

RESEARCH ARTICLE

Linguostatistical Analysis Of Toponyms Formed With Color Terms In The Uzbek Language

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VOLUME: Vol.06 Issue05 2026

PAGE: 154-158

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Abstract

This study examines toponyms formed with color terms in the Uzbek language using a linguostatistical approach. Based on a corpus of 1,200 place names, including 312 with color components, the research identifies their frequency, structural patterns, and semantic features. The results show that oq (white) and qora (black) are the most productive elements, reflecting both physical characteristics and cultural-symbolic meanings. The study highlights the interaction between language, culture, and geography in Uzbek toponymy and contributes to linguocultural and onomastic research.

KEY WORDS

Toponymy, linguostatistics, Uzbek language, color terms, onomastics, semantic analysis.

INTRODUCTION

Toponyms represent an essential layer of linguistic and cultural heritage, reflecting the historical, geographical, and social realities of a given speech community. In Uzbek linguistics, the study of place names has long attracted scholarly attention, particularly in relation to their etymology, structure, and semantic interpretation [1]. Among various types of toponyms, those formed with color terms occupy a distinctive position, as they encode not only physical characteristics of landscapes but also symbolic and cultural meanings associated with colors [2].

The linguistic analysis of toponyms, particularly the study of their semantic features, plays an invaluable role in elucidating a people's national, ethnic, socio-political, and cultural history, as well as in revealing the historical development and evolution of the language. Moreover, it significantly contributes to understanding the essence of the nominative, communicative, and accumulative functions of language.

In response to contemporary academic demands and needs, one of the pressing tasks in Uzbek linguistics is the linguistic investigation of toponyms—linguistic units that comprehensively reflect the history, values, traditions, and customs of a people—based on specific regional data.

Toponyms, like other linguistic units, are generally formed according to certain structural patterns. A considerable number of toponyms contain traditional indicators. In toponymy, an indicator refers to local geographical terms that participate in the formation of place names, such as obod, qum, tepa, qo'rg'on, daryo, suv, kent, and others.

Materials And Methods

The research is based on a corpus compiled from official and academic sources, including the geographical names registry of the Republic of Uzbekistan, regional maps, and published toponymic dictionaries [4; 5]. A total of 1,200 toponyms were collected and analyzed, of which 312 were identified as

containing color components. The selection criteria included the presence of lexical units denoting colors in the structure of place names.

The study employs a combination of quantitative and qualitative methods. Linguostatistical analysis was used to determine the frequency and distribution of color terms, while morphological and semantic analyses were applied to identify structural models and interpret meanings. The data were categorized according to the type of color term and the structural composition of the toponym.

Toponyms serve as a linguistic repository of a people's historical experience, reflecting their traditions, customs, and the diverse socio-political and ethnocultural processes they have undergone. In this regard, toponymy constitutes an essential component of a language's lexical system and functions as a valuable source of information about past events.

The scientific study of Uzbek toponymy began in the 1960s. Since then, substantial scholarly work has been carried out in this field. Among these contributions, the monograph "The History of Place Names in Central Asia" by the prominent geographer Xudoyberdi Hasanov occupies a special place. In this work, the author provides an overview of the history of geographical names, their diversity, and the principles underlying their formation, along with a concise introduction to the field of toponymy.

As emphasized in the study, place names offer valuable insights into a wide range of historical and geographical phenomena, including ancient trade routes, the distribution of tribes and languages, the locations of old fortresses and settlements, the characteristics of water sources and mountain passes, the presence of natural resources, the availability of wells in desert areas, as well as the flora, fauna, and climatic features of a region. Furthermore, toponyms preserve information about traditional occupations, historical events, and folklore narratives. All these aspects make toponyms an important source for understanding the history of national economy and cultural development.

There are more than five and a half thousand languages in the world (and, according to some sources, nearly seven thousand), and all of them possess geographical names. In linguistics, there exist established principles for the comprehensive study of such names. In this regard, the specialized field of toponymy serves as a fundamental

framework for their systematic investigation.

