Preserving the Naturalness of the Kazakh Language as a National Language: An Ecolinguistic Analysis

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***Abstract**[2]*: This study examines efforts to preserve the naturalness and sustainability of the Kazakh language from an ecolinguistic perspective. A systematic review method is employed, analyzing 32 academic publications obtained from designated databases covering the period 2020–2025. The findings indicate that language preservation relies on structural interventions such as national language policies, public prestige, and alphabet reform. Lexical strategies that balance terminology modernization with the preservation of traditional cultural discourse and educational policies that prioritize national identity and standardized norms were also within those structural interventions. The findings reveal that globalization (English) and historical language hierarchies (Russian) have narrowed the language's academic and public functions, and digitalization has presented opportunities and led to normative deviations. Ultimately, the ecological sustainability of the Kazakh language requires a holistic, proactive, and data-driven governance model that integrates policy, education, and digital technology, beyond merely prescriptive or simplistic approaches. This study offers a theoretical synthesis and a practical roadmap for language planners by outlining policy-oriented strategies, education-based interventions, and technology-supported mechanisms for sustaining linguistic naturalness.
Keywords: Kazakh Language, Ecolinguistics, Language Preservation, Language Naturalness, Turkic Languages

Language is one of the most fundamental elements reflecting a nation's identity, cultural heritage, and way of thinking. National languages are seen as means of communication and as living organisms that carry the historical memory and value system of societies. Against this

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backdrop, preserving the naturalness of a language means preserving its origins, structural integrity, and cultural essence (Karabassova, 2020). As an important member of the Turkic language family, the Kazakh language has largely preserved its unique structure despite social, cultural, and political changes throughout history. However, globalization, foreign language influences, language policies, and modernization processes have brought about new linguistic and cultural factors that threaten the naturalness of it (Akzhigitova et al., 2023). Recent studies conducted in Kazakhstan further demonstrate that language use within educational settings plays a critical role in shaping cultural empathy, social cohesion, and students' perceptions of school climate (Yussupova & Tarman, 2025).

Ecolinguistics is a branch of linguistics that considers language not merely as a means of communication but as part of a living ecosystem interacting with the social, cultural, and natural environment. This approach examines the interrelationships among language and nature, society, and cultural values, evaluating linguistic diversity within the context of environmental sustainability and cultural balance (Mussakhojayeva et al., 2021; Zhumabay et al., 2024). In today's Kazakhstan, rapidly developing technology, digital communication, and multicultural interaction are expanding the range of language use while also facilitating the infusion of foreign elements. This process threatens the language's unique syntax, phonetic structure, and richness of its meaning (Kurmanbayuly et al., 2023; Maralbek, 2024).

Linguistic naturalness" can be defined as a descriptive property that emerges when a linguistic item is used spontaneously, recurrently, and functionally by a speech community, rather than being guided by ideological or prescriptive norms, a distinction emphasized in recent sociolinguistic work (Kulmanov et al., 2023). This distinctionseparates naturalness from purism, which represents a normative effort to protect or purify language; from authenticity, which relies on claims of historical rootedness and cultural origin (Suleymanova & Rakhmetova, 2024); from standardization, tied to institutional codification; and from vitality, which describes intergenerational transmission and demographic sustainability (Doskeyeva et al., 2024).

Naturalness focuses instead on the internal coherence and communicative utility of forms in ordinary interaction, and can be identified through corpus-based frequency and contextual distribution, spontaneous production across registers, speaker intuition measures, diachronic continuity, and community-level legitimacy. It is bounded conceptually by the understanding that forms primarily imposed through prescriptive mechanisms lack naturalness, that purely stylistic uses do not constitute naturalness without stable usage patterns, and that contact-induced innovations count as natural only when they show sustained, spontaneous uptake within the community (Tlemissov et al., 2020). This study analyzes the preservation of the Kazakh language as a national language and its connection to its Turkic roots within an ecolinguistic framework based on relevant literature.

Language Policy, Globalization, and Language Transformation in Kazakhstan

Kazakhstan's population reached approximately 20 million at the beginning of 2024, with a multi-ethnic structure. According to 2023 data, ethnic Kazakhs constitute 70.6% of the population, while Russians represent 15.1%, Uzbeks 3.2%, Ukrainians 1.9%, Uyghurs 1.5%, and Germans and Tatars 1.1% each (Bureau of National Statistics of Kazakhstan, 2024). In terms of language use, a complex situation exists in the country; sociolinguistic research results demonstrate the clear dominance of the Russian language, while also revealing that Kazakh and English have strong communicative positions (Tlepbergen et al., 2022). Although Kazakh has official state language status, Russian is widely used, particularly in urban areas and higher education institutions.

Kazakhstan's language policy is based on an approach that aims to establish a balance between strengthening the state language and the multilingual nature of society (Abasilov &

Kapalbek, 2024a). The trilingual education model, which includes Kazakh, Russian, and English, aims to preserve national identity while increasing global competitiveness. The trilingual education model in Kazakhstan, initiated in 2007 and formalized through the 2015-2020 State Program, aims to develop proficiency in Kazakh, Russian, and English by implementing Content and Language Integrated Learning (CLIL) methodology in secondary schools (Karabassova, 2020). However, socioeconomic disparities between regions and structural inequalities between school types make the success of these goals variable (Nurlanova et al., 2022). While language regulations implemented in the public sphere aim to increase the visibility and prestige of Kazakh (Akzhigitova et al., 2023), the increasing weight of English in higher education has sparked new discussions about equity and access (Goodman & Kambatyrova, 2022). Furthermore, diverse practices observed in schools and universities indicate that functional multilingualism is becoming widespread beyond official language policies. Students' language preferences are directly related to their social status and opportunity structures (Kuzhabekova, 2019; Balcı & Sünbül, 2015).

Families' language ideologies and approaches indirectly influence the dissemination of Kazakh in social spheres (Kambatyrova, 2024). The hybrid language reflections observed in English-speaking universities point to a new norm-generation process (Zhunussova et al., 2023). Regional diversity reveals the need for localized and context-sensitive practices rather than a uniform policy approach (Kurambayev, 2022).

One of the most common forms of language is slang. Slang is an informal language used more in spoken language than in written language. Slang is an active element of youth language. It is so widespread that it is frequently used in daily spoken language. Slang is entering all areas of society. Because young people are the socially active layer of society, new forms of social relations significantly impact them (Auganbaeva et al., 2024). The content produced by younger generations in digital environments is increasing the gap between language rules and everyday usage (Yessenbekova & Syzdykova, 2024).

Globalization and the proliferation of digital platforms are significantly changing the pace and form of language use (Ten, 2024). Translations and the way news is presented in bilingual (Kazakh and English) media environments affect how people perceive the language (Kurambayev, 2022). Television, cinema, and online content allow for more detailed observation of data on Kazakh vocabulary. The language used in films and TV series, in particular, serves as a powerful model that influences the patterns young people prefer in their daily conversations (Piyazbayeva & Abasilov, 2025).

