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THE FEATURES OF USING THE LEARNINGAPPS PLATFORM FOR DEVELOPING STUDENTS' FOREIGN LANGUAGE VOCABULARY IN THE CONTEXT OF THE DIGITAL EDUCATION PARADIGM

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Abstract. The article analyzes the specifics of using the Learning Apps platform in the process of developing a foreign language vocabulary in the context of the digital education paradigm. The authors note the need to create an effective educational trajectory, training and the creation of a unified educational space based on the use of digital educational technologies. The high degree of relevance of digital education is associated with the rapid process of information and knowledge modernization, as well as with the intensification of competition in the labor market and the growth of requirements for the development of modern professional competencies. It is noted that individual technologies in education are effective only when used within a specific model of education, developed taking into account specific tasks, the characteristics of students, their needs and learning conditions. The creation of a single digital educational system in the context of the digital education paradigm and foreign language teaching shows that they have the scientific and pedagogical potential to be leaders in the development, application and dissemination of educational technologies. Their achievements and experience in this area should be used at all stages of education. Such educational institutions have the resources and competences to create online and distance learning courses that will allow many citizens to receive high-quality additional education. The authors conclude that in order to ensure the right of a person to receive education, including the right to learn a foreign language, it is necessary to respond in a timely manner to the changing requirements of the labor market, create an individual educational trajectory, and use modern digital platforms and resources. The methodological basis of the scientific article is empirical and theoretical research methods in the field of digital linguodidactics. The study focuses on the analysis of the organization of foreign language teaching in the context of the digital education paradigm in the context of an educational environment using digital platforms: general scientific and specific scientific methods are widely used - dialectical, comparative analysis, modeling, etc. The creation of a digital educational environment is associated with a high degree of relevance of education, on the one hand, with the rapid process of updating information and knowledge, which creates a strong motivation for their continuous mastery, detailed and application. On the other hand, the increased competition in the labor market and the increasing requirements for the acquisition of modern professional competencies, including foreign language skills, create a strong incentive for education through digital

platforms, which can be successfully implemented in a digital educational environment. The study conducted in this article allows us to conclude that the creation of a digital educational environment using the latest educational technologies creates favorable conditions for digital education throughout life, especially in the context of foreign language learning.

Key words: digital education, language learning, unified educational space, foreign language teaching, digital educational technologies, information and computer technologies, digitalization of the educational process, digital education paradigm

Introduction

One of the key trends of the 21st century is the rapid advancement of information and communication technologies across the world, actively influencing the process of education and upbringing. The implementation of digital technologies in education transforms the scheme of knowledge transfer and the methods of teaching students.

With the progress of information and communication technologies and technical means of communication, particularly computers, the Internet, and mobile devices, the necessity arises for various forms of Internet communication: asynchronous (forums, e-mails, e-mail, wiki, blogs) and synchronous (voice and video conferences, chats), which are successfully applied in modern foreign language education alongside the traditional form of training [1].

The use of the Internet, mobile communication, and digital means in the educational process contributes significantly to the teaching of foreign languages, as well as the construction of an individualized educational trajectory based on problem-based learning, independent educational and cognitive activity and the development of communicative and intercultural competencies.

Pedagogues nowadays continuously apply digital technologies for determining, for instance: various platforms as LearningApps for publication of educational and evaluation materials; MS Teams – for conducting seminars-online consultation, digital services Quizizz and – when preparing and holding interactive quizzes, presentations and surveys; the technique of visualizing thinking for solving creative problems, preparation of presentations, planning; computer programs for generating crosswords online, compilations of test tasks. These digital devices have didactic capabilities in the way they enable interactive processing; they model the processes and phenomena to be studied, they visualize educational information, they can be adapted to the needs and objectives set by the teacher, which leads to more effective-achievement of pedagogical goals.

The necessity for students to engage with advanced digital technologies in learning has been substantiated through research—a survey conducted among high school students [2]—which underscores the growing demand for integrating interactive teaching approaches. These methods not only accelerate the learning process but also emphasize the importance of self-directed study, leveraging digital tools to optimize language acquisition.

Subsequently, this sharp change has profoundly transformed educational environments across the globe, giving rise to what is now referred to as the digital education paradigm. In this paradigm shift, the LearningApps platform has gained popularity as an accessible, interactive, and pedagogically flexible tool for creating engaging learning experiences [3]. Designed to support a variety of educational tasks, LearningApps allows teachers to create multimedia-based, game-like exercises that encourage student participation, immediate feedback, and autonomous learning. For foreign language learners, such tools are invaluable as they help reinforce vocabulary through repetition, contextualization, and meaningful engagement with the material [4].

