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INGLIZ TILI LUG‘AT BOYLIGINI RIVOJLANTIRISHDA ONLAYN VOSITALARDAN FOYDALANISH

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Annotatsiya.

Raqamli vositalar bugungi kunda ingliz tili lug‘at boyligini o‘rgatish jarayonining odatiy qismiga aylangan. Biroq ularning samaradorligi ekrandan foydalanishning yangiligiga emas, balki bir qator pedagogik va metodik omillarga bog‘liq. Onlayn o‘yinlar, raqamli flesh-kartalar va multimedia ilovalari til o‘rganuvchilarga yangi so‘zlarni o‘zlashtirish, takrorlash va xotiradan qayta tiklashning turli imkoniyatlarini taqdim etadi. Ushbu maqolada raqamli vositalar yordamida lug‘at boyligini rivojlantirishga oid nashr etilgan ilmiy tadqiqotlar tahlil qilinib, mazkur vositalarning samaradorligi baholanadi. Ko‘rib chiqilgan adabiyotlar Duolingo va Quizlet platformalariga oid empirik tadqiqotlar, mobil texnologiyalar yordamida lug‘at o‘rganish bo‘yicha tizimli sharh hamda chatbot asosidagi lug‘at o‘rganish yordamchisining eksperimental baholash natijalarini qamrab oladi. Tadqiqotlarning aksariyatida raqamli vositalardan foydalangan o‘quvchilarning lug‘at bo‘yicha test natijalari yaxshilangani qayd etilgan. Biroq erishilgan natijalarning darajasi va xususiyati dastur turiga hamda undan foydalanish usullariga qarab farqlanadi. Maqolada so‘zlarni tushunish darajasidagi bilim, qisqa muddatli test natijalari va so‘zlardan faol foydalanish ko‘nikmalari alohida ko‘rib chiqiladi, chunki muayyan vosita ushbu jihatlardan birini rivojlantirishi, boshqalariga esa yetarlicha ta’sir ko‘rsatmasligi mumkin. Tahlil natijalari raqamli mashqlar mazmunli o‘qish, yozish va og‘zaki nutq faoliyati bilan uyg‘unlashtirilganda eng samarali bo‘lishini ko‘rsatadi. Maqola faqat nashr etilgan ilmiy ishlarga asoslangan bo‘lib, unda yangi empirik ma’lumotlar keltirilmagan.

Kalit so‘zlar: ingliz tili lug‘at boyligi, onlayn ta’lim vositalari, raqamli flesh-kartalar, geymifikatsiya, mobil texnologiyalar yordamida til o‘rganish, Quizlet, Duolingo.

ИСПОЛЬЗОВАНИЕ ОНЛАЙН-ИНСТРУМЕНТОВ ДЛЯ РАЗВИТИЯ СЛОВАРНОГО ЗАПАСА АНГЛИЙСКОГО ЯЗЫКА

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Аннотация.

Цифровые инструменты стали привычной частью процесса обучения английской лексике, однако их эффективность зависит не столько от новизны использования экранных технологий, сколько от совокупности педагогических и методических факторов. Онлайн-игры, цифровые флеш-карточки и мультимедийные приложения предоставляют обучающимся новые возможности для изучения, повторения и воспроизведения слов по памяти. В статье представлен обзор опубликованных научных исследований, посвящённых использованию цифровых технологий для развития словарного запаса, и рассматривается эффективность данных инструментов. Анализируемая литература включает эмпирические исследования платформ Duolingo и Quizlet, систематический обзор мобильного обучения лексике, а также экспериментальную оценку эффективности чат-бота, предназначенного для изучения словарного запаса. В большинстве исследований отмечается улучшение результатов лексических тестов у обучающихся, использовавших цифровые инструменты. Однако степень и характер достигнутых результатов различаются в зависимости от используемой программы и способов её применения. В статье отдельно рассматриваются рецептивное знание лексики, результаты краткосрочного тестирования и продуктивное использование слов, поскольку

цифровой инструмент может способствовать развитию одного из этих аспектов, не обеспечивая сопоставимого прогресса в других. Анализ научной литературы показывает, что цифровая практика наиболее эффективна при её сочетании с содержательными заданиями на чтение, письмо и говорение. Статья основана исключительно на опубликованных научных работах и не содержит новых эмпирических данных.