Social media facilitates the rapid spread of new words and hybrid language forms, constantly reshaping the balance between standard rules and everyday usage (Auganbaeva et al., 2024; Bakishev & Plumlee, 2022). The ideological divisions and economic trends emerging in this environment are also changing the social positioning of Kazakh and Russian (Ten, 2024). A corpus is a large database of real language samples collected from various areas of a language (newspapers, books, social media, television scripts, etc.). By analyzing these texts, researchers obtain measurable results on topics such as word usage, sentence structure, language change trends, or terminological consistency (Teubert, 2004). Corpus-supported monitoring of media content provides measurable data on terminological consistency and spelling unity, thus making the implementation of language policies more transparent (Nurlanova, 2022; Zhumanov & Tukeyev, 2021).

Cultural production areas strengthen the identity-building function of language (Dubuisson, 2020; Yessenbekova & Syzdykova, 2024). While themes related to national and cultural identity create new aesthetic forms in contemporary literature, digital short forms and traditional narratives coexist in the reading habits of younger generations (Abdurazakova et al., 2022). English language education in universities is supported to increase competitiveness, but is constantly evaluated in terms of equality principles (Goodman & Kambatyrova, 2022;

Kurambayev, 2022). The application of terminology and spelling standards in film and television translations contributes to the consistent establishment of formulaic expressions of the language (Kurambayev, 2022). Digital citizenship and media literacy programs, on the other hand, increase users' sense of responsibility by making the social impacts of their language choices visible (Yessenbekova & Syzdykova, 2024).

Lexical and Orthographic Developments in the Kazakh Language

A brief historical overview of Kazakh writing systems—from the Old Turkic alphabet to the Arabic alphabet, the Soviet-era Latin alphabet and Cyrillic alphabet, followed by the transition to the modern Latin-based alphabet today—creates a clearer linguistic context (Smagulova, 2008; Landau & Kellner-Heinkele, 2012). The transition of Kazakh to the Latin alphabet is not merely a technical change. It is considered a strategic turning point in terms of orthographic unity, technological compatibility, and international visibility (Bekzhanova & Makoelle, 2022). The reform is historically based on linguistic continuity established by Baitursynuly's orthographic principles. Baitursynuly's orthographic principles, developed in the 1920s, established a phonetically-based writing system for Kazakh that aimed to accurately represent the language's vowel harmony and unique sounds, distinguishing it from other Turkic languages and forming the foundation for subsequent alphabet reforms (Maralbek & Oralbai, 2024). Contemporary language policies strive to make orthographic reform a tool that supports, rather than threatens, "naturalness" by maintaining a balance between normative standards and everyday usage (Sarsenbay et al., 2023). Strengthening orthographic unity in the media language is closely linked to the perception of reliability and seriousness. Therefore, the simultaneous consideration of technical infrastructure and pedagogical principles ensures that orthographic reform is not merely a formal tool but also a tool for ecological and cultural stability (Abasilov & Kapalbek, 2024b; Sarsenbay & Salkynbay, 2023; Ten, 2024).

Terminology and conceptual mapping processes are fundamental elements that enhance the scientific production capacity of Kazakh and localize knowledge domains (Kurmanbayuly & Kulmanov, 2023). Semantic extension, derivational patterns, and the balance of compound structures play a decisive role in this process (Kulmanov et al., 2023). The decolonial approach strengthens native conceptualization and interaction with common Turkic roots by reducing reliance on foreign borrowings (Smagulova, 2023). Corpus-based verification methods provide quantitative support for language planning by measuring the extent to which term candidates are embedded in natural contexts (Teubert, 2004). Thus, terminology processes are not merely listing activities but also a scientific activity aimed at producing living, contextual guides.

Contributing local vocabulary to corpora is one effective way to preserve the ecological diversity of national languages. Regional dictionaries and ethnolexical inventories bring obscure words and idioms into academic circulation (Barmenkulova et al., 2023). These studies will provide data for updating educational and media guidelines by consistently mapping semantic fields (Aldasheva, 2023). Furthermore, folk idioms, proverbs, and formulaic expressions, as dense carriers of cultural memory, make visible the linguistic foundations of national identity (Suleymanova & Rakhmetova, 2024). Performative oral culture elements, such as the tradition of Aitys and the legacy of Dede Korkut, reinforce the continuity of written and spoken language by providing vivid examples of naturalness in contemporary language use (Yerlanova et al., 2025).

Education policies are the area of application where the goal of preserving naturalness is most concretely realized (Karabassova, 2020). The integration of CLIL (Content and Language Integrated Learning) and EMI (English Medium Instruction) approaches has the potential to increase the functionality of Kazakh in scientific and technical fields (Huertas-Abril & Shashken, 2021). However, the sustainability of multilingual models varies depending on teacher competencies, access to materials, and coordination between school types (Doskeyeva

et al., 2024; Tlemissov et al., 2020). The government's evaluation of multilingual models is ongoing, with continuous monitoring and adjustment processes in place to address the varied outcomes.

Transnational mobility and digital communication environments are transforming the linguistic ecology of Kazakh in multi-layered ways (Zhunussova et al., 2023). Multicultural consensus models support this transformation and increase the visibility of local language practices. Incorporating regional field data into policy design involves systematically collecting information on local language use, community preferences, and sociolinguistic practices, which then informs the development of adaptable strategies aimed at preserving the naturalness and functional relevance of the language across different regions (Sadulova et al., 2025). Cultural interactions with neighboring Turkic communities strengthen the circulation of a shared vocabulary, increasing ecological resilience (Ysmailova et al., 2024).

Problem Statement and Gaps in the Literature

In recent years, research on the Kazakh language has focused on two main trends. The first is studies addressing language policies and planning processes. The second is research based on corpus-based and computational linguistics approaches (Abasilov & Kapalbek, 2024a; Veitsman & Hartmann, 2024). While the number of systematic reviews is increasing, inconsistencies in reporting standards are observed (Aitim & Satybaldiyeva, 2024). Corpus-supported approaches have provided significant advances in preprocessing, speech databases, and natural language modeling, making it possible to monitor Kazakh usage patterns more objectively (Akhmed-Zaki et al., 2021; Mussakhojayeva et al., 2021). Also, text augmentation and large-scale language model evaluations conducted in low-resource language contexts increase sample diversity and open the door to methodological innovations (Bimagambetova et al., 2023).

Despite all these developments, longitudinal and causal field studies explaining the gap between policy and practice are still limited (Abasilov & Kapalbek, 2024b; Karabassova, 2020). The paucity of studies testing the social acceptance of terminology processes leaves unclear the extent to which standardization efforts align with local reality. Multi-level models that reveal how regional differences, media language, and popular cultural influences impact the norm-usus balance need to be developed (Kurambayev, 2022; Ten, 2024). While research on CLIL and EMI implementation in the educational setting provides important data on language equality and access, there is a need for standardization of indicators (Khassanov et al., 2024). The integration of corpus infrastructure into the policy-making cycle is just starting, and scalability problems continue (Kambatyrova, 2024).