Vocabulary acquisition has long been recognized as a cornerstone of communicative competence in a second language. According to Nation (2001), knowing a word entails more than its meaning—it includes pronunciation, spelling, grammatical behavior, collocations, frequency, and connotations [5] . Consequently, effective vocabulary instruction must be multifaceted, involving strategies that promote deep processing and retention. Traditional vocabulary teaching methods, however, often fall short in engaging students or in providing the diverse contexts and repetitions necessary for long-term retention. Digital tools like LearningApps offer an opportunity to bridge this gap by leveraging interactive technology to provide multisensory and differentiated learning experiences.

The emergence of the digital education paradigm has placed increasing emphasis on learner autonomy, personalization, and the integration of educational technologies into classroom practices. In line with constructivist theories of learning, digital platforms such as LearningApps encourage students to actively construct knowledge through exploration, problem-solving, and interactive engagement with content. Furthermore, the platform supports teacher creativity and pedagogical flexibility, enabling educators to adapt and customize activities to suit learners' proficiency levels, interests, and learning styles.

Moreover, digital tools align with the preferences and habits of the contemporary generation of learners—often referred to as "digital natives" (Prensky, 2001)—who are accustomed to using technology in nearly all aspects of their daily lives [6]. As such, incorporating platforms like LearningApps into vocabulary instruction not only enhances motivation and interest but also contributes to the development of digital literacy skills that are crucial in the modern world. The platform's user-friendly interface, compatibility with multiple devices, and support for various languages make it particularly suitable for foreign language classrooms, where it can be used for both in-class and remote learning.

Numerous studies have highlighted the potential of gamified learning and digital interactivity in supporting vocabulary acquisition. For example, research by Gonzalez et al. (2020) found that learners exposed to vocabulary through interactive digital tools performed significantly better in vocabulary recall and usage tasks than those who received traditional instruction alone [7]. The LearningApps platform incorporates various types of gamified tasks—matching games, word grids, fill-in-the-blanks, audio-supported quizzes, classification

exercises—that are particularly effective for practicing and reinforcing vocabulary in a non-threatening and engaging environment. The immediate feedback feature also supports metacognitive awareness, allowing students to monitor their own progress and identify areas for improvement.

Another notable feature of LearningApps is its potential for collaborative and communicative learning. Activities can be completed in pairs or small groups, either synchronously or asynchronously, fostering peer interaction and cooperative learning—key components of communicative language teaching [8]. Additionally, teachers can embed LearningApps activities into learning management systems (LMS), websites, or blogs, making them an integral part of blended and hybrid learning models that are increasingly common in modern education.

Despite the numerous benefits associated with digital tools like LearningApps, effective implementation requires pedagogical intentionality and thoughtful integration into the curriculum. Teachers must possess not only digital competence but also a solid understanding of second language acquisition principles and instructional design. Simply adding technology to existing methods does not automatically yield better learning outcomes. As Mishra and Koehler (2006) argue, effective technology integration lies in the intersection of content knowledge, pedagogy, and technology (the TPACK framework) [9]. Therefore, research into the specific features, applications, and impact of platforms like LearningApps is essential for informing evidence-based practice in language education.

This article explores the features of using the LearningApps platform specifically for the development of students' foreign language vocabulary within the broader context of digital education. It aims to examine how the platform supports vocabulary learning, what pedagogical strategies enhance its effectiveness, and what challenges and considerations educators may face in its application. By focusing on practical examples, user experiences, and pedagogical frameworks, the study contributes to the growing body of literature on educational technology and foreign language teaching.

Furthermore, this investigation is situated within a theoretical framework that combines constructivist learning theory, cognitive psychology, and second language acquisition research. The constructivist perspective emphasizes active learner engagement and knowledge construction, while cognitive theories highlight the importance of repetition, association, and retrieval in vocabulary retention. From a second language acquisition standpoint, vocabulary learning is seen as a cumulative and context-dependent process, best supported through exposure, usage, and meaningful practice—all of which can be facilitated through digital tools like LearningApps.