Ключевые слова: словарный запас английского языка, онлайн-инструменты обучения, цифровые флеш-карточки, геймификация, мобильное обучение иностранным языкам, Quizlet, Duolingo.

USING ONLINE TOOLS FOR ENGLISH VOCABULARY DEVELOPMENT

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Abstract.

Digital tools have become a familiar part of English vocabulary instruction, yet their effectiveness depends on much more than the novelty of screen-based learning. Online games, digital flashcards, and multimedia applications provide learners with new opportunities to encounter, review, and retrieve vocabulary. This article reviews published research on digital vocabulary instruction and examines what the existing evidence reveals about the effectiveness of these tools. The literature reviewed includes empirical studies of Duolingo and Quizlet, a systematic review of mobile-assisted vocabulary learning, and an experimental evaluation of a chatbot-supported vocabulary assistant. Most studies report improved vocabulary test scores among learners who used digital tools; however, the extent and nature of these gains vary depending on the program and how it is implemented. The review also distinguishes between receptive vocabulary knowledge, short-term test performance, and productive vocabulary use, as a particular tool may support one of these aspects without necessarily improving the others. The findings suggest that digital vocabulary practice is most effective when integrated with meaningful reading, writing, and speaking activities. The article is based exclusively on previously published research and presents no new empirical data.

Keywords: English vocabulary, online learning tools, digital flashcards, gamification, mobile-assisted language learning, Quizlet, Duolingo.

Introduction. Knowing a language takes more than knowing its grammar. Learners also need a substantial vocabulary if they are to understand what they read and hear and express their ideas with reasonable accuracy. Vocabulary is also notoriously difficult to learn. A student may recognise a word on a list but forget it within days, confuse it with a similar word, or find that they cannot use it correctly in a sentence. For this reason, effective vocabulary teaching requires repeated exposure to words and meaningful opportunities to use them in context.

Digital technology offers one way to provide both. Learners can study on their phones, listen to pronunciations, match words to pictures, test themselves, and receive immediate feedback. Some platforms incorporate game-like features, while others use flashcards or sequences of short activities. Such features increase access to vocabulary practice and may encourage learners to continue studying outside the classroom. Dağdeler (2023), for example, reviewed research on mobile-assisted vocabulary learning and examined the types of technologies used and the topics addressed in the studies.

However, it would be an oversimplification to assume that using an application automatically leads to long-term learning. A student who performs well on a matching task may still be unable to use the same words correctly in conversation or writing. The contribution of an online tool depends on the vocabulary being taught, the design of the activities, the learner's proficiency level, and how the teacher integrates online practice with face-to-face classroom instruction.

This paper examines the potential of online tools for English vocabulary learning. It considers game-based platforms, digital flashcards, and multimedia tools. Rather than treating all digital resources as equally effective, it explores what specific tools offer and identifies potential limitations that teachers should consider.

2. APPROACH TO THE LITERATURE

This article presents a focused narrative review of published research on digital tools for English vocabulary learning. It draws on a selected number of identifiable empirical studies and one systematic review of mobile-assisted vocabulary learning. The empirical research includes quasi-experimental studies, pre-test and post-test designs, comparisons of different vocabulary applications, and investigations of digital learning environments.

The studies cannot be directly compared in every respect. They differ in participants' ages and proficiency levels, teaching contexts, target vocabulary, and duration of practice. Some measure vocabulary test scores, while others examine retention, learner perceptions, or application design. Therefore, the results are not statistically pooled in this review, and no platform is presented as universally superior to others. Instead, each study is considered in relation to a more specific question: what can its findings reasonably tell teachers about the use of digital resources?

