

Assessing the General and Academic Lexical Competencies: Evidence from Online Russian Vocabulary Size Test and Word Associations Test (RL)

Zhannat Maigeldiyeva*, Zukhra Abdrakhmanova, and Olga Pavlovskaya

Abstract—The study aims to assess the general and academic lexical competence of university students and develop an educational strategy for Russian language learning using media content. The present study examines the general and academic productivity and satisfaction of students. The sample included 120 individuals. The study uses multiple testing methods including two different vocabulary tests, written and oral assignments, and the post-experimental questionnaire. The data collection was performed in September, the autumn semester of 2020. The participants were tested using the Vocabulary Size Test and Word Associates Test (RL). Vocabulary size and depth were analyzed using descriptive statistics. The scholars identified that the students had strong general and academic vocabulary knowledge. At the same time, students used high-frequency words more often than low-frequency words and academic vocabulary. Moreover, productive vocabulary assessment showed poor results in terms of receptive vocabulary knowledge. In this case, students could not use lexical competence and lexical knowledge in language activities. Thus, the choice of the most effective method for teaching the Russian language depended on the data of residual knowledge and the combination of traditional language learning methods and media content.

Index Terms—Russian language, student teaching, lexical competence, vocabulary breadth, vocabulary depth, academic vocabulary

I. INTRODUCTION

In recent years, technological advancements have transformed the education sector, providing new ways of teaching and learning. The integration of technology in education has become a hot topic in research, and various educational institutions have invested heavily in digital technologies. This new era has presented numerous opportunities for enhancing the education system, including personalized learning, remote learning, and gamification.

Technology has also provided new tools for educators to engage students in innovative ways, improve the effectiveness of assessments, and enhance collaboration among learners. However, as with any new development, there are also some challenges to be addressed.

Manuscript received January 29, 2023; revised March 21, 2023; accepted April 13, 2023.

Zhannat Maigeldiyeva is with the Department of the Russian Language and Literature, Korkyt Ata Kyzylorda University, Kyzylorda, Kazakhstan.

Zukhra Abdrakhmanova is with the Department of the Russian Language and Literature, M. Kh. Dulaty Taraz Regional University, Taraz, Kazakhstan. Email: zuk_abdrakhman@rambler.ru (Z.A.)

Olga Pavlovskaya is with the Department of the Russian Language and Speech Communication, Kuban State Agrarian University, Krasnodar, Russian Federation, Russia. E-mail: oepa@mail.ru (O.P.)

*Corresponding author: maigeldiyeva@rambler.ru (Z.M.)

Covid-19 restrictions and the lockdown has caused a collapse that affected all areas of education. The changes taking place in the world due to the Covid-19 outbreak are reasons for radical shifts in education. New challenges and requirements have emerged in education to motivate students and inspire their interest to learn the Russian language [1]. The new environment forces many educational establishments to introduce language training based on media content. The research admits that there is a need to develop strategies and increase the effectiveness of training. In the 21st century, educational professionals differ from the past generation teachers. New, effective, and exciting methods and approaches to Russian language learning are introduced to the educational process with multimedia and virtual programs. The proposed approach of using multimedia and virtual programs contributes to the development of the Russian language lexis competence. It is an important aspect of language proficiency, as it allows individuals to communicate effectively and accurately in their native language or in a foreign language they are learning. Developing lexical competence is a crucial part of language learning since it allows learners to build a solid foundation of vocabulary and grammar that they can then use to further develop their language skills.

The scholars investigated the problem of lexical competence in their research [2]. There are several problems that students may face when it comes to their lexical competence. The problems refer to their ability to use and understand words in a language: limited vocabulary, incorrect word usage, poor spelling, and lack of motivation. Although there are some articles on lexical competence, the research insufficiently covers the practical application of multimedia in high education [3]. Most studies address only academic results or student engagement. The results of these studies demonstrate that the national research is focused on the theoretical and methodological aspects of the problem but pays no attention to the practical development of lexical competence. Multimedia can be used as a tool to improve lexical competence. For example, listening to podcasts, watching videos, and reading articles can expose language learners to a wide range of vocabulary and help them to develop their comprehension skills. Multimedia resources also allow learners to practice using new words and phrases in context. The use of multimedia and the transition to online education are essential in the pedagogical practice [4–6]. In recent years, education has introduced innovative approaches to teaching and implementing IT technologies in education to meet the ever-changing needs and provide further support to educators.

