HSR (LONDON),
HOUGHTON STREET REVIEW JOURNAL
ISSN: 2058-5519|Impact factor-15.9
http://houghtonstreetreview.com/index.php/hsr

INTERFERENCE-ORIENTED DIGITAL EXERCISES FOR TEACHING RUSSIAN AS A SECOND LANGUAGE TO UZBEK-SPEAKING PRIMARY SCHOOL PUPILS

Baxtiyor M. Suvankulov
Associate Professor, Jizzakh State Pedagogical University, Jizzakh, Uzbekistan
doi:https://doi.org/10.5281/zenodo.24397217

Abstract: Digital tools for language learning are spreading rapidly in primary schools, yet most ready-made resources for Russian were designed for children who already speak Russian and ignore the typical difficulties of learners whose first language is Uzbek. This article presents a system of digital exercises for teaching Russian as a second language in Grades 1–4 of Uzbek-medium schools, built on a contrastive analysis of the two languages. The study followed a design-based research approach that combined theoretical analysis, contrastive analysis of Uzbek and Russian, expert evaluation of digital tools against a ten-criterion checklist, and iterative classroom implementation. The resulting system comprises 28 exercises arranged in three stages (preparatory, conditional-communicative and communicative) and covers phonetics, vocabulary, grammar and the four language skills. Each exercise targets a specific interference point, such as the hard–soft consonant opposition, the vowel [ы], grammatical gender and agreement, prepositions with case forms, and visually confusable Latin and Cyrillic letters. The system is designed to work under three levels of school equipment ("one screen", "group screens" and "one device per pupil") and limits continuous individual screen time to seven minutes. The article argues that the value of digital resources in early second-language teaching depends less on the technology itself than on how precisely the tasks address learners' cross-linguistic difficulties.

Keywords: Russian as a second language; primary education; digital educational resources; mobile-assisted language learning; language interference; exercise system; Uzbek-speaking learners.

1. INTRODUCTION

Over the past decade, digital technologies have moved from the periphery of school education to its centre. International organisations stress, however, that technology improves learning only when it serves a clear pedagogical aim, is adapted to learners' age and is supported by teachers' methodological preparation [1]. This caveat is especially important for primary education, where children form their attitude to learning, their cognitive interests and their intrinsic motivation to learn languages.

In Uzbekistan, the digitalisation of education is a state priority. The Law "On Education" and the "Digital Uzbekistan – 2030" strategy set the tasks of building digital infrastructure in schools, creating electronic learning resources and raising teachers' digital literacy [2; 3]. At the same time, multilingualism is regarded as a key competence for the modern citizen, and Russian keeps its role as a language of regional cooperation, scientific exchange and cultural contact. In Uzbek-medium schools Russian is taught as a second language. This makes its methodology fundamentally different from teaching Russian as a mother tongue: the learner perceives the new language system through the system of the first language, which leads to phonetic, lexical and grammatical interference [4; 5].

Today's 7–10-year-olds are often described as "digital natives" [6]. They meet smartphones, tablets and interactive screens before school, and their attention is drawn to visual, dynamic and interactive information. Lessons based only on the textbook and the blackboard often fail to motivate them.

HSR (LONDON),
HOUGHTON STREET REVIEW JOURNAL
ISSN: 2058-5519|Impact factor-15.9
http://houghtonstreetreview.com/index.php/hsr

Carefully selected mobile applications and interactive platforms, by contrast, allow language learning to be combined with play, communication and creative activity.

Practice, however, shows several persistent problems. First, most digital resources for Russian were created for Russian-speaking children and do not take into account the language experience and interference patterns of Uzbek-speaking pupils. Second, many primary teachers use digital tools episodically rather than systematically, so that a tool often serves the "modern look" of a lesson rather than its objective. Third, concerns about screen time, children's health and data security call for a method that uses digital resources in moderation and with a clear purpose [7].

The aim of this article is to present and justify a system of digital exercises for teaching Russian as a second language in Grades 1–4 of Uzbek-medium schools, in which each exercise is designed around a specific point of Uzbek–Russian interference. The article addresses three research questions:

– RQ1. Which interference points should digital exercises for Uzbek-speaking primary pupils target first?

– RQ2. How can digital exercises be organised into a coherent, stage-based system that develops both language knowledge and the four skills?

– RQ3. How can such a system be adapted to the uneven technical equipment of schools while keeping screen time within safe limits?

