh and Nogai are leading languages belonging to the Kipchak group of the Turkic family of languages. These two languages play a significant role in the historical, cultural and linguistic context of Central Asia. Historical place names in the regions inhabited by Kazakh and Nogai peoples are important signs reflecting the history, culture and way of life of these communities. Kazakh and Nogai geographical terms reveal a rich linguistic structure for expressing different aspects and features of natural and human geography. In this study, the effect of information technologies on teaching the similarities and differences between these two language structures to students studying in Kazakh Language and Literature departments was examined. After the experimental applications carried out in this context, the experimental group students who carried out activities with the support of information technology achieved higher Kazakh language achievement in related subjects (toponyms and folk geographical terms) compared to their friends in the control group with traditional teaching.

In the first part of the study, it was found that the use of information technology applications in language teaching had a positive effect on students' academic achievement. This result, which was reached through quantitative analysis, was found to have a similar positive effect on academic achievement in some studies in the literature (Hussain, Niwaz, Zaman, Dahar, & Akhtar, 2010; Promsurin & Vitayapirak, 2015; Thamarana, 2016). According to Leek (2020), supporting language teaching with technology-supported applications contributes to achievement as well as language skills. In the language teaching process, opportunities such as visual and content richness, ease of access to learning environments, interaction and communication offered by information technologies can be provided very easily with technological applications. In addition, information technologies have positively affected achievement as they contribute to taking into account the individual needs of students and providing feedback (Grant, 2017).

In another sub-problem of the research, the effects of information technologies on the teaching of toponyms and folk geographical terms in Nogai language were examined. In the study, no significant difference was found between the experimental and control groups in terms of Nogai language post-test achievement scores. Although the students who performed activities with the support of information technologies achieved high Nogai language achievement, the difference was not significant. In particular, the 6-week implementation in the study may not have been sufficient in terms of achievement in Nogai language. For this reason, it is thought that long-term ICT-supported instruction will increase learning achievement in Nogai language.

In the last finding of the study, the effect of information technologies in teaching the participants the similarities and differences between these two language structures was examined in terms of attitudes towards the course. In this context, after the experimental applications, the students in the experimental group who carried out activities with the support of information technology developed a more positive attitude towards the Kazakh Language and Literature course compared to their friends in the control group where traditional teaching was applied. In many

studies, it is seen that in language learning environments where information and communication technologies are used, positive results such as students' attitudes towards language learning, motivation, self-confidence and enthusiasm increase, and the development of targeted language skills is beneficial and accelerated (Barrot, 2016; Gobel & Kano, 2014; Grant, 2016; Hayati et al., 2013; Ke & Cahyani, 2014; Tai, 2012).

In conclusion, the use of information technologies in literature teaching is of great importance due to the advantages it provides. The importance of using technology has a special place in literature teaching due to its positive features such as better conveying the content of the course to students, saving time, attracting attention and motivating them. In this context, effective technology planning should be made in literature and language classes, digital libraries should be created, course resources should be accessed online, continuous communication with teachers should be ensured, digital videos and recordings should be supported in lessons, and students should be able to access course resources related to information technologies. In future studies, it is recommended to conduct qualitative and mixed model research to reveal the perceptions of students and instructors regarding the use of information technologies in Kazakh and Nogai languages.

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Author Information

Aidana Ainabek

 <https://orcid.org/0009-0006-1742-0468>


L. N. Gumilyov Eurasian National University
Astana c., Kazhymukan Street 11
Kazakhstan
Contact e-mail: aydanayerkinkyzy@gmail.com

Bekzhan Abdualiuly

 <https://orcid.org/0000-0003-1481-8850>

L. N. Gumilyov Eurasian National University
Astana c., Kazhymukan Street 11
Kazakhstan

Samal Zhuanyshpaeva

 <https://orcid.org/0000-0001-6096-9970>


M. Kozybaev North Kazakhstan State University
Petropavl c., Pushkin Street. 86
Kazakhstan

Aliya Ongarbayeva

 <https://orcid.org/0000-0003-3031-752X>


Abai Kazakh National Pedagogical University
Almaty c., Kalkaman 2, Nurpeisova Street 34
Kazakhstan

Aigul Aitymova

 <https://orcid.org/0009-0004-9671-6288>

M. Kozybaev North Kazakhstan State University
Petropavl c., Pushkin Street. 86
Kazakhstan

Assem Belgibekova

 <https://orcid.org/0009-0008-4556-5730>

M. Kozybaev North Kazakhstan State University
Petropavl c., Pushkin Street. 86
Kazakhstan