The present study aims to identify the practical aspect of lexical skills and abilities (vocabulary assimilation, grammatical competence, facts memorizing), and also assess the residual knowledge of students. To this end, it was necessary to accomplish the following objectives:

- 1) Activate residual knowledge of the first-year students using traditional methods and multimedia.
- 2) Carry out the post-experimental questionnaire to assess the effectiveness of multimedia in the Russian language classrooms.
- 3) Use the results to select the best multimedia to develop the Russian language lessons and improve vocabulary teaching that goes beyond the traditional teaching system.

A. The Introduction of Multimedia in Education

The introduction of multimedia in education requires the development of an appropriate scientific and methodological basis with the necessary tools and systems for computer learning and knowledge control. It is important to integrate digital technologies into existing curricula and education [5].

Traditional Russian language teaching is outdated and fails to ensure good learning outcomes. Therefore, along with traditional teaching, it is rational to diversify the learning process and adapt technical means. Self-study under supervision should be introduced into education [7]. Self-study and the reformation of traditional teaching and learning are two distinct approaches to education. Nevertheless, they can be complementary and mutually reinforcing. When self-study is combined with reformed educational practices, it can lead to more effective and efficient learning outcomes. Self-study can be facilitated by reformed teaching and learning practices that provide learners with greater autonomy, flexibility, and opportunities for active engagement.

Multimedia, including printed texts, graphics, visualizations, dynamic photographs, and virtual reality, has been introduced into education during the pandemic, and it helps educators to influence students' perception systems. The use of simultaneous audio visualization techniques has been found to benefit the Russian learning process significantly. These techniques, as well as the Internet, have improved students' acquisition and retention of knowledge by 30%–40% [8, 9]. The advantage of using the proposed methods is to meet the personal learning needs of each student, using a student-centered approach. Thus, the use of multimedia in teaching the Russian language would significantly expand and diversify the motivation of students to improve their language skills and vocabulary [10].

B. Psychological, Pedagogical, and Didactic Principles to Develop and Use Innovative Pedagogical Technologies

In modern education, multimedia is becoming indispensable for online learning. The proposed approach intensifies learning, and educators should clearly define the psychological, pedagogical, and didactic purposes of educational establishments when introducing new pedagogical techniques in the educational process [11]. The role of a teacher is tremendous in the development of Russian language competence. The teachers effectively combine traditional and new teaching technologies, apply them to the

learning process, improve and expand knowledge and skills, and motivate students to acquire new knowledge. New pedagogical technologies are important for the realization of didactic principles of individualized education, creativity, and cognitive activity development. The proposed technique provides access to a wide range of authentic materials (language materials, integrated databases, reference books, interactive access to educational materials, information sites, and so forth) [12]. Undoubtedly, the combination of multimedia and traditional teaching aids (textbooks, teaching aids, etc.) ensures the development of practical skills and helps educators to create opportunities for students to use language competence in everyday practice.

The use of multimedia in teaching the Russian language increases the individualization of students' educational activities, provides better learning of vocabulary and grammatical rules, and breaks the monotony in the classroom to develop speech competence based on the lexical minimum [11]. Consequently, a student can avoid one of the main reasons for the negative attitude towards learning and academic failure. Learning has a great impact on the use of multimedia in language exercises. Computer technology makes it possible to use digital and printed educational materials via telecommunication networks. A student can learn the Russian language remotely while maintaining contact and receiving feedback from a teacher. Computer systems can ensure modifications, identify errors, give recommendations, introduce exercises, provide access to electronic libraries, and find necessary quotations, paragraphs, or chapters in a short time. Multimedia participates in mental activity since it provides communication between students and a teacher or between a teacher and other students, allows educators to create a virtual learning environment, and enhances student academic performance [13]. Media content expands consciousness and activates memory, becoming a new way to improve language perception. The benefits diversify and intensify the educational process but also improve the knowledge acquisition and communicative competence of students in high education.

II. METHODS AND MATERIALS

A. Research Conditions

This study is mixed research based on teaching the educational program No. 6B01706 *Training Teachers of the Russian Language and Literature* introduced at M. Kh. Dulaty Taraz Regional University and The Korkyt Ata Kyzylorda University. For online and offline training, educators used multimedia technologies. Teachers expanded and updated the technologies used for the Russian language training sessions. The most popular materials were electronic manuals, knowledge databases, educational software exercises, etc. The additional materials included textbooks developed for the research, special programs, independent educational and methodological sets. The teachers used applications and added materials for students to the database before each lesson.