2. LITERATURE REVIEW

2.1. Technology in language learning. Research on computer-assisted language learning (CALL) has a long history. Levy described the theoretical foundations and stages of the field [8], while Warschauer and Healey distinguished behaviourist, communicative and integrative stages of CALL [9]. Chapelle linked computer applications with second language acquisition theory [10]. Kukulska-Hulme and Shield summarised research on mobile-assisted language learning (MALL) and showed that the main advantage of mobile technologies is that they free learning from the limits of time and place [11]. Stockwell later systematised the concepts and challenges of MALL [12].

Meta-analytic evidence supports a moderate positive effect of technology-based instruction. Plonsky and Ziegler, synthesising CALL–SLA meta-analyses, reported a moderate advantage of technology-enhanced teaching over traditional teaching [13]. Golonka and colleagues found the strongest evidence for tools that support oral production and pronunciation, and for computer-mediated communication [14]. Hattie's synthesis of more than 800 meta-analyses showed that the effect of computer-assisted instruction is moderate and grows when the teacher organises it purposefully [15]. Selwyn warned against "technological determinism", the belief that technology improves education automatically [16]. Taken together, these studies indicate that technology is effective when it is embedded in a well-designed pedagogical framework.

2.2. Teaching young learners. Cameron and Pinter stress that young learners acquire grammar through repeated use of speech patterns rather than through explicit rules, that their attention span is short, and that play and movement are central to their learning [17; 18]. Paivio's dual coding theory and Mayer's multimedia learning theory show that words presented together with images are remembered better than words alone [19; 20]. Sweller's cognitive load theory, in turn, warns that unnecessary animation and decoration overload working memory [21]. For digital exercises for children, this means using multimodal presentation while keeping the interface simple.

2.3. Exercise systems in second language teaching. In Uzbek methodology, Jalolov divided exercises into preparatory (language) exercises and communicative (speech) exercises and argued for

HSR (LONDON),
HOUGHTON STREET REVIEW JOURNAL
ISSN: 2058-5519|Impact factor-15.9
http://houghtonstreetreview.com/index.php/hsr

developing the four skills in an integrated way [22]. Passov added an intermediate type, conditional-communicative exercises, which are close to real speech situations but still controlled in terms of language material [23]. Galskova and Gez proposed building an exercise system on the principle "from skill to ability, from ability to speech activity" [24]. These ideas form the basis of the three-stage system presented in this article.

2.4. Interference. The theory of language contact and interference goes back to Weinreich [4] and to Lado's contrastive analysis [25]. Odlin later described cross-linguistic influence as a complex phenomenon that includes both negative and positive transfer [26]. Uzbek is an agglutinative Turkic language without grammatical gender, with fixed final stress and without a phonological opposition of hard and soft consonants. Russian is an inflectional Slavic language with three genders, mobile stress and a rich system of case endings. These typological differences produce predictable errors in Uzbek-speaking learners' Russian [5; 27].

2.5. Research gap. The literature thoroughly covers the general pedagogy of digital technologies, second language teaching methodology and CALL/MALL theory. However, a coherent system of digital exercises that is explicitly built around the interference points of Uzbek-speaking primary pupils learning Russian has not yet been described. This article addresses that gap.

3. METHODS

3.1. Research design. The study followed a design-based research approach, which is suitable when the goal is to develop and refine an educational intervention in real classroom conditions. The work was carried out in three phases. In the first phase, the scientific, linguistic and methodological literature was analysed, interference points were identified and existing digital resources were evaluated. In the second phase, the exercise system, rules for safe use and lesson templates were developed and tried out in primary classes of Uzbek-medium general secondary schools. In the third phase, the exercises were revised on the basis of observation and teacher feedback, and methodological recommendations were formulated.

3.2. Contrastive analysis. The phonetic, grammatical, lexical and graphic systems of Uzbek and Russian were compared in order to predict the areas of negative transfer. The predicted interference points were then checked against typical errors observed in pupils' oral and written work during lessons.

3.3. Expert evaluation of digital tools. Digital tools were selected according to three practical criteria: the tool is free or conditionally free and works in Uzbekistan; a teacher can master it without programming skills; and the tool allows teachers to create their own content adapted to Uzbek-speaking pupils. Each candidate resource was then evaluated with a ten-item checklist (Table 1). Each item is scored from 0 to 2. A resource scoring 16–20 points is recommended for lessons, 10–15 points can be used with teacher adaptation, and fewer than 10 points is not recommended.