Ecolinguistics interprets language changes not only at the structural or semantic level, but also in conjunction with social and ecological impacts. According to this perspective, preserving a language also means preserving cultural identity, social memory, and environmental awareness (Yessenbayev et al., 2020). In this context, ecolinguistics is an interdisciplinary field of study that aims to maintain the health of the linguistic ecosystem and strengthen cultural sustainability by supporting the natural evolutionary processes of languages (Derni, 2008). The methodological fragmentation and lack of standards in the existing literature prevent decision-makers from reaching a holistic picture (Aitim & Satybaldiyeva, 2024). Therefore, unless a systematic, indicator-based, and practice-sensitive ecolinguistic framework for the ecological sustainability of the Kazakh language is developed, naturalness policies will remain fragmented.

The primary goal of this research is to examine efforts to preserve and sustain the naturalness of the Kazakh language from an ecolinguistic perspective. The study seeks answers to the following sub-research questions:

1. What ecolinguistic approaches are being adopted in the preservation and development of the Kazakh language?
2. What strategies and practices are being used to preserve the vocabulary and discourse forms of the Kazakh language?
3. How are the language policies and educational strategies designed to strengthen the naturalness and cultural essence of the national language?
4. How do globalization, foreign language influences, and modernization processes affect the naturalness of the Kazakh language?
5. What gaps and limitations exist in the literature on the preservation of the naturalness of the national language, and how can these deficiencies be addressed in future research?

Method

Research Model

The present study adopts the systematic review method to systematically examine the literature on preserving the naturalness of the Kazakh language as a national language. Systematic review is a model that ensures comprehensiveness and reproducibility by synthesizing findings related to relevant research questions, applying predefined inclusion and exclusion criteria (Snyder, 2019). The research process follows a framework consisting of four main stages: search (determination of search terms and databases), evaluation (quality assessment using predefined inclusion and exclusion criteria), synthesis (extraction and categorization of data), and analysis (describing the results and drawing conclusions) (Mengist et al., 2020).

Search Strategy

The study population consisted of studies whose full texts were accessible from the Web of Science (WoS), Scopus, and Google Scholar databases.

Search Strategy and Inclusion/Exclusion Criteria
(i) The database search was conducted on October 8, 2025.
(ii) The database search strategy was *TS= (("Kazakh*" OR "Kazakhstan") AND ("language" OR "linguistic*") AND ("preserv*" OR "maintain*" OR "sustain*" OR "vitalit*" OR "ecolog*" OR "natural*" OR "authenticit*" OR "purity" OR "purism") AND ("national" OR "identity" OR "culture" OR "heritage" OR "traditional")) Timespan: 2020-2025*
(iii) Considering its purpose, the author, publication year, publication title, database, subject, keywords, and abstract information were determined and extracted from the relevant literature search in the study.
(iv) These criteria were refined to include only research articles and reviews that are peer-reviewed and available in full text in English.
(v) Using the *Academic Publication Evaluation Form* prepared, each study was numbered. Studies, except those specified, were withdrawn for the reporting process, using the *APA 7* bibliography writing style.
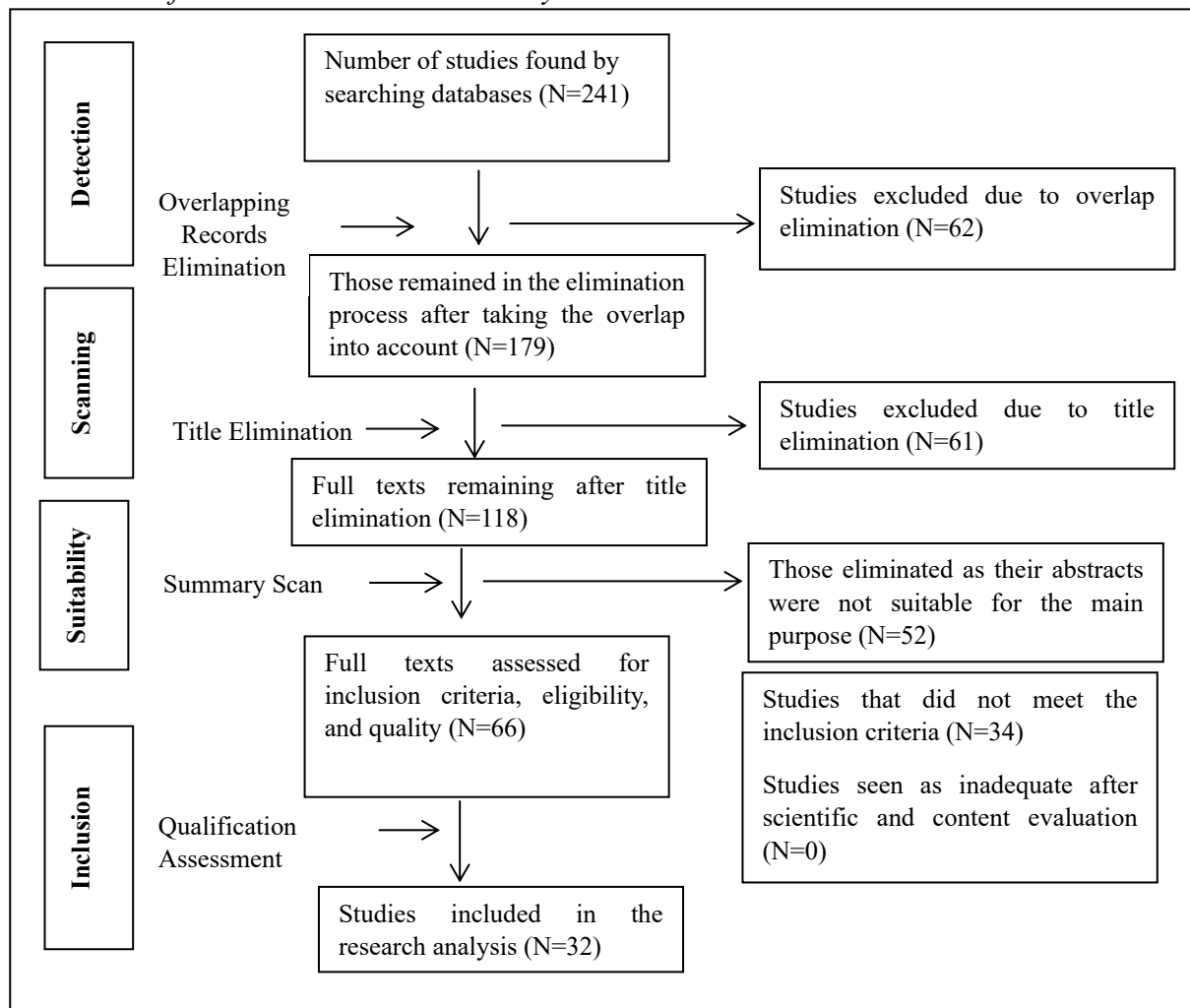Reasons for not including a research study in the scope of publications include:
    (i) Not found in relevant databases
    (ii) Not having access to the full text
    (iii) Not focusing on preserving the naturalness of the Kazakh language as a national language.