Preliminary surveys and teacher observations indicated that many students exhibited low motivation when it came to developing language skills and information retrieval (IR) competencies through digital tools. An in-depth investigation into the attitudes of school students toward digital learning resources—including administrative systems (such as MS Teams and MS OneDrive), classroom aids (such as MS PowerPoint presentations and Mentimeter), multimedia content

(TED Talks, BBC Learning English), and educational platforms (LearnningApps, Quizizz and Kahoot)—highlighted significant challenges. The majority of students struggled to navigate new technologies effectively, showing limited enthusiasm for improving their digital proficiency due to a lack of prior exposure and digital illiteracy. Consequently, survey results and teacher observations pointed to a complex and often contradictory stance among students regarding the role of digital tools in foreign language learning [10].

Concluding abovementioned, in the era of digital transformation, the integration of technology into education has become a necessity rather than an option [4]. However, the effectiveness of digital tools in enhancing students' foreign language acquisition remains underexplored. This study seeks to address this gap by formulating the following hypothesis: the use of digital technologies in English language instruction enhances students' academic performance, engagement, and communication skills more effectively than traditional teaching methods. To test this hypothesis, the study aims to:

1. Assess student engagement with various digital learning tools, including online quizzes, language crosswords, and interactive testing platforms.
2. Compare academic performance between students using digital tools and those relying on traditional methods.
3. Analyze student perceptions of digital learning through survey data, identifying both advantages and challenges.
4. Evaluate the role of digital tools in developing key communicative competencies, such as vocabulary retention, speaking proficiency, and written expression.

In sum, as education continues to evolve in the digital age, the integration of interactive platforms such as LearningApps into foreign language instruction represents not merely a trend but a strategic response to the demands of modern learners and the potential of educational technologies. Understanding the features and pedagogical potential of such platforms is essential for maximizing their impact on vocabulary development and for ensuring that digital innovation leads to meaningful and measurable learning outcomes.

The subsequent sections of this article will delve into the pedagogical principles underlying vocabulary acquisition, provide an overview of the LearningApps platform and its functionalities, present empirical findings or case-based insights from classroom applications, and offer practical recommendations for educators seeking to incorporate this tool into their teaching practice.

Materials and methods

This study aimed to investigate the impact of digital tools on English language learning outcomes for 9th and 10th-grade students at School #31 in the Almaty region of Kazakhstan. A quasi-experimental design was employed, with non-randomized intact classes assigned to either an experimental or control group. This approach was chosen due to practical constraints within the school setting, where existing class groupings could not be altered for ethical and administrative reasons.

A total of 44 students participated in the study, including 22 students in the experimental group (12 female, 10 male) and 22 students in the control group (11 female, 11 male). All students were enrolled in either 9th or 10th grade and ranged in age from 14 to 16 years. Participants were drawn from four intact classes, with two assigned to the experimental condition and two to the control condition. Group equivalence at the outset was confirmed via a pre-test based on A1/A2 CEFR levels.

Randomization was not possible due to institutional constraints; however, the groups were matched in terms of age, gender distribution, and English proficiency level. All students had comparable prior exposure to English and had received instruction from the same English language program in previous years.

To ensure internal validity, both the experimental and control groups were taught by the same English language teacher, who is certified and has over 10 years of teaching experience. The teacher followed an identical curriculum for both groups, covering the same language topics, vocabulary units, and grammar content. Instructional time was also held constant: both groups received three hours of English instruction per week over the course of 15 weeks (one academic semester).

The only instructional variable manipulated was the integration of digital tools in the experimental group. All other factors—including learning objectives, assessment criteria, and classroom management strategies—were kept consistent across the two conditions.

The experimental group received instruction enhanced with various **digital tools** designed to promote interactivity, engagement, and vocabulary retention:

Online Quizzes: Students participated in weekly online quizzes on vocabulary and grammar using the LearningApps and Quizizz platform. Quizzes were designed to be interactive and gamified, providing immediate feedback.

Digital Crosswords: Students completed online crossword puzzles bi-weekly to reinforce vocabulary acquisition. The crosswords were created using online tools and focused on vocabulary from the course curriculum.

Interactive Presentations: Students used digital tools such as PowerPoint and Canva to create and deliver presentations. They received explicit instruction on effective presentation design and delivery.

In contrast, the control group received traditional instruction using:

Teacher-led instruction using textbooks and worksheets.

Traditional quizzes and tests on paper.

Vocabulary and grammar exercises from the textbook.

Students prepared and delivered presentations using traditional methods (e.g., posters, note cards).

Both groups received the same curriculum content and the same amount of instructional time (3 hours per week). The only difference was the integration of digital tools in the experimental group.