Table 1. Teacher's checklist for selecting a digital resource

No.	Criterion	0	1	2
1	The resource matches the lesson objective and the curriculum			
2	Language material suits pupils' age and level			
3	Pronunciation model is correct and clear (native speaker or trained narrator)			

HSR (LONDON),
HOUGHTON STREET REVIEW JOURNAL
ISSN: 2058-5519|Impact factor-15.9
http://houghtonstreetreview.com/index.php/hsr

No.	Criterion	0	1	2
4	Difficulties specific to Uzbek-speaking pupils are taken into account			
5	Provides feedback and explains errors			
6	Simple interface; the pupil can operate it independently			
7	No distracting, unnecessary elements			
8	No advertising; personal data are safe			
9	Works under low-quality Internet connection			
10	The teacher can modify or adapt the content			

Source: developed by the author.

3.4. Design principles. The exercises were designed according to the principles of communicative language teaching [22; 23], multimedia learning [20], cognitive load reduction [21] and the SAMR model of technology integration [28]. Teachers' readiness was considered through the TPACK framework [29].

4. RESULTS

4.1. Interference points (RQ1). The contrastive analysis identified the following priority areas for Uzbek-speaking primary pupils (Table 2).

Table 2. Main interference points of Uzbek-speaking pupils learning Russian

Level	Interference point	Typical error
Phonetic	Hard and soft consonants	мат instead of мать; брат and брать are not distinguished
Phonetic	Vowel [ы]	мило instead of мыло; бил instead of был
Phonetic	Mobile stress, akanye	stress placed on the last syllable by analogy with Uzbek
Phonetic	Initial consonant clusters	a vowel inserted at the beginning of стол, школа
Grammatical	Gender of nouns	мой сестра
Grammatical	Agreement of possessive pronouns	мой мама
Grammatical	Prepositions and case	в школа, на стол
Grammatical	Numerals with nouns	два книга
Grammatical	Past tense agreement	Мама читал.

HSR (LONDON),
HOUGHTON STREET REVIEW JOURNAL
ISSN: 2058-5519|Impact factor-15.9
http://houghtonstreetreview.com/index.php/hsr

Level	Interference point	Typical error
Lexical	Different scope of word meaning, lexical gaps	Uzbek opa and singil both correspond to сестра
Graphic	Latin and Cyrillic letters of similar shape	POT read as "POT"

Source: compiled by the author on the basis of contrastive analysis and classroom observation.

4.2. The three-stage exercise system (RQ2). On the basis of the theory of exercise systems [22; 23; 24], the digital exercises were organised into three stages.

– **Preparatory (introductory) exercises** help pupils perceive new language material (a sound, a word, a grammatical form) and form initial skills. Digital tools present the material multimodally and allow unlimited repetition: listening and repeating, matching pictures and words, discriminating sounds, sorting words by gender.

– **Conditional-communicative exercises** require pupils to use the material in a situation close to real speech, but their answers are still guided by a model or support. Examples are answering a random question from a "spinning wheel", making a sentence from a picture following a model, and completing a dialogue.

– **Communicative exercises** ask pupils to produce speech independently in a real or simulated situation. Digital tools let pupils record their speech, share it with classmates and create a digital product: a short audio story about themselves, a recorded reply to a classmate's question, or a digital booklet.

The balance between the stages changes with the grade. In Grade 1 preparatory exercises dominate; by Grade 4 the share of communicative exercises increases considerably. The stages also correspond to the levels of the revised Bloom's taxonomy [30]: remembering and understanding mainly belong to the preparatory stage, applying and analysing to the conditional-communicative stage, and evaluating and creating to the communicative stage.

4.3. Exercises by language area. The system includes 28 exercises. Table 3 shows representative examples for each area together with the interference point they address.

Table 3. Representative interference-oriented digital exercises

Exercise	Grade	Tool	Interference point and procedure
«Твёрдый или мягкий?»	1–2	Wordwall (group sort)	Hard/soft consonants. The pupil listens to мат – мать, брат – брать, угол – уголь and places each word in a blue (hard) or green (soft) "house".
«Найди звук [ы]»	1	LearningApps (matching pairs)	[ы] vs [и]. The pupil hears мыло – мило, был – бил, мышка – мишка and chooses the matching picture.
«Поставь ударение»	2–3	Wordwall (labelled diagram)	Mobile stress. The pupil listens and taps the stressed syllable, including shifting stress: рука́ – ру́ки.