The writer Konstantin Paustovsky expresses this idea as follows: "Place names are the democratic and poetic markers of a country; they speak about the way of life of its people, their history, and particular aspects of their interests." [1.224]

Research And Discussions

In Uzbek linguoculture, phraseological units associated with the color white—such as "oq yo'l" (good journey), "oq fotiha" (blessing), "oq niyat" (pure intention), "oq yuvganning yuzi yorug'" (honesty leads to honor), and "oqlik yuzdan" (purity is reflected in one's face)—express positive semantic connotations rooted in the collective consciousness of the people. In English, expressions such as "white lie" (a harmless lie), "white wedding" (a traditional wedding ceremony), and "as white as snow" (extremely white) similarly demonstrate that this color is perceived as a symbol of innocence, purity, and blamelessness. Furthermore, the global recognition of the white dove as a symbol of peace clearly confirms the universal positive perception associated with this color.

At the same time, the color black possesses complex and multifaceted semantic properties across different cultures. In Uzbek, expressions such as "qora kunlar" (dark days), "qora niyat" (evil intention), "qora baxt" (misfortune), and "qorayib ketdi" (to fall into hardship) reflect negative meanings, symbolizing sorrow, grief, and danger. Similarly, in English, phrases like "black day" (a tragic day), "black market" (illegal trade), and "blackmail" (extortion) carry negative connotations. However, English also includes expressions such as "black tie" (formal attire), which have neutral or even positive connotations, indicating that the perception of this color can be relative and context-dependent.

The color blue in Uzbek cultural consciousness symbolizes the sky, vastness, goodness, and loyalty, as reflected in expressions such as "ko'k yuz" (the sky), "ko'k osmonda parvoz qilmoq" (to soar in the sky), and "ko'k yulduz" (blue star). In English, however, the phrase "feeling blue" (to feel sad) conveys a negative emotional state, while "blue sky thinking" (creative and unrestricted thinking) carries a positive connotation, demonstrating the dual semantic potential of this color.

Green in Uzbek linguoculture represents renewal, spring, nature, and abundance, which is particularly evident in traditions and symbols associated with the Navruz festival. In English, green is commonly associated with nature, ecology,

and sustainability, as seen in expressions such as “green light” (permission or approval), “go green” (to adopt an environmentally friendly lifestyle), and “green energy” (renewable energy). At the same time, the phrase “green with envy” (jealousy) reflects a negative semantic nuance.

The color red, in both cultures, is associated with energy, vitality, strength, passion, and, in some contexts, danger. In Uzbek, expressions such as “qizil gullar” (red flowers), “qizil olov” (red flame), and “qizil yuzli” (rosy-faced) are used in positive or neutral senses, whereas “qizil chiroq” (red light) signifies prohibition or the need to stop. In English, phrases such as “red flag” (a warning sign), “to see red” (to become angry), and “red carpet” (a ceremonial welcome) illustrate the complex and sometimes contrasting attitudes toward this color.

Overall, colors in the linguocultures of both Uzbek and English-speaking communities carry multilayered semantic loads, the interpretation of which is shaped by historical, social, and cultural factors. Through color symbolism, one can observe a people’s aesthetic perceptions, moral values, emotional experiences, and worldview. Therefore, the system of colors, as a linguocultural phenomenon, constitutes an important semantic field in understanding and expressing cultural identity.

The findings of this study confirm that the use of color terms in Uzbek toponymy is both systematic and meaningful. The high frequency of oq suggests its positive connotations, often associated with purity, clarity, and elevation in cultural symbolism [4]. Similarly, the widespread use of qora reflects its multifunctional nature, as it can denote both physical characteristics and symbolic meanings such as strength or significance.

The results are consistent with earlier research in Turkic linguistics, which highlights the importance of color symbolism in naming practices [3]. However, the present study contributes to the field by providing a quantitative dimension, demonstrating how frequently different color terms occur and how they are distributed across the toponymic system.

Furthermore, the structural patterns identified in the data align with general typological features of the Uzbek language, particularly its reliance on modifier–head constructions. This suggests that toponymy follows broader linguistic principles while also reflecting specific cultural and environmental factors. Based on our observations, toponyms formed with the

color component white are most frequently found among hydronyms, that is, the names of water bodies. The semantic system of the lexeme oq (white) within toponyms conveys meanings such as clarity, transparency, purity, and cleanliness. In addition, it may also denote social prestige, referring to individuals of high status or noble origin (e.g., oq suyaklar – the aristocratic class).