The key challenge in choosing multimedia for further education is to identify the students' residual knowledge. In

recent years, the results of the Unified National Testing (UNT) have worsened. The study analyses the pedagogical experiment that examines the set of multimedia-based exercises. Therefore, the scholars analyzed the proposed teaching model used to develop lexical competence in teaching Russian to students on program No. 6B01706 *Training Teachers of the Russian Language and Literature* at M. Kh. Dulaty Taraz Regional University and The Korkyt Ata Kyzylorda University.

In the first stage, the study assessed the initial terminology knowledge and skills developed in students. The scholars used such tools as the Online Russian Vocabulary Size Test and Word Associates Test (RL) to identify residual knowledge of oral and written speech. Moreover, students could provide feedback on whether the chosen strategy and tactics of teaching meet their educational needs and expectations. Thus, the study performed testing of terminology knowledge and the ability to use it in written and oral speech. The study also examined the need to learn the chosen professional vocabulary and its importance for mastering terminology. The test that assessed knowledge of the professional vocabulary of the Russian language consisted of twenty test items (multiple and alternative choice, the substitution of vocabulary terminology, and so forth). To assess answers, the 100-point scale was used and each correct answer was multiplied by 4. The maximum number of points for the test was 100 (Fig. 1).

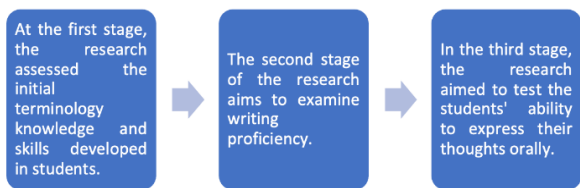


Fig. 1. The research steps.

B. Research Participants

The sample consisted of 120 students who studied the educational program No. 6B01706 *Training Teachers of the Russian Language and Literature* used at M. Kh. Dulaty Taraz Regional University and The Korkyt Ata Kyzylorda University. The participants were learning Russian as a foreign language and passed UNT. The results were relevant and valid. The research participants were informed about the anonymity and ethical issues of the experiment.

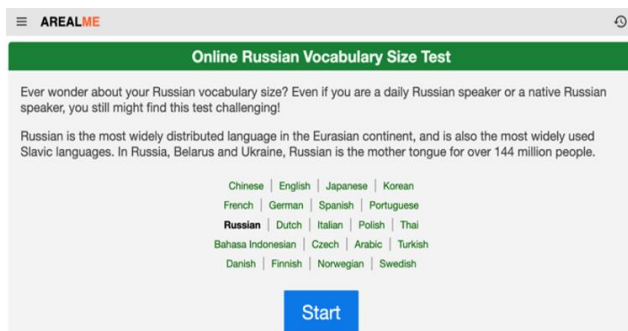


Fig. 2. The online Russian vocabulary size test.

C. Tools

The scholars focused on the assessment of the general and

academic lexical competence of students and the introduction of multimedia into the traditional educational process. The study analyzed the skills and knowledge in the general and academic vocabulary acquired by students. At this stage, the research tool was the Online Russian Vocabulary Size Test. It is an online tool that allows students to take tests not only in Russian but also in other languages. It can be used both for those who study a foreign language and for native speakers (Fig. 2). The test was designed by a reliable organization. It was checked by professionals and had sufficient face validity.

The assessment tool used the frequency ranges of the vocabulary and meanings and included lists of 2000, 3000, and 5000 academic words, as well as the final list of 10,000 words (Table I).