HSR (LONDON),
HOUGHTON STREET REVIEW JOURNAL
ISSN: 2058-5519|Impact factor-15.9
http://houghtonstreetreview.com/index.php/hsr

Exercise	Grade	Tool	Interference point and procedure
«Эхо»	1–4	Voice recorder	Self-monitoring of pronunciation. The pupil records a model word and compares the two recordings.
«Говорящие карточки»	1–4	Quizlet	New vocabulary. Picture on one side, word and audio on the other; no Uzbek translation in Grades 1–2.
«Семейное дерево»	2–3	Genially	Lexical gaps. Pupils place family words on a tree and learn старшая сестра and младшая сестра for Uzbek opa and singil.
«Он, она, оно»	2	Wordwall (group sort)	Gender. Words are sorted into blue, red and green baskets; a model phrase is played after each correct answer.
«Мой, моя, моё»	2–3	LearningApps (fill the gap)	Agreement of possessive pronouns: ___ мама, ___ папа, ___ платье.
«Где кошка?»	2–3	Genially (interactive image)	Prepositions and case: Кошка на столе, в коробке, под стулом.
«Сколько?»	3–4	Wordwall (matching)	Numerals with nouns: один карандаш, два карандаша, пять карандашей.
«Вчера и сегодня»	4	Google Forms	Past tense agreement; automatic feedback explains: «Мама — она, значит, читала».
«Буквы-обманщики»	2	Wordwall (matching pairs)	Graphic interference. Cyrillic Р, Н, С, В, Х, У are matched with their sounds and familiar words.

Source: developed by the author.

A consistent colour code underpins the system. Hard consonants are marked blue and soft consonants green; masculine nouns are blue, feminine nouns red and neuter nouns green. The same colours are used in digital exercises, in exercise books and on classroom posters. This consistency creates a stable visual and auditory association, which matters for children whose first language has no grammatical gender.

Vocabulary is organised by theme and by gender at the same time, so that pupils "see" the gender of a word from their first encounter with it. Exceptions to the rule of determining gender by the ending

HSR (LONDON),
HOUGHTON STREET REVIEW JOURNAL
ISSN: 2058-5519|Impact factor-15.9
http://houghtonstreetreview.com/index.php/hsr

(папа and дедушка are masculine but end in -а; тетрадь and дверь are feminine and end in -ь) are not taught as rules in primary school. Instead, they are presented as "interesting words" to memorise and are marked with an asterisk in the exercises.

4.4. Exercises for the four skills. For listening, the system uses Krashen's idea of comprehensible input [31]: short (1–2 minute), familiar texts with visual support, organised into pre-listening, while-listening and post-listening stages. Examples include TPR-based "listen and show" tasks on the interactive board, short cartoon fragments with embedded questions, and familiar fairy tales («Колобок», «Репка», «Теремок») followed by sequencing tasks.

For speaking, digital tools address a well-known limitation of traditional lessons: in a 45-minute lesson with 25 pupils, each child has only about one or two minutes for oral speech. The system increases speaking practice in two ways. Pupils work in pairs and groups at the same time, and they record short oral messages at home. In the «Голосовое письмо» exercise, for example, a pupil records a 30–60-second message about themselves on Padlet, classmates leave questions, and the author answers them by voice. This task corresponds to the "modification" level of the SAMR model [28].

For reading, special attention is paid to graphic interference, because pupils first learn to read in the Uzbek Latin alphabet and only then in Cyrillic. For writing, the system uses letter-tracing animations, anagram tasks for words with initial consonant clusters (стол, школа) and digital booklets in Book Creator.

4.5. Adaptation to school equipment (RQ3). Schools in Uzbekistan differ considerably in their technical equipment. The system therefore defines three working modes:

– **"One screen" mode:** only an interactive board or projector and the teacher's computer are available. Wordwall, Genially and LearningApps are used for frontal work, and Plickers for individual polling with paper cards.

– **"Group screens" mode:** several tablets or computers are available. Pupils work in pairs or small groups, rotating between stations.

– **"One device per pupil" mode:** each pupil works on a tablet or computer; individual exercises, voice recording and adaptive tasks are used.

Most exercises were designed so that they can also be carried out in "one screen" mode, and homework assumes the use of a family smartphone. For each digital exercise the teacher prepares a paper or oral back-up version in case of technical failure.