Figure 1

Flowchart of Studies Included in the Analysis

As seen in the PRISMA diagram in Figure 1, all relevant databases were searched for keywords to identify the appropriate research for analysis with accessible full text, and 241 studies were included in the pool. Sixty-two studies were excluded because they duplicated/overlapped the same studies in both the keywords and the databases. In the second stage, the remaining 179 studies were examined in depth. Of these, 61 were removed from the pool due to irrelevant topics, 52 for non-conformity to the main purpose, and 34 for not meeting the inclusion criteria. The remaining 32 studies were transferred to the *Mendeley* database for further evaluation. Detailed information about the included studies is provided in Appendix 1.

Data Analysis

Content analysis techniques were used to analyze the data by coding the frequency of message elements as codes, and countable units were identified and expressed as themes and subthemes. The analysis aimed to count message elements according to the frequency of a particular component, and they were expressed in terms of frequency. This approach allows for understanding the frequency of a particular component and its intensity and importance within the context of the analysis (Köhler & Stemmler, 1997).

Validity and Reliability of the Study

Validity: In qualitative studies, validity is related to the researcher's ability to reflect the phenomenon under examination in the most realistic, objective, and holistic manner possible. The researcher's clear disclosure of the data collection process, the methods underlying the conclusions, and the data analysis stages are among the fundamental elements increasing the validity of the study (Creswell & Poth, 2016). It is generally assessed in two fundamental dimensions: internal and external validity.

Internal validity focuses on the adequacy of the research process to reveal the phenomenon under study and, therefore, the researcher is expected to show a consistent, systematic, and careful approach throughout the data collection, analysis, and interpretation stages (Patton, 2014). To strengthen internal validity in this study, the findings section was supported with detailed definitions. The obtained data were first presented objectively, followed by the interpretation phase. Internal consistency (homogeneity) and external diversity (heterogeneity) criteria were also taken into account to identify similarities and differences between the data clearly.

External validity relates to the replicability and generalizability of the results across similar settings. Therefore, the ability of a study to produce the same results across different settings shows that external validity has been achieved (Patton, 2014). To support external validity in this current study, the process of obtaining the sources used from the databases is explained in detail, and the raw data is presented as an appendix and described in a manner suitable for comparison with different databases. This strengthens the replicability of the study in other settings.

Reliability: Reliability relates to the clarity, traceability, and replicability of the research. In other words, it refers to the degree to which research findings can be reproduced using the same methods (Creswell & Poth, 2016). In this regard, data analysis was conducted independently by two experts, and the reliability formula developed by Miles and Huberman (1994) was applied to determine the consistency of the results. The calculations revealed a reliability rate of 78% for the study. The coding process followed an inductive approach in which themes and subthemes were derived from the data, and coding disagreements were resolved through researcher consensus. An inter-coder reliability of 78% was considered acceptable for this review because the dataset consisted of conceptually diverse texts in which complete coding convergence is less likely; moreover, discrepancies were minor and resolved through consensus meetings, strengthening the validity of the final thematic structure

Transparency and Replicability

To enhance the transparency and replicability of the search process, a clearer rationale was provided for both the database strategy and the selected time window. Google Scholar was used not as an unrestricted search space but as a supplementary source to capture studies that may not yet be indexed in WoS or Scopus; therefore, a fixed search query was applied consistently across all platforms. The 2020–2025 timespan was chosen because debates on the naturalness of the Kazakh language as a national language have undergone a significant transformation in the past five years. Increasing digitalization, revisions in national identity strategies, and the accelerated transition to the Latin script have reshaped contemporary discussions on naturalness, authenticity, and modernization. While earlier studies provide valuable historical perspectives, focusing on this recent period allows the review to reflect how current sociopolitical developments have influenced scholarly conceptualizations of linguistic naturalness.

Results

Findings Regarding the First Research Question

Table 1 presents the findings regarding the ecolinguistic approaches adopted in the preservation and development of the Kazakh language.

Table 1

Ecolinguistic Approaches in the Preservation and Development of the Kazakh Language

Theme	Sub-theme	Category	n	Related Research
Political Strategies	National Language Policy and Legal Regulations	Ensuring language security by establishing a policy framework and laws.	5	Riahanov (2021); Abasilov & Kapalbek (2024a); Abasilov & Kapalbek (2024b); Ibrayeva et al. (2025); Khassanov et al. (2024)
		Strengthening strategic management by developing language planning mechanisms.	2	Akzhigitova et al. (2023); Ten (2024)
	Linguistic Transformation	To raise the prestige of the national language through public space arrangements.	3	Tlepbergen et al. (2022); Maralbek & Oralbai (2024); Anarbekova & Salkynbay (2024)
		Increasing the visibility of the Kazakh language in urban areas and promoting it in public spaces.	2	Bekzhanova & Makoelle (2022); Akzhigitova et al. (2023)
Alphabet Reform and Writing System	Transition to the Latin Alphabet	Facilitating learning by adapting the education system to the new alphabet.	4	Bekzhanova & Makoelle (2022); Tlepbergen et al. (2022); Maralbek & Oralbai (2024); Anarbekova (2025)
		Forming social acceptance by ensuring social inclusion and harmony.	2	Bekzhanova & Makoelle (2022); Anarbekova & Salkynbay (2024)
	Orthographic Norms	Preserving linguistic unity by standardizing spelling rules.	3	Khabiyeva et al. (2024); Anarbekova (2025); Sadulova et al. (2025)
		Ensuring cultural continuity by reevaluating historical writing traditions.	2	Anarbekova & Salkynbay (2024); Serdalina (2024)
		Standardizing institutional correspondence.	2	Zhunussova et al. (2023); Agbo et al. (2025)
Multilingualism and Language Ecology	Kazakh-Russian Bilingualism	Restoring the balance of power by ensuring linguistic justice.	3	Ten (2024); Sadulova et al. (2025); Ibrayeva et al. (2025)
		Improving the quality of teaching by analyzing linguistic error patterns.	2	Ibrayeva et al. (2025); Khassanov et al. (2024)
	The Role of English	Protecting the national language by designing balanced language policies in higher education.	4	Goodman & Kambatyrova (2022); Zhunussova et al. (2023); Khassanov et al. (2024); Agbo et al. (2025)

Theme	Sub-theme	Category	n	Related Research
		Critically evaluating the myths of global competitiveness and setting realistic goals.	2	Zhunussova et al. (2023); Agbo et al. (2025);
	Multilingual Education Applications	Developing effective strategies by evaluating student perceptions.	2	Kubieva et al. (2021); Khassanov et al. (2024)

The data in Table 1 show that ecolinguistic approaches to the preservation and development of the Kazakh language are grouped under four main themes in the literature: Political strategies, alphabet reform and writing system, multilingualism and language ecology, and processes of linguistic transformation.

Political strategies focus on establishing national language policies, ensuring language security through legal regulations, and developing strategic management mechanisms. In this setting, national language policies provide a legal framework and are also supported by practices that increase the prestige of the language in public spaces and strengthen public awareness.