TABLE I: GENERAL AND ACADEMIC VOCABULARY OF STUDENTS

The term connotation, borrowing, terminology of "dead" languages (Greek, Latin) and affixation	Stylistically colored terminology	Stylistically colored general vocabulary words	The active and passive vocabulary of the Russian language
Алфавит (alphabet), время глагола (verb tense), интонация (intonation), корень (root), местоимение (pronoun), многозначность (polysemy), окказионализм (occasionalism), окончание (ending), оксюморон (oxymoron), орфограмма (spelling), переразложение (decomposition), предложение (sentence), род (genus), согласование (sequence), топонимика (toponymy), транскрипция (transcription), ударение (stress), фонема (phoneme).	Весовщик (weighter), вето (veto), вешалка (hanger), вздор (nonsense), визг (scream), владыка (Lord), влипнуть (get into trouble), галерка (theatre gallery), гарнир (garnish), гелиотехника (helioelectronics), генеральша (general's wife), гласить (shout), гоготать (giggle), дебошир (yammerer), дегустировать (taste), дезертир (deserter), деревенщина (redneck), диета (diet), жеманиться (attitudinize), жемчужина (pearl), жратва (grab), забегаться (run over).	Ангелочек (angel), благоверная (faithful woman), блюститель (overseer), борзописец (scribe), буквоед (literalist man), ваятель (sculptor), верхогляд (skygazer), грандиозный (grandiose), держава (a state), деляга (hustler), дерзать (dare), достояние (heritage), единомышленник (like-minded person), зайныка (sweetheart), капитулянт (capitulator), клика (a clique), колобродить (prowling around), комбинатор (combinator), краснорай (powerful speaker), крохобор (cheapskate).	Абсцисса (abscissa), агитка (agitation piece), армяк (woolen cloth), бердянка (a single rifle shotgun), бионика (bionics), велеречивый (eloquent), виночерпий (wine man), виньетка (vignette), гносеология (epistemology), гобелен (tapestry), головоотяп (bungler), дзюдо (judo), дурашка (a dummy), жрец (priest), залихватский (dashing), зеркало (metal speculum), конка (horsecar), ликбез (literacy educational programme), острог (Ostrog), припарковаться (parking), сеанс (session).

The test showed how many words students knew. They were asked to define the etymology of a term. It helped to analyze how well the students knew its meaning. The writing skills of the students were analyzed using the written essay. At the final stage, the interview helped to examine the active vocabulary of students (Table II). The students had to work on

essays independently. The teachers did not help students to complete writing tasks. In order to check the written assignments, edit them, and improve the content, students were allowed to crosscheck essays with each other, make the necessary adjustments, and hand over the essays to the teacher. Using certain assessment criteria, the teacher assessed each essay (up to 25 points for each criterion) and calculated the final score, which did not exceed 100 points.

TABLE II: TOOLS USED TO ANALYSE THE LEXICAL POTENTIAL OF STUDENTS

Online Russian Vocabulary Size Test	Word Associates Test (RL)	Essay	Interview
The frequency of students' vocabulary.	The vocabulary knowledge depth of the semantically related words.	Analyzing the productive skills in writing.	Analyzing vocabulary using an interview method.

D. Data Collection

The data collection was performed in September, the autumn semester of 2020. The participants were tested on the Vocabulary Size Test and Word Associates Test (RL). Before the start of testing, students received information about the purpose and conditions. According to the research procedures, the students were not allowed to use any dictionaries or consult their peers. The students wrote the two tests during two lessons having a 10 minutes break. In the following lesson, the participants wrote a paragraph on the topic: *The city of Petersburg in the XIX century and its injury and insult*. The students had 50 minutes to complete this assignment. The purpose of the written assignment was to identify residual knowledge of students in literature and history and analyze literacy and skills to implement the metahistorical approach in writing.

In the last research stage, the students were interviewed to assess their oral skills as well as their skills to think abstractly and logically. The oral task was an interview and lasted one lesson. The students were inquired to choose unique fictional characters, remember facts and details, be active in dialogues, critically assess facts and literary details, and express a point of view. The oral assignments were the following: *The Nobles is the key class in the Tsarist Russia of the XIX century* and the topic they learned in the lesson on *The Russian literature of the XIX century*. The oral tasks were assessed during the lesson, and the students answered one by one. Each student had two minutes to complete the task. The oral assignment was recorded on a tape recorder. The maximum number of points was 100.

E. Data Analysis

The students passed the Vocabulary Size Test. The website assessed the responses. In addition, the written essays were downloaded on the computer and uploaded into the VocabProfile program. Vocabulary size and depth were analyzed using descriptive statistics. Other data were manually analyzed by the scholars using scores. Additionally, the Pearson correlation test was implemented to analyze the correlation of all methodology instruments. A positive correlation coefficient was 0.96.

The students were surveyed at the end of the study. The

participants evaluated the role and importance of the testing support using multimedia during the implementation stage and the need to correct the current educational program. Therefore, they were asked to report on the advantages of using multimedia in the educational process. There were seven questions and statements with “yes” or “no” options:

- 1) Did you like multimedia-based testing?
- 2) Did multimedia-based testing of residual knowledge help you concentrate, relax, and answer correctly?
- 3) Did multimedia increase interest in the academic subject, improve memorization, help to develop communication skills based on tasks, or help to test and evaluate knowledge?
- 4) The computer and special programs and applications, helped you to activate your vocabulary using different learning tasks and the Internet.
- 5) Virtual learning would be more interesting for you than traditional classrooms since you understood and remembered multimedia material better.
- 6) You could learn the material more interestingly, solving specific problems on the virtual learning platforms.
- 7) Teachers encouraged you to use computer technology to learn Russian at school.