3. ONLINE TOOLS AND VOCABULARY DEVELOPMENT

3.1. Gamified Vocabulary Platforms

Gamified platforms present vocabulary practice through quizzes, matching activities, points, levels, and other game-like features. Part of their appeal lies in their practicality. Students can complete short tasks, receive immediate feedback, and try again after making mistakes. Teachers can also quickly assess whether learners have retained recently introduced vocabulary.

Ajisoko (2020) investigated Duolingo as a supplementary tool for English vocabulary learning among university students. Using a pre-test and post-test design, the study found improvements in vocabulary scores following a period of application-based practice. The study was relatively small, so its findings cannot establish that the application would be equally effective in every context. Nevertheless, it demonstrates how a mobile platform can be integrated into supplementary vocabulary practice.

Yip and Kwan (2006) conducted a quasi-experimental study of online vocabulary games involving 100 engineering students over approximately nine weeks. One group used selected game-based websites, while the comparison group participated in activity-based lessons. The experimental group achieved higher post-test scores. The teachers involved considered the games useful but also recognised that additional support would be necessary if such resources were to become a central component of instruction.

Taken together, these studies suggest that game-based practice can encourage participation and provide repeated exposure to target vocabulary. However, points and speed-based competition may shift learners' attention towards winning rather than understanding. One practical response is to follow a game with an activity in which students explain a word, use it in a sentence, or apply it to a topic related to their course.

3.2. Digital Flashcards

Digital flashcards make vocabulary review easier to organise and repeat. Applications such as Quizlet allow learners to create or use existing word sets, read definitions, and practise recalling vocabulary items. Unlike traditional paper flashcards, digital versions can include audio, images, and example sentences. Although these additional features can be helpful, much of the learning value comes from actively retrieving a word rather than simply reviewing it.

Solhi Andarab (2019) used Quizlet to investigate vocabulary learning through collocations. The study involved 70 upper-intermediate EFL learners and compared vocabulary items presented with synonyms against those presented with frequent collocations in example sentences. A statistically significant difference emerged between the groups, highlighting the potential value of teaching words in meaningful combinations rather than as isolated items.

Nguyen and Le (2022) examined the use of Quizlet inside and outside the classroom with 89 university students. Quizlet-supported review contributed to vocabulary gains compared with the control condition. However, no statistically significant difference was found between the group using Quizlet at home and the group using it in class. This finding suggests that the value of a digital tool may depend less on where it is used than on the quality and consistency of the review activities it supports.

Nevertheless, flashcards do not constitute a complete vocabulary teaching method. Learners may become familiar with definitions while remaining uncertain about a word's grammatical behaviour or appropriate contexts of use. A practical instructional sequence involves introducing a word in context, using flashcards for retrieval practice, and then asking learners to produce their own examples, explanations, or dialogues.

3.3. Multimedia and AI-Supported Applications

Multimedia applications combine written explanations, audio, images, and interactive tasks. This can be particularly helpful for words that are difficult to explain through translation alone. Learners may understand a term more readily when they hear its pronunciation, see a relevant image, and read an example sentence.

AI-supported applications offer an additional feature: interaction. A chatbot can answer learners' questions, provide examples, or encourage them to use vocabulary in short exchanges. Polyzi and Moussiades (2023) presented an artificial intelligence-based vocabulary learning assistant that combined games, quizzes, and chatbot interaction. In their experimental evaluation, the application was compared with book-based vocabulary study and produced positive results. The study illustrates the potential benefits of combining different forms of practice, although the evaluation of a single application in one setting cannot establish the effectiveness of AI-based tools in general.

Teachers must also consider the reliability and relevance of automatically generated explanations and examples. Digital tools can support vocabulary practice, but they do not eliminate the need to verify language accuracy, select appropriate content, and guide learners towards correct usage.