Alphabet reform and the writing system are shaped around the transition of Kazakh to the Latin alphabet. In this process, adapting the education system to the new script, strengthening social acceptance, and standardizing orthographic norms are key priorities. The reform process is not only a technical transformation but also crucial for ensuring cultural continuity and reinterpreting the written tradition.

Multilingualism and language ecology examine the impacts of Kazakh-Russian bilingualism on linguistic justice, the rising role of English, and the consequences of multilingual education policies on the national language. Within this framework, the study focuses on issues such as reestablishing the balance of power between languages, analyzing linguistic error patterns in teaching processes, and designing balanced language policies in higher education. Moreover, despite the increasing status of English due to globalization, the necessity of preserving Kazakh as a carrier of national identity is emphasized.

Finally, under the heading of linguistic transformation, strategies are explored to increase the public visibility of the Kazakh language and expand its use in urban life. These studies aim to foster social ownership via increasing the language's prestige, ensuring its visibility in public spaces, and fostering linguistic awareness.

Findings Regarding the Second Research Question

Table 2 presents the findings regarding the strategies and practices used to preserve the vocabulary and forms of discourse of the Kazakh language.

Table 2

Strategies for Preserving the Vocabulary and Forms of Discourse of the Kazakh Language

Theme	Sub-theme	Category	n	Related Research
Terminology and Lexical Innovations	Kazakh Language Protection and Purism	Testing acceptability by evaluating lexical innovations using a subjective scaling method.	4	Aldasheva (2023); Kulmanov et al. (2023); Maralbek & Oralbai (2024); Anarbekova & Salkynbay (2024)
		Preserving the essential structure of the language by eliminating foreign words.	3	Aldasheva (2023); Kurmanbayuly & Kulmanov (2023); Khabiyeva et al. (2024);
	Formation of Modern Terminology	Combining traditional terminology methods with modern needs.	3	Akhmed-Zaki et al. (2021); Kurmanbayuly & Kulmanov (2023); Serdalina (2024)
		Ensuring the naturalness of modern terms by analyzing semantic processes.	2	Kulmanov et al. (2023); Kurmanbayuly & Kulmanov (2023)
		Increasing linguistic autonomy by developing Kazakh terminology in new fields.	2	Akhmed-Zaki et al. (2021); Kulmanov et al. (2023)
	Lexical Norms and Standardization	Establishing vocabulary norms in the modern Kazakh language.	3	Kulmanov et al. (2023); Aldasheva (2023); Khabiyeva et al. (2024)
		Maintaining the purity of the language by regulating the integration of loanwords.	2	Aldasheva (2023); Kurmanbayuly & Kulmanov (2023)
		Testing the compatibility of neologisms with the language system.	2	Aldasheva (2023); Khabiyeva et al. (2024)
		Supporting the development of scientific language by ensuring terminological consistency.	2	Kulmanov et al. (2023); Kurmanbayuly & Kulmanov (2023)
	A Historical Linguistics Perspective	Ensuring continuity by examining language evolution in a historical context.	3	Serdalina (2024); Anarbekova & Salkynbay (2024); Maralbek & Oralbai (2024)
		Planning for the future by drawing lessons from past language reforms.	2	Maralbek & Oralbai (2024); Anarbekova & Salkynbay (2024)
Traditional Discourse and Cultural Values	Proverbs and Idioms	Keeping the philosophical meaning of proverbs alive in contemporary communication.	2	Kurambayev (2022); Suleymanova & Rakhmetova (2024)
		Strengthening cultural identity by conveying national values through language patterns.	3	Kabadaiy & Sadykova (2022); Abdurazakova et al. (2022) Suleymanova & Rakhmetova (2024);
	Traditional Speech Culture	Reflecting and preserving traditional discourse in literature and cinema.	3	Abdurazakova et al. (2022); Maralbek & Oralbai (2024); Chermukhambetov et al. (2024)
		Comparing modern and traditional Kazakh speech at the lexico-phraseological level.	2	Kabadaiy & Sadykova (2022); Yessenbekova & Syzdykova (2024)

Theme	Sub-theme	Category	n	Related Research
		Preserving the oral cultural heritage by documenting it in written texts.	2	Maralbek & Oralbai (2024); Suleymanova & Rakhmetova (2024)
		Revitalizing traditional wisdom in contemporary discourse.	2	Suleymanova & Rakhmetova (2024); Chermukhambetov et al. (2024);
	Spiritual and Moral Values	Preserving the spiritual dimension of the humanitarian problem in the national consciousness of the Kazakh people.	2	Abdurazakova et al. (2022); Chermukhambetov et al. (2024);
Digital Language Processing and Technology	Information Systems Development	Supporting digital use by creating pre-processing systems for the Kazakh language.	2	Akhmed-Zaki et al. (2021); Tlepbergen et al. (2022)
		Strengthening language acquisition through technology-supported learning.	2	Akhmed-Zaki et al. (2021); Tlepbergen et al. (2022)
	Translation and Media Language	Maintaining natural language in news translation in a bilingual context.	3	Kurambayev (2022); Yessenbekova & Syzdykova (2024)
		Improving the quality of Kazakh language use in media language.	2	Kurambayev (2022); Kabadaiy & Sadykova (2022)

When Table 2 is examined, it is seen that strategies for preserving the vocabulary and forms of discourse in the Kazakh language adopt an ecolinguistic approach, holistically addressing both historical roots and contemporary developmental needs. The studies are grouped under five main themes: Terminology and lexical innovations, lexical norms and standardization, historical linguistics perspective, traditional discourse and cultural values, and digital language processing and technology.

The theme of terminology and lexical innovation aims to preserve and enrich the Kazakh vocabulary in the modernization process. Neologisms are newly created or recently adopted words and expressions that emerge in a language to describe new concepts, technologies, or cultural phenomena. Emphasis is placed on eliminating words of foreign origin, testing the semantic naturalness of new terms, and developing modern terminology in accordance with traditional methods to create a terminological structure that reflects national identity while increasing linguistic autonomy.

Lexical norms and standardization aim to define the boundaries of the modern Kazakh vocabulary, regulate the integration of loanwords, and ensure the coherence of the scientific language.

The historical linguistics perspective aims to preserve linguistic continuity through examining the historical development of the Kazakh language and previous reform experiences. Experiences gained from past linguistic transformations guide current language planning.

The theme of traditional discourse and cultural values focuses on the cultural carrier function of language. Proverbs, idioms, and traditional forms of speech are considered fundamental tools of national identity and spiritual values. This approach aims to ensure the sustainability of cultural heritage through language.

Finally, the theme of digital language processing and technology seeks to strengthen the presence of Kazakh in the digital age. The development of information systems and

preprocessing tools, technology-supported learning, and improving the quality of Kazakh in media language are priorities in this area.

Findings Regarding the Third Research Question

Table 3 presents the findings regarding how language policies and educational strategies are designed to strengthen the naturalness and cultural essence of the national language.