III. RESULTS

The research examined vocabulary knowledge using the Vocabulary Size Test of students. The findings showed that the average score of vocabulary knowledge was 85.45 points out of 100. The test lexical knowledge of the Word Associates Test (RL) was 82.85 points. The result of the written essay was 79.8 points. The qualitative analysis of the written work showed that, despite some grammatical errors and gaps in understanding the semantics, students achieved their goals and demonstrated a satisfactory level of knowledge. Those results were above average. The average score on the oral test of residual knowledge was 79.65 points (Fig. 3).

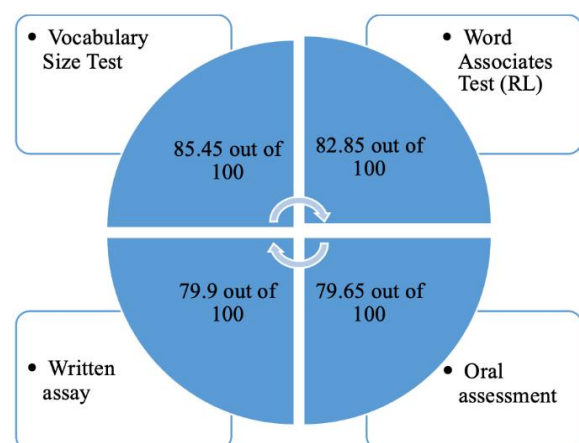


Fig. 3. The testing results of residual knowledge in students of program No. 6B01706 Training Teachers of the Russian Language and Literature at the M. Kh. Dulaty Taraz Regional University and The Korkyt Ata Kyzylorda University.

The results on the use of terminology (in written works) in the experimental groups were 78.9 points. The qualitative analysis of written assignments revealed that the students used vocabulary according to the context, they logically combined

terms and transformed them. The assigned essays were about 3–5 pages of text typed on a computer.

The writing test was pilot-studied with sufficient inter-rater reliability quantified by Cohen's kappa:

a – number of students who scored high on both tests = 60

b – number of students who scored high on Test 1 (Vocabulary Size Test) but low on Test 2 (Word Associates Test (RL)) = 10

c – number of students who scored high on Test 2 but low on Test 1 = 5

d – number of students who scored low on both tests = 25

n – total number of students = 100

$P(a) = (a+d) / n = (60+25) / 100 = 0.85$

Thus, the coefficient of inter-rater reliability was 0.85, which was satisfactory.

In the third stage, the study aimed to test students' ability to express their thoughts orally. The total number of points of skills mastery and abilities to use lexical units of a journalistic style of speech in all groups was 79.65 points. It was obtained by adding averages and dividing them into groups. The overall assessment was satisfactory.

The qualitative analysis of students' oral presentations and their statements in the interactive exercises, discussions, role-playing, and business games showed that students possessed well-developed skills and were able to use lexical units in different language situations. The assessment of oral communication skills included not absolute but relative correctness of oral communication. The assessment of the oral speech was influenced not by the number of language errors but by the successful resolution of the communication problem. In addition to a well-formed ability to use vocabulary in speech, the students were asked to think critically and demonstrate skills of active listening, adequate behavior, and the ability to solve difficult communicative problems in the context of interactive work. The testing helped to control and identify the lexical competence based on the training's results and analyze the challenges of introducing multimedia to the Russian language classroom. At the same time, the students had the best results in media tests, while the oral and written tasks were less productive.

The preliminary research created the conditions to perform the post-experimental questionnaire and analyzed the learning progress of students using multimedia in the Russian language lessons at Kh. Dulaty Taraz Regional University and The Korkyt Ata Kyzylorda University. The study used the questionnaire to examine the proposed hypothesis and obtained results on the effectiveness of the developed set of exercises based on the methodology for lexical competence. The post-experimental survey depended on the methodology requirements and recommendations.