To keep screen time within safe limits, the following distribution of a 45-minute lesson is recommended: 12–15 minutes of frontal screen-based work, 8–10 minutes of individual or pair screen work, 10–12 minutes of live oral communication, 5–7 minutes of writing in exercise books and 4–5 minutes for a physical activity break and organisational matters. Continuous individual screen time does not exceed seven minutes, and a single lesson uses two or three digital exercises that alternate with live dialogue, writing and movement. This follows the American Academy of Pediatrics' recommendation that screen use should not displace sleep, physical activity and face-to-face communication [7].

4.6. Classroom observations. During implementation, teachers reported several qualitative effects. The colour code helped pupils notice gender and agreement. Recording and re-listening made pupils more attentive to their own pronunciation. Platform reports helped teachers identify the words and forms that caused the most errors in the class and plan the next lesson around them. Teachers also identified practical risks: overuse of game elements based on points and rankings, discipline problems at tablet

HSR (LONDON),
HOUGHTON STREET REVIEW JOURNAL
ISSN: 2058-5519|Impact factor-15.9
http://houghtonstreetreview.com/index.php/hsr

stations, and loss of lesson time when the Internet connection was unstable. These observations led to the back-up rule and the screen-time limits described above.

5. DISCUSSION

The results support the view, common in CALL research, that the effectiveness of technology depends on its pedagogical use rather than on its technical features [13; 15; 16]. The novelty of the proposed system lies in its explicit linkage of each digital exercise to a predicted point of Uzbek–Russian interference. Generic resources created for Russian-speaking children cannot provide this, because they do not "know" that a child whose first language lacks gender will say мой сестра, or that the hard–soft opposition is not phonologically relevant in Uzbek.

The system also shows that constructor platforms such as Wordwall, LearningApps and Genially are especially valuable in this context. Unlike ready-made content, they allow teachers to create exercises that address their own pupils' errors. This shifts the teacher's role from a consumer of digital content to its designer, a role described in the DigCompEdu framework [32] and in the TPACK model [29].

The findings are consistent with research on young learners [17; 18]: grammar is taught through patterns, colour and repetition rather than explicit rules, and play is used as a source of motivation. Following Kapp [33], the system relies on story, goals and gradually increasing challenge rather than on points and rankings alone, in order to support intrinsic motivation.

The study has limitations. First, it focuses on the design and qualitative implementation of the exercise system. A controlled quantitative evaluation of learning outcomes using linguistic, speech, motivational and digital criteria should be reported separately. Second, the long-term durability of the effects, and the use of the system with pupils with special educational needs, require further research. Third, the rapid change of digital tools means that specific platforms may become unavailable. For this reason the article offers selection criteria (Table 1) rather than a fixed list of tools.

6. CONCLUSION

The article proposed a system of 28 digital exercises for teaching Russian as a second language to Uzbek-speaking pupils in Grades 1–4. The system is grounded in a contrastive analysis of Uzbek and Russian and organised into preparatory, conditional-communicative and communicative stages. Each exercise targets a specific phonetic, grammatical, lexical or graphic interference point. The system works under three levels of school equipment, includes back-up versions for technical failures and keeps continuous individual screen time within seven minutes.

The practical value of the system lies in its readiness for use by primary teachers, in teacher education programmes and in in-service training. Future research should evaluate the system's effect on learning outcomes in a controlled experiment, develop a national digital platform adapted to Uzbek-speaking learners, and examine how accurately AI-based pronunciation assessment tools recognise Uzbek-accented children's speech.

REFERENCES

1. UNESCO. Global Education Monitoring Report 2023: Technology in Education – A Tool on Whose Terms? Paris: UNESCO, 2023.
2. Law of the Republic of Uzbekistan "On Education". No. ZRU-637, 23 September 2020.
3. Decree of the President of the Republic of Uzbekistan "On Approval of the Digital Uzbekistan – 2030 Strategy and Measures for Its Effective Implementation". No. PF-6079, 5 October 2020.