Table 3

Language Policies and Educational Strategies that Strengthen the Naturalness of the National Language

Theme	Sub-theme	Category	n	Related Research
Language of Instruction Policies	Multilingual Education Models	Ensuring balanced language development by implementing multilingual education models.	4	Kubieva et al. (2021); Khassanov et al. (2024); Sadulova et al. (2025); Ibrayeva et al. (2025)
		Maintaining the primacy of the national language by balancing the status of English.	2	Khassanov et al. (2024); Agbo et al. (2025)
	Selection of Language of Instruction	Supporting the formation of multilingual identities at EMI universities.	3	Goodman & Kambatyrova (2022); Zhunussova et al. (2023); Agbo et al. (2025);
		Considering socioeconomic factors in language of instruction decisions.	2	Goodman & Kambatyrova (2022); Abasilov & Kapalbek (2024b)
Language Norms and Standardization	Spelling Norms	Clarifying standards by identifying normative issues in modern Kazakh writing.	2	Khabiyeva et al. (2024); Anarbekova (2025)
		Ensuring consistency by determining normative forms using scientific methods.	2	Anarbekova (2025); Ibrayeva et al. (2025)
	Error Analysis and Correction	Systematically analyzing error patterns that occur in bilingualism.	3	Khassanov et al. (2024); Ibrayeva et al. (2025); Sadulova et al. (2025)
		Identifying grammatical difficulties and improving the curriculum.	2	Khabiyeva et al. (2024); Ibrayeva et al. (2025)
Education of History and Identity	National Narratives	Strengthening identity awareness by creating new national discourses in history textbooks.	2	Abdurazakova et al. (2022); Burkhanov & Sharipova (2024)
		Reflecting national and cultural identity through literature.	2	Abdurazakova et al. (2022); Chermukhambetov et al. (2024)
	Transfer of Cultural Heritage	Integrating the legacy of historical figures into language education.	2	Anarbekova & Salkynbay (2024); Serdalina (2024)

The findings presented in Table 3 indicate that strategies to strengthen the naturalness and cultural essence of the national language are shaped around education policies, language

norms, and identity education. The findings are grouped under three main themes: Language of education policies, language norms and standardization, and history and identity education.

Within the framework of language of instruction policies, multilingual education models aim to maintain the naturalness of Kazakh while establishing a functional balance with other languages. The goal of these models is to ensure that students can effectively use more than one language without weakening the prestige of Kazakh. Balancing the influence of English in higher education and maintaining Kazakh's position as the primary language in public and academic settings are priority objectives. Besides, socioeconomic conditions and regional differences should be considered when choosing a language of instruction.

Language norms and standardization focus on establishing standards for spelling, grammar, and usage in Kazakh. Normative issues in modern Kazakh writing should be analyzed using scientific methods. Error analysis and systematic examination of grammatical difficulties help understand the challenges faced by bilinguals in their learning process. This approach contributes to the development of language teaching curricula.

History and identity education focuses on the role of language in constructing national identity. Research reveals an increasing use of discourses reinforcing national identity in history textbooks and literary texts. Language is considered a means of communication and also a carrier of cultural belonging and historical continuity. Integrating national heroes and cultural heritage into language education aims to instill historical awareness and linguistic identity in students.

Findings Regarding the Fourth Research Question

Table 4 presents the findings regarding how globalization, foreign language influences, and modernization processes affect the naturalness of the Kazakh language.

Table 4
The Effects of Globalization and Modernization on the Naturalness of the Kazakh Language

Theme	Sub-theme	Category	n	Related Research
Foreign Language Influences	The Influence of Russian	The hegemonic structure of the Russian language creates linguistic injustice, hindering the natural development of the Kazakh language.	3	Goodman & Kambatyrova (2022); Ten (2024); Sadulova et al. (2025)
		The dominance of Russian in bilingual discourse narrows the communication spaces of the Kazakh language.	2	Kurambayev (2022); Ten (2024)
		Kazakh-Russian bilingualism creates unbalanced power relations in language choices.	2	Sadulova et al. (2025); Ibrayeva et al. (2025)
	The Expansion of English	The excessive use of English in higher education weakens the academic functions of the Kazakh language.	3	Goodman & Kambatyrova (2022); Zhunussova et al. (2023); Agbo et al. (2025)
		Global language policies threaten linguistic diversity by damaging the local language ecology.	2	Khassanov et al. (2024); Agbo et al. (2025)
	Multilingual Identity Formation	Hybrid linguistic identities in the context of EMI fragment national linguistic identity.	2	Zhunussova et al. (2023); Khassanov et al. (2024)

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Theme	Sub-theme	Category	n	Related Research
		The language preferences of multilingual students create negative attitudes toward the Kazakh language.	3	Kubieva et al. (2021); Zhunussova et al. (2023); Khassanov et al. (2024)
		Language mixing and code-switching disrupt the natural structure of the Kazakh language, creating hybrid forms.	2	Kurambayev (2022); Ibrayeva et al. (2025)
		Multi-layered linguistic identities weaken national linguistic affiliation.	2	Abdurazakova et al. (2022); Zhunussova et al. (2023)
		Foreign language learning leads to a decline in native language proficiency.	2	Ibrayeva et al. (2025); Sadulova et al. (2025)
Modernization and Digitalization	New Communication Environments	Digital platforms are leading to deviations from official Kazakh language norms.	3	Akhmed-Zaki et al. (2021); Tlepbergen et al. (2022); Yessenbekova & Syzdykova (2024);
		The changing reading habits of the younger generation are eroding traditional forms of Kazakh language use.	2	Kurambayev (2022); Yessenbekova & Syzdykova (2024)
		Social media language simplifies traditional discourse structures, reducing their richness.	2	Kabadaiy & Sadykova (2022); Yessenbekova & Syzdykova (2024)
	Technological Adaptation	The inadequacy of language technologies limits the visibility of the Kazakh language in digital spaces.	2	Akhmed-Zaki et al. (2021); Tlepbergen et al. (2022)
		The predominance of English in technology-supported learning diminishes the Kazakh language's function as a teaching tool.	2	Tlepbergen et al. (2022); Khassanov et al. (2024)
Cultural Change and Adaptation	Transformation of Traditional Values	Modernization diminishes the functionality of traditional forms of discourse, leading to their oblivion.	2	Suleymanova & Rakhmetova (2024); Chermukhambetov et al. (2024)
		The spread of Western lifestyles weakens national consciousness and spiritual values in the new generation.	2	Abdurazakova et al. (2022) Chermukhambetov et al. (2024)
		Cultural change processes sever the link between language use and cultural identity.	2	Riahanov (2021); Abdurazakova et al. (2022)

The findings presented in Table 4 show that globalization, foreign language influences, and modernization processes affect the naturalness of the Kazakh language in multiple ways. The historical and socio-political dominance of Russia stands out as one of the primary factors limiting the natural development of the Kazakh language. This leads to the dominance of

Russian in communication, particularly in bilingual communities, and the emergence of linguistic injustices. Similarly, the increasing use of English in higher education and academic circles undermines the Kazakh language's role in scientific production and creates an imbalance in the local language ecosystem. The devaluation of local languages under the influence of global language policies leads to a decrease in linguistic diversity and the erosion of cultural authenticity.