A. The Students' Competence

The survey revealed the following results. The sample consisted of 120 students who studied the educational program No. 6B01706 *Training Teachers of the Russian Language and Literature* at M. Kh. Dulaty Taraz Regional University and The Korkyt Ata Kyzylorda University. The students gave the following answers:

- 120 respondents (100%) reported they liked multimedia-based testing;

- 119 students (99%) reported that multimedia-based testing of residual knowledge helped them to concentrate, relax, and answer correctly;
- 118 respondents (98%) admitted that multimedia increased their interest in the subject, improved memorization, helped to develop communication skills based on tasks, helped to test and evaluate knowledge;
- 118 students (98%) reported that the computer, as well as special programs and applications, helped them to activate their vocabulary using different learning tasks and the Internet;
- 118 students (98%) admitted that virtual learning would be more interesting for them than traditional classrooms since they understood and remembered multimedia material better;
- 115 students (96%) reported that they could learn the material more interestingly, solving specific problems on the virtual learning platforms;
- 114 respondents (95%) admitted that teachers encouraged them to use computer technology to learn Russian at school.

B. The Educational Strategy

The positive results of testing on the students' residual knowledge revealed a strategy for the introduction of multimedia in Russian language learning. The introduction of multimedia into the educational process forces educational establishments to introduce new lesson structures. These structures should contribute to the independent and creative work of students. Moreover, students can easily find new information sources to increase their skills. Writing projects are effective for language skills development. This type of activity facilitates self-organization and helps students to master research skills. The media content performs analytical functions, develops communication skills, and allows learners to solve thematic language problems. These functions contribute to oral speech development and vocabulary memorization. Moreover, media content provides access to linguistic materials available on websites. They contain all kinds of phraseological units, proverbs, and neologisms. The knowledge of these linguistic units improves oral competence, which is important for future journalists.

IV. DISCUSSION

The Covid-19 restrictions have created new challenges for students in acquiring knowledge. Russian language learning in high education combines media content and traditional teaching methods [14]. The pedagogical practice [15] depends on such approaches to the lexical competence developments in high education that meet current standards of education, providing effective pair-group work and different forms of speech interaction. Moreover, the educational process allows students to acquire vocabulary knowledge and creates opportunities for mastering language skills. The students learn lexical units as part of the Russian language program for their future professional activity [16–18]. It is consistent with the results of the current study, as the scholars identified the importance and need for increasing lexical competence in students. The study used the questionnaire to

examine the proposed hypothesis and obtained results on the effectiveness of the developed set of exercises based on the methodology for lexical competence.

Modern pedagogical practices suggest that teachers train students to use Russian terminology in groups and teams. Therefore, teachers should develop gaming activities, introduce problem-solving tasks, enhance students' creative thinking, develop their learning abilities, identify potential communication, improve professional knowledge, and promote flexibility and practicality. Information perception and processing in Russian language learning provide opportunities for knowledge acquisition among students majoring in different disciplines [19, 20]. The development of lexical competence in high education involves students in planning, organizing, and performing various tasks. The students participate in different forms of speech interaction and assessments. The proposed methods help educators to improve the teaching process. Thus, teachers develop students' abilities as team leaders responsible for decision-making and assessments of the work of others [21]. Guseynova and Gorozhanov *et al.* [22] underlines that pair-group and group methods of education should be combined with an individual approach to ensure psychological and pedagogical conditions for students. The research highlights that educators should introduce interactive methods for lexical competence development to stimulate the students' interest in self-knowledge. Some scholars admit that self-learning is one of the most important tasks in continuous language learning [23]. The teacher-student cooperation in language learning includes group activities and interpersonal contact using multimedia [24]. However, media content is an innovative method of language teaching that provides additional opportunities for students and teachers. Moreover, it brings novelty to the pedagogical process by offering innovative strategies [25]. The scholars found that effective Russian language teaching is the combination of traditional teaching methods and multimedia. The introduction of Internet technologies into the learning process has its advantages [26]. One of them is the influence of media content (e-mails, chats, forums, web conferences) on the development of students' communicative competence [27]. The technology in the classroom helps educators introduce a student-centered approach and ensure that the individual and group features of students' performance are considered by the universities. Therefore, the research [28–30] argues that Russian language learning based on multimedia motivates students. For example, in the current study, 98% of students reported that computers, as well as special programs and applications, helped them to activate their vocabulary using different learning tasks and the Internet. About 99% of students noted that testing residual knowledge with multimedia technology helped them to concentrate, relax, and answer correctly.

V. CONCLUSIONS

The study aimed to investigate the efficiency of multimedia for Russian language learning. The scholars examined the use of multimedia in the educational program No. 6B01706

Training Teachers of the Russian Language and Literature at M. Kh. Dulaty Taraz Regional University and The Korkyt Ata Kyzylorda University.

The study found that such multimedia tools as the Vocabulary Size Test and Word Associates Test (RL) were better for students than classic written essays and interviews. The study proved the importance of testing in identifying the advantages and challenges of multimedia in Russian language classrooms. Overall, 97% of students noted that they were ready to use media in language testing.