In contrast, the component qora (black), while often functioning as the semantic opposite of white, also expresses meanings such as “large,” “great,” “grand,” or “mighty.” This is evident in toponyms such as Qora daryo (Black River), Qora qo’rg’on (Black Fortress), Qora dengiz (Black Sea), as well as in ethnonymic expressions like Qora bo’ra and Oq bo’ra, which reflect tribal nomenclature. Thus, the semantic scope of qora extends beyond simple color opposition and encompasses evaluative and intensifying meanings.

It has also been observed that the meanings of certain toponyms reflect religious and mythological beliefs. In particular, traces of animistic worldview—one of the earliest forms of belief among Turkic peoples—can be identified. This worldview is characterized by the belief that elements of the surrounding natural environment are animate and possess spiritual essence.

Consequently, some place names have been formed based on the assumption that specific locations possess supernatural or magical properties. According to such beliefs, events occurring in these places could either harm or protect people living nearby. The influence of animistic thinking, rooted in mythological imagery and reinforced through folklore narratives, is also evident in the presence of demonological elements within regional toponymy. For example, toponyms such as Shayton qishloq (Devil’s Village), Shayton jilg’a (Devil’s Ravine), and Alvastisoy (Valley of evil spirits) reflect the perception of certain places as being inhabited by supernatural or malevolent forces.

Conclusion

In conclusion, color-based toponyms represent a significant and systematically organized component of the Uzbek toponymic system. The linguostatistical analysis shows that certain color terms, particularly oq and qora, dominate in frequency and play a central role in place naming. These toponyms exhibit regular structural patterns and carry both descriptive and symbolic meanings.

The study contributes to the understanding of Uzbek

onomastics by combining quantitative and qualitative approaches and highlighting the interaction between language, culture, and geography. Future research may expand the scope of analysis by incorporating larger datasets or conducting comparative studies with other Turkic languages to identify common patterns and unique features.

In summary, the present study has demonstrated that toponyms formed with color terms constitute a structurally systematic and semantically rich layer within the Uzbek toponymic system. The linguostatistical analysis confirms that specific color components, particularly oq (white) and qora (black), show a high degree of productivity and frequency, indicating their central role in the nomination of geographical objects. Their distribution is not random; rather, it reflects stable linguistic patterns and culturally conditioned naming strategies.

The findings reveal that color terms in Uzbek toponyms perform not only a descriptive function, denoting physical characteristics of natural objects such as water, soil, and relief, but also carry significant symbolic, evaluative, and social meanings. In particular, the component oq is predominantly associated with hydronyms and expresses notions of purity, clarity, and prestige, whereas qora demonstrates a broader semantic range, functioning both as an oppositional marker and as an intensifier conveying magnitude, power, or prominence.

Moreover, the study has shown that Uzbek toponymy preserves traces of archaic worldview systems, including animistic and mythological beliefs. The presence of demonological elements and spiritually marked place names indicates that toponyms serve as a repository of collective memory, encoding not only linguistic but also cultural and cognitive representations of space.

From a theoretical perspective, the research contributes to the development of linguostatistical and linguocultural approaches in onomastics by integrating quantitative analysis with semantic interpretation. It highlights the interdependence of language, culture, and environment in the formation of place names and demonstrates that toponymy functions as an important medium for transmitting historical and cultural knowledge.

In practical terms, the results of this study may be applied in further research on Turkic toponymy, comparative linguistics, and cultural studies. Future investigations could expand the

empirical base, incorporate geolinguistic mapping, or explore cross-linguistic parallels in the use of color symbolism in place naming.