The increasing multilingualism associated with globalization paves the way for the formation of hybrid linguistic identities among individuals. This situation, particularly in English-language institutions, leads students to distance themselves from their national linguistic identities and develop negative attitudes toward Kazakh. Phenomena such as code-switching and language mixing disrupt the natural structure of the language, leading to the proliferation of hybrid forms. The strengthening of multi-layered linguistic identities weakens national language loyalty and leads to a noticeable decline in native language proficiency. Thus, the communicative, cultural, and symbolic functions of the Kazakh language are gradually declining within multilingual social structures.

Modernization and digitalization processes are also having significant impacts on the naturalness of the Kazakh language. Much of the content produced on digital platforms deviates from the official norms of the language and undermines its orthographic unity. The simplified and abbreviated forms of discourse adopted by the younger generation, particularly in social media and online communication environments, diminish the language's traditional structural richness. Social media language is replacing traditional Kazakh discourse forms, favoring a more superficial and functional style of communication. This change brings about not only a linguistic but also a cultural transformation. The limited representation of the Kazakh language in digital spaces during the process of adapting to technological advancements is also noteworthy.

The inadequacy of local applications of language technologies leads to insufficient support for the Kazakh language in artificial intelligence, voice recognition, or automatic translation systems. This facilitates the dominance of English in digital spaces and reduces the use of the Kazakh language as a teaching tool. With modernization and urbanization, the functionality of cultural carriers such as traditional forms of discourse, proverbs, and idioms is diminishing. This weakens the language's function as a cultural memory and causes gaps in the transmission of social values. The spread of Western lifestyles leads to the weakening of national consciousness and spiritual values, especially among younger generations. This trend overshadows the language's role as a carrier of cultural identity.

Findings Regarding the Fifth Research Question

Table 5 presents recommendations for future research based on gaps in the literature on preserving the naturalness of the national language.

Table 5

Current Gaps and Future Research Directions in the Ecological and Cultural Sustainability of the Kazakh Language

Theme	Sub-theme	Category	n	Related Research
Methodological Approaches	Qualitative and Quantitative Methods	Measuring lexical acceptance using subjective scaling.	2	Aldasheva (2023); Ibrayeva et al. (2025)
		Evaluation of traditional and modern languages using comparative analysis methods.	3	Kabadaiy & Sadykova (2022); Serdalina (2024); Maralbek & Oralbai (2024)
	Sociolinguistic Analyses	Developing sociolinguistic perspectives in multilingual contexts	3	Zhunussova et al. (2023); Meruyert et al. (2024); Sadulova et al. (2025);
		Assessing visibility through language landscape and public discourse analyses	2	Akzhigitova et al. (2023); Ten (2024)
Research Gaps	Lack of Long-Term Monitoring	Conducting longitudinal studies to monitor the long-term effects of language policies.	2	Abasilov & Kapalbek (2024b); Bekzhanova & Makoelle (2022)
		Determining the intergenerational impact of alphabet reform.	2	Bekzhanova & Makoelle (2022); Anarbekova (2025)
	Lack of Ecolinguistic Theory	Creating unique ecolinguistic frameworks for the Kazakh language	3	Riahanov (2021); Ten (2024); Meruyert et al. (2024)
		Adapting concepts of language ecology and sustainability to the Kazakh context	2	Kubieva et al. (2021); Sadulova et al. (2025)
Future Research Orientations	Digital Language Resources	Creation of comprehensive digital corpora and databases	2	Akhmed-Zaki et al. (2021); Kulmanov et al. (2023)
		Development of AI-powered language learning tools	2	Akhmed-Zaki et al. (2021); Tlepbergen et al. (2022)
	Policy Impact Assessment	Systematizing the social impact assessment of language policies	3	Akzhigitova et al. (2023); Abasilov & Kapalbek (2024a); Abasilov & Kapalbek (2024b)
		Integrating stakeholder views into policy-making through participatory research methods	2	Zhunussova et al. (2023); Khassanov et al. (2024);
	Cultural Sustainability	To explore ways to integrate traditional knowledge systems into modern education	2	Suleymanova & Rakhmetova (2024); Chermukhambetov et al. (2024)

The literature on the ecological and cultural sustainability of the Kazakh language highlights several methodological and theoretical gaps. In particular, studies measuring lexical acceptance using subjective scaling methods and comparatively analyzing traditional and modern language structures are limited. Furthermore, a need remains to develop sociolinguistic perspectives in multilingual contexts and systematically examine the visibility of the national language through analyses of the language landscape and public discourse. Longitudinal studies

to determine the intergenerational impact of language policies and alphabet reform are limited. Furthermore, there are shortcomings in developing specific ecolinguistic frameworks for the Kazakh language and adapting language ecology and sustainability concepts to local contexts. Future research should focus on developing digital language resources and AI-enabled language learning tools. The creation of comprehensive digital corpora and databases will increase the traceability of language in both academic and social settings. Systematic assessment of the societal impacts of language policies and the inclusion of stakeholder perspectives in policy-making processes will strengthen their effectiveness. Besides, exploring ways to integrate traditional knowledge systems into modern education programs to support cultural sustainability is crucial.

Discussion

The present study examines efforts to preserve the naturalness and sustainability of the Kazakh language from an ecolinguistic perspective. An examination of the ecolinguistic approaches adopted for the first research question reveals that Kazakh language preservation is built on three fundamental strategies: political strategies, alphabet reform, and multilingualism management. The key finding demonstrates that legal regulations aimed at ensuring language security are directly linked to efforts to increase the language's prestige and visibility in the public sphere. This is significant because it confirms that language preservation is not merely a linguistic issue but also a political project related to national sovereignty and identity construction.

Alphabet reform is interpreted not as a mere technical orthographic change but as an ecological intervention that ensures cultural continuity and aims for social acceptance. The findings are in line with similar studies in the literature and confirm that the success of national language policies depends on practices that enhance the language's prestige in the public sphere, beyond the legal framework (Abasilov & Kapalbek, 2024a; Akzhigitova et al., 2023). It is emphasized that the adaptation of the education system and ensuring social inclusion during the transition to the Latin alphabet are crucial to the success of the reform (Bekzhanova & Makoelle, 2022).

From the perspective of the multilingual ecology, the power imbalances in Kazakh-Russian bilingualism and the increasing role of English in higher education have highlighted the need for policies aimed at ensuring linguistic justice (Goodman & Kambatyrova, 2022). It is emphasized that the adaptation of the education system and ensuring social inclusion during the transition to the Latin alphabet are crucial to the success of the reform (Bekzhanova & Makoelle, 2022). At the same time, the findings highlight that preserving a language requires attention to its vocabulary and its broader discourse structures. Maintaining traditional forms of discourse and cultural values emerges as a key strategy for sustaining the language's role as a cultural carrier (Suleymanova & Rakhmetova, 2024). This further affirms that language functions not just as a tool for communication but also as a primary conduit of national identity and spiritual heritage. The documentation of literature, cinema, and oral traditions appears to play a vital role in safeguarding cultural memory. Finally, digital language processing and technological tools stand out as contemporary supports for these preservation efforts (Akhmed-Zaki et al., 2021).