The proposed strategy for Russian language learning combines the traditional teaching methods and tasks aimed to improve language skills (listening, reading, writing, speaking). For effective training and teaching of the Russian language for future journalists, information and communication technologies should be introduced into the learning process. One of the proposed programs is the virtual learning program aimed to increase student motivation to learn the Russian language. This teaching method is also essential for teachers. It facilitates the language knowledge assessment and inspires teachers to use new and non-traditional teaching methods that are interesting and effective for students. The proposed strategy equips students with the knowledge and skills necessary for professional vocabulary development. The study provides evidence for changes in the future. The findings can be successfully used by teachers of the Russian language education programs in the Republic of Kazakhstan. Other universities may also use the proposed recommendations on how to improve Russian language teaching for journalists using multimedia. Further research in this field is still required.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

AUTHOR CONTRIBUTIONS

ZM and ZA have given substantial contributions to the conception or the design of the manuscript, OP and ZM to the acquisition, analysis, and interpretation of the data. All authors have participated in drafting the manuscript, ZA revised it critically. All authors read and approved the final version of the manuscript.

REFERENCES

- [1] C. Frances, C. D. Martin, and J. A. Duñabeitia, "The effects of contextual diversity on incidental vocabulary learning in the native and a foreign language," *Sci. Rep.*, vol. 10, no. 1, 13967, Aug. 2020.
- [2] Y. M. Kazhan, V. A. Hamaniuk, S. M. Amelina, R. O. Tarasenko, and S. T. Tolmachev, "The use of mobile applications and Web 2.0 interactive tools for students' German-language lexical competence improvement," in *Proc. the 7th Workshop on Cloud Technologies in Education (CTE 2019)*, Kryvyi Rih, Ukraine: KDPU, 2020, pp. 392–415.
- [3] E. Obodo, G. C. Odoh, K. Udeh, N. S. Odoh, V. Celestine Gever, and C. Onuora, "Measuring the impact of visual multimedia on awareness, alertness and behavioural intention towards kidnapping prevention measures among young secondary school students in Nigeria," *J. Asian Afr. Stud.*, vol. 57, no. 4, pp. 678–692, Jul. 2022.
- [4] K. J. Graziano, "Peer teaching in a flipped teacher education classroom," *TechTrends*, vol. 61, no. 2, pp. 121–129, May 2016.
- [5] M. Rahimi and A. Allahyari, "Effects of multimedia learning combined with strategy-based instruction on vocabulary learning and strategy use," *SAGE Open*, vol. 9, no. 2, Apr. 2019.

