



ISSN 3135-2316 (Print)

ISSN 3135-2324 (Online)

BUKETOV LANGUAGE REVIEW

Vol. 1
Issue (1)
2026

blr.buketov.edu.kz

BLR

ISSN 3135-2316 (Print)
ISSN 3135-2324 (Online)

BUKETOV LANGUAGE REVIEW

2026

Volume 1, Issue 1(1)

Founded in 2026

Published 4 times a year

Karaganda
2026

Publisher: Karaganda National Research University named after Academician Ye.A. Buketov

Postal address: 28, Universitetskaya St., Karaganda, 100024, Kazakhstan

E-mail: glrsmagulova@gmail.com *Web-site:* <https://blr.buketov.edu.kz>

Chief Editor

Candidate of Pedagogical Sciences, Associate Professor **G.N. Akbayeva**

Responsible secretary

PhD, Associate Professor **G.Zh. Smagulova**

Editorial board

Faridah Pawan,	PhD, Professor, Indiana University, Bloomington, USA;
Douglas K. Hartman,	PhD, Professor, Michigan State University, College of Education, East Lansing, USA;
Mustafa Öztürk Akcaoglu,	PhD, Professor, Kastamonu University, Kastamonu, Turkey;
Syed Abdul Manan,	PhD, Professor, Nazarbayev University, Astana, Kazakhstan;
Irina Shelenkova,	PhD, Professor, Istanbul Medipol University, Istanbul, Turkey;
Alfiya Kanybekovna Kitibayeva,	PhD, Associate Professor, Buketov Karaganda National Research University, Karaganda, Kazakhstan;
Galiya Baizhumakzy Sarzhanova,	PhD, Professor, Buketov Karaganda National Research University, Karaganda, Kazakhstan;
Tatyana Yuryevna Shelestova,	PhD, Associate Professor, Buketov Karaganda National Research University, Karaganda, Kazakhstan

Executive Editor

PhD, Professor **G.B. Sarzhanova**

Proofreaders

A.K. Shakishev

Computer layout

V.V. Butyaikin

Buketov Language Review. — 2026. — Vol. 1, Iss. 1(1). — 42 p. — ISSN 3135-2316 (Print); ISSN 3135-2324 (Online).

Proprietary: NLC “Karaganda National Research University named after Academician Ye.A. Buketov”

Registered by the Ministry of Culture and Information of the Republic of Kazakhstan. Registration certificate No. KZ91VPY00141951 dated 16.02.2026.

Signed in print 08.06.2026. Format 60×84 1/8. Photocopier paper. Volume 5,25 p.sh. Circulation 200 copies. Price upon request. Order № 67.

Printed in the Publishing house of NLC “Karaganda National Research University named after Academician Ye.A. Buketov”.

28, University St., Karaganda, 100024, Kazakhstan. Tel.: +7(7212) 35-63-16. E-mail: printed@karnu-buketov.edu.kz

CONTENTS

<i>Kalizhanova A.N.</i> Nomads and monuments in translation: AI-supported deconstruction of binary oppositions in Russian–English archaeological texts and student translations	4
<i>Rizakhojayeva G.A.</i> Applying scaffolding approach in advancing communication skills	11
<i>Toleuzhan A.T., Khajayeva Zh.B., Orazaliyeva R.K.</i> Open educational resources in the context of language learning and teaching	17
<i>Kürşat Cesur.</i> The impact of student-centered foreign language learning on academic performance.....	25
<i>Manan S.A., Kazhigaliyeva A.</i> Ethnography of English medium instruction policy and practice in the multilingual context of a private university in Kazakhstan.....	30
<i>Lobeeva P.I.</i> Language Education Potential of Generative AI Chatbots.....	37

A.N. Kalizhanova

Ufa University of Science and Technologies, Ufa, Russia

E-mail: anna.kalizhanova2017@gmail.com

ORCID ID: <https://orcid.org/0000-0003-2337-2280>

Scopus ID: 57210320921

Nomads and monuments in translation: AI-supported deconstruction of binary oppositions in Russian–English archaeological texts and student translations

This study proposes an AI-supported Deconstruction Analyzer v 2.0 Tool for teaching translation students how to translate archaeological texts from Russian to English and vice versa. This tool was created because contemporary archaeological discourse often uses binary oppositions like nomadic/sedentary, civilization/barbarism, and center/periphery, which can reproduce colonial and hierarchical stereotypes in original texts and translations. We tested our tool on a corpus of ten English-language archaeological papers, 38 student translations, and five museum podcasts on Central Kazakhstan's legacy. The program uses curated lexicons of archaeologically salient opposites and syntagmatic and paradigmatic modules to detect explicit polar word collisions within sentences and display pole-centric lexical asymmetries across texts. An AI layer using transformer-style language models expands each pole's vocabulary, recognizes paraphrases, and highlights evaluative patterns without replacing human interpretation. The study shows that accounts of nomadic lifestyles and monuments often have too much sedentary and "civilized" framing, and that student translations of museum podcasts often have ideologically charged clashes. Student reflections show enhanced awareness of unconscious bias, lexical sensitivity, and enjoyment of visual analytics for translation revision. The study suggests that incorporating AI-mediated deconstruction into translation education promotes critical thinking and decolonization.

Keywords: AI-assisted text analysis, deconstruction, binary oppositions, scientific English for translators, archaeological discourse, museum podcast scripts, Deconstruction Analyzer v 2.0, nomadic, sedentary

Introduction

When training future translators, not only courses on English grammar and terminology but also ones on scientific English are necessary to address how disciplinary knowledge is constructed through various discourses, including the archaeological one. Archaeological texts help translation students not only to render specialist vocabulary accurately, but also to recognise and critically evaluate the narrative patterns and hidden hierarchies embedded in them in the form of binary oppositions such as *nomadic/sedentary*, *civilization/barbarism*, *center/periphery*, etc. The use of these patterns explains how past societies are described and implicitly ranked [1, 2].

Recent work in archaeology and heritage studies demonstrates that such binaries are closely linked to colonial, gendered, and nationalist assumptions that continue to shape both research and public communication [3–5]. For students translating archaeological texts into English, uncritical repetition of stereotypical phrases—such as portraying nomadic communities as “backward” or “marginal” compared to “advanced” sedentary cultures—risks reinforcing these hierarchies in the language of science.

At the same time, digital methods, including text mining and natural language processing (NLP), have begun to transform how large corpora of archaeological texts and oral histories are analysed, allowing researchers to detect recurrent themes, collocations, and evaluative patterns that may be difficult to see through close reading alone [6]. Debates around AI in archaeology and historical disciplines emphasise that such tools should support, rather than replace, critical human interpretation [7, 8].

Against this background, the present article focuses on teaching translation students to perform deconstructive analysis of binary oppositions in archaeological texts in English. It presents an AI-supported tool, *Deconstruction Analyzer*, designed specifically for educational use in courses on scientific English for trans-

lators. The tool helps students identify and visualise explicit and implicit binary oppositions in archaeological discourse and reflect on how their own lexical choices in translation may reproduce or challenge stereotypical representations of nomads, monuments, and other key concepts. The article argues that integrating such AI-mediated deconstruction into translator training can foster more critical, responsible work with scientific English in archaeology.

Theoretical background

The theoretical basis of this study brings together: linguistic and semiotic accounts of binary opposition and deconstruction; critical and decolonial perspectives on binary thinking in archaeological discourse; and research on AI-supported text analysis and its pedagogical use in language and translation education.

In structural linguistics, binary oppositions have long been described as fundamental organising principles of language systems: phonological contrasts such as voiced/voiceless or semantic contrasts such as masculine/feminine structure paradigms and enable economical coding of meaning [9, 10]. However, later developments in semiotics and discourse analysis have stressed that many culturally salient binaries are not just descriptive, but ideological. Oppositions like *civilized/barbarian*, *center/periphery*, or *male/female* are typically asymmetrical: one pole is constructed as the unmarked norm, while the other is represented as deficient, deviant, or secondary [11]. Deconstructive approaches therefore focus on how texts privilege one side of the opposition, which metaphors and evaluative terms cluster around each pole, and how apparent dichotomies can be destabilised through close reading.

The second line of thought is about text analysis with the help of AI. Deep learning models have also been successfully used on epigraphic corpora, helping scholars put together pieces of broken inscriptions and figure out dates and where they came from, like in the Ithaca system [12]. A recent review of text mining in ecology and evolution breaks it down into three main paradigms: frequency-based methods, traditional NLP pipelines, and transformer-based language models. It says that combining them makes analysis both scalable and sensitive to context. Digital archaeology debates say that AI can process a lot more text, but it also risks making biases in datasets stronger and making it harder to see who is responsible for interpretation [13].

The third thread connects these changes to how translators are taught and science English. When AI tools are used in language and translation education, they are generally for machine translation and grammar correction, which makes things run more smoothly but doesn't do much to make people more aware of how disciplinary discourse builds knowledge. Deep neural networks have been used in the digital humanities to analyze texts recently. New research suggests that AI can also be used to help people read more closely by showing patterns in word choice, intertextual echoes, and evaluative framing that can then be interpreted by humans [14]. This means that AI could be used in archaeology classes not as an "automatic translator," but as a teaching tool for deconstructive reading—as a way to show students possible binary structures and inequalities, which they can then think about and talk about.

In all, the intersection of these three strands conceptualises *Deconstruction Analyzer* as an AI-supported educational instrument that operationalises deconstructive theory in a way that is accessible for translation students: by linking abstract discussions of binary oppositions to concrete visualisations of how "nomads" and "monuments" are constructed in actual archaeological texts in English. In doing so, it aims to contribute both to the didactics of scientific English for translators and to ongoing efforts to critically examine binary thinking in archaeological discourse.

Methods and Materials

This pilot study employed a mixed-methods design combining corpus analysis with qualitative investigation of 38 second-year undergraduate translation students' (BA programme "6B02301 — *Translation Studies*") reflections, who enrolled in a semester-long course on "*Theory of Translation*." At first, we checked the participants' level of English to ensure that all of them had intermediate-to-advanced English proficiency (B2–C1 CEFR). We also asked the participants to sign informed consent prior to participation, and they agreed to do that.

The material of the study comprised five museum podcast scripts, each of which was based on approximately 150 academic sources and thematically focused on a key archaeological topic from Central Kazakhstan: (1) Karazhertas Pyramid: The Great Steppe History; (2) Petroglyphs of Saryarka: The Mysteries of Bygone Civilizations; (3) Botai Culture of Kazakhstan: Taming the Wild Horse; (4) "Timur's Stone" at Altynshoky: Retracing the Great Warrior's Journey; and (5) Central Kazakhstan Folk Arts and Crafts: Bronze Age Ceramics [15]. The Russian master scripts were prepared collaboratively by museum specialists

and university researchers, then translated into English and Kazakh to support intercultural communication and accessibility for mixed student audiences. For the present pilot, we used the English versions of these five scripts and 38 student translations (Russian → English, 200–250 words each) as the core corpus for AI-supported deconstruction of binary oppositions.

Together with our translation students, we identified three core binary oppositions in archaeological discourse: (1) *nomadic/sedentary* (nomad, steppe, migration, horse, herder | settlement, city, monument, architecture, permanent); (2) *civilization/barbarism* (civilized, complex, developed, advanced | primitive, backward, tribal, savage); and (3) *center/periphery* (heartland, capital, core, metropolitan | margin, frontier, hinterland, remote). These oppositions were inserted into the database of the *Deconstruction Analyzer v2.0*, a free, browser-based tool (<https://deconstruction-analyzer.netlify.app/>), requiring no installation (Fig. 1).

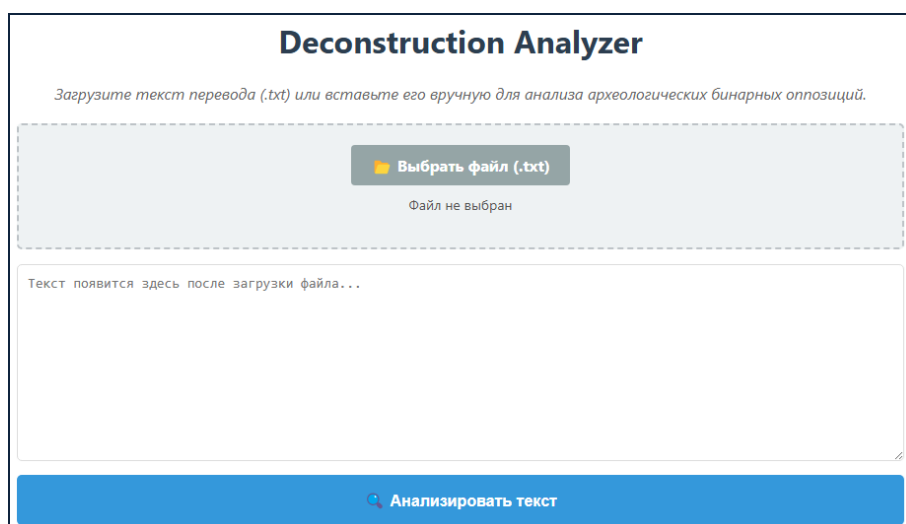


Figure 1. Deconstruction Analyzer v2.0 interface

As it is clearly seen in Figure 1, users had to upload a plain-text file or paste text manually, select opposition pairs from a menu, and click “Analyze.”

This tool uses two complementary modules, syntagmatic and paradigmatic [6].

The syntagmatic module identifies sentences with terms from opposite poles, such as “*Nomadic pastoralists built sedentary monuments*,” and displays “*explicit collisions*” in a concordance list, allowing students to analyze contexts involving nomads and monuments.

The paradigmatic module counts each pole's vocabulary across the text and displays it as a bar chart. If a text describing “*nomadic cultures*” has 70 % sedentary vocabulary and 30 % nomadic terminology, the imbalance is obvious, leading to questions about whether the source text or the translation produced it.

This tool uses AI to expand lexicons by suggesting related terms, recognize paraphrases and indirect references, and highlight evaluative words associated with each pole, such as primitive nomads/complex sedentary societies [16]. Rather than replacing human interpretation, the AI layer augmentation was created to make students seriously consider all ideas [8].

Data gathering was a 4-step process. First, students first used ordinary dictionaries to translate 200–250-word texts without the technology. Second, they uploaded their translations to the *Deconstruction Analyzer* to see binary oppositions, collision sentences, and asymmetry charts. Third, students responded to tool-generated challenges with 150–200 word reflections: “*Your translation of a text about nomadic horse-breeders utilizes 65 % 'sedentary' terminology. Is this the original, or has your wording changed the cultural context?*” Finally, after reflecting, students edited and submitted both translations.

The program collected frequency, asymmetry ratios (nomadic: sedentary percentages), and collision sentence counts to quantify data, while two researchers independently classified student reflections for “recognition of stereotypical language,” “awareness of translator agency,” and “desire for more nuanced terminology” for qualitative analysis [17]. Discrepancies were discussed separately.

Results and Discussion

A total of 38 student translations and 10 source archaeological texts were analyzed by using *The Deconstruction Analyzer v2.0*, thanks to which we managed to reveal consistent patterns of lexical asymmetry and explicit collisions in binary oppositions, particularly *nomadic/sedentary*. These findings highlight both the tool's effectiveness in surfacing hidden discursive structures and its pedagogical value in prompting students to reflect on their translation choices. Figure 2 demonstrates paradigmatic asymmetry in *nomadic/sedentary* vocabulary across student translation groups.

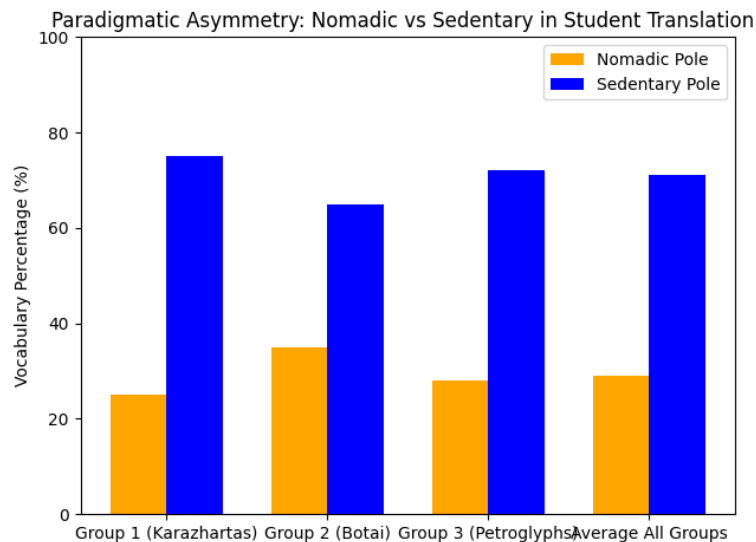


Figure 2. *Nomadic vs Sedentary* in students' translations

As Figure 2 shows, the *Sedentary* pole had an average of 71 % of the terminology associated with opposition in all 38 translations, whereas the *Nomadic* pole only had 29 %. In Group 1, versions of the *Karazhartas Pyramid* podcast script's opposition vocabulary contained 75 % of sedentary terms, which signaled the imbalance. For instance, in a text about the "*steppe pyramid*," students typically used English phrases that signify "*settlement*," "*architecture*," and "*monument*" to translate Russian descriptions of architects who were nomads (75 times compared to 25 times for nomadic terminology like "*steppe*" or "*pastoralist*"). The AI layer contributed more words to the study, such as "*permanent structure*" (*Sedentary*) and "*mobile community*" (*Nomadic*), which made the imbalance even more clear.

Group 2's translations of the Botai Culture also exhibited similar trends. Even though the material was largely on how to tame horses, which is common in nomadic economies, students used 65 % sedentary language, for instance, "*Specialized horse breeding gives way to hunting, fish farming, and elements of agriculture*" was translated as "*settled communities transitioned to farming*," which put more emphasis on the phrase "*settled*" than on the word "*nomadic*."