The third research question focused on language policies and educational strategies designed to strengthen the naturalness and cultural essence of the national language. The findings clearly demonstrated that the education system is the most critical area for ensuring the ecological sustainability of the language. The key finding revealed that language preservation strategies are built on three pillars: balancing multilingual education models, standardizing language norms, and integrating national identity education into the curriculum. Multilingual education models demonstrate a delicate balancing act aimed at ensuring students'

integration into the global world while preventing the status of English from being excessively elevated at the expense of the national language (Khassanov et al., 2024). This approach aligns with analyses of language policies in higher education (Goodman & Kambatyrova, 2022). This finding is consistent with recent curriculum-based research in Kazakhstan, which highlights the role of educational institutions and communicative competence development in sustaining effective language policies and national language planning (Bokayev et al., 2024). Another striking finding is the strong connection between history and identity, education, and language policies. National discourses in history textbooks and the transmission of cultural heritage through literature have been shown to strengthen identity awareness (Burkhanov & Sharipova, 2024). This situation proves that language is seen both a means of communication and the carrier of the national narrative.

The fourth research question examined how globalization, foreign language influence, and modernization processes shape the naturalness of Kazakh, and the reviewed studies provide concrete evidence of several pressure points. The historical dominance of Russian and the rising prestige of English are shown to restrict Kazakh's functional domains in public, educational, and academic settings (Goodman & Kambatyrova, 2022; Ten, 2024; Zhunussova et al., 2023). Modernization and digitalization create a similar dual effect: while expanding the language's communicative reach, they also generate shifts away from codified norms and foster simplified discourse practices in social media environments (Yessenbekova & Syzdykova, 2024). The limited availability of robust language technologies further constrains Kazakh's digital presence (Akhmed-Zaki et al., 2021), and cultural transitions contribute to the weakening of traditional discourse forms, which risks loosening the bond between language and cultural identity (Bekpenbetova et al., 2025; Suleymanova & Rakhmetova, 2024). Taken together, the reviewed evidence indicates that sustaining linguistic naturalness requires ongoing accommodation to global and technological transformations (Auganbaeva et al., 2024), as these dynamics can otherwise amplify issues such as linguistic inequity and cultural erosion.

Implications

The findings of this systematic review have essential theoretical and practical implications for the ecolinguistic sustainability of the Kazakh language. Theoretically, this study has demonstrated in concretely that the concept of "linguistic naturalness" is related to the internal structure of a language as well as its status, functionality, and digital presence. The findings suggest that language ecology models should take greater account of political power dynamics and decolonial efforts, particularly in post-Soviet and multilingual societies. The study presents a theoretical imperative that language management, situated at the intersection of politics, education, and technology, should be integrated into existing ecolinguistic frameworks.

The findings suggest that careful planning is necessary to ensure that the increasing prevalence of English in higher education does not hinder the development of Kazakh as an academic language. For media organizations and technology developers, developing mechanisms to encourage the correct use of Kazakh on digital platforms and investing in language technologies are crucial for the language's vitality in the digital ecosystem. Finally, it has become clear that traditional forms of discourse must be repopularized through modern communication channels to preserve cultural heritage. A committee of language policy stakeholders, including educators, community representatives, and policymakers, should be established to actively participate in planning and implementing strategies for preserving the naturalness of the language.

Limitations and Recommendations

While the study provides a comprehensive synthesis of the literature on the preservation of the naturalness of the Kazakh language, it also has limitations. First, the research is limited to Web of Science and Scopus databases and covers the time period of 2020-2025. This may have excluded valuable local studies and the long-term sociolinguistic impact of language policies. Only specific international indexes were included, while future research could broaden the scope by incorporating additional indexes and publications in other languages. At the same time, the selected indexes are widely used in systematic reviews and therefore are not expected to narrow the evidence base in a way that substantially distorts the overall findings. Another limitation stems from the methodological limitations of the reviewed studies.

Future Research

In light of these limitations, concrete recommendations for future research have been developed to support the ecological sustainability of the language. Future research should be conducted long-term, mixed-method field studies that evaluate the intergenerational impacts of language policies and alphabet reform. Participatory research models that systematize the social impact assessment of language policies and center stakeholder participation should be encouraged. With regard to cultural sustainability, applied studies are needed that explore how traditional knowledge systems can be effectively integrated into modern educational curricula. The key recommendation for policymakers is to move from a reactive approach to language planning towards a data-driven and flexible governance approach that proactively supports the language ecosystem. Finally, future research could benefit from developing a more structured analytical framework that helps organize the currently fragmented indicators. Such a framework could consist of multiple layers—conceptual indicators (clarity of definitions, theoretical coherence), methodological indicators (data type, measurement validity), contextual indicators (sociopolitical conditions, linguistic ecology), and applied indicators (policy relevance, practical uptake). A multi-layered, indicator-based structure of this kind would reduce fragmentation in the literature and enable more holistic, comparable evaluations across studies.

Conclusion

This study comprehensively demonstrates that the effort to preserve the naturalness of the Kazakh language as a national language is not an isolated linguistic intervention but a complex ecological management problem. The study shows that maintaining linguistic vitality requires a delicate balance between opposing considerations such as globalization and localization, standardization and natural usage, and tradition and modernity. The main contribution of this study to the literature is that it systematically analyzes the essential components required for "ecolinguistic sustainability" in the Kazakh context, filling the gap in the literature's fragmented approach. The findings reveal that the naturalness of the language cannot be protected solely through legal regulations. Instead, a holistic strategy is needed that enhances the functionality of the language in academic and digital spheres, ensures terminological autonomy, and actively reproduces cultural discourse through education. The lasting impact of this study is that it provides a concrete foundation for language planners, educators, and policymakers in Kazakhstan. The findings highlight the importance of shifting from a reactive approach to conservation to a proactive and sustainable governance model that supports the natural evolution of the language to preserve and strengthen its ecosystem. This will ensure the preservation of it as a heritage as well as a dynamic foundation for national identity and future societal development.

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Appendix 1: Descriptive Analysis of Publications Included in the Study

Feature	Category	n	%
Publication Type	Research Article	21	65.6
	Review Article	11	34.4
Research Method	Qualitative	22	68.8
	Quantitative	4	12.5
	Mixed Methods	3	9.4
	Theoretical/Review	3	9.4
Research Design	Document/Content Analysis	9	28.1
	Policy Analysis	6	18.8
	Discourse Analysis	5	15.6
	Sociolinguistic Research	4	12.5
	Experimental Design	3	9.4
	Theoretical Examination	2	6.3
	Historical Analysis	2	6.3
	Linguistic Landscape Analysis	1	3.1
Total		**32**	**100.0**