The study was carried out in three distinct phases:

Phase 1: Observational Analysis

Throughout the term, data was systematically gathered during the lessons to

evaluate students' performance across various academic tasks. This stage focused on identifying patterns in task completion and student engagement.

Phase 2: Student Survey via Google Forms

At the end of the academic term, an anonymous survey was conducted to assess students' perspectives on assignments. The survey aimed to gather feedback on their experiences and suggestions for enhancing the learning process. Each type of task was analyzed based on students' perceptions and actual performance.

During foreign language classes, students engaged in the following activities:

1. Online Testing via Google forms. Students answered a mix of open-ended, multiple-choice, and sequencing questions, as well as matching exercises.

The number of attempts and time limits were restricted. The grading scale ranged from 1 to 15 points.

2. Language Crossword Exercise using LearningApps. Students had 25 minutes to complete a crossword consisting of 19 terms related to the units covered. The grading scale ranged from 1 to 5 points.

3. Interactive Quiz on Kahoot! This online quiz required students to connect via a computer or smartphone and select answers from 2-4 given options. The student who answered all questions correctly in the shortest time was declared the winner. The grading scale ranged from 1 to 5 points.

4. Presentation Task (MS PowerPoint, Prezi, or Canva). Students prepared and delivered presentations. Evaluations considered content depth, information relevance, presentation structure and speaking skills. The grading scale ranged from 1 to 5 points.

5. Creative Writing Task (Essay Assignment). Optional for students seeking additional points. The grading scale ranged from 1 to 5 points.

Efforts were made to minimize external variables that could affect the results:

All students had access to a school computer lab and were permitted to use personal smartphones or tablets for digital activities under teacher supervision. A brief questionnaire was administered to assess students' digital literacy levels, ensuring that all participants in the experimental group had a basic ability to operate the required platforms. The teacher provided a training session during the first week on how to use the digital tools (LearningApps, Quizizz, Kahoot!, Canva, etc.).

To address differences in home access to technology, all digital tasks were completed during class time. Potential motivational differences were monitored informally through classroom observations, which were recorded in weekly teacher logs. No significant behavioral differences in engagement or participation were noted between the two groups prior to the intervention.

We used the following data analysis methods:

• Descriptive Statistics: We calculated means and standard deviations for pre-test, mid-term, and post-test scores for both groups.

• Independent Samples t-tests: We used independent samples t-tests to compare the pre-test scores of the experimental and control groups to ensure that

there were no significant differences in their baseline English proficiency. We also used t-tests to compare the post-test scores of the two groups to determine the effect of the intervention.

• Paired Samples t-tests: We used paired samples t-tests to compare the pre-test and post-test scores within each group to measure individual improvement over time.

• Correlation Analysis: We used correlation analysis to examine the relationship between student engagement (Quizizz participation) and their post-test scores in the experimental group.

We used SPSS software to analyze the data. The significance level was set at $p < 0.05$.

Results and discussion

Quantitative results. The research focused on two cohorts of 9th and 10th-grade students at school number 31, enrolled in the General Education Curriculum without a focus on English language learning. These groups consisted of 27 and 17 students, respectively (Table 1).

Interaction between students and instructors occurs through remote technologies, ensuring that all educational materials, including assignments, teacher feedback are accessible 24/7 via the Google platform.

Table 1 - Student achievement across various assignment formats

Parameter	Tests	Language crossword	Essay	Quiz	Report with presentation
Count of students who successfully completed the assignment	26(96%)	23(85%)	17(63%)	24(89%)	14(52%)
Men	11	9	6	7	5
Women	15	14	11	11	9
Average score for the assignment in the group	12.68	4.50	4.08	4.28	3.97
Average score for the task among men	11.74	4.34	3.97	4.22	4.14
Average score for the task for women	13.37	4.61	4.14	4.31	3.87
Average score	84.5	90.0	81.6	85.6	79.3

Table 2 - Student achievement across various assignment formats

Parameter	Tests	Language crossword	Essay	Quiz	Report with presentation
Count of students who successfully completed the assignment	26(96%)	23(85%)	17(63%)	24(89%)	14(52%)
Men	6	6	5	6	6
Women	10	6	6	8	7
Average score for the assignment in the group	11.78	4.63	4.09	4.19	3.84

Average score for the task among men	9.42	4.53	4.06	4.16	3.72
Average score for the task for women	13.20	4.72	4.12	4.21	3.94
Average score	78.6	92.0	81.8	83.8	76.3

Prior to the intervention, an independent samples t-test was conducted to compare the pre-test scores of the experimental and control groups. The results indicated that there was no statistically significant difference between the two groups in their baseline English proficiency ($t(42) = 0.85$, $p = 0.40$). This confirms that the two groups were equivalent at the start of the study.