Most of the binaries (72 %) in Group 3, who worked with the text about Saryarka petroglyphs, were sedentary. In particular, there were more rock art scenes of horses, "*ritual sites*," and "*permanent carvings*" than of nomads like "*herders*" and "*hunters*."

Such discrepancies in Figure 2 align with prior studies employing text mining in historical archaeology, where discourse analysis revealed enduring hierarchies that favor sedentary "*civilization*" over nomadic "*otherness*" [12].

The AI-enhanced extension, namely *Deconstruction Analyzer v2.0*, in turn, detected 15–20 % more binary oppositions than just keyword matching, thereby making it easier to find ideological bias in scientific English in a more subtle way [18].

The syntagmatic module identified explicit collisions—sentences containing both poles—in an average of 7.75 sentences per text (Fig. 3).

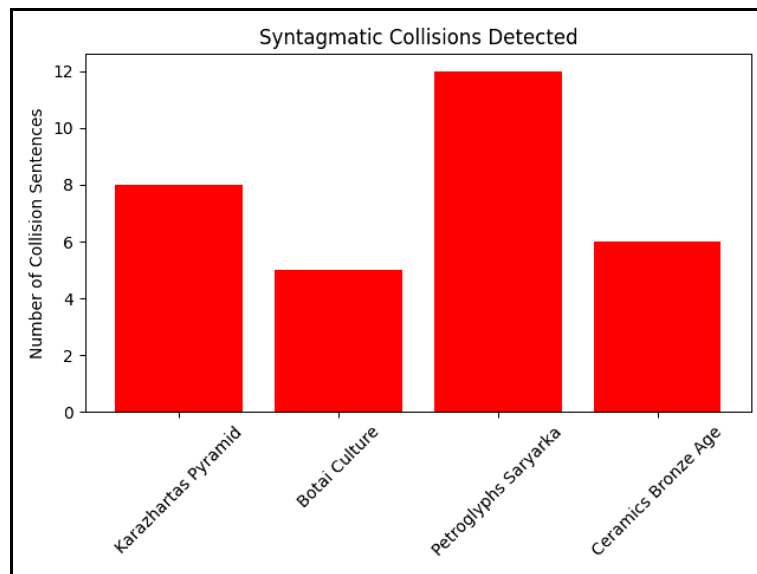


Figure 3. Syntagmatic collisions: Explicit juxtapositions

As Figure 3 demonstrates, the texts about *The Petroglyphs Saryarka* yielded 12 syntagmatic collisions, such as “Ancient artists depicted hybrid figures—horsemen [Nomadic] and ritual monuments [Sedentary],” which was the highest compared to the translation about *Botai* culture (5 collisions including “nomadic horse herders [Nomadic] built stable settlements [Sedentary].”

Karazhartas Pyramid scripts showed 8 syntagmatic binaries, e.g., “nomadic cultures of the steppe [Nomadic] kept their memories... in stone monuments [Sedentary],” while *Bronze Age Ceramics* texts had 6 explicit juxtapositions, like “nomadic potters [Nomadic] created permanent ornamental vessels [Sedentary].”

These binary oppositions on a syntagmatic level often carried an evaluative load, with sedentary terms modified positively (“complex monuments”) and nomadic terms negatively or marginally (“primitive steppe”), which mirrors findings from discourse network analysis, where polar terms in historical texts signal ideological tension [19].

The thematic analysis of about 7,000 words of 38 student reflections on the use of *The Deconstruction Analyzer v2.0* allowed for the identification of three dominant themes, such as (1) unconscious bias awareness; (2) lexical revision and agency; (3) pedagogical value (Fig. 4).

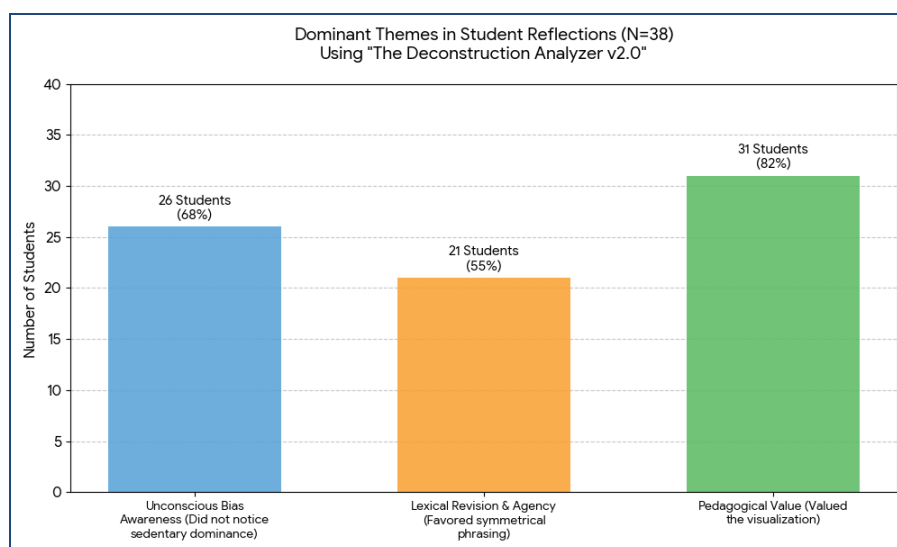


Figure 4. Three dominant themes in translation students' reflections on using *The Deconstruction Analyzer v2.0*

A total of 26 students out of 38 did not notice sedentary dominance (68 % of reflections), for example, “I used ‘settlement’ and ‘architecture’ everywhere without thinking—it made nomads seem less important,” which echoes qualitative studies on translation ideology, where tools reveal implicit cultural framing [20].

While revising translations, 21 students favored symmetrical phrasing (55 % of reflections) by replacing “primitive nomads built advanced monuments” with “steppe pastoralists constructed ritual structures,” thereby highlighting translator agency, claiming that the chart showed them they “can choose words that don’t reinforce stereotypes.”

31 out of 38 translation students valued the visualization, provided by *The Deconstruction Analyzer v2.0* (82 % of reflections). For example, some students claimed that “the bar chart made the asymmetry obvious—much better than reading frequencies,” thereby aligning with corpus-driven pedagogy research conducted in 2021 [17].

As we said before, *The Deconstruction Analyzer v2.0 tool’s* dual modules effectively operationalized deconstruction because paradigmatic charts quantified hierarchy (71:29 average), while collision lists enabled close reading of tension points. It also fostered reflective practice in scientific English translation, moving students from intuitive choices to data-informed critique. In particular, the AI layer’s expansions (e.g., recognizing “mobile pastoralism”) addressed limitations of manual lexicons, supporting nuanced analysis suitable for B2–C1 learners although seven students noted over-expansion led to “too many false positives,” suggesting tunable thresholds for classroom use [21, 22].

We also need to mention some limitations, which include the small corpus size (pilot scope) and focus on one binary opposition. However, these limitations open the horizon for future research, which could scale to multilingual corpora [23] and additional binaries (e.g., male/female in archaeology) [24].

Conclusions

In conclusion, the findings of this pilot study indicate that AI-assisted deconstructive analysis can enable translation students to discern ideological tendencies in ancient discourse that may have previously eluded them. The findings indicate that *sedentary* civilization is frequently lauded above *nomadic* lifestyles in English scientific literature and student submissions. *The Deconstruction Analyzer v2.0* transformed abstract theoretical concepts of binary oppositions into tangible classroom experiences comprehensible to students. This prompted numerous individuals to scrutinize conventional phrases and articulate a more precise explanation of their influence on scientific narratives. The study demonstrates the necessity of meticulously regulating the evolution of the English language through AI and addressing the biases present in both historical corpora and language models. In this approach, digital tools will help people think critically instead of replacing them. The study examined a limited sample and a single institution, yet it indicates that instructing scientific English and specialized translation through AI-mediated deconstruction may facilitate decolonial initiatives in archaeology and heritage communication by educating future translators to perceive, interrogate, and transform the binary frameworks frequently employed in historical discourse.

Acknowledgements

The study was carried out under the auspices of the international initiative titled “*The Application of Artificial Intelligence Methods in Translation Localization*.”

References

- 1 Cobb, H., & Croucher, K. (2016). Personal, political, pedagogic: Challenging the binary bind in archaeological teaching, learning and fieldwork. *Journal of Archaeological Method and Theory*, 23(3), 949–969. <https://doi.org/10.1007/s10816-016-9292-0>.
- 2 Power, M. (2020). Non-binary and intersex visibility and erasure in Roman archaeology. *Theoretical Roman Archaeology Journal*, 3(1), 11. <https://doi.org/10.16995/traj.422>.
- 3 Dempsey, K. (2019). Gender and medieval archaeology: Storming the castle. *Antiquity*, 93(369), 772–788. <https://doi.org/10.15184/aqy.2019.13>.
- 4 Lemos, R. (2023). Can we decolonize the ancient past? Bridging postcolonial and decolonial theory in Sudanese and Nubian archaeology. *Cambridge Archaeological Journal*, 33(1), 19–37. <https://doi.org/10.1017/S0959774322000178>.
- 5 Londoño W. (2021). Indigenous archaeology, community archaeology, and decolonial archaeology: What are we talking about? A look at the current archaeological theory in South America with examples. *Archaeologies*, 17(3), 386–406. <https://doi.org/10.1007/s11759-021-09433-y>.

- 6 Brown, M., & Shackel, P. (2023). Text mining oral histories in historical archaeology. *International Journal of Historical Archaeology*, 1–17. Advance online publication. <https://doi.org/10.1007/s10761-022-00680-5>.
- 7 Hacıgüzeller, P., Taylor, J.S., & Perry, S. (2021). On the emerging supremacy of structured digital data in archaeology: A preliminary assessment of information, knowledge and wisdom left behind. *Open Archaeology*, 7(1), 1709–1730. <https://doi.org/10.1515/opar-2020-0220>.
- 8 Tenzer, M., Pistilli, G., Bransden, A., & Shenfield, A. (2024). Debating AI in archaeology: Applications, implications, and ethical considerations. *Internet Archaeology*, (67). <https://doi.org/10.11141/ia.67.8>.
- 9 Utaker, A. (1974). On the binary opposition. *Linguistics*, 12(134), 73–93. <https://doi.org/10.1515/ling.1974.12.134.73>.
- 10 Lacková, L. (2022). Participative opposition applied. *Sign Systems Studies*, 50(2-3), 261–285. <https://doi.org/10.12697/SSS.1>.
- 11 Spitzmüller, J. (2022). Beyond the binarism: locating past, present and future sociolinguistic research on ideologies of communication. *Sociolinguistica*, 36(1-2), 207–218. <https://doi.org/10.1515/soci-2022-0001>.
- 12 Richards, J., Tudhope, D., & Vlachidis, A. (2015). Text mining in archaeology: Extracting information from archaeological reports. *Mathematics and Archaeology*, 240–254.
- 13 Assael, Y., Sommerschild, T., Shillingford, B., Bordbar, M., Pavlopoulos, J., Chatzipanagiotou, M., Androutsopoulos, I., Prag, J., & de Freitas, N. (2022). Restoring and attributing ancient texts using deep neural networks. *Nature*, 603(7900), 280–283. <https://doi.org/10.1038/s41586-022-04448-z>.
- 14 Suissa, O., Elmalech, A., & Zhitomirsky-Geffet, M. (2022). Text analysis using deep neural networks in digital humanities and information science. *Journal of the Association for Information Science and Technology*, 73(2), 268–287. <https://doi.org/10.1002/asi.24544>.
- 15 Kalizhanova, A., & Bedelbayeva, M. (2025). Museum podcasts as a medium for intercultural archaeology in Kazakhstan. *Journal of Community Archaeology & Heritage*, 1–5. <https://doi.org/10.1080/20518196.2025.2517950>.
- 16 Farrell, M.J., Le Guillaume, N., Brierley, L., Hunter, B., Scheepens, D., Willoughby, A., ... & Mideo, N. (2024). The changing landscape of text mining: a review of approaches for ecology and evolution. *Proceedings B*, 291(2027), 20240423. <https://doi.org/10.1098/rspb.2024.0423>.
- 17 Alhassan, A., Sabtan, Y., & Ismail Omar, L. (2021). Using parallel corpora in the translation classroom: moving towards a corpus-driven pedagogy for Omani translation major students. *Arab World English Journal (AWEJ) Volume*, 12, 40–58. <https://dx.doi.org/10.24093/awej/vol12no1.4>.
- 18 Schwartz, H.A. (2023, November). Text mining analysis of perception in archaeological landscapes: The case of Stonehenge. In *Proceedings of the 7th ACM SIGSPATIAL International Workshop on Geospatial Humanities* (pp. 40–43). <https://doi.org/10.1145/3615887.3627757>.
- 19 Moseley, R. (2015). Digital analogies: The keyboard as field of musical play. *Journal of the American Musicological Society*, 68(1), 151–228. <https://doi.org/10.1525/jams.2015.68.1.151>.
- 20 De Sutter, G., Cappelle, B., De Clercq, O., Looek, R., & Plevioets, K. (2017). Towards a corpus-based, statistical approach to translation quality: Measuring and visualizing linguistic deviance in student translations. *Linguistica Antverpiensia, New Series—Themes in Translation Studies*, 16, 25–39. <https://doi.org/10.52034/lanstts.v16i0.440>.
- 21 Risku, H. (2018). Situated learning in translation research training: academic research as a reflection of practice. In *Situated Learning in Translator and Interpreter Training* (pp. 12–28). Routledge. <https://doi.org/10.1080/1750399X.2016.1154340>.
- 22 Suissa, O., Elmalech, A., & Zhitomirsky-Geffet, M. (2022). Text analysis using deep neural networks in digital humanities and information science. *Journal of the Association for Information Science and Technology*, 73(2), 268–287. <https://doi.org/10.1002/asi.24544>.
- 23 Granger, S., & Lefer, M.A. (2020). The multilingual student translation corpus: A resource for translation teaching and research. *Language Resources and Evaluation*, 54(4), 1183–1199. <https://doi.org/10.1007/s10579-020-09485-6>.
- 24 Dempsey, K. (2019). Gender and medieval archaeology: storming the castle. *antiquity*, 93(369), 772–788. <https://doi.org/10.15184/aqy.2019.13>.

Information about the author

Kalizhanova A.N. — PhD candidate, Ufa University of Science and Technology, Ufa, Russian Federation; e-mail: anna.kalizhanova2017@gmail.com; ORCID ID: <https://orcid.org/0000-0003-2337-2280>; Scopus ID: 57210320921.

G.A. Rizakhojayeva

Khoja Akhmet Yassawi International Kazakh-Turkish University, Turkestan, Kazakhstan

E-mail: gulnara.rizahodjaeva@ayu.edu.kz

ORCID ID: <https://orcid.org/0000-0002-6791-243X>

Applying scaffolding approach in advancing communication skills

Speaking is a vital skill in learning English and requires a lot of practice to form intelligible phrases and expressions. English learners need to learn to speak the language fluently, but they face various difficulties in doing so. Scaffolding strategies help students to grasp speaking fluency. Using scaffolding helps ELT learners to develop their communication skills. Providing learners with additional resources and assistance beyond the required lessons can take a lot of effort and time. Teachers also need to have a better understanding of their learners' behavior and learning styles in order to be able to choose the appropriate scaffolding that meets their needs. The main objective of the recent research study is investigating the effectiveness of applying Scaffolding approach in developing interactive skills in the speaking classroom. The descriptive research study was used. The quantitative technique was chosen to achieve the aims and research objectives of the study. Overall, 30 foreign language students participated in the present research study. After collecting the relevant data, the findings of the study were generated using the Statistical Package for Social Sciences (SPSS) version 23. In order to answer the research questions descriptive analysis and Mann-Whitney U-test were used. The research study concluded as positive perception of participants and there was no significant difference between courses and genders of participants.

Keywords: scaffolding, speaking skills, speaking anxiety, communication skills, speaking classroom, advancing speaking

Introduction

Language is a highly developed system that uses aspects and arrangements common to a civilization in terms of meaning and sound to communicate thoughts, feelings and desires to other people. As one of the most important phenomena of the modern world, learning a foreign language is considered to have a profound impact on social and economic change as well as individual and societal well-being. As a result of the increasing globalization of the world, the need to learn other languages has also increased over time.

Of the four basic English language skills, speaking seems to be the most challenging, as speakers need to find sentences on the fly. For second or foreign language learners, constructing sentences without grasping the necessary grammatical rules and terminology can be quite challenging. In conclusion, speaking English with grammatically correct expressions presents a variety of challenges for EFL/ESL language learners. People aim to acquire speaking skills in order to interact effectively with everyone in society, wherever they are in the world, because speaking skills are fundamental to communication.

According to Tridinanti, it is essential for learners to acquire the art of speaking in order to be competent in oral communication. Learners who learn English as a second language because they are not native speakers may find it difficult to express their ideas even in simple dialogues. The two main aims of the curriculum are to integrate written and oral communication and to develop speaking skills. Proficiency in a language requires the ability to use it in written and oral communication as well as the ability to convey thoughts, feelings and experiences in a variety of contexts [1].

Speaking is a type of speech act used for interpersonal communication. This type of speaking exercise enables verbal communication in combination with listening. This exercise relies heavily on hearing, attention and memory. Phonetics, vocabulary and grammar are among the language levels involved in this type of action. In order to be able to communicate, one must be proficient in the foreign languages spoken or develop speaking skills [2].