HSR (LONDON),
HOUGHTON STREET REVIEW JOURNAL
ISSN: 2058-5519|Impact factor-15.9
http://houghtonstreetreview.com/index.php/hsr

4. Weinreich U. Languages in Contact: Findings and Problems. New York: Linguistic Circle of New York, 1953.
5. Shchukin A.N. Metodika prepodavaniya russkogo yazyka kak inostrannogo [Methods of Teaching Russian as a Foreign Language]. Moscow: Vysshaya shkola, 2003.
6. Prensky M. Digital Natives, Digital Immigrants. On the Horizon, 2001, 9(5), pp. 1–6.
7. American Academy of Pediatrics, Council on Communications and Media. Media Use in School-Aged Children and Adolescents. Pediatrics, 2016, 138(5), e20162592.
8. Levy M. Computer-Assisted Language Learning: Context and Conceptualization. Oxford: Clarendon Press, 1997.
9. Warschauer M., Healey D. Computers and language learning: An overview. Language Teaching, 1998, 31(2), pp. 57–71.
10. Chapelle C.A. Computer Applications in Second Language Acquisition. Cambridge: Cambridge University Press, 2001.
11. Kukulska-Hulme A., Shield L. An overview of mobile assisted language learning: From content delivery to supported collaboration and interaction. ReCALL, 2008, 20(3), pp. 271–289.
12. Stockwell G. Mobile Assisted Language Learning: Concepts, Contexts and Challenges. Cambridge: Cambridge University Press, 2022.
13. Plonsky L., Ziegler N. The CALL–SLA interface: Insights from a second-order synthesis. Language Learning & Technology, 2016, 20(2), pp. 17–37.
14. Golonka E.M., Bowles A.R., Frank V.M., Richardson D.L., Freynik S. Technologies for foreign language learning: A review of technology types and their effectiveness. Computer Assisted Language Learning, 2014, 27(1), pp. 70–105.
15. Hattie J. Visible Learning: A Synthesis of over 800 Meta-Analyses Relating to Achievement. London: Routledge, 2009.
16. Selwyn N. Education and Technology: Key Issues and Debates. London: Continuum, 2011.
17. Cameron L. Teaching Languages to Young Learners. Cambridge: Cambridge University Press, 2001.
18. Pinter A. Teaching Young Language Learners. Oxford: Oxford University Press, 2006.
19. Paivio A. Mental Representations: A Dual Coding Approach. New York: Oxford University Press, 1986.
20. Mayer R.E. Multimedia Learning. 2nd ed. Cambridge: Cambridge University Press, 2009.
21. Sweller J. Cognitive load during problem solving: Effects on learning. Cognitive Science, 1988, 12(2), pp. 257–285.
22. Jalolov J.J. Chet til o'qitish metodikasi [Methods of Foreign Language Teaching]. Tashkent: O'qituvchi, 2012.
23. Passov E.I. Kommunikativnyy metod obucheniya inoyazychnomu govoreniyu [The Communicative Method of Teaching Foreign Language Speaking]. Moscow: Prosveshchenie, 1991.
24. Galskova N.D., Gez N.I. Teoriya obucheniya inostrannym yazykam: lingvodidaktika i metodika [Theory of Foreign Language Teaching: Linguodidactics and Methodology]. Moscow: Akademiya, 2004.
25. Lado R. Linguistics Across Cultures: Applied Linguistics for Language Teachers. Ann Arbor: University of Michigan Press, 1957.

HSR (LONDON),
HOUGHTON STREET REVIEW JOURNAL
ISSN: 2058-5519|Impact factor-15.9
http://houghtonstreetreview.com/index.php/hsr

26. Odlin T. Language Transfer: Cross-linguistic Influence in Language Learning. Cambridge: Cambridge University Press, 1989.
27. Ellis R. The Study of Second Language Acquisition. 2nd ed. Oxford: Oxford University Press, 2008.
28. Puentedura R.R. Transformation, Technology, and Education. 2006. Available at: http://hippasus.com/resources/tte/
29. Mishra P., Koehler M.J. Technological Pedagogical Content Knowledge: A framework for teacher knowledge. Teachers College Record, 2006, 108(6), pp. 1017–1054.
30. Anderson L.W., Krathwohl D.R. (Eds.). A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives. New York: Longman, 2001.
31. Krashen S.D. Principles and Practice in Second Language Acquisition. Oxford: Pergamon Press, 1982.
32. Redecker C. European Framework for the Digital Competence of Educators: DigCompEdu. Luxembourg: Publications Office of the European Union, 2017.
33. Kapp K.M. The Gamification of Learning and Instruction: Game-based Methods and Strategies for Training and Education. San Francisco: Pfeiffer, 2012.