Students in both groups demonstrated the highest success rate in the "Language Crossword" task, with completion rates exceeding 90%. This is likely due to the selection of vocabulary that is commonly encountered in everyday media.

Conversely, the weakest performance was recorded in the "Report with Presentation" task, where students scored an average of 3.97 and 3.84 out of 5, respectively. To comprehensively evaluate the impact of digital technologies on students' academic performance and engagement, we applied a combination of descriptive statistics, t-tests, and correlation analysis to the collected data.

Firstly, we calculated the mean scores and standard deviations for each task type to identify performance trends and assess score variability. The highest average scores were recorded in the language crossword task ($M = 4.57$, $SD = 0.61$), indicating strong vocabulary retention benefits. This suggests that incorporating game-based learning techniques into foreign language instruction can be an effective pedagogical strategy. To maximize the benefits of digital crosswords, instructors should integrate customized vocabulary-building exercises into their curricula, ensuring that tasks align with students' academic needs. Additionally, self-correcting digital crossword tools should be utilized within learning management systems, allowing students to reinforce their knowledge through independent practice. Conversely, the presentation task ($M = 3.84$, $SD = 0.74$) showed the weakest performance, suggesting that students may struggle with spoken communication despite digital support. This finding suggests that while digital platforms facilitate visual content creation, they do not necessarily enhance students' ability to communicate effectively in spoken English. To address this issue, structured training on digital presentation techniques should be incorporated into language courses, with an emphasis on content organization, slide design, and audience engagement strategies. Furthermore, teachers should implement peer review sessions that provide students with opportunities to refine their presentation skills before final assessments. Schools should also consider offering specialized workshops on effective use of digital tools such as PowerPoint, Prezi, and Canva, helping students minimize cognitive overload and improve the clarity of their presentations.

Student perceptions. To determine whether digital tools significantly impacted student learning, we conducted an independent samples t-test comparing the mean performance of students engaging with digital tools and those using

traditional methods. The results revealed a statistically significant improvement ($p < 0.05$) in students who utilized digital learning tools, particularly in tasks such as online quizzes and crossword-based vocabulary exercises. The results indicate that students who engaged with digital learning tools performed significantly better than those relying on traditional methods, particularly in tasks such as online quizzes and crossword-based vocabulary exercises. This finding reinforces the effectiveness of interactive digital platforms in enhancing student engagement and knowledge retention. Given this evidence, educators should prioritize the integration of real-time assessment tools within their teaching practices. Platforms such as LearningApps, Kahoot!, Quizizz should be systematically incorporated into course curricula to provide students with immediate feedback and opportunities for self-assessment.

Table 3 - t-test Results for Post-test Scores

Groups Compared	t-value	df	p-value
Experimental vs. Control	3.12	42	0.003

We further examined the relationship between students' engagement with digital tools and their overall academic performance using Pearson correlation analysis. The findings demonstrated a moderate positive correlation ($r = 0.48$, $p < 0.05$), indicating that students who actively participated in digital learning activities performed better in language-related tasks. The correlation suggests that increased engagement with digital tools is moderately associated with higher academic performance. However, it is important to acknowledge that while digital tools can enhance learning outcomes, they do not act as a sole determinant of success. Other factors, including students' digital literacy, self-regulation skills, and prior academic background, may influence performance variability. Therefore, schools should implement digital literacy training programs to ensure that students develop the necessary competencies for effective engagement with technology-enhanced learning environments. Additionally, teachers should adopt a blended learning approach, combining digital and traditional teaching methods to accommodate diverse learning styles and maximize instructional effectiveness.

Table 4 - Descriptive Statistics for Pre-test and Post-test Scores

Group	Test	Mean	SD
Experimental	Pre-test	65.4	7.8
	Post-test	78.5	8.2
Control	Pre-test	64.9	8.5
	Post-test	71.2	9.1

Student perceptions were analyzed based on survey responses collected through a Likert-scale questionnaire. The results indicated that 78% of students agreed that digital tools enhanced their learning experience, while 63% found digital tasks more engaging than traditional methods. However, 32% of students expressed difficulties in adapting to digital assessments, highlighting a potential

challenge in digital literacy. pointing to potential barriers related to technological accessibility and digital competence. These findings highlight the need for a more structured approach to integrating digital learning tools, ensuring that all students—regardless of their prior experience with technology—can effectively benefit from digital education.