Learning English is difficult for almost all learners. Not every learner is born with the capacity to learn a language. Many encounter a language barrier that makes it difficult for them to pronounce certain sounds

specific to English or to form grammatically appropriate expressions. A decline in enthusiasm and activity towards learning English can be attributed to all these reasons. Even with a good English score and grammatical knowledge, EFL/ESL learners lack speaking skills [3].

As stated by Namaziandost and Nasri speaking is a productive verbal ability that involves producing verbal utterances in a systematic way to convey meaning. Speaking is the act of presenting a message developed through mental work and accumulation to another person through language. The act of speaking has four dimensions. The use of voice and grammar, facial and body movements constitute other aspects of it, while people's engagement in producing as both receiver and transmitter constitute two of them. The ability to speak is necessary for people to communicate in a variety of social contexts, to express their feelings, thoughts and ideas clearly and to convey information on a variety of topics. Fluency is said to be useful both for self-expression and for moving up the social hierarchy [4].

As mentioned by Soomro and Farooq speaking is the most important skill in learning a foreign or second language. Speaking is seen as the most important of the four basic language skills for learning a foreign or second language. Despite its importance, the teaching of speaking skills has received little attention and the majority of EFL/ESL teachers have continued to teach speaking skills only as drill memorization or dialogue memorization [5]. However, the contemporary world requires learners to have communication skills and English language teachers need to transfer these skills to ELLs so that they can become more competent speakers and work successfully in everyday contexts.

Although communication is more important than technology in terms of employment, oral skills are completely ignored in the current EFL classroom environment. The phonological, morphological, semantic and syntactic components of language have received relatively little attention, making it difficult for English language learners (ELLs) to develop their speaking abilities. So far, reading and writing skills have received more attention. Since oral communication skills are so important, it has become even more important to learn to speak well to help learners succeed in their academic studies and in their careers after graduation. English is the language of study luck and success in achieving your desired goals.

Speaking is the most important of the four basic English language skills (listening, reading, writing and speaking) because it is the most reliable indicator that a person has learnt a language and is competent in other areas [6]. Foreign language skills, especially speaking and listening, can be difficult to learn. There are other countries where teaching English as a second language can be more difficult than in Kazakhstan.

With the encouragement of the instructor, students talk more in class, which is seen as negligence on the part of the teacher. More attention should be paid by foreign language teachers to the development of spoken language in the classroom, and teachers should work to ensure that students are able to express their thoughts, hypothesize on a given topic and defend their own position. Foreign language teachers in Kazakhstan are willing to adapt their daily practice and incorporate new teaching strategies in order to improve the quality of their teaching and the quality of knowledge acquired by their students. They also recognize the necessity of these adjustments.

Classroom Interactional Competence.

According to the interactional view of language, language is mainly used to create and maintain interpersonal connections, but also to carry out social transactions between people.

According Moorhouse and Walsh, the capacity of instructors and students to use interaction as a means to mediate and support learning is known as classroom interaction competence. It suggests that by developing their CIC, instructors and students will immediately increase their chances of both learning and learning. It places interaction at the center of teaching and learning. The focus on CIC is based on the core claim that improving instructors' understanding of classroom interaction will have a positive impact on student learning, particularly where learning is seen as a social activity that is heavily influenced by participation, interaction and engagement [7].

Through the use of assistance tailored to the individual needs of each learner, educators can eliminate difficult learning by using the teaching method known as scaffolding. As they acquire new knowledge or skills, this helps learners to understand and remember them. Using this paradigm, the instructor can go through a problem-solving process, then take a step back and allow learners to co-operate in small groups until eventually the scaffolding is removed and students are working on their own.

In the 1970s, psychologist Jerome Bruner first introduced the idea of educational "scaffolding". Bruner and other psychologists used the phrase to characterize the way preschool educators provide in-depth explanations to help children learn, before stepping back to allow learners to work on their own. Since scaffolding in education is akin to a temporary platform, the word itself implies building.

The idea of scaffolding is quite similar to the Zone of Proximal Development Theory, which argues that children learn new skills more easily under the support and guidance of an instructor, as new skills are often more difficult for children to acquire on their own.

One of the major advantages of scaffolding is that it provides a safe, stimulating learning atmosphere in the classroom, where learners feel comfortable asking questions, taking risks and developing their self-confidence. As the instructor gradually reduces the initial assistance, the support also motivates learners to become more involved in their education. As teachers withdraw, learners learn to strengthen skills such as self-management and self-directed learning.

Furthermore, scaffolding helps learners in the following ways:

- Develops better participation;
- Improves comprehension;
- Improves problem-solving skills;
- Creates a more pleasant classroom atmosphere.

Providing learners with additional resources and assistance beyond the required lessons can take a lot of effort and time. Teachers also need to have a better understanding of their learners' behavior and learning styles in order to be able to choose the appropriate scaffolding that meets their needs.

The research objective.

The current research study aimed to investigate the effectiveness of using Scaffolding approach on advancing speaking comprehension of learners. In addition, the main objective of the recent research study is investigating effectiveness of applying Scaffolding approach in developing interactive skills in the speaking classroom. In order to achieve research objective, the following research questions are formulated.

The research questions

RQ1. To what extent does scaffolding help learners to develop their interactional competences (IC) in an EFL classroom?

RQ2. Are there significant differences between levels of satisfaction towards the use of scaffolding according to gender?

RQ3. Are there significant differences between levels of satisfaction towards the use of scaffolding according to courses?

Methods and Materials

The usefulness of the scaffolding technique in developing interaction skills in speaking classes was determined through descriptive research. Different types of questionnaires are used in projects involving descriptive research. Describe the conditions by applying descriptive research. The descriptive study was conducted to determine the correlations between certain variables [8]. The aim of the research was to find out how successfully the scaffolding technique improves English language learners' interactive speaking abilities. The quantitative technique was chosen to achieve the aims and research objectives of the study. A review of many specific research studies was presented using the quantitative technique. Facts were illustrated using numbers [9].

Participants of the research

Overall 30 foreign language students from Khoja Akhmet Yassawi International Kazakh-Turkish University participated in the present research study. The survey participants were selected using a "purposive sampling" approach. This is a non-probability based sampling method in which the researcher makes independent decisions. First and second year students participated in the research. A survey was conducted after the end of the 2024-2025 semesters.

Data collection instrument

The questionnaire was developed by Phungdee and Krongyut (2013) [10]. The poll consisted of overall 20 items, which are divided into 5 domains.

Items 1 to 3 were designed to measure how satisfied participants were with the course material. Items 4 to 6 were designed to measure the effectiveness of an educator. Items 7 to 16 were created to measure opinions about the lessons taught. Learners were asked to indicate their comments on the evaluation using items 17 to 18. Finally, questions 19 to 20 were asked to investigate the advantages of the scaffold teaching approach.

The attitude questionnaire was used to measure students' perceptions of the classroom's supportive teaching approach. Based on the methodology of the study, a 5-point Likert scale questionnaire was created (5 being strongly agree, 4 being agree, 3 being neutral, 2 being disagree and 1 being strongly disagree). The

reliability of the questionnaire, with a Cronbach's alpha value of $\alpha = .810$, was found to be extremely good, even given the large number of items. See Table 1.

Table 1

Reliability of scales

Cronbach's Alpha	N of Items
.810	20

Data collection procedure and analysis

The age and class of the participants were the main issues in the voting. Each question was easy to understand, did not cause problems and the answers were given in advance. Everything was done so that even a beginner in English could understand. Preliminary explanatory work was carried out for the students. It was explained that the answers would remain confidential and would only be used for scientific purposes. Finally, after collecting the relevant data, the findings of the study were generated using the Statistical Package for Social Sciences (SPSS) version 23. Normality Testing was used as the first step in determining whether parametric or non-parametric was acceptable for the available data before performing inferential statistical tests on the data. The application of non-parametric tests to the data was chosen as the findings of the Kolmogorov-Smirnov and Shapiro-Wilk tests suggested that the participants' awareness of data reading did not follow a normal distribution.

Results and Discussion

The first research question was "To what extent does scaffolding help learners to develop their interactional competences (IC) in an EFL classroom?" The results are given in Table 2.

Table 2

Results of descriptive analysis

Total	N	Minimum	Maximum	Mean	Std. Deviation
	30	3.90	4.75	4.1655	.23072

In order to obtain results of the first research question descriptive analysis was utilized. In accordance with the results above the learners' attitudes towards using scaffolding in developing their interactional competences in speaking classroom showed positive results. The mean rank results $M = 4.16$ illustrated highest results. It means that Scaffolding helps participants to advance their interactional competences in an EFL speaking classroom.

The second research question was about "Are there significant differences between levels of satisfaction towards the use of scaffolding according to gender?" The clear results are given in Table 3.

Table 3

Results of Mann-Whitney U-test

Total	gender	N	Mean Rank	U	p
	Male	13	16,73	81,500	,320
	Female	16	13,59		

In order to calculate results of second research question Mann-Whitney U-test was used. According to obtained results of Mann-Whitney U-test, male participants' levels of satisfaction towards the use of scaffolding presented results as $M = 16.73$. Moreover, female learner's levels of satisfaction towards the use of scaffolding illustrated mean rank results as $M = 13.59$. In accordance with the results there was no significant difference between male and female participants' levels of satisfaction towards the use of scaffolding. $U = 81.500$, $p = .320$.

The third research question was about "Are there significant differences between levels of satisfaction towards the use of scaffolding according to course?" The results are demonstrated in Table 4.

Table 4

Results of Mann-Whitney U-test

Total	grade	<i>N</i>	Mean Rank	<i>U</i>	<i>p</i>
	1 st course	18	15.58	78.500	,585
	2 nd course	12	13.72		

Mann-Whitney U-test was used in order to calculate data of last research question. In accordance with calculated results of Mann-Whitney *U*-test, 1st course learners' levels of satisfaction towards the use of scaffolding presented results as $M = 15.58$. In addition, 2nd course learners' levels of satisfaction towards the use of scaffolding illustrated mean rank results as $M = 13.72$. The crystal-clear results presented that there were no significant differences between 1st and 2nd course learners' levels of satisfaction towards the use of scaffolding illustrated mean rank results. $U = 78.500$, $p = .585$.

The same positive results were obtained by de Oliveira, Jones and Smith. The majority of students are able to interact through scaffolding, which is praised. When instruction is scaffolded, students continually build on existing knowledge and make connections between newly learnt materials, ideas and language proficiency. Scaffolding also offers learners a chance to succeed before stepping into uncharted territory. Especially for children learning a new language, this type of instruction reduces failure, which in turn reduces frustration [11].

When it comes to language learning, scaffolding is a crucial component of effective teaching. Despite some instructors' enthusiasm for the idea, scaffolding is more than just teacher support. By providing scaffolding, which is customized just-in-time assistance, teachers can provide students with the pedagogical encouragement they need to work more actively. According to some socioculturally oriented scholars, second language learners' chances of success are higher when their peers and teachers provide specialized help when needed [12].

Encouraging students to be autonomous in completing their tasks is the main purpose of the scaffolding technique in education. The effectiveness of the scaffolding approach used by educators is another important issue to be considered. A good learning outcome depends on the use of teaching strategies when teaching speaking as a skill that requires practice and patience. It is possible to modify certain tactics to suit the demands of the training process. Generally speaking, scaffolding is mostly used to increase students' confidence in their ability to acquire new material because the trainer continues to support them until they finish the tasks on their own. The environment of the teaching and learning process is protected by scaffolding. The teacher may have several chances to provide feedback to the students. Teacher and student are in a mutually beneficial relationship where the student has the freedom to explain everything at any time. It is therefore possible to increase students' skills [13].

Conclusion

As an important part of the English language, scaffolding methods are often used to help people overcome anxiety about speaking the language and communicate effectively. Adults, such as teachers, are ready to help students who need clarification or assistance during the teaching-learning process. With proactive help, children can learn independently. It is helpful for children to feel more motivated and confident to participate in all tasks and activities aimed at developing their communication skills. Scaffolding tactics help learners to overcome a range of learning difficulties and become skilled language producers.

Giving learners the chance to overcome learning difficulties makes scaffolding an invaluable teaching tool that supports the learning process. Providing less experienced learners with short-term assistance from more knowledgeable and experienced people is called scaffolding. After receiving the necessary knowledge, the student will be able to work independently.

Acknowledgments

This research is funded by the Science Committee of the Ministry of Science and Higher Education of the Republic of Kazakhstan (Grant No. AP22787128)

References

- 1 Tridinanti, G. (2018). The correlation between speaking anxiety, self-confidence, and speaking achievement of undergraduate EFL students of private university in Palembang. *International Journal of Education and Literacy Studies*, 6 (4), 35–39. DOI: 10.7575/aiac.ijels.v.6n.4p.35
- 2 Rao, P.S. (2019). The importance of speaking skills in English classrooms. *Alford Council of International English & Literature Journal (ACIELJ)*, 2 (2), 6–18.
- 3 Akhter, S. (2021). Exploring the significance of speaking skill for EFL learners. *Sir Syed Journal of Education & Social Research (SJESR)*, 4 (3), 1–9. DOI: 10.36902/sjesr-vol4-iss3-2021(1-9)
- 4 Namaziandost, E. & Nasri, M. (2019). The Impact of Social Media on EFL Learners Speaking Skill: Survey Study Involving EFL Teachers and Students. *Journal of Applied Linguistics and Language Research*, 6 (3), 199–215.
- 5 Soomro, A.F. & Farooq, M.U. (2018). EFL learners' attitude towards developing speaking skills at the University of Taif, Saudi Arabia. *International Journal of English Linguistics*, 8 (3), 318–327. DOI: 10.5539/ijel.v8n3p318
- 6 Arroba, J. & Acosta, H. (2021). Authentic digital storytelling as alternative teaching strategy to develop speaking skills in EFL classes. *LEARN Journal: Language Education and Acquisition Research Network*, 14 (1), 317–343.
- 7 Moorhouse, B.L., Li, Y. & Walsh, S.E. (2021). E-classroom interactional competencies: Mediating and assisting language learning during synchronous online lessons. *RELC Journal*, 54 (1), 114–128. DOI: 10.1177/0033688220985274
- 8 Grimes, D.A. & Schulz, K.F. (2002). Descriptive studies: what they can and cannot do. *The Lancet*, 359 (9301), 145–149. DOI: 10.1016/S0140-6736(02)07373-7
- 9 Watson, R. (2015). Quantitative research. *Nursing Standard*, 29 (31), 44–48. DOI: 10.7748/ns.29.31.44.e8681
- 10 Tsou, W. (2018). Implementing content language integrated learning (CLIL) in Taiwan-a review study. In *Proceedings of the PIM 8th National and 1st International Conference* (pp. 1–10). Bangkok: Panyapiwat Institute of Management.
- 11 De Oliveira, L.C., Jones, L. & Smith, S.L. (2023). Interactional scaffolding in a first-grade classroom through the teaching-learning cycle. *International Journal of Bilingual Education and Bilingualism*, 26 (3), 270–288. DOI: 10.1080/13670050.2020.1798867
- 12 Sarmiento-Campos, N.V., Lázaro-Guillermo, J.C., Silvera-Alarcón, E.N., Cuellar-Quispe, S., Huamán-Romani, Y.L., Apaza, O.A. & Sorkheh, A. (2022). A look at Vygotsky's sociocultural theory (SCT): The effectiveness of scaffolding method on EFL learners' speaking achievement. *Education Research International*, 2022, 1–12. DOI: 10.1155/2022/3514892
- 13 Sari, D.K. & Rozimela, Y. (2021). The implementation of scaffolding strategies at speaking English course in Kampung Inggris Pare East Java. In *Ninth International Conference on Language and Arts (ICLA 2020)* (pp. 51–56). Paris: Atlantis Press. DOI: 10.2991/assehr.k.210325.010

Information about the author

Rizakhojayeva G.A. — PhD, Associate Professor, Khoja Akhmet Yassawi International Kazakh-Turkish University, Turkestan, Kazakhstan; e-mail: gulnara.rizahodjaeva@ayu.edu.kz; ORCID ID: <https://orcid.org/0000-0002-6791-243X>

A.T. Toleuzhan^{1*}, Zh.B. Khajayeva², R.K. Orazaliyeva³

^{1,2,3}*Buketov Karaganda National Research University, Karaganda, Kazakhstan*

(Corresponding author e-mail: bota.kz93@mail.ru)

¹ORCID ID: <https://orcid.org/0000-0002-6495-5952>

²ORCID ID: <https://orcid.org/0000-0003-4636-5497>

Open educational resources in the context of language learning and teaching

Open Educational Resources (OER) movement represents a global initiative that fosters collaboration among educators and institutions while promoting equal access to knowledge and learning opportunities. Initially introduced as innovative instruments within a traditional educational context, OER are defined by open licenses that permit the use, adaptation, and redistribution of materials without consent from the author. The integration of OER into language learning expands accessibility to authentic learning materials and contributes to the development of learner autonomy, intercultural awareness, and digital literacy. The article examines the role of OER in the context of language learning and provides a classification of widely used platforms offering freely accessible and openly licensed materials for the development of language skills. Reviewed OER combine multiple resource types to create personalized language-learning experiences. Additionally, the study highlights the challenges related to OER adoption, including learners' awareness, quality assurance, copyright issues, digital competence and the institutional support. The results indicate that successful integration of OER in language teaching requires not only knowledge of available resources but also educators' ability to critically assess and pedagogically adapt OER to ensure alignment with intended learning outcomes.

