Email:

conference@houghtonstreetreview.com

Website:

www.houghtonstreetreview.com/index.php/conference

© 2026 International Online Conference on Multidisciplinary Academic Research. All Rights Reserved.

Editor-in-Chief:

Dr. Ewelum Johnson Nnadi

Managing Editors:

1.Harold Jan R. Terano

2.Dr. Mandakini Singla

3.Massoud Kaykhaii







PROBLEMS OF STANDARDIZATION AND UNIFICATION OF TERMINOLOGY IN UZBEK SIGN LANGUAGE

Bakhromova Nasiba Abduvaliyevna
2 nd year Master's Student in Surdopedagogy,
Faculty of Pedagogy, Psychology and Inclusive Education,
National Pedagogical University of Uzbekistan
Email: bahromovanasiba468@gmail.com

Abstract. This thesis examines linguistic, sociolinguistic, educational, and technological challenges associated with standardizing and harmonizing terminology in Uzbek Sign Language. Particular attention is paid to lexical variation, the representation of emerging scientific concepts, semantic ambiguity, fingerspelling, digital lexicography, and the participation of Deaf communities in language planning. Drawing on Uzbekistan's legal framework and international scholarship on sign language documentation and standardization, the paper develops a community-centered approach to terminological coordination. Illustrative analyses of terms in education, law, medicine, and information technology show why conceptual precision and communicative acceptability are more important than imposing a single sign for every concept. The study proposes a video-based terminological database and a participatory procedure for collecting, evaluating, and documenting variants.

Keywords: Uzbek Sign Language, terminology, standardization, unification, lexical variation, fingerspelling, corpus linguistics, inclusive education, sign language interpreting, digital lexicography.

Introduction

The expansion of inclusive education, digital communication, and access to public services has increased the need for accurate specialized terminology in sign languages. New concepts in artificial intelligence, cybersecurity, healthcare, law, and pedagogy must be communicated in ways that are both linguistically natural and conceptually precise. In Uzbek Sign Language, this issue cannot be reduced to choosing a single manual gesture for each Uzbek written word. Sign languages are autonomous natural languages with their own grammatical and lexical structures; their signs involve handshape, location, movement, palm orientation, and nonmanual features such as facial expression. Consequently, terminology work requires linguistic documentation, community consultation, and assessment of actual usage.

The objective of this paper is to identify key obstacles to the standardization and unification of specialized vocabulary in Uzbek Sign Language and to propose an evidence-based approach informed by international experience. The methods are descriptive, comparative, and conceptual. The examples below are analytical scenarios, not claims that particular signs or regional distributions have already been empirically documented in Uzbekistan. This distinction is necessary because reliable, publicly accessible corpus evidence for individual Uzbek Sign Language technical signs remains limited.

Email:

conference@houghtonstreetreview.com

Website:

www.houghtonstreetreview.com/index.php/conference

© 2026 International Online Conference on Multidisciplinary Academic Research. All Rights Reserved.

Editor-in-Chief:

Dr. Ewelum Johnson Nnadi

Managing Editors:

1.Harold Jan R. Terano

2.Dr. Mandakini Singla

3.Massoud Kaykhaii







Legal and theoretical foundations

An important domestic policy foundation is Presidential Resolution No. PQ-407 of 20 October 2022, "On Additional Measures for the Development of Uzbek Sign Language and the Braille Alphabet." It identifies the development of Uzbek Sign Language, educational resources, linguistic work, and relevant teaching capacities as public priorities. The United Nations Convention on the Rights of Persons with Disabilities, especially Article 21, also recognizes the importance of facilitating and promoting the use of sign languages. These frameworks support terminological development as an accessibility and language-rights issue, rather than merely a translation exercise.

Terminological standardization refers to the systematic documentation and clarification of meanings, forms, domains, and conventions of use. Unification or harmonization concerns coordination across institutions and professional settings so that specialized concepts are communicated consistently. However, consistency should not be confused with the elimination of natural lexical diversity. Johnston demonstrates the importance of lexicographic description and the documentation of variants in sign language dictionaries. Adam examines the social and political complexities of standardization. The World Federation of the Deaf warns against top-down attempts to impose one standardized sign at the expense of community usage and variation. A defensible policy therefore distinguishes descriptive documentation from coercive prescription.

Regional and social lexical variation

A concept may be expressed by different signs or by a lexical sign in one context and a descriptive phrase in another. Age, educational background, social networks, contact between signing communities, and geographical mobility can influence such variation. Research on Uzbek Sign Language should therefore compare authentic recordings from different communities, including users in Tashkent, Samarkand, the Fergana Valley, Bukhara, and Karakalpakstan, without assuming in advance that a specific difference exists in any of these locations.