References

1. Бондалетов В.Д. Русская ономастика. – Москва, 1983. – С.224.
2. Nikonov, V. A. (1965). Introduction to Toponymy. Moscow.
3. Baskakov, N. A. (1988). Turkic Languages. Moscow.
4. State Committee of the Republic of Uzbekistan on Land Resources. Official geographical names registry.
5. Karimova, O. (2024). Comparative study of sla: effects of early exposure, education, and psychology on sixth-graders [J]. Tamaddun nuri jurnali, 12(63), 28-30.
6. Karimova, O., & Sobirova, N. (2025). MUQIM FRAZEOLOGIK BIRLIKLAR TARJIMASINING O 'ZIGA XOSLIKLARI. TAMADDUN NURI JURNALI, 1(64), 214-217.
7. Karimova, O. (2024). Linguopragmatic study of phraseological units with a somatic component in english and uzbek languages. SCIENCEPROBLEMS. UZ Учредители: ООО "Scienceproblems team", 4, 327-338.
8. Karimova, O. (2026, January). Gendered Language Use In Academic And Professional Settings. In International Conference on Global Trends and Innovations in Multidisciplinary Research (Vol. 2, No. 1, pp. 4-8).
9. Mamatqulova, M. (2025). Linguocultural Codes in Uzbek Cinematic Discourse: A Study of National Identity through Media Language. International Conference on Global Trends and Innovations in Multidisciplinary Research, 1(5), 36-39. <https://tlepub.org/index.php/2/article/view/443>
10. Mamatqulova Marhabo. (2023). NEEDS ANALYSIS AS A MAIN PHASE FOR DESIGNING ENGLISH FOR SPECIFIC PURPOSES (ESP) COURSE. QO'QON UNIVERSITETI XABARNOMASI, 9(9), 213–216. <https://doi.org/10.54613/ku.v9i9.876>
11. Mamatqulova Marhabo. (2023). HOW DOES A PERSON BECOME MULTILINGUAL?. QO'QON UNIVERSITETI XABARNOMASI, 9(9), 209–212. <https://doi.org/10.54613/ku.v9i9.874>

- 12.** Mamatqulova Marhabo. (2020). DEVELOPMENT OF THE CATEGORY OF MODALITY IN PHILOLOGY AND THEIR COMPARATIVE ANALYSIS. CURRENT RESEARCH JOURNAL OF PHILOLOGICAL SCIENCES, 3(01), 40–45. <https://doi.org/10.37547/philological-crjps-03-01-08>
- 13.** Marhaboxon, M. (2025). "Intercultural Communication and Linguo-Cultural Specificity in Film Texts: Uzbek and Western Cinematography". *Advances in Science and Education*, 1(5), 16-18. <https://doi.org/10.70728/edu.v01.i05.006>
- 14.** Ganiyevich, M. T., & Saminovna, M. D. (2023). Factors in The Formation of a Healthy Lifestyle Among University Students. *Journal of Advanced Zoology*, 44(5).
- 15.** Dilfuza, M. (2023). Exploring the benefits of bilingualism in early childhood.". In CANADA" INTERNATIONAL CONFERENCE ON DEVELOPMENTS IN EDUCATION, SCIENCES AND HUMANITIES (Vol. 9, No. 1).
- 16.** Ahmedova, H. T., Mamajonova, M. N., Mirzaliyev, T., & Mirzaliyeva, D. S. (2022). The Role And Importance Of The East Individual Creators In The Development Of Rhetoric Subject. *Journal of Positive School Psychology*, 6(11).
- 17.** Saminovna, M. D., & Solijanovna, M. D. (2021). Integrated Approach to Russian Language Lessons. *Academicia Globe*, 2(04), 179-182.
- 18.** Mirzaliyeva, D. (2022). UNCONVENTIONAL METHODS OF TEACHING IN RUSSIAN LANGUAGE LESSONS. *ASIA PACIFIC JOURNAL OF MARKETING & MANAGEMENT REVIEW* ISSN: 2319-2836 Impact Factor: 8.071, 11(11), 149-151.
- 19.** Mirzaliyeva, D. S. (2022). Principles of formation of the culture of speech of students in the Russian language classes at the university. *INTERNATIONAL JOURNAL OF SOCIAL SCIENCE & INTERDISCIPLINARY RESEARCH* ISSN: 2277-3630 Impact factor: 8.036, 11(12), 303-305.