Keywords: digitalization; open education; licensing terms; language learning; OER platforms, autonomous learning, collaboration

Introduction

Education systems around the world are experiencing rapid changes under the influence of digitalization, globalization and new learning paradigms. It is driven by innovative tools and strategies that make learning more accessible, engaging, and affordable. One of the key trends in this transformation is growing movement toward open access since there is evidence of increasing the dissemination of science and knowledge and sharing it with others without limits or conditions. The concept of openness in education is closely linked with open pedagogy. Open pedagogy, often known as OEP, is a concept closely tied to Open Educational Resources (OER) and defined as “the set of teaching and learning practices that are only possible or practical in the context of the 5R (retain, reuse, revise, remix, redistribute) permissions which are characteristic of OER”. The term “OER” was first introduced at the UNESCO Forum and defined as learning, teaching and research materials in any format and medium that reside in the public domain or are under copyright that have been released under an open license, that permit no-cost access, re-use, re-purpose, adaptation and redistribution by others [1]. The defining characteristic that sets an Open Educational Resource apart from other learning materials is its licensing terms that require no permission from the copyright holder to reuse and adapt materials. OER are learning resources, including full courses, course materials, modules, textbooks, streaming videos, tests, software, and any of their tools, materials, or techniques used to support access to knowledge.

Over the past 20 years, open education has become a global movement affecting all levels of education. OER are now widely used across various educational contexts and more recent efforts have focused on research and development of open educational practices, which encompass “all activities that open up access to educational opportunity, in a context where freely available online content and services... are taken as the norm” [2], and the teaching of languages is no exception to this global trend. OER for language teaching and learning enable international collaboration [3] and equal access to learning irrespective of economic situation. In the field of language education, OER provide teachers and learners with unprecedented access to authentic materials, online courses, videos, and digital tools that can be adapted for individual or classroom

use. Yang and Sun found that using Open Courseware can aid EFL learners in expanding their vocabulary, especially in acquiring technical terms [4]. Similarly, Celik, in a national study conducted in Turkey, reported that Wikipedia is an example of an OER and was the most commonly used resource among local EFL teachers. These online tools were mainly used to enhance students' grammar and reading skills. In addition, the integration of OER into language learning promotes learner autonomy, intercultural competence, and digital literacy which are essential for the 21st-century learner [5]. The study carried out by Rets, Coughlan, Stickler, and Astruc analyzed the text complexity of 200 OER reading materials from various educational levels and subject areas on two major OER platforms [6]. The findings offered empirical evidence supporting existing concerns: over 86 % of these materials demand an advanced level of English proficiency. This indicates a potential mismatch between the language skills of many OER users and the linguistic demands of the resources intended to promote inclusive education. Since prior research has shown that a "one-size-fits-all" approach is ineffective, especially in online learning, which allows for significant personalization [6] it becomes crucial to explore strategies that enhance the global accessibility of OERs.

Nowadays among competencies communicative skills in a foreign language take priority due to considering it as a mandatory requirement to contribute to economic and cultural growth of a country. The ubiquitous nature of internet resources gives rise to new knowledge ecologies that involve foreign languages context and language users, teachers, researchers. Due to its immense potential in the learning of foreign languages it has led to a considerable shift in the approaches used to develop language skills. Despite the fact that open educational resources movement has been around for 20 years, little attention has been paid with regard to practical usage of OER in language learning. To be more specific, there is a scarcity of empirical studies related to the effectiveness of OERs in the teaching and learning of languages [7, 8]. Thoms et al. state, "the bulk of research related to open education and second language (L2) learning and teaching has primarily focused on the creation, adaptation, and/or (re)use of OER content in FL contexts", and not really on the effects of educational materials on the learning [9]. Although there is strong institutional support for fostering students' multicultural competence, many English language teachers face significant challenges when trying to integrate multicultural education into their curricula, especially since English is taught as a foreign language [10]. These challenges arise from multiple factors. As Byram and Kramsch point out, teachers often hesitate to teach cultural content due to fears of reinforcing stereotypes or being unable to explain cultural concepts clearly, largely because of their limited background in this area [11]. Additionally, cultural instruction is typically delivered through teacher-centered explanations, while students tend to prefer more interactive, student-driven learning methods. This gap between teaching styles and learning preferences makes it more challenging for educators to effectively integrate multicultural elements into English language teaching [10]. Moreover, many EFL instructors are obligated to use textbooks prescribed by ministries of education. Since no textbook can fully meet all learners' needs, teachers worldwide can enhance their lessons by accessing OER databases to locate and adapt activities suitable for their specific student groups. For numerous learners, the combined cost of English courses and textbooks poses a financial burden. Open Educational Resources help ease this issue by providing free, high-quality learning materials.

This article explains the role of OER in language learning by identifying major platforms offering open, freely accessible materials, analyzing how these resources support personalized language development, and examining the key challenges such as quality, copyright, digital literacy, and institutional support that must be addressed to effectively integrate OER into language teaching.

Methods and materials

The research uses the method of theoretical analysis. Given the purpose of the research, this approach is suitable for examining the works of leading scholars in the field. It is considered most effective to synthesize the findings obtained through analysis and formulate an independent perspective based on them [12].

Literature review

For nearly two decades, Open Educational Resources have been shaping the educational environment, actively supporting broader access to high-quality educational opportunities [13]. Conceptualized as open educational resources in 2002, the field has acquired strong transformative potential by uniting the pedagogical and digital dimensions, as it promotes learning materials to build ubiquitous learning networks while the ease of sharing digital resources online enables reducing the knowledge divide that separates and partitions societies [14]. According to several studies, the primary advantages of OER have been reported in reducing learning cost [15], increasing affordability and accessibility [16], and improving education quality [17]. The-

se are key factors that strongly affect both instructors' and students' motivation and willingness to use them, as the high cost of quality learning materials can limit opportunities for gaining knowledge and experience.

The bulk of research related to open education has been conducted examining the factors related to students' interaction with OER materials and the effects on their educational progress [18]. A recent systematic literature review shows that the impact of OERs extends beyond course grades, contributing to overall academic progress. Research indicates that students enrolled in courses utilizing OER tend to advance toward their degrees more quickly. For example, it was found that community college students taking OER-based courses complete more credits than those in traditional courses [19]. Similarly, earlier studies revealed that students who used OER were more likely to enroll in additional courses in following semesters. Moreover, research has also shown that students in OER-supported classes have lower withdrawal rates, reinforcing the idea that OER use promotes stronger academic persistence and progress toward degree completion [20].

The different individual practices of OER adoption focus on addressing the high cost of textbooks [21]. Copyright affordances proposed by OER have created new opportunities for teaching and learning. Initially, these tools focus on reducing financial barriers providing freely available materials to improve access and affordability for students. However, beyond cost reduction, OER also serve as an innovation in curriculum design, pedagogy and professional development. In this manner, OER contribute to building an institutional culture characterized by innovation and continuous enhancement of teaching and learning practices which is increasingly optimal for shaping a sustainable, adaptable, student-centred future [22].

Many studies have addressed teachers' perspectives on collaborating to create a MOOC (Massive Open Online Course) as an open educational resource. Koukis and Jimoyiannis investigated three dimensions: teachers' personal engagement, their interaction and mutual support, and their collaborative creation of teaching materials and learning scenarios. The study revealed that teachers value MOOCs for professional development and are willing to adopt other forms of OER to enhance subject instruction, knowledge construction, and their own professional growth [23].

Research in this area is constantly developing, with a particular emphasis on OER challenges related to awareness, creation, use [24]. Hylén highlighted three major barriers concerning the wider adoption of Open Educational Resources: limited awareness of academic copyrights and licensing, concerns about the quality of open content, and the long-term sustainability of institutional OER initiatives [25]. Kotsiou and Shores identified financial constraints as a major barrier to OER adoption and suggested three main funding sources: private, governmental, and institutional [26]. They also identified that many faculty members lack awareness of what OER are, the benefits they offer, and how copyright and Creative Commons licenses work. Limited training and support were highlighted as additional obstacles. Similar challenges were noted by Schuwer and Janssen, who also pointed to a cultural reluctance to share teaching materials and the absence of immediate consequences for using copyrighted resources. Investigations carried out by Mićunović also ensure that concerns regarding the quality of OER [27] that remains a major issue to their adoption [28], with the constantly evolving nature of these resources requiring an even higher level of trust between creators and users [29]. Studies also show that many OER repositories do not provide quality-assurance systems [30], and this absence of oversight has created difficulties for both educators and learners [31]. A proposed solution is to incorporate OER development and the assessment of their accessibility and quality into teacher training programs [32].

An analysis of the abovementioned authors' concepts indicates that long-term benefits offered by Open Educational Resources in the process of teaching demonstrate substantial potential to reshape traditional educational practices. The findings evidence the increasing significance of Open Educational Resources that is represented in terms of the cost reduction and accessibility of learning content with the individuals' possibilities to adapt, revise and redistribute materials. Due to their flexible set of licenses the learning content is provided to suit various learning communities, supporting pedagogical flexibility and innovation. Moreover, OER promote collaboration and knowledge sharing among educators, which contributes to the continuous improvement of educational resources and supports equity in education by making high-quality materials more widely available. Thus, achieving the high quality in education is another opportunity offered by the OER, and for ending up with the probable improvements proposed by OER, it is important to incorporate OER development and the assessment of their accessibility and quality into teacher training programs. This is highly recommended for providing ongoing guidance and support among teachers in order to avoid main issues related to their awareness of licenses, supporting education quality and involvement in long-term OER initiatives.

Repositories of Open Educational Resources in language learning

According to D. Altunay, the role of OER in language learning and teaching can be framed through several language acquisition theories, including the Input Hypothesis, Interaction Hypothesis, and Sociocultural Theory [33]. From the perspective of Krashen's Input Hypothesis, a second language acquisition occurs when learners are exposed to language that they can understand through listening or reading — even if it includes some unfamiliar grammar or vocabulary [34, 35]. OER provide this type of comprehensible input, offering learners understandable language that produces new forms and supports natural acquisition. Similarly, the Interaction Hypothesis emphasizes that learning is strengthened through communication and negotiation of meaning with more proficient speakers, such as through feedback or clarification [36]. Within the Sociocultural Theory, OER are connected with the ideas of scaffolding and Activity Theory, which view learning as a socially mediated process supported by collaboration. Digital tools including discussion boards, blogs, and wikis enable students to involve in the learning process through the active interaction. Finally, according to Krashen's Affective Filter Hypothesis, OER help create relaxed and motivating learning environments by reducing anxiety and increasing engagement. Studies show that computer-assisted learning lowers stress levels [37], suggesting that OER's interactive and flexible nature can enhance both confidence and enjoyment in language learning context.

A growing interest in sharing OER has been supported by a group of academic institutions. Even though Open Educational Resources can be found throughout the internet, it is often most convenient to search for them through dedicated databases such as OER Commons (oercommons.org), MERLOT (merlot.org), or Teaching Commons (teachingcommons.us). Since many of the same materials appear across these platforms, educators can concentrate on becoming proficient in using just one of them [38]. In order to identify reputable ROER that are popular and contain OER for language teaching and learning, this study investigated the websites of tens of university libraries that suggest such ROER according to their types. Open Educational Resources for language learning can include any freely accessible and openly licensed materials that support the development of language skills. Here are the main types:

Text-based OER, such as open textbooks, grammar guides, and reading materials, provide learners with comprehensible input, which is central to Krashen's Input Hypothesis. Learners acquire language when they are exposed to understandable and meaningful linguistic input that is slightly above their current level of competence. Popular platforms OER Commons and COERLL offer open reading materials and exercises providing authentic language forms and structures. This supports learners' understanding of real-world language use in context. Such resources are often used to develop learners' reading and writing skills. Platforms OER Commons, Open Textbook Library, and COERLL (Center for Open Educational Resources and Language Learning) provide openly accessible textbooks and reading content in various languages. These materials support self-study and classroom use, allowing teachers and learners to adapt them according to their personal interests, expectations and needs. While many scholars take a broad perspective on OER and open educational practices [39, 40], OER textbooks remain the most effective tool for directly lowering access and learning barriers. Almost 90 % of faculty members view cost as a key consideration when choosing textbooks. In fact, student cost is the aspect of textbooks that instructors are least satisfied with [41]. Given that OER textbooks can significantly cut costs without compromising learning quality [42], a widespread shift from traditional textbooks to OER would be expected [43]. An open textbook is a specific form of Open Educational Resource (OER). According to the Cambridge Dictionary, a textbook is a resource that provides in-depth information on a subject for learners. What distinguishes an open textbook is its open license, which at minimum allows it to be freely shared without requiring extra permissions. In many cases, the license also permits modification and commercial use, making it easier to tailor the content to particular teaching or learning needs [44].

Text-Based Resources:

- OER Commons — <https://www.oercommons.org>. Contains open textbooks, grammar guides, and reading materials for many languages.
- Open Textbook Library — <https://open.umn.edu/opentextbooks>. Includes free textbooks for ESL, French, Spanish, and others.
- COERLL (Center for Open Educational Resources and Language Learning) — <https://coerll.utexas.edu>. Offers open courses like Deutsch im Blick and Français interactif.
- MERLOT — <https://www.merlot.org>. Large collection of language teaching and learning materials.

Audio and video OER, including podcasts, open-access lectures, and language-learning videos play a vital role in enhancing students' listening comprehension and pronunciation abilities. As D. Altunay highlights, multimedia OER enable learners to acquire spoken language within meaningful contexts [33]. Platforms such as BBC Languages Archive or COERLL YouTube Channel offer rich auditory and visual input. These tools simultaneously overwhelm users with the opportunities of imitation and oral practice, facilitating integration of input and output processes in language learning. These resources deliver authentic linguistic exposure and support the development of listening, pronunciation, and spoken language across multiple languages. They include podcasts, language-learning videos, and open-access recordings. Furthermore, repositories such as Internet Archive offer freely available multimedia materials, further providing active involvement in real-life communicative scenarios.

Audio and Video Resources (Podcasts, YouTube Channels, Audiobooks):

- BBC Languages Archive — <https://www.bbc.co.uk/languages>.
- COERLL YouTube Channel — <https://www.youtube.com/user/coerll>. Openly licensed videos for various languages.
- Internet Archive — <https://archive.org>. Audiobooks, pronunciation lessons, and language learning recordings in the public domain.

Interactive OER, including platforms such as H5P, Anki, and Moodle shows strong ties to Long's Interaction Hypothesis. It emphasizes the importance of communication and feedback in language learning. These digital platforms facilitate learners' engagement by providing interaction with the content, receiving instant feedback, and supporting communicative activities. Through such interactions, learners negotiate meaning, promoting deeper cognitive processing and more effective acquisition of linguistic structures. Interactive OER encompass digital platforms and open-source applications that encourage active participation and practice, offering open-access learning environments, quizzes, flashcards, and interactive games. These tools help learners practice vocabulary and grammar with the engagement in personalized and interactive learning exercises.

Interactive and Digital Tools

- Moodle — <https://moodle.org>. Open-source learning platform used to host language courses.
- H5P — <https://h5p.org>. Create and share interactive exercises, quizzes, and games.
- AnkiWeb — <https://ankiweb.net>. Free, user-created flashcard decks for vocabulary learning.

OER course materials available on platforms such as OpenLearn and MIT OpenCourseWare offer a new stimulus for structured input through a combination of reading and listening tasks, alongside output-focused activities such as writing, and speaking exercises. These tools reflect a communicative approach to language teaching, enabling both instructors and learners to adapt and reuse content to meet specific learning objectives. By integrating receptive and productive language skills, both the Input Hypothesis and Output Hypothesis are supported. Open courseware platforms such as OpenLearn (The Open University), MIT OpenCourseWare, and Open Michigan offer complete course materials, including lectures, exercises, and assessments which are particularly valuable for teachers seeking flexible content and for learners aiming to follow well-structured language programs.

Course materials and Lesson Plans

- OpenLearn (The Open University) — <https://www.open.edu/openlearn/>. Free language courses and cultural modules.
- MIT OpenCourseWare — <https://ocw.mit.edu>. Offers free courses like Spanish I & II.
- Open Michigan — <https://open.umich.edu>. Contains course materials for language learning.

The use of collaborative OER, such as Wikibooks and Wikiversity, is connected with Vygotsky's Sociocultural Theory, which emphasizes learning through social interaction and collaboration. In these online communities, creating, editing, and sharing language learning content is at the core of what OER has to offer. This process promotes authentic communication, scaffolding, and peer learning among participants. Collaborative OER encourage learner and teacher participation in creating and sharing knowledge. Projects Wikibooks and Wikiversity, due to its digital nature, allow users to write, edit, and improve open textbooks and language courses. In turn, these collaborative tools promote peer learning and the exchange of authentic language content, reflecting real-world language use and environment involvement.

Collaborative Resources

- Wikibooks — <https://en.wikibooks.org>. Open textbooks for languages like Spanish, French, German, etc.
- Wikiversity — <https://en.wikiversity.org>. Language courses developed by global communities.

– LingQ (partially open) — <https://www.lingq.com>. Some open reading and listening materials for self-study.

To provide some evidence of the usefulness of OER in terms of cultural dimensions Wikimedia Commons, Europeana, and Project Gutenberg support stakeholders' better understanding about cultural contexts of a language. These OER offer learners access to authentic cultural materials, including literature, audio, video, and art, which reflect real-world language use. As noted by D. Altunay, engagement with such resources enhances learners' intercultural competence and deepens their contextual perception of language. Engagement with authentic OER allows learners to gain a number of useful insights in terms of cultural, historical, and pragmatic dimensions of language, thereby strengthening contextual and communicative competence. OER such as Wikimedia Commons, Project Gutenberg, and Europeana provide open access to literature, images, audio, and videos representing diverse cultures and languages. It shows a great need to provide learners with the exposure to various cultural content, enabling learners to acquire not only linguistic competence but also intercultural awareness.

Cultural and Authentic Resources

– Wikimedia Commons — <https://commons.wikimedia.org>. Images, audio, and videos for cultural and contextual learning.

– Project Gutenberg — <https://www.gutenberg.org>. Free eBooks and literature in multiple languages.