- [6] D. Zou, Y. Huang, and H. Xie, "Digital game-based vocabulary learning: where are we and where are we going?" *Comput. Assist. Lang. Learn.*, vol. 34, no. 5–6, pp. 751–777, Jul. 2021, doi: <https://doi.org/10.1080/09588221.2019.1640745>
- [7] K. N. Peebles, S. E. Hirsch, S. J. Gardner, R. G. Keeley, B. L. Sherrow, J. M. McKenzie, K. N. Randall, J. E. Romig, and M. J. Kennedy, "Using multimedia instruction and performance feedback to improve preservice teachers' vocabulary instruction," *TESE*, vol. 42, no. 3, pp. 227–245, Oct. 2019.
- [8] A. Kapelner, J. Soterwood, S. Nesaiver, and S. Adlof, "Predicting contextual informativeness for vocabulary learning," *IEEE Trans. Learn. Technol.*, vol. 11, no. 1, pp. 13–26, Jan. 2018.
- [9] E. Rassaei, "Computer-mediated textual and audio glosses, perceptual style and L2 vocabulary learning," *Lang. Teach. Res.*, vol. 22, no. 6, pp. 657–675, Feb. 2018.
- [10] F. C. Ou-Yang and W. C. V. Wu, "Using mixed-modality vocabulary learning on mobile devices: Design and evaluation," *J. Educ. Comput. Res.*, vol. 54, no. 8, pp. 1043–1069, Jul. 2017.
- [11] R. Chugh and U. Ruhi, "Social media in higher education: A literature review of Facebook," *Educ. Inf. Technol.*, vol. 23, no. 2, pp. 605–616, June 2018.
- [12] A. Syakur and Y. Sabat, "The effectiveness of cooperative learning (STAD and PBL type) on E-learning sustainable development in higher education," *J. Dev. Res.*, vol. 4, no. 1, pp. 53–61, 2020.
- [13] I. Chelysheva and G. Mikhaleva, "Content analysis of university students' interethnic tolerance reflected in Russian and English-language media education of the 21st century," *Media Educ.*, vol. 60, no. 2, pp. 222–237, 2020.
- [14] A. R. Malik and M. N. A. Asnur, "Using social media as a learning media of foreign language students in higher education," *Bahtera*, vol. 18, no. 2, pp. 166–175, Jul. 2019.
- [15] A. Syakur, "The effectiveness of English learning media through google classroom in higher education," *BloLAE J.*, vol. 2, no. 1, pp. 475–483, March 2020.
- [16] R. Basili, D. Croce, and G. Castellucci, "Dynamic polarity lexicon acquisition for advanced Social Media analytics," *Int. J. Eng. Bus. Manag.*, vol. 9, 1847979017744916, Dec. 2017.
- [17] S. M. Lee, "The impact of using machine translation on EFL students' writing," *Comput. Assist. Lang. Learn.*, vol. 33, no. 3, pp. 157–175, Feb. 2020.
- [18] F. M. Plaza-del-Arco, M. T. Martín-Valdivia, L. A. Ureña-López, and R. Mitkov, "Improved emotion recognition in Spanish social media through incorporation of lexical knowledge," *Future Gener. Comput. Syst.*, vol. 110, pp. 1000–1008, Sep 2020.
- [19] A. A. Kharlamov and M. A. Pilgun, "Perception and content assessment of active users: Russian language social networks," *Res. Appl. Linguist.*, vol. 10, pp. 64–79, Jul. 2019.
- [20] N. Ramezanali and F. Faez, "Vocabulary learning and retention through multimedia glossing," *Lang. Learn. Technol.*, vol. 23, no. 2, pp. 105–124, June 2019.
- [21] C. Greenhow and E. Askari, "Learning and teaching with social network sites: A decade of research in K-12 related education," *Educ. Inf. Technol.*, vol. 22, no. 2, pp. 623–645, Nov. 2017.
- [22] I. A. Guseynova, A. I. Gorozhanov, and E. F. Kosichenko, "Development of linguistic institutional educational virtual environment at Moscow State Linguistic University (2016-2018)," in *Proc. SHS Web of Conferences*, vol. 69, p. 45, Les Ulis: EDP Sciences, 2019.
- [23] S. Alnujaidi, "Social network sites as ESL/EFL learning and teaching tools: A critical review," *IJALEL*, vol. 6, no. 3, pp. 34–42, 2017.
- [24] J. L. Jimenez-Marquez, I. Gonzalez-Carrasco, J. L. Lopez-Cuadrado, and B. Ruiz-Mezcua, "Towards a big data framework for analyzing social media content," *Int. J. Inf. Manag.*, vol. 44, pp. 1–12, Feb. 2019.
- [25] V. Muzykant, E. Burdovskaya, K. Souhila, and H. Ruiqi, "Media platforms as influential tool of Russian language learning abroad," *Media Educ.*, vol. 17, no. 2, pp. 350–362, 2021.
- [26] R. Kabooaha and T. Elyas, "The effects of Youtube in multimedia instruction for vocabulary learning: perceptions of EFL students and teachers," *English Lang. Teach.*, vol. 11, no. 2, pp. 72–81, 2018.
- [27] A. V. Kalinina, L. V. Pushkareva, and A. I. Rybakova, "National identity of mass media: retrospective study of the russian language mass media prevalence in Eastern Europe," *Amazonia Investiga*, vol. 8, no. 22, pp. 40–50, 2019.
- [28] V., Kumar and P. Nanda, "Social media in higher education: A framework for continuous engagement," *IJICTE*, vol. 15, no. 1, pp. 97–108, 2019.
- [29] T. Skorikova, N. Romanova, and E. Orlov, "Training of intercultural communication using didactic resources of virtual e-learning environment," in *Proc. EDULEARN19 11th International Conference on Education and New Learning Technologies*, València: IATED Academy, 2019, pp. 1224–1229.
- [30] C., Uz Bilgin and S. T. Tokel, "Facilitating contextual vocabulary learning in a mobile-supported situated learning environment," *J. Educ. Comput. Res.*, vol. 57, no. 4, pp. 930–953, June 2019.

Copyright © 2023 by the authors. This is an open access article distributed under the Creative Commons Attribution License which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited ([CC BY 4.0](https://creativecommons.org/licenses/by/4.0/)).