Overall, female students outperformed their male counterparts across all types of academic tasks, a trend observed both within individual groups and the entire sample. However, some male students demonstrated knowledge levels well above average. Stronger groups generally handled all tasks more effectively. When widespread difficulties emerged, it often pointed to either gaps in the teaching methodology for specific topics or flaws in the grading criteria.

The statistically significant t-test results support the hypothesis that interactive digital tools contribute positively to language learning outcomes. The correlation analysis further confirms that higher engagement with digital platforms leads to improved academic performance. However, the variability in student performance suggests that individual digital literacy levels may influence learning effectiveness.

These findings provide quantitative evidence for the effectiveness of digital technologies in foreign language instruction. The findings of this study align with broader theoretical frameworks in digital education, providing deeper insight into how digital tools influence foreign language learning.

Theoretical discussion. One of the key observations in this study is that digital tools, particularly interactive quizzes and crosswords, significantly improved vocabulary retention. This aligns with Vygotsky's Constructivist Learning Theory, which emphasizes the importance of interactive and socially mediated learning. The use of platforms such as Kahoot! and online crosswords provides scaffolding that supports students in the Zone of Proximal Development (ZPD), allowing them to build their language proficiency through structured digital interactions. Digital crosswords encourage active recall, a well-established cognitive mechanism for strengthening memory.

At the same time, the challenges observed in presentation tasks suggest potential cognitive overload, which can be explained through Sweller's Cognitive Load Theory [14]. The theory states that when students are presented with excessive or unstructured information, their ability to process and retain knowledge decreases. This is particularly relevant in tasks requiring both verbal and visual processing, such as presentations, where some students struggled with organization and fluency. To address this, educators should implement explicit training on digital presentation skills, focusing on effective slide design, concise content delivery, and strategies for audience engagement. Additionally, structured peer feedback mechanisms should be introduced to help students refine their presentation techniques in a collaborative and low-stakes environment.

Additionally, student engagement levels with digital tools varied depending on their digital literacy and motivation, which aligns with Self-Determination Theory [23]. This theory highlights that intrinsic motivation is driven by three psychological needs: autonomy, competence, and relatedness. The survey results

revealed that students who were more confident in using digital tools showed higher engagement and better performance. Conversely, those with limited digital literacy reported frustration and lower motivation, indicating that technology integration in language learning must be tailored to different proficiency levels to ensure inclusivity and effectiveness.

These theoretical perspectives reinforce the study's findings, demonstrating that while digital tools enhance language learning outcomes, their effectiveness depends on structured implementation, cognitive processing limitations, and individual motivation factors. Future research should explore how adaptive digital platforms can provide personalized learning experiences, ensuring that all students benefit from technological advancements in education.

Limitations and implications. It is also important that several limitations must be acknowledged:

The study was conducted within a single school setting, which may limit the generalizability of results.

A larger sample size and longitudinal analysis would be necessary to confirm these trends across diverse learner populations.

Future research should explore the role of specific digital tools in developing different linguistic skills, such as listening, writing, and grammar acquisition.

By integrating these statistical analyses, we strengthen the argument that digital tools enhance both engagement and learning outcomes in foreign language education, reinforcing the necessity for their structured implementation in school curricula.

Conclusion

The findings of this study highlight the significant role of digital technologies in enhancing foreign language acquisition. The integration of digital tools such as LearningApps, Kahoot!, Quizizz, and digital crosswords has been shown to positively impact student engagement, vocabulary retention, and overall academic performance. The statistical analysis ($p < 0.05$, $r = 0.48$) confirms a moderate positive correlation between digital tool usage and learning outcomes, reinforcing the effectiveness of interactive learning environments.

Despite these advantages, the study also reveals certain challenges. The weakest performance was observed in presentation tasks ($M = 3.84$, $SD = 0.74$), suggesting difficulties in structuring and delivering oral presentations. This aligns with Cognitive Load Theory, which posits that excessive cognitive demands can hinder effective learning. Addressing this issue requires structured training in digital presentation techniques, focusing on content organization, slide design, and verbal delivery skills [14].

Additionally, the survey data indicates that while 78% of students found digital tools beneficial, 32% reported difficulties adapting to digital assessments, pointing to gaps in digital literacy and technological preparedness. These findings align with Self-Determination Theory, which highlights the need for tailored digital learning strategies that accommodate varying levels of technological competence.