Consider the concept "university." In a hypothetical dataset, some signers might use a conventional lexical sign, whereas others might combine signs corresponding to "higher" and "education." Both expressions could be comprehensible, yet the second might refer more broadly to a higher education institution rather than specifically to a university. The researcher would need to compare semantic scope, frequency, intelligibility, age distribution, and contextual appropriateness. Selecting the most frequent form without examining meaning would risk conflating distinct concepts. Recording both variants with usage notes would preserve valuable linguistic information while supporting interpreters and teachers.

Scientific and technological terminology

Specialized terms often designate abstract concepts that do not have a transparent visual counterpart. New signs may emerge through semantic extension, compounding, iconic motivation, borrowing, or fingerspelling. None of these processes guarantees terminological precision by itself. The challenge is particularly visible in information technology, where metaphors inherited from spoken languages can obscure the intended technical meaning.

For example, "artificial intelligence" might be explained by a combination corresponding to "artificial" and "intelligence." Such an expression may provide an

Email:

conference@houghtonstreetreview.com

Website:

www.houghtonstreetreview.com/index.php/conference

© 2026 International Online Conference on Multidisciplinary Academic Research. All Rights Reserved.

Editor-in-Chief:

Dr. Ewelum Johnson Nnadi

Managing Editors:

1.Harold Jan R. Terano

2.Dr. Mandakini Singla

3.Massoud Kaykhaii







initial conceptual cue but does not necessarily distinguish artificial intelligence from machine learning or neural networks. These are related yet nonidentical concepts. A terminological resource should provide distinct definitions, video examples, and links indicating broader and narrower conceptual relationships. A sign should be evaluated according to what users understand it to mean, not merely whether its components resemble the written phrase.

The term "cloud computing" presents another difficulty. A sign motivated only by the image of a meteorological cloud could invite an unintended literal interpretation. Contextual demonstration—such as storing and accessing data through remote computing infrastructure—can help establish the technical sense. This example does not establish that such a sign is used in Uzbek Sign Language; it illustrates why metaphoric terminology requires testing with actual users.

Polysemy, near-synonymy, and conceptual boundaries

Terminological coordination also requires distinguishing related but noninterchangeable concepts. In legal discourse, "right" and "law" may appear close in ordinary language but refer to different notions. Compare "Every child has the right to education" with "The education law was adopted." The former concerns an entitlement, while the latter concerns a legal enactment. If an interpretation fails to distinguish them, the message can be materially altered. A specialized dictionary should therefore document the meaning of each term and supply context-rich examples rather than relying on a word-for-word correspondence.

A comparable problem arises with "integration" and "inclusion" in education. Integration may emphasize the placement of learners into an existing system, whereas inclusion emphasizes adapting educational environments to accommodate diverse learners. The terms overlap in some discussions but are not universally synonymous. In teacher education and policy interpretation, collapsing them into one unexplained expression may obscure an important conceptual distinction. Terminological documentation should include definitions, example sentences, and, where relevant, multiple established signs with usage labels.

Fingerspelling and lexical signs

Fingerspelling is useful for proper names, abbreviations, and unfamiliar borrowed terms, but repeated fingerspelling may be less efficient than an established lexical sign in rapid technical discussion. Take "algorithm" as an example. Spelling the word can identify its written form, particularly when introducing a new topic. During an extended computer science lesson, however, a community-accepted lexical sign, if one exists or develops naturally, may support fluent communication. The relevant research questions are whether such a sign is attested, how widely it is recognized, whether it is conceptually accurate, and how it functions alongside fingerspelling. These forms should be treated as complementary resources rather than mutually exclusive alternatives.

Digital corpora and video-based lexicography

A conventional bilingual wordlist cannot adequately represent the full structure of a sign language lexicon. A useful terminological entry should include the written term, a concise definition, a video recording, phonological parameters of the sign, domain labels, attested variants, geographic or social usage where substantiated, examples in context, provenance, and the date of review. It should also distinguish

Email:

conference@houghtonstreetreview.com

Website:

www.houghtonstreetreview.com/index.php/conference

© 2026 International Online Conference on Multidisciplinary Academic Research. All Rights Reserved.

Editor-in-Chief:

Dr. Ewelum Johnson Nnadi

Managing Editors:

1.Harold Jan R. Terano

2.Dr. Mandakini Singla

3.Massoud Kaykhaii







verified community usage from newly proposed forms. This prevents a suggested sign from being mistaken for an established convention.

Johnston argues that turning archived sign language recordings into research corpora requires systematic transcription and annotation. Global Signbank provides a relevant model for structured lexical databases, while work by Kopf, Schulder, Hanke, and Bigeard highlights the importance of harmonizing annotation practices across sign language resources. These lessons suggest that an Uzbek Sign Language database should adopt stable identifiers and consistent metadata from the outset. Search functions should allow users to locate entries by written term, topic, sign parameters, and attested variants, while video material should be collected with informed consent and appropriate privacy protections.