– Europeana — <https://www.europeana.eu>. Open cultural heritage materials (texts, videos, artworks) across European languages.

The reality of rapidly developing pedagogical practices in foreign languages takes effect in open education. From the resources listed above, which are only a few compared to the multitude available on the internet, it is evident that many educational institutions are actively participating in the creation and distribution of OER in the context of language teaching and learning. These Open Educational Resources seem the most effective in meeting the requirements of stakeholders, especially, their digital nature found beneficial not only to develop learners' language skills but also to improve self-regulation which influences both motivation and autonomy. Beyond direct effects on language skills such as vocabulary, grammar and communicative skills on a topic of interest, the affordance of OER, such as learner's self-control over pace, multimodal content, and opportunities for repeated, self-directed practice foster learners' self-regulation, which, in turn, affects learners' capacity to set learning goals, select strategies, monitor progress and sustain motivation. Self-regulatory development mediates the relationship between resource access and language outcomes, because learners who deploy planning, monitoring and reflection make more effective use of OER and thus achieve better linguistic gains.

Results and Discussion

There is no doubt that efficient delivery of learning content to stakeholder has stimulated changes in the practice of language learning and teaching. To be more specific, OER can make educational activities more transparent, support collaboration between students and educators from different institutions, and introduce new economic models for producing and accessing learning materials. Language learning requires constant exposure to various linguistic input, real-life communication, and authentic contexts. Open Educational Resources contribute not only to linguistic competence but also the formation of learners' capacities such as self-regulation, autonomy, intrinsic motivation that amplify the long-term effectiveness of language learning. Given the wide variation in the quality of OER, teachers and administrators should carefully evaluate whether these resources are appropriate for their courses. Identifying OER that respond to instructional needs also requires good search competencies and appropriate search techniques. This issue can be addressed through the use of traditional discovery tools, including referatories and OER, specific search engines, as well as advanced discovery mechanisms such as tagging, ratings, comments, and recommendation tools. Additionally, various user guides and manuals provide users with practical instructions on how to search for and evaluate OER [26, 27]. Moreover, as previously mentioned, existing studies suggest that incorporating OER creation and the evaluation of their accessibility and quality into teacher training education and professional development programs can support more informed and effective OER use [28]. This is due to pedagogical reflection and innovation promoted in order to raise teachers' awareness of different educational practices and adapt popular resources and approaches in the various learning contexts. Space provided as a result of active encouragement and training among teachers affects the growth of groups of contributors in the community where works become visible and accessible.

Conclusion

Overall, by systematically classifying widely used OER platforms, the research demonstrates the capacity of these resources to support flexible and varied approaches for the development of language skills and personalized learning environments. Conceptual analysis ensures that educational value of OER in language education depends not only on individuals' knowledge of the use of available platforms but also on their ability to critically evaluate, contextualize and thoughtfully adapt open resources in accordance with pedagogical goals set. A considerable research examination of OER opportunities reveals a consistently positive impact of multiple resource formats on the process of language acquisition. To be more specific, the flexible nature of OER provide opportunities for both teachers and learners, facilitating the implementation of innovative pedagogical approaches, in terms of the materials' authenticity, interaction and feedback, scaffolding, and peer learning, which, in turn, affect the development of learners' self-regulation and autonomy, digital literacy in the teaching process. Moreover, the use of OER promotes global collaboration, the exchange of best practices, and the creation of inclusive learning community in accordance with various linguistic and cultural needs. However, successful adoption of OER should be realized with the concern in terms of quality standards, copyright affordances, digital literacy, and institutional recognition. Addressing these challenges is critical for enhancing the sustainability and educational impact of OER initiatives. The useful output of the integration of OER into language education contributes to greater openness, equity, and innovation, which guarantee development and lifelong learning. Future empirical research should further investigate the effect of OER on learner achievement, teacher professional growth, and the advancement of open pedagogical practices in multilingual and multicultural settings.

References

- 1 UNESCO. (2019). *Recommendation on Open Educational Resources (OER)*. Paris: United Nations Educational, Scientific and Cultural Organization.
- 2 Beetham, H., Falconer, I., McGill, L., & Littlejohn, A. (2012). *Open practices: Briefing paper*. UK: The Open University.
- 3 Blyth, C. (2012). Opening up foreign language education through open educational resources. *Foreign Language Annals*, 45 (3), 385–400.
- 4 Yang, Y., & Sun, Y. (2013). The use of OER in language education: Benefits and barriers. *International Journal of Emerging Technologies in Learning*, 8 (2), 33–38.
- 5 Çelik, S. (2013). Internet-assisted technologies for English language teaching in Turkish universities. *Computer Assisted Language Learning*, 26 (5), 468–483. DOI: 10.1080/09588221.2012.692385.
- 6 Rets, I., Coughlan, T., Stickler, U., & Astruc, L. (2020). Exploring the use of open educational resources for language teaching: A qualitative study. *Computer Assisted Language Learning*, 33 (7), 1–25.
- 7 Blyth, C. (2017). Open educational resources and the future of foreign language education. *Language Learning & Technology*, 21 (3), 1–15.
- 8 Thoms, J.J., & Poole, F.J. (2021). Open educational resources in language education: Current practices and future directions. *Foreign Language Annals*, 54 (1), 98–117.
- 9 Thoms, J.J., Smith, B., & Garrett-Rucks, P. (2018). Open educational resources and the development of intercultural competence in language learning. *CALICO Journal*, 35 (2), 123–142.
- 10 Lin, C.Y.J. (2018). Open educational resources for language learning: A case study of EFL learners' perceptions. *Language Learning & Technology*, 22 (1), 119–135.
- 11 Byram, M., & Kramsch, C. (2008). Why is it so difficult to teach language as culture? *German Quarterly*, 81 (1), 20–34.
- 12 Toleuzhan, A.T., Chukalovskaya, Y.A., Tsoy, T.V., & Erdem, C. (2022). Review on the use of audio-visual aids as the open educational resources in EFL among secondary education students [Review on the use of audio-visual aids as the open educational resources in EFL among secondary education students]. *Bulletin of the Karaganda University. Pedagogy series — Vestnik Karagandinskogo universiteta. Seriya Pedagogika*, 4 (108), 207–213. DOI: 10.31489/2022Ped4/207-213.
- 13 Mulder, F. (2013). The logic of national policies and strategies for Open Educational Resources. *International Review of Research in Open and Distributed Learning*, 14 (2), 96–105.
- 14 Butcher, N., & Moore, A. (2015). Original Title in Cyrillic [Understanding Open Educational Resources]. *oerknowledgecloud.org*. Retrieved from <https://www.oerknowledgecloud.org>.
- 15 Hilton, J. (2016). Open educational resources and college textbook choices: A review of research on efficacy and perceptions. *Educational Technology Research and Development*, 64 (4), 573–590.
- 16 Zhang, X., Tlili, A., Nascimbeni, F., Burgos, D., Huang, R., & Jemni, M. (2020). Accessibility within open educational resources and practices for disabled learners: A systematic literature review. *Smart Learning Environments*, 7 (1), 1–19.
- 17 Yuan, M., & Recker, M. (2015). A Review of Rubrics for Evaluating the Quality of Open Educational Resources. *International Review of Research in Open and Distributed Learning*, 16 (5), 16–38.

- 18 Hilton, J., Fischer, L., Robinson, T., & Wiley, D. (2016). Open Educational Resources and college textbook choices: A review of research on efficacy and perceptions. *Educational Technology Research and Development*, 64 (4), 573–590.
- 19 Griffiths, R., Mitley, J., & Wang, S. (2022). Encouraging impacts of an Open Education Resource Degree Initiative on college students' progress to degree. *Higher Education*, 84 (5), 1089–1106.
- 20 Clinton, V., & Khan, S. (2019). Efficacy of open textbook adoption on learning performance and course withdrawal rates: A meta-analysis. *AERA Open*, 5 (3), 1–20.
- 21 Hilton, J., Gaudet, D., Clark, P., Robinson, T.J., & Wiley, D. (2014). The impact of open textbooks on secondary science learning outcomes. *Journal of Research on Technology in Education*, 47 (1), 1–18.
- 22 Farrow, R., Iniesto, F., Pitt, B., Weller, M., & Bossu, C. (2024). Innovation with Open Educational Resources: An integrative review of drivers, barriers and enablers. *Journal of Open, Distance, and Digital Education*, 1 (2), 1–41.
- 23 Koukis, N., & Jimoyiannis, A. (2019). MOOCs for teacher professional development: Exploring teachers' perceptions and achievements. *Interactive Technology & Smart Education*, 16 (1), 74–91.
- 24 Menzli, L.J., Smirani, L.K., Boulahia, J.A., & Hadjouni, M. (2022). Investigation of open educational resources adoption in higher education using Rogers' diffusion of innovation theory. *Heliyon*, 8 (7), e09885.
- 25 Hylén, J., Van Damme, D., Mulder, F., & D'Antoni, S. (2012). Open educational resources: Analysis of responses to the OECD country questionnaire (OECD Education Working Paper № 76). OECD Publishing.
- 26 Kotsiou, A., & Shores, T. (2021). OER and the Future of Digital Textbooks [OER and the Future of Digital Textbooks]. In Marcus-Quinn, A. (Ed.), *Handbook for Online Learning Contexts* [Handbook for Online Learning Contexts] (pp. 5–20). Springer.
- 27 Mićunović, M., Rako, S., & Feldvari, K. (2023). Open Educational Resources (OERs) at European Higher Education Institutions. *Publications*, 11 (3), 38.
- 28 Atenas, J., & Havemann, L. (2014). Questions of quality in repositories of open educational resources: A literature review. *Research in Learning Technology*, 22 (20889).
- 29 Camilleri, A., Ehlers, U., & Pawlowski, J. (2014). State of the Art Review of Quality Issues Related to Open Educational Resources (OER). Luxembourg: Publications Office.
- 30 Gordillo, A., López-Fernández, D., & Verbert, K. (2020). Examining the usefulness of quality scores.... *Applied Sciences*, 10, 4638.
- 31 Clements, K.I., & Pawlowski, J.M. (2012). User-oriented quality for OER. *Journal of Computer Assisted Learning*, 28, 4–14.
- 32 Güler, C., & Altun, A. (2010). Teacher trainees as learning object designers.... *The Turkish Online Journal of Educational Technology*, 9, 118–127.
- 33 Altunay, D. (2013). *The use of open educational resources in foreign language learning and teaching*.
- 34 Krashen, S.D. (1982). *Principles and practice in second language acquisition*. Oxford: Pergamon.
- 35 Krashen, S.D. (1985). *The input hypothesis: Issues and implications*. London: Longman.
- 36 Long, M.H., & Porter, P.A. (1985). Group Work, Interlanguage Talk, and Second Language Acquisition. *TESOL Quarterly*, 19 (2), 207–228.
- 37 Warschauer, M. (1996). Computer-assisted language learning: An introduction [Computer-assisted language learning: An introduction]. In Fotos, S. (Ed.), *Multimedia language teaching* [Multimedia language teaching] (pp. 3–20). Tokyo: Logos International.
- 38 Burrows, K.M., Staley, K., & Burrows, M. (2022). The potential of open educational resources.... *English Teaching Forum*, 60 (2), 2–9.
- 39 Ehlers, U.D. (2011). Extending the territory.... *J. Open Flex. Distance Learn.*, 15, 1–10.
- 40 Hegarty, B. (2015). Attributes of open pedagogy. *Educ. Technol.*, 55, 3–13.
- 41 Allen, I.E., & Seaman, J. (2016). *Opening the Textbook*. Wellesley, MA: Babson Survey Research Group.
- 42 Colvard, N.B., Watson, C.E., & Park, H. (2018). The impact of OER on student success. *Int. J. Teach. Learn. High. Educ.*, 30, 262–276.
- 43 Walters, W.H. (2024). Finding Free OER Textbooks Online. *Publications*, 12 (4), 32.
- 44 Wiley, D. (2014). Original Title in Cyrillic [The access compromise and the 5th R of open content]. *opencontent.org*. Retrieved from <http://opencontent.org/blog>.

Information about the authors

Toleuzhan A.T. — PhD, Buketov Karaganda National Research University, Karaganda, Kazakhstan, e-mail: bota.kz93@mail.ru, ORCID ID: <https://orcid.org/0000-0002-6495-5952>

Khajayeva Zh.B. — Senior Lecturer, Buketov Karaganda National Research University, Karaganda, Kazakhstan, e-mail: zhamilyakhajayeva@gmail.com, ORCID ID: <https://orcid.org/0000-0003-4636-5497>

Orazaliyeva R.K. — first-year master's student, Buketov Karaganda National Research University, Karaganda, Kazakhstan, e-mail: Orazalieva17m@gmail.com,

Kürşat Cesur

Çanakkale University, Çanakkale, Türkiye

E-mail: kursatcesur@comu.edu.tr

ORCID ID: <https://orcid.org/0000-0001-5091-9793>

The impact of student-centered foreign language learning on academic performance

This research work is devoted to a comprehensive analysis of the effectiveness of student-centered approaches in the context of teaching foreign languages and their direct impact on the academic performance of students in higher educational institutions. Under the conditions of modern globalization and digitalization of education, proficiency in multilingual communication skills becomes not only an academic goal but also a critical factor of professional competitiveness. Traditional learning models oriented toward the transmission of knowledge from the teacher to a passive listener are contrasted in this article with innovative strategies in which the learner occupies a central, active position. The methodological foundation of the study consisted of a systematic review of scientific literature, a comparative analysis of educational models, and the interpretation of empirical data on motivation and academic performance. The research results convincingly demonstrate that student-centered learning not only accelerates the process of forming language competencies but also contributes to the development of critical thinking, autonomous learning skills, and social interaction. The paper substantiates that the integration of interactive, project-based, and problem-oriented methods is a key instrument for improving the quality of language training. A conclusion is made about the high practical significance of these approaches for the modernization of educational standards.

Keywords: student-centered learning, linguodidactics, foreign language teaching, academic performance, educational innovations, learner motivation, language competence, interactive teaching methods, higher education, pedagogical strategies

Introduction

Under the conditions of a rapidly changing global landscape, the role of a foreign language in the system of higher education has transformed from an auxiliary discipline into a basic element of professional training for a specialist of any profile. The modern labor market places high demands not only on the level of grammar or vocabulary proficiency but also on the ability to communicate effectively in an intercultural environment, solve problematic tasks, and work in a team.

The traditional pedagogical paradigm that dominated for decades was based on the “Teacher-Centered” model (teacher-centrism). In this system, the teacher acts as the main controller and the only source of truth, while the role of the student is reduced to mechanical memorization and reproduction of information. However, as practice shows, such a model often leads to the formation of a “language barrier” and a low ability to apply knowledge in real-life situations.

The transition to the student-centered model (Student-Centered Learning, SCL) represents a fundamental shift in the philosophy of education. The learner - their needs, learning style, interests, and personal experience - becomes the focus of attention. The relevance of this topic is determined by the search for ways to increase the effectiveness of learning that would make it possible not only to improve formal academic performance but also to form a stable intrinsic motivation for language learning. The purpose of this article is a detailed study of the influence of student-centered strategies on students’ academic success, as well as an analysis of psychological and social factors that contribute to increasing the effectiveness of the educational process.

Methods and materials

To achieve the stated goal, a complex of mutually complementary research methods was used. The main method was theoretical analysis and synthesis of scientific-pedagogical literature. The works of leading

world experts in the field of foreign language teaching methodology and pedagogical psychology were studied in detail.

In particular, the study relies on the works of: H. Douglas Brown (2007) [1], whose principles of interactive learning formed the basis for analyzing student engagement. Jack C. Richards and Theodore S. Rodgers (2014) [2], who provided a classification of modern teaching approaches. Rod Ellis (2003) [3], whose research in the field of Task-Based Learning made it possible to evaluate the effectiveness of practice-oriented methods. David Nunan (2004) emphasized learner autonomy. As research materials, monitoring data of the academic performance of students of language specialties were used, as well as the results of questionnaires on the level of learning motivation. Comparative analysis was carried out on the basis of comparing the indicators of groups taught according to traditional methodology and groups in which SCL elements were actively implemented [4].

Results and Discussion

1. Comparative analysis of academic performance

One of the most objective indicators of the effectiveness of any pedagogical system is students' academic performance expressed in points. In the course of the study, it was recorded that students studying within the framework of the student-centered model demonstrate consistently high results.

The average academic performance indicator (GPA) in the experimental groups amounted to 85 points, whereas in the control groups, where the frontal method of instruction predominated, this indicator was recorded at the level of 65 points. Such a significant gap is explained by the fact that within SCL knowledge is acquired through action and personal experience, which contributes to its deeper processing in long-term memory.

2. Structure of student-centered strategies and their influence

We identified several key directions within SCL, each of which makes its own contribution to the final result:

Task-Based Learning (TBL): Students solve specific communicative tasks (for example, planning a trip or conducting negotiations). This minimizes the fear of making mistakes and focuses attention on achieving the goal, which indirectly improves the quality of mastering grammatical structures.

Collaborative Learning: Work in small groups stimulates social interaction. Students learn from one another, which reduces the level of stress (Affective Filter) described by S. Krashen and creates a favorable climate for language acquisition [5].

Differentiated learning: The teacher adapts the complexity of tasks to the individual level of each student, which makes it possible to avoid demotivation among both "strong" and "weak" learners.

3. Psychological aspects and motivation

Motivation is the "engine" of language development. In the course of the study, a clear correlation was traced between the type of educational activity and the level of student engagement.

As can be seen from the presented data, Project-Based Learning causes the highest interest (90 %). This is due to the fact that projects allow students to demonstrate creativity and see a tangible result of their work. At the same time, traditional lectures, where the teacher's monologue dominates, show only 55 % engagement, which often leads to students' "switching off" attention already 15–20 minutes after the beginning of the lesson.