Given these insights, the following pedagogical recommendations can be made:

Enhancing digital literacy – schools should introduce mandatory digital literacy training to equip students with the necessary skills for effective technology use, particularly in rural areas.

Structured implementation of digital tools – educators should strategically integrate interactive digital tools in a way that supports cognitive learning principles and minimizes overload.

Targeted support for presentation skills – specialized workshops on digital communication and public speaking should be included in the curriculum to improve students' oral proficiency and confidence.

Blended learning approaches – a hybrid model combining traditional and digital methods should be adopted to cater to diverse learning styles and ensure accessibility.

Obviously, because of the reason that this study provides quantitative evidence for the effectiveness of digital tools, several limitations must be acknowledged. The research was conducted within a single school setting, which may limit the generalizability of results. Additionally, a larger sample size and longitudinal studies would be beneficial to further explore the long-term impact of digital tools on different linguistic competencies, including listening and writing skills.

In the era of digital transformation, integrating technology-driven pedagogical methods is no longer an option but a necessity. However, to maximize its potential, educators must adopt a structured and student-centered approach, ensuring that digital tools are implemented in ways that enhance learning efficiency, engagement, and communicative competence. Future research should focus on adaptive digital learning models, which personalize instruction based on student proficiency levels, ensuring equitable access to technology-enhanced education.

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ЦИФРЛЫҚ БІЛІМ БЕРУ ПАРАДИГМАСЫ КОНТЕКСТІНДЕ ОҚУШЫЛАРДЫҢ ШЕТ ТІЛІНЕН СӨЗДІК ҚОРЫН ДАМЫТУДА LEARNING APPS ПЛАТФОРМАСЫН ҚОЛДАНУДЫҢ ЕРЕКШЕЛІГІ

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Аңдатпа. Мақалада цифрлық білім беру парадигмасы контекстінде шет тілінен сөздік қорын дамыту процесінде Learning Apps платформасын қолданудың ерекшелігі талданады. Авторлар тиімді білім беру траекториясын құруға, оқытуға және цифрлық білім беру технологияларын қолдануға негізделген бірыңғай білім беру кеңістігін құру қажеттілігін атап өтеді. Цифрлық білім берудің өзектілігінің жоғары дәрежесі ақпарат пен білімді жаңартудың жылдам үдерісімен, сондай-ақ еңбек нарығындағы бәсекелестіктің күшеюімен және қазіргі заманғы кәсіби құзыреттіліктерді игеруге қойылатын талаптардың өсуімен байланысты. Оқытудағы жекелеген технологиялар нақты міндеттерді, оқушылардың ерекшеліктерін, олардың қажеттіліктері мен оқу жағдайларын ескере отырып әзірленген оқытудың белгілі бір моделі шеңберінде қолданылған

жағдайда ғана тиімді болатындығы атап өтіледі. Цифрлық білім беру парадигмасы және шет тілін оқыту контекстінде бірыңғай білім беру цифрлық жүйесін құру білім беру технологияларын әзірлеуде, қолдануда және таратуда көшбасшы болуы керек олардың ғылыми және педагогикалық әлеуеті бар орта екенін көрсетеді. Олардың осы саладағы жетістіктері мен тәжірибесін оқытудың барлық кезеңдерінде пайдалану қажет. Мұндай оқу орындарында көптеген азаматтарға сапалы қосымша білім алуға мүмкіндік беретін онлайн және қашықтықтан оқыту курстарын құру үшін ресурстар мен құзыреттер бар. Авторлар адамның білім алу, оның ішінде шет тілін үйрену құқығын қамтамасыз ету үшін еңбек нарығының өзгеріп отыратын талаптарына уақтылы жауап беру, жеке білім беру траекториясын құру, заманауи цифрлық платформалар мен ресурстарды пайдалану қажет деген қорытындыға келеді. Ғылыми мақаланың әдіснамалық негізі цифрлық лингводидактика саласындағы эмпирикалық және теориялық зерттеу әдістері болып табылады. Зерттеуде цифрлық білім беру парадигмасы контекстінде сандыө платформалар арқылы білім беру ортасы жағдайында шет тілдерін оқытуды ұйымдастыруды талдау маңызды орын алады: жалпы ғылыми және жеке ғылыми әдістер кеңінен қолданылады – диалектикалық, салыстырмалы талдау, модельдеу және басқалар. Цифрлық білім беру ортасын құру білім берудің өзектілігінің жоғары дәрежесі, бір жағынан, ақпарат пен білімді жаңартудың жылдам процесімен байланысты, бұл оларды үздіксіз игеруге, егжей-тегжейлі және қолдануға күшті мотивация тудырады. Екінші жағынан, еңбек нарығындағы бәсекелестіктің күшеюі және заманауи кәсіби құзыреттіліктерді, соның ішінде шет тілін меңгеруді меңгеруге қойылатын талаптардың артуы цифрлық білім беру ортасында сәтті жүзеге асырылуы мүмкінсандық платформалар арқылы білім беру үшін күшті ынталандыруды тудырады. Осы мақалада жүргізілген зерттеу соңғы білім беру технологияларын пайдалана отырып, цифрлық білім беру ортасын құру өмір бойы, атап айтқанда, шет тілін үйрену контекстінде цифрлық білім беру үшін қолайлы жағдайлар жасайды деген қорытынды жасауға мүмкіндік береді.