The following conceptual examples illustrate potential database entries. “Artificial intelligence” would require a definition distinguishing it from machine learning; “algorithm” would require an assessment of fingerspelled and lexical alternatives; “inclusion” would require a note distinguishing it from integration; “right” would need legal context; “cloud computing” would benefit from a technical video explanation; and “competence” would require a definition suited to educational discourse. These are proposed research priorities, not a verified inventory of existing Uzbek Sign Language signs.

Implications for education, healthcare, and interpreting

Terminological ambiguity can directly affect educational access. In biology, “cell,” “tissue,” “organ,” and “organism” form a conceptual hierarchy. A teacher or interpreter needs to convey their differences consistently while preserving the natural grammar of the target sign language. Likewise, “allergy,” “infection,” “inflammation,” and “immunity” refer to distinct medical concepts. In healthcare settings, unclear terminology may compromise the accuracy of information communicated to patients. These examples underscore the value of domain-specific terminological resources developed with qualified practitioners and Deaf language users.

Professional development should therefore teach interpreters and educators not only a preferred term where one is widely accepted, but also variant recognition, semantic disambiguation, contextual explanation, and strategies for introducing unfamiliar concepts. An overly rigid one-sign-per-word policy would be especially problematic when a spoken-language word has multiple meanings or when two written terms overlap imperfectly with sign language lexical categories.

A participatory model for Uzbek Sign Language terminology

A practical development program could begin by gathering video recordings of specialized communication from Deaf signers, teachers, interpreters, and domain experts in multiple settings. Researchers would then annotate the signs, identify lexical variants, and compare their conceptual meanings. A review group led by Deaf sign language users and including linguists, educators, interpreters, and relevant subject specialists would assess intelligibility and acceptability. The resulting database would publish attested variants with transparent status labels, definitions, and examples. Periodic reviews would incorporate new usage rather than freezing the lexicon at a single moment.

As an initial pilot, researchers could select approximately 100–150 frequently needed terms from education, law, medicine, and digital technology. This number is a

Email:

conference@houghtonstreetreview.com

Website:

www.houghtonstreetreview.com/index.php/conference

© 2026 International Online Conference on Multidisciplinary Academic Research. All Rights Reserved.

Editor-in-Chief:

Dr. Ewelum Johnson Nnadi

Managing Editors:

1.Harold Jan R. Terano

2.Dr. Mandakini Singla

3.Massoud Kaykhaii







proposed research design, not a reported empirical sample. Each term could be evaluated against semantic accuracy, user comprehension, communicative efficiency, and consistency across contexts. For a term such as "artificial intelligence," participants might view alternative explanations or attested signs and then identify the intended concept. Analysis should consider differences in comprehension across participant groups without interpreting all variation as error. Results would support evidence-based recommendations rather than an imposed inventory.

Conclusion

The standardization and unification of Uzbek Sign Language terminology is a multidimensional task involving semantics, natural lexical variation, educational practice, technology, and language rights. International research suggests that effective coordination should prioritize accurate documentation and community participation over compulsory uniformity. Specialized concepts such as artificial intelligence, cloud computing, algorithm, inclusion, and legal rights illustrate the need for precise definitions, contextual examples, and empirical testing. A sustainable strategy would combine video-based lexicography, corpus annotation, transparent review procedures, and training for teachers and interpreters. Most importantly, Deaf sign language users should have a leading role in determining how terminology is documented, evaluated, and shared. Such an approach can strengthen access to education and public information while respecting the linguistic autonomy and diversity of Uzbek Sign Language.

References

1. Adam, R. Standardization of sign languages. Sign Language Studies, 15(4), 432–445. https://doi.org/10.1353/sls.2015.0015
2. Johnston, T. Language standardization and sign language dictionaries. Sign Language Studies.
3. Johnston, T. From archive to corpus: Transcription and annotation in the creation of signed language corpora. International Journal of Corpus Linguistics, 15(1), 106–131. https://doi.org/10.1075/ijcl.15.1.05joh
4. Kopf, M., Schulder, M., Hanke, T., & Bigeard, S. Specification for the harmonization of sign language annotations. EASIER Project. https://doi.org/10.25592/uhhfdm.9842
5. President of the Republic of Uzbekistan. (2022, October 20). Resolution No. PQ-407: On additional measures for the development of Uzbek Sign Language and the Braille alphabet. https://lex.uz/mact/6248469
6. Radboud University. (n.d.). Global Signbank: Lexical database for sign languages. https://signbank.cls.ru.nl/
7. United Nations. Convention on the Rights of Persons with Disabilities, Article 21. https://www.un.org/development/desa/disabilities/convention-on-the-rights-of-persons-with-disabilities/article-21-freedom-of-expression-and-opinion-and-access-to-information.html
8. World Federation of the Deaf. WFD statement on standardized sign language. https://wfdeaf.org/wfd-statement-on-standardized-sign-language/