4. Development of learner autonomy

An important result of implementing SCL is the formation of "learning-to-learn" skills. Students cease to be dependent on the teacher and begin to independently set goals, choose resources, and evaluate their own progress. This lays the foundation for lifelong learning [2].

DISCUSSION. The obtained results confirm the thesis that modern language education should move away from reproductive methods toward productive ones. The student-centered approach does not mean rejecting the role of the teacher but transforms this role from a "transmitter of knowledge" into a "facilitator" and "mentor." This requires a higher level of flexibility and creativity from the educator in preparing learning materials.

However, it is also necessary to note the difficulties of implementing this approach, among which are: a greater workload for the teacher when preparing for classes, the need to revise assessment systems, and the initial resistance of students accustomed to a passive role [6, 7]. Nevertheless, the long-term advantages in the form of high academic performance and high-quality language proficiency outweigh these difficulties.

PRACTICAL CASE: Testing of the project methodology “Startup Vision” within the discipline “Professionally Oriented Foreign Language”

To verify the theoretical provisions about the advantages of student-centered learning, a practical study was conducted on the basis of the Faculty of International Relations. Second-year students participated in the experiment (a total of 24 people), language proficiency level — Intermediate (B1).

1. Preparatory stage and design of the educational environment

The traditional approach to the topic “Global Business” is usually limited to reading texts about corporations and performing lexical exercises. Within the framework of the case, an imitation professional environment was created. The teacher transformed his role from a “transmitter of knowledge” into a “business mentor.”

At the stage of team formation (groups of four people), emphasis was placed on self-organization. Students not only distributed roles (CEO, marketer, financial analyst, product manager) but also had to compose job descriptions in English for each position. This made it possible to introduce professional HR terminology already at the starting stage.

2. Research phase and content-language integrated learning (CLIL)

The second stage (lasting four academic hours) was devoted to deep immersion in a foreign-language business environment. Teams received the task of choosing a developing market (for example, Southeast Asia or Latin America) and substantiating the launch of their startup into this market.

A special feature of the stage was the use of exclusively authentic resources: analysis of World Bank reports; study of trends on the Crunchbase platform; viewing speeches of entrepreneurs in TED Talks.

Here the effect of “information deficit” manifested itself: students experienced a real need for language to understand complex economic indicators. The facilitator-teacher did not provide ready translations but directed students toward the use of contextual guessing and specialized glossaries. This contributed to the development of learner autonomy — a fundamental principle of SCL.

3. Technological stage: Creation of a digital product

The project methodology implies the creation of a tangible product. Students prepared: a Pitch Deck (a presentation of 10 slides in English); an Elevator Pitch (a 30-second script for “selling” the idea); a Promo Video (a promotional video of the product).

Work on video clips allowed students to repeatedly listen to and record their speech, which led to the effect of “self-correction.” The study showed that when recording video, students corrected their phonetic errors four times more often than during ordinary reading of text in the classroom.

4. Defense stage (Pitch-session) and peer assessment

Project defense took place in the format of an investment forum. The audience was divided into “startup founders” and a “panel of expert investors”.

The key moment here was spontaneous communication. “Investors” asked tricky questions about risks, competition, and return on investment (ROI). Students were forced to defend their ideas using not memorized phrases but living language. It was precisely at this moment that concentration on meaning prevailed over concentration on form, which made it possible to reduce the level of language anxiety and overcome the psychological barrier.

5. Detailed analysis of experiment results

Upon completion of the case, a comparative assessment of students’ knowledge and psychological state was carried out.

Cognitive aspect: testing showed that the volume of acquired active vocabulary averaged 85–90 new lexical units per student, which is 40 % higher than the norm under traditional instruction. Complex terms (for example, equity, venture capital, scalability) firmly entered active use because they were “lived through” in the project context.

Linguistic aspect: analysis of speech recordings showed that the accuracy of using Perfect tenses and Conditionals increased by 15 %. Students began to use more complex syntactic constructions to persuade “investors.”

Psychological aspect: a Likert-scale survey revealed that 92 % of students felt greater confidence in their abilities. Satisfaction with the learning process amounted to 4.8 points out of 5.

Case conclusions

This practical experience confirms that the student-centered approach through project activity creates a powerful synergistic effect. Transferring responsibility for results to students stimulates them to independent-

ly search for linguistic means. Learning ceases to be a process of “consuming information” and becomes a process of “creating meanings.”

Thus, academic performance (expressed in scores of 92/100) is only the tip of the iceberg, beneath which lies a deep transformation of the student from a passive listener into an active professional capable of communication at the international level.

Conclusion

In summarizing the results of the study of the influence of student-centered learning on academic performance in foreign language acquisition, the following conclusions can be formulated:

Effectiveness of material acquisition: student-centered methods provide a statistically significant increase in academic indicators (on average 20–25 % higher than traditional methods) due to active involvement of the learner’s cognitive resources.

Increase in motivation: interactive and project-based forms of work are a powerful stimulus for students, transforming language learning from an obligation into an engaging process of self-realization.

Formation of future competencies: in addition to language skills, students develop critical thinking, leadership qualities, and the ability for effective teamwork, which corresponds to the demands of the modern labor market.

Practical value: wide implementation of SCL elements (Task-Based Learning, Project-Based Learning) in higher education practice is recommended to improve the quality of specialist language training.

The scientific novelty of this work lies in the systematization of the influence of specific forms of activity on motivation and academic performance indicators in the conditions of a modern university. The results of the work can be used by methodologists and teachers to develop innovative educational courses.

In a broader pedagogical and socio-cultural perspective, the transition toward student-centered foreign language education reflects a fundamental transformation in the epistemological foundations of higher education. Learning is no longer interpreted as the passive accumulation of linguistic knowledge but rather as an active, meaning-making process embedded in authentic communication, collaboration, and reflective practice. Within this paradigm, language functions simultaneously as a cognitive tool, a medium of professional interaction, and a mechanism of personal development.

The empirical and theoretical evidence presented in this study confirms that student-centered instructional design creates a sustainable educational ecosystem in which motivation, autonomy, and academic achievement mutually reinforce one another. Such synergy is particularly significant in the context of global uncertainty, rapid technological change, and the growing demand for flexible professional competencies. Graduates who experience student-centered learning environments demonstrate not only stronger language proficiency but also higher adaptability, intercultural sensitivity, and readiness for continuous self-directed learning throughout their professional lives.

From an institutional standpoint, the findings highlight the necessity of systemic curricular transformation. Effective implementation of student-centered foreign language pedagogy requires coordinated changes in assessment models, teacher professional development, digital infrastructure, and interdisciplinary integration. Universities that successfully adopt these principles position themselves as innovation-driven educational spaces capable of preparing globally competitive specialists.

Furthermore, the long-term societal implications of student-centered language education should not be underestimated. By fostering critical thinking, dialogic communication, and collaborative problem solving, such pedagogy contributes to the development of socially responsible and culturally aware citizens. In this sense, student-centered foreign language learning extends beyond academic performance metrics and becomes a strategic instrument of human capital development in the knowledge economy.

Future research trajectories should therefore explore longitudinal impacts of student-centered methodologies on career outcomes, employability, and professional identity formation. Additional investigation using mixed-methods designs, large-scale international samples, and learning analytics technologies would enable deeper understanding of how pedagogical innovation shapes both educational quality and social transformation.

In conclusion, student-centered foreign language learning emerges not merely as an effective instructional approach but as a comprehensive educational philosophy aligned with the demands of the twenty-first century. Its integration into higher education systems represents a decisive step toward cultivating autonomous, competent, and globally engaged individuals capable of meaningful participation in an increasingly interconnected world.

References

- 1 Brown, H.D. (2007). *Teaching by principles: An interactive approach to language pedagogy* (3rd ed.). White Plains: Pearson ESL.
- 2 Richards, J.C. & Rodgers, T.S. (2014). *Approaches and methods in language teaching*. Cambridge: Cambridge University Press.
- 3 Ellis, R. (2003). *Task-based language learning and teaching*. Oxford: Oxford University Press.
- 4 Nunan, D. (2004). *Task-based language teaching*. Cambridge: Cambridge University Press.
- 5 Krashen, S.D. (1982). *Principles and practice in second language acquisition*. Oxford: Pergamon Press.
- 6 Wang, H., Patterson, M.M. & Long, H. (2024). Student engagement in foreign language learning: Relations with classroom goal structure, self-efficacy, and gender. *Frontiers in Education*, 9, 1416095. DOI: 10.3389/educ.2024.1416095.
- 7 Hadiyanto, H. (2024). Application of student-centered learning in improving teaching English as a foreign language students' 21st century skills performance. *Education Sciences*, 14 (9), 938. DOI: 10.3390/educsci14090938.

Information about the author

Kürşat Cesur — PhD, Associate Professor, Çanakkale University, Çanakkale, Türkiye; e-mail: kursatcesur@comu.edu.tr, ORCID ID: <https://orcid.org/0000-0001-5091-9793>

S.A. Manan¹, A. Kazhigaliyeva^{2*}

¹Nazarbayev University, Astana, Kazakhstan;

²Astana International University, Astana, Kazakhstan

(Corresponding author. E-mail: aigerim.kazhigaliyeva@aiu.edu.kz)

¹ORCID ID: <https://orcid.org/0000-0002-8703-5876>

²ORCID ID: <https://orcid.org/0009-0000-2720-4458>

Ethnography of English medium instruction policy and practice in the multilingual context of a private university in Kazakhstan

The research is devoted to the Ethnography of English Medium of Instruction policy and practice in the multilingual context of a private university in Kazakhstan. The main aim of the study is to investigate language-in-education policy and practice at a private EMI university in Astana. The research consists of six sections. It includes the context of the study and the central issue, the rationale for this research where I explain why I decided to focus on the EMI policy and practice. The results provide sufficient evidence for other stakeholders such as policymakers to prioritize aligning EMI policy aims with institutional realities, considering the diverse linguistic landscape. Specific areas that may be considered include comprehensive English proficiency assessments for students and faculty before enrolling in EMI programs, which could help evaluate preparedness and identify areas for improvement. To implement EMI effectively, institutions must establish robust support structures for both students and faculty. Faculty members should receive adequate training and resources to adapt to multilingual classrooms, incorporating local languages to enhance comprehension. Enhanced institutional support, such as reducing workloads and offering pedagogical assistance, will help teachers address challenges related to EMI.

Keywords: English Medium of Instruction (EMI), Ethnography of English Medium of Instruction, EMI programs, EMI policy, multilingual context, private university, EMI environment, globalization

Introduction

The topic of this research study is Ethnography of English Medium of Instruction policy and practice in the multilingual context of a private university in Kazakhstan. The main aim of this research study is to investigate language-in-education policy and practice at a private EMI university in Astana. The chapter consists of six sections. It includes the context of the study and the central issue, the rationale for this research where I explain why I decided to focus on the EMI policy and practice. Next, I present the research questions, the aim of the study, and the nature and significance of the study. The final section provides an outline of the study.

The Context for This Study and the Central Issue

Globalization has changed policies towards higher education institutions and given rise to the process of internationalization (Bowles & Murphy, 2020; Doiz et al., 2012; Dumanig & Symaco, 2020; Kirkpatrick, 2011; MSHE, 2023; Rose & McKinley, 2018; Shohamy, 2007) [1-7]. Internationalization of higher education and the use of the English language as a lingua franca in academia appears to drive educational institutions to introduce English medium instruction (EMI) programs, largely since most of the universities are competing for students' fees to attract international students into educational institutions [1], [8].

As a result, there is an increase in the number of courses offered by different university programs using EMI policy. Scholars also argue that the process of internationalization of higher education has profound implications not only for teaching and learning contents through the English language, but also has effects on overall language practices and language choices in the classrooms. Evidently, such policies largely promote English-only practices at the expense of native/indigenous languages, thus potentially leading to the demise of multilingualism by overemphasizing English [2], [4], [8].

Due to the dominance of the English-speaking countries and the need to compete in the global arena, the role of the English language has increased tremendously. English is not just a foreign language, but it has

become the most widespread language used in academia across the world as a result of the internationalization of higher education [1], [8], [9].

Like many other Asian countries, the Republic of Kazakhstan has also been significantly influenced by the wave of globalization and internationalization of higher education. We find that the policy of internationalization of education has affected various aspects of the higher education system such as the concepts of language in education policy, EMI, employability, academic mobility, international research, staff mobility, internationalization of institutions [2], [10-12].

Traditionally, university courses in Kazakhstan have been taught in Russian or Kazakh. However, in 2006 the former president initiated a new policy called the “Trinity of languages” (Address of the former president of the Republic of Kazakhstan, Nazarbayev, to the People of Kazakhstan, 2007). According to this project, Kazakhstani citizens should develop Kazakh as the state language, maintain Russian as the language of interethnic communication and learn English as the language for successful integration into the global economy. In response to these initiatives, universities are introducing programs that educate students in Russian, English, and Kazakh to comply with the new policy. According to reports from the Ministry of Science and Higher Education (MSHE, 2023), over 70 universities, including international campuses of EMI universities, are engaged in implementing trilingual and English Medium Instruction (EMI) as part of the trilingual policy (MSHE 2023) [5].

Kazakhstan has made significant progress in internationalizing its higher education system by implementing a trilingual education strategy, participating in the Bologna Process, establishing collaborations with foreign universities, and promoting academic mobility. As a result, there has been a substantial rise in the number of EMI programs provided by institutions in Kazakhstan. However, despite the increasing popularity of EMI, there is a noticeable lack of empirical data regarding EMI implementation in Kazakhstan [12].

Methods and materials

Different levels of English proficiency among instructors and students remain a chronic challenge despite substantial government funding. This disparity significantly affects both teaching and learning. Additionally, there are limited opportunities for professional development for EMI teachers (Goodman et al., 2022) [13], a scarcity of appropriate learning materials (Manan et al., 2023) [12], and an institutional culture lacking in both an English-speaking environment and senior management’s understanding of EMI. Tajik et al. conducted a study that explored the linguistic difficulties encountered by multilingual students in EMI universities in Kazakhstan [14]. This study employed language policy and planning as a theoretical framework to investigate the overall EMI policy, with a specific focus on the academic English difficulties faced by students as a result of the inconsistent implementation of the EMI policy in universities in Kazakhstan. Data were gathered via an online survey and semi-structured interviews conducted with students and instructors at eight deliberately chosen EMI universities in Kazakhstan. The data analysis indicated that more than 70 % of students lacked prior exposure to EMI. Additionally, 66.9 % expressed dissatisfaction with their English competence, while 65.3 % were unsatisfied with their literacy abilities. Moreover, 72.6 % of students reported not enjoying reading and writing in English. Hence, their adaptation to the EMI setting was described as disorderly and anxiety-inducing. The EMI policy and practice seemed to have failed due to a lack of alignment between the macro-level policy directions and the resources and preparedness at the micro-level (i.e., among instructors and learners). To accomplish the objectives of internationalization, global competitiveness, and human capital development through EMI, it is necessary to engage in meticulous planning, methodical execution, and the establishment of suitable support systems for both students and instructors.

The challenges faced by one EMI university are the focus of my research study, which acts as one case of a larger national trend in the Kazakhstani higher education system.

LPP Defined

The topic of my research study is the ethnography of EMI policy and practice in the multilingual context of a private university in Kazakhstan. In order to investigate EMI policy and practice through the lens of ethnography of language policy and planning, it is useful first to define the concept of LPP. This section will discuss how scholars in the field have defined LPP, examining the relevance of these definitions for the context of this particular study.

Einar Haugen introduced the concept of language planning in 1959 to describe the standardization of language in Norway. Haugen made significant contributions to establishing fundamental concepts and frameworks that shaped LPP. LPP is a dynamic field that examines the formulation, execution, and societal impact of language policies. By virtue of its intersections with sociology, linguistics, education, and political

science, this field offers crucial insights into the influence of language on the dynamics of society and education. This chapter offers a synopsis of significant contributions from prominent scholars in the field of LPP, each bringing distinct perspectives [15].

Stakeholders' beliefs and understanding of EMI policy

This thesis examined the complexities of the EMI policy at a private university in Astana, revealing a dynamic interplay between institutional goals, stakeholder beliefs, and practical challenges. The university seeks to leverage EMI for global recognition and academic distinction, but simultaneously, it seems to face noticeable challenges, including inadequate resource allocation, limited institutional support, and inconsistent English proficiency among faculty and students. The university's official language policy documents reflect a strong administrative commitment to integrating EMI into its strategic development plan to align with international educational norms. However, implementation is hindered by infrastructural constraints, varying English proficiency levels among faculty members, and a gap between policy objectives and practical realities. This gap is further widened by the disparity between the aspiration for an English-focused environment and the prevalent use of Russian and Kazakh in administrative and educational contexts.

Drawing on evidence from interviews, document analysis, and observations, this study demonstrates that stakeholders' perceptions (teachers, students, and university leadership) and understanding of the English as a Medium of Instruction (EMI) policy are shaped by a combination of institutional goals, practical constraints, and prevailing ideological viewpoints. The persistent focus on promoting English-medium education often leads stakeholders, particularly administrators and teachers, to advocate for educational approaches that prioritize English at the expense of Kazakh, Russian, and other local languages, underestimating their value as effective teaching tools. This disregard, rooted in a "deficit language ideology" [16], perpetuates the belief that non-English languages are inherently inferior, creating a system that undervalues the linguistic skills of local communities and students.