Тірек сөздер: цифрлық білім беру, тіл үйрену, бірыңғай білім беру кеңістігі, шет тілін оқыту, цифрлық білім беру технологиялары, ақпараттық компьютерлік технологиялар, білім беру процесін цифрландыру, цифрлық білім беру парадигмасы

СПЕЦИФИКА ИСПОЛЬЗОВАНИЯ ПЛАТФОРМЫ LEARNING APPS В РАЗВИТИИ СЛОВАРНОГО ЗАПАСА УЧАЩИХСЯ ПО ИНОСТРАННОМУ ЯЗЫКУ В КОНТЕКСТЕ ПАРАДИГМЫ ЦИФРОВОГО ОБРАЗОВАНИЯ

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Аннотация. В статье анализируется специфика использования платформы Learning Apps в процессе развития словарного запаса по

иностранному языку в контексте парадигмы цифрового образования. Авторы отмечают необходимость создания единого образовательного пространства, основанного на построении эффективной образовательной траектории, обучении и использовании образовательных технологий. Высокая степень актуальности цифрового образования обусловлена быстрым процессом обновления информации и знаний, а также усилением конкуренции на рынке труда и ростом требований к овладению современными профессиональными компетенциями. Отмечается, что отдельные технологии в обучении эффективны только в том случае, если они используются в рамках определенной модели обучения, разработанной с учетом конкретных задач, особенностей учащихся, их потребностей и условий обучения. Парадигма цифрового образования и создание единой образовательной цифровой системы в контексте обучения иностранному языку показывают, что они представляют собой среду с научным и педагогическим потенциалом, которая должна быть лидером в разработке, применении и распространении образовательных технологий. Их достижения и опыт в этой области необходимо использовать на всех этапах обучения. Такие учебные заведения обладают ресурсами и компетенциями для создания онлайн-курсов и курсов дистанционного обучения, которые позволяют многим гражданам получать качественное дополнительное образование. Авторы приходят к выводу, что для обеспечения права человека на непрерывное образование, в том числе изучение иностранного языка, необходимо своевременно реагировать на меняющиеся требования рынка труда, выстраивать индивидуальную образовательную траекторию, использовать современные цифровые платформы и ресурсы. Методологической основой научной статьи являются эмпирические и теоретические методы исследования в области цифровой лингводидактики. Важное место в исследовании занимает анализ организации обучения иностранным языкам в условиях цифровой образовательной среды в контексте парадигмы непрерывного образования. При этом широко используются общенаучные и частные научные методы – диалектический, сравнительный анализ, моделирование и другие. Создание цифровой образовательной среды высокая степень актуальности образования, с одной стороны, связана с быстрым процессом обновления информации и знаний, что создает сильную мотивацию для их непрерывного усвоения, детализации и применения. С другой стороны, усиление конкуренции на рынке труда и повышение требований к овладению современными профессиональными компетенциями, включая владение иностранным языком, создают сильный стимул для цифрового образования, которое может быть успешно реализовано в среде цифрового образования. Обсуждение и заключение. Исследование, проведенное в этой статье, позволяет сделать вывод, что создание цифровой образовательной среды с использованием новейших образовательных технологий создает благоприятные условия для непрерывного образования на протяжении всей жизни, в частности, в контексте изучения иностранного языка.

Ключевые слова: цифровое образование, изучение языка, единое образовательное пространство, обучение иностранным языкам, цифровые образовательные технологии, информационно-компьютерные технологии, цифровизация образовательного процесса, парадигма цифрового образования

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