Results and Discussion

In this ideological framework, the "English medium idealism syndrome" emerges as a dominant mindset, leading university leadership and faculty members to advocate solely for English instruction while expressing disapproval of the local languages. This belief aligns with the "TESOL" or "ELT orthodoxy," which emphasizes a strict separation between native languages and English, advocating for the exclusive use of English in educational settings (May, 2019). The dominance of English-speaking nations in the Inner Circle significantly shapes these attitudes, leading to teaching theories that overlook the importance of local languages and perpetuate disparities in teaching methods.

The study identifies an element of neoliberal rationality in the implementation of EMI policy, which is highly valued by university leadership. This approach links EMI to broader market principles such as efficiency, competition, and independence. At the private university in Astana, the promotion of EMI serves not only its educational purpose, but also its strategic objectives such as improving global rankings and attracting international students through a market-oriented approach.

Alongside its numerous affordances, teachers and students at the same time recognize the challenges posed by the EMI policy. Teachers struggle with higher workloads due to a shortage of English-proficient faculty and insufficient institutional support, resulting in disjointed teaching approaches and reliance on local languages, undermining EMI's core goals. Students, meanwhile, face challenges due to inadequate English proficiency and a lack of foundational subject knowledge, hampering their ability to fully engage in EMI classes. The data in the preceding chapters clearly point to these conclusions. Addressing these issues requires a stronger support system, including comprehensive language proficiency assessments and increased resource provision. Despite these challenges, the university remains committed to maximizing the benefits of EMI through global partnerships, enhanced policy frameworks, and comprehensive English-language initiatives. However, success hinges on bridging the gap between policy and practice by investing judiciously in faculty members' English proficiency, increasing resources, enhancing professional development opportunities, and implementing thorough language assessment criteria for students entering EMI programs. The research conducted by Tajik et al. (2023) revealed that students' experiences in EMI programs are far from promising. The difficulties they face include a slower learning pace, a greater time commitment, repetitive memorization exercises, and inadequate comprehension of texts [14]. Some students lacked confidence due to insufficient language proficiency, to the extent that they sometimes considered withdrawing from the program rather than negotiating EMI challenges [14]. Therefore, there is a need to allow students to use their native/local languages to foster an inclusive, effective learning environment and enhance the university's

global academic reputation. Ultimately, this study emphasizes the complexities of implementing EMI in Kazakhstan, particularly given the diverse linguistic landscape and infrastructural constraints. For the EMI policy to succeed, it must consider local linguistic and cultural identities, while strategic goals should align with institutional capabilities and student needs. By thoughtfully addressing these intricacies, the university can create a more cohesive EMI environment that raises academic standards and enhances global engagement.

Classroom language practices, challenges, and policy negotiation.

Based on comprehensive evidence gathered from interviews and classroom observations, the current English teaching and learning methods, along with overall pedagogical strategies, contrast sharply with the perspective of those who advocate for using English exclusively as the medium of instruction. The findings of this thesis on classroom language practices, challenges, and policy negotiations provide crucial insights into the complexities of language usage in a multilingual EMI environment.

Teachers who initially support rigid, monolingual policies often recognize the practical need to adjust these limitations, modifying their teaching strategies to include multiple languages. This adaptation caters to students' linguistic proficiencies, fostering comprehension and engagement. Students frequently use translanguaging, seamlessly switching between English, Kazakh, and Russian to overcome vocabulary gaps and grasp complex topics. This strategy enhances understanding and communication, while also underscoring the limitations of monolingual policies. It emphasizes the practicality and importance of multilingualism in education.

Strict language policies often compel students to discreetly use their native languages to avoid academic penalties while maintaining clarity in their assignments. This careful navigation illustrates the tension between institutional demands and practical feasibility, highlighting the need for a more inclusive language policy framework. Recognizing students' multilingual abilities values these skills and shifts away from favoring a single language to embracing a more inclusive perspective. Translanguaging enriches classroom communication, aids in understanding academic material, and allows students to actively engage in their studies [12].

As indicated in the findings, the "pedagogy of compromise" involves teachers moving away from idealized views of EMI, where English-only is the norm, toward a more realistic strategy that includes local languages for full comprehension and active participation. Teachers initially advocating for strict English-only policies often realize the necessity of incorporating local languages to promote inclusivity. This transition is particularly important in Kazakhstan, where students have varied linguistic backgrounds and differing English proficiencies. The compromise seeks a harmonious balance, maintaining English for academic subjects while acknowledging the practical need to include local languages to enhance comprehension and participation. At the same time, it is crucial to highlight here that the reported "compromise" also stands as a disapproved practice in many stakeholders' views, in ideological and pedagogical terms, as the recourse to multilingual resources becomes a 'forced measure', and a necessity. English-only monolingualism and Anglonormativity are still the aspirations and an ideal.

The study found that both faculty members and university administrators favored implementing EMI policies in a reductive or subtractive manner, with English as the primary instructional language. However, the concept of a "pedagogy of compromise" shows how educational goals and classroom realities push teachers to modify their approaches. This clearly explains the paradox, the fallacy, and the dilemma for different stakeholders operating within the EMI policy framework. For instance, classroom observations and staff feedback reveal that those initially advocating for English-only policies recognize the importance of local languages for improving comprehension and engagement. This policy-to-practice shift is a crucial educational response to current classroom conditions and immediate sociolinguistic realities, as exclusive English instruction does not always align with students' linguistic capabilities, often leading them to rely on their native languages to clarify complex concepts.

The success of an EMI university is based on its ability to embrace and utilize students' diverse linguistic skills through language flexibility. This approach recognizes and values students' linguistic backgrounds, purposefully integrating multiple languages to enhance their educational experience. By incorporating native languages alongside English, educators can deepen students' understanding of the curriculum. Language flexibility emerges from the interplay between rigid policy mandates and the actual linguistic diversity of students. This adaptability addresses the limitations of monolingual philosophies that fail to meet students' varied linguistic needs. Classroom observations show that using multiple languages in instruction not only aids comprehension but also enhances cognitive skills and subject mastery. Teachers and students employ translanguaging to shift from a monolingual mindset to a comprehensive multilingual approach.

For instance, Dana, a teacher who initially supported exclusive English instruction, eventually acknowledged the importance of including Kazakh and Russian for thorough comprehension and active participation. This adaptation is a pragmatic adjustment aimed at maintaining educational standards, especially when reliance solely on English falls short. Overall, the study underscores the significance of linguistic flexibility in bridging the gap between rigid EMI policies and students' diverse language backgrounds. Recognizing the practical need for a compromise framework ensures a more inclusive and engaging learning environment, fostering greater understanding and class participation.

Conclusion

In conclusion, many teachers who initially favored rigid, monolingual policies come to recognize the practical necessity of adjusting and negotiating policy constraints. They adapted their teaching methods to include multiple languages, accommodating students' linguistic abilities and ensuring optimal understanding and engagement. Students frequently resorted to translanguaging, seamlessly switching between English, Kazakh, and Russian to bridge vocabulary gaps and comprehend complex subjects. This approach enhanced comprehension and communication, while students' multilingual skills challenge restrictive monolingual policies, highlighting the practicality and necessity of multilingualism in education. The study also demonstrates how strict language regulations often compel students to covertly use their native languages to evade academic sanctions while maintaining clarity in their work. This delicate balancing act underscores the tension between institutional expectations and practical realities, emphasizing the need for a more inclusive language policy framework. Recognizing students' multilingual abilities as valuable assets rather than obstacles shifts the paradigm from a monolingual bias to a more inclusive approach. The proponents of the multilingual turn also emphasize the same (May, 2019). It is now widely established empirically that translanguaging enriches classroom interaction, facilitates academic content comprehension, and enables students to fully engage with their academic disciplines (cite some studies that make similar conclusions)

Implications for research, policy, and practice.

This study can be considered a Kazakhstani contribution to the expanding body of empirical research on EMI policy issues in universities worldwide. My research clearly demonstrates the complex interplay between the implementation of an English-only policy and the practical ways students and teachers use and understand their native/local languages for communication and comprehension. This gap arises from the disparity between actual classroom conditions and institutional directives advocating for an English-only orientation. Both teachers and students employ their first (L1) and second (L2) languages simultaneously to enhance learning in English as a Medium of Instruction (EMI) classrooms. The challenges and inconsistencies involved in enforcing monolingual EMI policies in multilingual environments reflect a gap between policy and practice. Policymakers often design policies with specific socio-economic and educational goals in mind, but teachers and students at the individual level may not fully align with them. The actual implementers and end-users of these regulations often struggle to apply them effectively in real-world academic settings. The findings clearly highlight the limitations of linguistic rigidity, and monolingual orientations in contexts such as Kazakhstan, where English still functions as a foreign language in many ways. At the same time, the findings also vividly suggest that a departure from the monolingual approach to a more flexible, and meaningful pedagogical translanguaging can serve much better inclusion, learning, and responsiveness. This calls for a pragmatic adaptability, flexibility, and openness to using, understanding, and applying EMI policies within the Kazakhstan-like classroom contexts. EMI is not only English language; it is much more than only English language. Therefore, I emphasize that EMI policy and practice needs to be guided by the principles of inclusion, and culturally and linguistically responsive pedagogy.

This study explores the complex interplay between policy, stakeholder perspectives, and the practical challenges of establishing EMI in Kazakhstan's multilingual academic context. In my view, the findings can provide a roadmap and direction for further research in the same area. The research can examine the influence of translanguaging practices on academic achievement, particularly in settings where students alternate between English, Kazakh, and Russian. Longitudinal studies could analyze the long-term effects of comprehensive language exams on the English proficiency of both students and staff. Moreover, comparative studies across different EMI programs and institutions could provide valuable insights into effective policy frameworks, support systems, and teaching approaches.

Similarly, the findings provide sufficient evidence for other stakeholders such as policymakers to prioritize aligning EMI policy aims with institutional realities, considering the diverse linguistic landscape. Specific areas that may be considered include comprehensive English proficiency assessments for students and

faculty before enrolling in EMI programs, which could help evaluate preparedness and identify areas for improvement. Policies should also encourage ongoing professional development for faculty, with an emphasis on English proficiency. Additionally, policy frameworks should adopt translanguaging practices to promote inclusive learning environments where students can leverage their multilingual skills without adverse effects on their academic performance. One possible course of action for teachers' professional development could be to propose that, alongside language skills, content English teachers require some more knowledge and professional development in basic applied linguistics, and sufficient understanding of the overall pedagogical and instructional nuances of content-based instruction through a foreign language such as English [12].

Thus, to implement EMI effectively, institutions must establish robust support structures for both students and faculty. Faculty members should receive adequate training and resources to adapt to multilingual classrooms, incorporating local languages to enhance comprehension. Enhanced institutional support, such as reducing workloads and offering pedagogical assistance, will help teachers address challenges related to EMI. Students require comprehensive English-language programs that include targeted proficiency instruction and foundational subject knowledge preparation. I must emphasize too that fostering a critical multilingual awareness among teachers as well as administrator could be crucial to soften the rigid monolingual notions of these stakeholders. A classroom environment that embraces multilingualism will tackle challenges effectively and enhance the learning process. Addressing these research, policy, and practice implications can help bridge the gap between EMI policy and classroom reality, resulting in a cohesive, inclusive, and effective EMI environment that raises academic standards and promotes global engagement.

References

- 1 Bowles, H., & Murphy, A.C. (2020). *English-medium instruction and the internationalization of universities*. Cham: Palgrave Macmillan.
- 2 Doiz, A., Lasagabaster, D., & Sierra, J.M. (2012). *English-medium instruction at universities: Global challenges*. Bristol: Multilingual Matters.
- 3 Dumanig, F., & Symaco, L. (2020). Internationalization of higher education in Malaysia and the Philippines: A comparative analysis of mission and vision statements of selected universities. *Journal of Multilingual and Multicultural Development*, 12 (4), 1–13.
- 4 Kirkpatrick, A. (2011). Internationalization or Englishization: Medium of instruction in today's universities. *The Asian Journal of Applied Linguistics*, 1 (1), 4–15.
- 5 Ministry of higher education and science in the Republic of Kazakhstan. (2023). The Concept of development of the higher education and science in the Republic of Kazakhstan for 2023 – 2029. *adilet.zan.kz*. Retrieved from <https://adilet.zan.kz/rus/docs/P2300000248> [in Russian].
- 6 Rose, H., & McKinley, J. (2018). Japan's English-medium instruction initiatives and the globalization of higher education. *Higher Education*, 75, 111–129. DOI: 10.1007/s10734-017-0125-1
- 7 Shohamy, E. (2007). Reinterpreting globalization in multilingual contexts. *International Multilingual Research Journal*, 1 (2), 127–133. DOI: 10.1080/19313150701495421
- 8 Sah, P.K., & Fang, F. (2023). *Policies, politics, and ideologies of English-medium instruction in Asian universities: Unsettling critical edges*. London: Taylor & Francis.
- 9 Ricento, T. (2018). Globalization, language policy, and the role of English. In J.W. Tollefson & M. Pérez-Milans (Eds.), *The Oxford Handbook of Language Policy and Planning* (pp. 221–235). Oxford: Oxford University Press.
- 10 Agbo, S.A., & Pak, N. (2017). Globalization and educational reform in Kazakhstan: English as the language of instruction in graduate programs. *International Journal of Educational Reform*, 26 (1), 16–45. DOI: 10.1177/105678791702600102
- 11 Agbo, S.A., Pak, N., Akbarov, A., Madiyeva, G., & Saurykov, Y. (2022). Global competitiveness myths and ideals: English language policy in universities in Kazakhstan. *International Journal of Educational Reform*, 34 (1), 105678792211375. DOI: 10.1177/10567879221137572
- 12 Manan, S.A., Tajik, M.A., Hajar, A., & Amin, M. (2023). From colonial celebration to postcolonial performativity: “guilty multilingualism” and “performative agency” in the English Medium Instruction (EMI) context. *Critical Inquiry in Language Studies*, 1–28. DOI: 10.1080/15427587.2023.2242989
- 13 Goodman, B., Kambatyrova, A., Aitzhanova, K., Kerimkulova, S., & Chsherbakov, A. (2022). Institutional supports for language development through English- medium instruction: A factor analysis. *TESOL Quarterly*, 56 (2), 713–749.
- 14 Tajik, M.A., Namysova, G., Shamatov, D., Manan, S.A., Zhunussova, G., & Antwi, S.K. (2023). Navigating the potentials and barriers to EMI in the post-Soviet region: insights from Kazakhstani university students and instructors. *International Journal of Multilingualism*, 22 (4), 1–21. DOI: 10.1080/14790718.2023.2265428
- 15 May, S. (2019). Negotiating the multilingual turn in SLA. *The Modern Language Journal*, 103, 122–129. DOI: 10.1111/modl.12531

16 Phyak, P., & De Costa, P.I. (2021). Decolonial struggles in indigenous language education in neoliberal times: Identities, ideologies, and activism. *Journal of Language, Identity & Education*, 20 (5), 291–295. DOI: 10.1080/15348458.2021.1957683

Information about the authors

Syed Abdul Manan — PhD, Associate Professor, Multilingual Education, Graduate School of Education, Nazarbayev University, Astana, Kazakhstan; e-mail: syed.manan@nu.edu.kz, ORCID ID: <https://orcid.org/0000-0002-8703-5876>

Aigerim Kazhigaliyeva — PhD, Higher School of Arts and Humanities, Astana International University, Astana, Kazakhstan; e-mail: aigerim.kazhigaliyeva@aiu.edu.kz, ORCID ID: <https://orcid.org/0009-0000-2720-4458>

P.I. Lobeeva

Bauman Moscow State Technical University, Moscow, Russia

ORCID ID: <https://orcid.org/0009-0009-4336-3921>

Language Education Potential of Generative AI Chatbots

This study systematically delineates the linguodidactic properties of generative AI chatbots as transformative instruments in foreign language pedagogy, synthesizing theoretical frameworks, literature reviews, and empirical precedents to propose their integration in foreign language teaching. The aim of the article is to identify the language education potential of chatbots as educational tools, provide scientific justification and propose a methodology to integrate them into foreign language teaching. Employing qualitative content analysis of over 20 peer-reviewed sources alongside prompt-engineering experiments with models like ChatGPT, the research identifies seven core properties: (1) role-playing simulation via reinforcement learning; (2) interactivity across six feedback modalities (educational-social, evaluative, etc.); (3) nonlinear processing enabling adaptivity to learner proficiency; (4) instant error remediation; (5) multimodal delivery unbound by spatio-temporal constraints; (6) device-agnostic accessibility; and (7) low-anxiety environments fostering motivation and autonomy. These affordances address persistent challenges in communicative competence, such as limited practice and fossilization, and outperforming traditional tools in dialogic immersion and personalization. A novel three-phase methodology is advanced: input/role assignment, contextual practice (debates/role-plays), and teacher-controlled refinement. Despite limitations like misinformation risks, chatbots position as co-agents in the “learner – AI – teacher” triad, promising scalable ELT efficacy.

Keywords: ICT, AI chatbots, linguodidactic properties, foreign language teaching, communicative competence, feedback, ELT pedagogy

Introduction

Contemporary scholarship and educational practice increasingly emphasize the transformative potential of artificial intelligence (AI) technologies in foreign language pedagogy. This surge in research attention stems from AI’s language education potential, which facilitates innovative approaches to cultivating foreign language communicative competence through integrated practice across all speech modalities (listening, speaking, reading, writing) and linguistic domains (phonetics, lexis, grammar), with AI chatbots emerging as particularly versatile tools.

AI has transitioned from a peripheral aid to a co-equal agent within the pedagogical triad “learner–AI–teacher,” a framework coined by P.V. Sysoyev (2023) [1] to capture the reconfiguration of instructional roles amid generative AI’s proliferation. This evolution enables AI to undertake diverse functions, ranging from personalized instructional trajectory modeling and content generation to emulating human-like discursal cognition, delivering real-time feedback, and evaluating learner performance — capabilities validated by recent studies confirming positive effects on lexical skills [2], grammar proficiency [3, 4], and speech abilities [5]. While overall chatbot effectiveness remains debated due to limited empirical studies, insufficient data does not render them useless; contemporary research addresses not only their linguodidactic potential but also limitations, including technological imperfections, communication failures, and adaptation challenges across diverse proficiency levels [6]

The imperative to integrate AI technologies into foreign language pedagogy stems from persistent challenges in mastering complex linguistic structures, cultivating authentic communicative competence, and elevating instructional efficacy amid limited practice opportunities. Specifically, chatbots facilitate extracurricular speech practice that demonstrably enhances not only lexical minimum acquisition but also the automation of natural communication strategies and target structures.

The aim of this article is to identify the language education potential of chatbots as educational tools, provide scientific justification and propose a methodology to integrate them into foreign language teaching.

Literature Review

The term *information and communication technologies* (ICT) emerged in the mid-1990s amid growing computer use in education, driven by their accessibility and the expansion of the Internet during societal informatization. Early ICT applications in foreign language teaching focused on automated task checking, access to video/audio materials, and primarily the traditional “drill & practice” method [7].

Digital services and platforms shifted emphasis to autonomous student work, offering 24/7 access from any device at convenient times. Social networks spurred a “social-communicative” approach [7]. Concurrently, lifelong learning gained traction, aligning with demands for tech-savvy specialists, including digital tools. Foreign language teaching thus embraced ICT like smartphone apps, MOOCs, automated testing systems, and more.

The current digitization phase, dated from 2015 by Titova S.V. and Staroverova M.V. (2023), involves gradual AI integration. Per Habr IT community data, nearly all software incorporates AI since 2020. Internet-downloadable programs for smartphones/tablets became integral to instruction. Online translators, mobile apps, and AI-driven tests now permeate language pedagogy.

AI integration has spawned foundational studies, forming one of the innovative directions in foreign language teaching. AI develops interactive materials attuned to neuro-psychological information processing (e.g., visualization, VR games/simulations) and enables individualized approaches. Machine learning and natural language processing unlocked language education potential of AI. Machine learning algorithms build large language models trained on vast texts to generate human-like speech, powering chatbots and NLP apps.

Terminological variety marks AI interactive solutions: dialog agents, virtual interlocutors, or chatbots. Differences are minor; preferences vary by researcher/era. Dialog agents stress meaningful conversation; virtual interlocutors emphasize human-like interaction; chatbots denote text-based automated systems. Chatbots simplify user interaction via voice/text assistants with instant feedback, spanning education, e-commerce, healthcare, finance, etc. University bots aid applicants with program selection and study info [9].

In 2006, Fryer L. and Carpenter R. analyzed educational potential of ALICE chatbot, identifying six didactic advantages from student interaction experiments: (1) psychological comfort (85 % preferred bot communication per survey); (2) unlimited repetition (bots are tireless unlike humans); (3) enhanced listening/reading via text-to-speech/speech-to-text; (4) sustained interest via novelty and positive experience; (5) vocabulary expansion through new lexical/grammatical practice; (6) error correction feedback [10].

Despite early promise, adoption lagged. First, early bots lacked full interlocutor capabilities — script-bound, non-diverse responses failed real-practice simulation. Milestones like Apple's Siri (2011), IBM Watson (Jeopardy win), and Google Duplex (2018 real-time calls) were assistants, not chatbots, for other tasks [11]. Besides, students often preferred teachers for better explanations [12] or peers [6] to chat-bots. This was probably due to the fact that early chat-bots were scripted, agreeable replies stifled debate, demotivating practice [6, 13, 14]. Novelty faded; mismatches in proficiency/task complexity, speech recognition failures, and context-irrelevant replies frustrated users [6, p. 23]. Another serious problem was lack of methodologies caused by weak theory/experiments that hindered integration, spurring current development.

Interest surged with deep learning and generative AI. OpenAI ChatGPT showcased understanding diverse languages and generating human-like responses.

Key studies for this research and their contributions are detailed in the Table.

T a b l e

Current State of Research on Chatbots in Foreign Language Teaching Methodology

Scientific study	Aim	Key results
Sysoyev P.V., Filatov E.M., Sorokin D.O. (2023) [15]	Review of studies on chatbots in foreign language teaching	1) Identified key issues in chatbot-based language learning, particularly communicative skills development. 2) Outlined prospects for methodology development in chatbot-supported foreign language interaction.
Kharlamenko I.V. (2023) [16]	Analysis of @LingvoBot, @multitran_bot, @slovaribot, @WordContextBot for translation and lexical semanticization	1) Revealed strengths and weaknesses of examined chatbots. 2) Provided recommendations for resource selection based on lexical work parameters. 3) Presented examples of script-based vs. neural network chatbots.

Continuation of Table

Scientific study	Aim	Key results
Divekar R.R. et al. (2021) [17]	Study of chatbot features for speech practice	1) Demonstrated differences between general chatbots and language learning chatbots. 2) Emphasized need to shift from Q&A format to natural dialogue-capable chatbots.
Dukalskaya I.V., Alikberova E.O. (2023) [18]	Analysis of existing Telegram bots for foreign language study	1) Provided examples and detailed functionality descriptions of Telegram bots. 2) Highlighted advantages: interactivity, instant feedback, motivation boost, learning efficiency.
Lavrinenko I.Yu. (2023) [19]	Analysis of ChatGPT neural network chatbot capabilities	1) Noted key achievements and advantages: dialog capability, self-learning, multilingual translation. 2) Identified prospects for large language model applications.
Chen M.R.A., Lin Y.H. (2023) [20]	Development of AI chatbot grammar learning approach for interactive English practice	1) Experimental verification of grammar learning via chatbot. 2) Positive effects: reduced anxiety, improved material retention.
Kim N. (2019) [4]	Impact of chatbots on English grammar skill improvement	1) Confirmed grammar gains in experimental vs. control groups. 2) Proposed directions for future chatbot research.
Fryer L.K., Nakao K., Thompson A. (2019) [6]	Comparison of chatbots vs. humans as language learning interlocutors	1) Identified strengths/weaknesses of each interlocutor type. 2) Called for further chatbot research and classroom implementation.
Cherkasova E.A. (2023) [3]	Methodology for differentiated grammar teaching in technical university via generative AI chatbot interaction	1) Defined didactic properties and methodological functions for English grammar teaching. 2) Specified generative AI chatbot functions for grammar instruction.

Building on predecessors' work, we propose using chatbots for supplementary speech practice to develop students' lexical and grammatical skills.

Methods and Materials

To examine chatbots as a pedagogical tool, it is essential to formulate their key properties. This study employs a qualitative analytical approach grounded in theoretical synthesis and empirical examples. Materials include peer-reviewed literature on AI in language education, technical documentation on generative AI models (e.g., large language models like GPT variants), and practical demonstrations via chatbot interactions (e.g., ChatGPT, Grok).

Methods involve: (1) content analysis of 20+ sources to extract properties; (2) prompt engineering experiments simulating language teaching scenarios; (3) evaluation of feedback types and adaptability through iterative dialogues. Data was analyzed thematically to derive seven core properties, validated against established frameworks in AI pedagogy.

Results and Discussion

This analysis delineates seven core linguodidactic properties of AI chatbots as pedagogical instruments: (1) role-playing simulation; (2) interactivity; (3) nonlinear information processing and adaptive capabilities; (4) instant feedback provision; (5) flexible instructional delivery; (6) accessibility and versatility; and (7) fostering a low-anxiety learning environment.

1. Role-playing simulation

Role-playing simulation constitutes a foundational attribute, facilitating AI self-learning through iterative user interactions. Unlike rule-based algorithmic systems, contemporary chatbots emulate neural processes, transcending rigid command execution to evolve via accumulated experiential data. This mechanism aligns with reinforcement learning, wherein user prompts serve as fine-tuning agents [21, p. 676]. Feedback efficacy hinges on training corpus quality and volume; practically, role assignment — such as prompting the bot as a “foreign language instructor” — yields authentically pedagogical responses. A critical caveat per-

sists: due to the lack of autonomous critical reasoning, chatbots may propagate inaccuracies from flawed inputs, posing dissemination risks.

2. Interactivity

Interactivity manifests in dynamic, multifaceted responsiveness to user inputs, encompassing six generative AI feedback modalities [5]: educational-social (structuring student-bot discourse for skill-building); information-reference (delivering sociocultural content for intercultural competence); methodological (supporting teacher material design and lesson planning); analytical (data processing for efficacy forecasting); evaluative (rapid assignment verification); and conditionally-creative (boundless instructional content generation). This architecture underpins methodologies spanning speech modalities, linguistic dimensions, and communicative competence facets. Essential for skill ontogenesis, interactivity engenders “lively illusions” of authentic exchange [21, p. 679], privileging productive competencies and real-world lexical confidence.

3. Nonlinear processing and adaptivity

Nonlinearity and adaptivity derive from interactivity, enabling contextually variant responses over templated outputs: “not a single templated response... but varying form and content based on query details and context” [21, p. 679]. Chatbots comprise neural architectures of interconnected neurons that dynamically weight-transform inputs during training, exhibiting task-dependent linearity (basic operations yielding fixed C from $A+B$) or nonlinearity (complex, context-bound transformations). Large language model instantiations parse queries holistically, generating personalized outputs attuned to proficiency and thematic nuance, positioning bots as equitable interlocutors.

The confluence of role simulation and nonlinearity begets adaptivity via dialogic reinforcement. Content-level adaptation adjusts topics, lexis/grammar, and modalities to learner profiles; didactically, it modulates pacing and task rigor through progress analytics.

4. Instant feedback provision

On-demand instantaneous feedback expedites error remediation, novel assimilation, and query resolution, mitigating fossilization endemic to second language acquisition. While irreplaceable by human instructors, chatbots multitask as dialog partner, advisor, and tutor.

5. Flexible instructional delivery

Multimodal generation (textual, graphical, auditory, visual) liberates practice from spatiotemporal bounds, amplifying foreign language exposure. Systematic target-language engagement—pivotal for communicative competence—gains potency in naturalistic contexts; for phrasal verb ontogenesis, iterative communicative drills transcend rote memorization toward fluent deployment.

6. Accessibility and versatility

Effortless device integration and task-agnostic applicability (pedagogy, inquiry, discourse) democratize access, sans technical prerequisites. This autonomy empowers learner agency over session parameters.

7. Low-anxiety learning environment

Motivational sustenance through nonjudgmental interaction curtails affective barriers; anxiety impairs metacognition, retention, and focus. Benevolent milieus recast learning as ludic pursuit. Empirical accounts affirm chatbot valorization for oracy drills, notably idea generation in stress-attenuated debate preparation [22]. Using chatbots as interlocutors maintains learning interest and enables regular speech practice for lexical and grammatical skills. Interacting with chatbots makes students active participants who experience positive emotions akin to real communication. Thus, chatbots model a near-natural learning environment.

The identified properties of AI chatbots underscore their transformative potential in foreign language pedagogy. Role-playing simulation and interactive formats address key challenges in communicative competence development, such as limited practice opportunities outside class — aligning with your expertise in AI-assisted ESP and translation post-editing. Adaptive capabilities via nonlinear processing enable personalized trajectories, crucial for mastering complex elements like phrasal verbs, where traditional methods often fall short due to fossilization risks.

However, limitations persist: chatbots lack true critical thinking that might result in misinformation propagation, necessitating teacher oversight and curated training data. Compared to tools like Quizlet or Lexilize, chatbots offer superior dialogic immersion but require hybrid integration with instructor-led refinement to mitigate biases.

AI chatbots can be integrated into foreign language teaching at university to maximize speaking practice opportunities. We propose a three-phase ELT module:

Phase 1: Input/Role Assignment — Prompt chatbot as “native-speaker mentor”; expose students to 20 target vocabulary items via contextual dialogues.

Phase 2: Interactive Practice — Nonlinear tasks (e.g., debates, role-plays) with instant evaluative feedback; adapt difficulty based on error patterns.

Phase 3: Assessment/Refinement — Analytical feedback for self-correction; teacher reviews for accuracy.

This leverages properties 1–5, fostering automation and confidence for real-world use.

Conclusion

The properties of AI chatbots position them as indispensable tools for enhancing lexical and grammatical skills, especially in autonomous foreign language learning. By simulating authentic communication, providing adaptive feedback, and creating low-stress environments, they elevate ESP training efficacy. Future research should explore multimodal integrations (e.g., voice-enabled bots) and longitudinal impacts on communicative automation. Implementing the proposed methodology promises scalable, personalized language mastery, bridging AI potential with pedagogical needs.

References

- 1 Sysoev, P.V. (2023). Artificial intelligence technologies in foreign language teaching. *Foreign Languages at School*, (3), 6–16 [in Russian].
- 2 Kharlamenko, I.V. (2024). Artificial intelligence to help a foreign language teacher when working on lexical skills. *Languages at School*, (3), 55–60 [in Russian].
- 3 Cherkasova, E.A. (2023). Didactic and methodological functions of chatbots in teaching foreign language grammar to students of non-linguistic specialties. *Tambov University Review. Series: Humanities*, 28 (6), 1443–1451 [in Russian].
- 4 Kim, N. (2019). A Study on the Use of Artificial Intelligence Chatbots for Improving English Grammar Skills. *Journal of Digital Convergence*, 17 (8), 37–46.
- 5 Sysoev, P.V., Filatov, E.M., & Sorokin, D.O. (2024). Feedback in foreign language teaching: from information technology to artificial intelligence. *Language and Culture*, (65), 242–261 [in Russian].
- 6 Fryer, L.K., Nakao, K., & Thompson, A. (2019). Chatbot learning partners: Connecting learning experiences, interest and competence. *Computers in Human Behavior*, 93, 279–289.
- 7 Titova, S.V., & Staroverova, M.V. (2023). Stages of digitalization of language education in the 20th–21st centuries. *Moscow University Linguistics and Intercultural Communication Bulletin*, (3), 25–45 [in Russian].
- 8 Avramenko, A.P. (2023). Large language models in linguistics and linguodidactics. Moscow: KDU, Dobrosvet [in Russian].
- 9 Hiremath, G., Hajare, A., Bhosale, P., Nanaware, R., & Wagh, K. (2018). Chatbot for Education System. *International Journal of Advance Research, Ideas and Innovations in Technology*, 4 (3), 37–43.
- 10 Fryer, L., & Carpenter, R. (2006). Bots as language learning tools. *Language Learning & Technology*, 10 (3), 8–14.
- 11 Labadze, L., Grigolia, M., & Machaidze, L. (2023). Role of AI chatbots in education: systematic literature review. *International Journal of Educational Technology in Higher Education*, 20 (1), 1–18. DOI: 10.1186/s41239-023-00426-1.
- 12 Yoon, S.Y. (2019). Student readiness for AI instruction: perspectives on AI in university EFL classrooms. *Multimedia-Assisted Language Learning*, 22 (4), 134–160.
- 13 Çakmak, F. (2022). Chatbot-human interaction and its effects on EFL students' L2 speaking performance and speaking anxiety. *Novitas-ROYAL (Research on Youth and Language)*, 16 (2), 113–131.
- 14 Huang, W., Hew, T., & Fryer, L.K. (2022). Chatbots for language learning — are they really useful? A systematic review of chatbot-supported language learning. *Journal of Computer Assisted Learning*, 38 (1), 237–257. DOI: 10.1111/jcal.12610.
- 15 Sysoev, P.V., Filatov, E.M., & Sorokin, D.O. (2023). Chatbots in foreign language teaching: problems of modern works and prospects for future research. *Bulletin of Moscow University Linguistics and Intercultural Communication*, (3), 46–59 [in Russian].
- 16 Kharlamenko, I.V. (2023). Chatbots in teaching English. *Foreign Languages at School*, (3), 55–59 [in Russian].
- 17 Divekar, R.R., Lepp, H., Chopade, P., Albin, A., Brenner, D., & Ramanarayanan, V. (2021). Conversational Agents in Language Education: Where They Fit and Their Research Challenges [Conversational Agents in Language Education: Where They Fit and Their Research Challenges]. In C. Stephanidis (Ed.), *HCI International 2021 — Late Breaking Posters — HCI International 2021 — Late Breaking Posters* (pp. 272–279). Cham: Springer.
- 18 Dukalskaia, I.V., & Alikberova, E.O. (2023). Chatbots in the Telegram application as a means of learning English. *Prepodavatel XXI vek*, (2, ch. 2), 434–442 [in Russian].
- 19 Lavrinenko, I.Yu. (2023). Using GPT chatbots in the process of teaching English in a non-linguistic university: theoretical aspect. *Bulletin of Siberian Institute of Business and Information Technologies*, 12 (2), 18–25 [in Russian].
- 20 Chen, M.R.A., & Lin, Y.H. (2023). AI Chatbot-Supported Grammar Tense Learning on EFL Students Learning Effectiveness In *INTED2023 Proceedings — INTED2023 Proceedings* (pp. 1207–1216). Valencia: IATED.
- 21 Sysoev, P.V. (2024). Didactic properties and methodological functions of neural networks. *Perspectives of Science and Education*, 6(72), 672–690 [in Russian].

22 Guo, K., Zhong, Y., Li, D., & Chu, S.K.W. (2024). Investigating students' engagement in chatbot-supported classroom debates. *Interactive Learning Environments*, 32 (9), 4917–4933.

Information about the author

Polina I. Lobeeva — English Lecturer of “English for Mechanical Engineering” Department, Bauman Moscow State Technical University, Moscow, Russian Federation; e-mail: Lobeeva@bmstu.ru; ORCID ID: <https://orcid.org/0009-0009-4336-3921>