3.4. Tools for Academic and Specialised Vocabulary

Vocabulary applications do not all serve the same purpose. Some focus on everyday vocabulary, while others aim

to develop academic or specialised lexical knowledge. This distinction is important because students in higher education frequently need to understand terminology used in lectures, textbooks, and discipline-specific communication.

Iravi and Malmir (2023) compared several lexical tools and applications for learning English academic core vocabulary. Their study involved 74 EFL students and included Anki, WordUp, and technology-mediated communication applications. The outcomes varied across the applications. WordUp performed better than both Anki and the communication-based applications, while Anki demonstrated advantages over the communication group. These findings suggest that application design and instructional focus are important factors. Simply describing a resource as digital provides little information about its suitability for a particular learning objective.

For English for Specific Purposes (ESP) teaching, the implication is that vocabulary tools should be selected according to the subject area and students' language-related tasks. General English vocabulary sets may be useful for revision, but they do not necessarily prepare engineering or architecture students to describe processes, interpret diagrams, or explain technical decisions. Digital practice becomes more relevant when vocabulary sets and examples reflect learners' academic needs. This concern is also central to earlier work on foreign language teaching for students in technical fields (Katayeva, 2023) and on online and mobile-assisted vocabulary learning in engineering (Katayeva, 2025).

4. DISCUSSION

Across the studies considered in this review, online tools appear to offer three practical advantages. First, they make regular vocabulary review more accessible. Short activities can be completed outside the classroom, allowing learners to encounter target words repeatedly. Second, many tools provide immediate feedback, enabling students to identify errors and try again. Third, games and interactive features may make repetitive review more engaging. Together, these benefits help explain the increasing use of digital resources in language classrooms.

However, the evidence must be interpreted carefully. The studies differ in their participants, interventions, and outcome measures. Improvements in post-test scores in one setting do not necessarily mean that an application will be equally effective for learners of different ages, proficiency levels, or academic specialisations. Similarly, positive attitudes towards an application do not demonstrate durable vocabulary knowledge. In this respect, Dağdeler's (2023) systematic review is particularly useful because it highlights the diversity of technologies and research approaches within mobile-assisted vocabulary learning.

Another important issue is the distinction between receptive and productive vocabulary knowledge. Receptive knowledge enables learners to recognise a word when reading or listening, whereas productive knowledge involves retrieving the word independently and using it appropriately. Many digital activities are more effective at assessing recognition because learners select answers, match definitions, or identify translations. Although such tasks are useful, successful performance should not be interpreted as evidence that learners can confidently use the vocabulary in communication.

Teachers can help bridge this gap by connecting online practice with classroom activities. After reviewing vocabulary on Quizlet, students might explain a technical term to a partner, label a diagram, write a short description, or present a solution to a problem. Following a game-based quiz, they could discuss why an answer is correct and create their own examples. Such follow-up activities encourage learners to retrieve and apply vocabulary beyond the digital application.

Practical barriers must also be considered. Students may not have equal access to reliable internet connections or suitable devices. Some platforms restrict their most useful features to paid subscriptions, while notifications and unrelated content may interrupt concentration. Teachers should therefore avoid making a single application the only means of completing essential coursework. Wherever possible, digital activities should be accompanied by accessible alternatives and selected for their educational value rather than their popularity.

5. IMPLICATIONS FOR TEACHING PRACTICE

Online tools are most effective when integrated into a planned instructional sequence rather than used as isolated activities. A teacher might begin by introducing a small set of words through a text, an image, or a subject-related example. Students can then practise retrieving the words using a flashcard application, while a short quiz can help the teacher identify items that remain difficult. Finally, learners should use the vocabulary in a task that resembles the communication they are expected to perform in English.

This sequence also helps teachers determine what should be assessed. A digital score indicates that a learner selected correct answers in a particular activity; it cannot independently demonstrate the ability to use a word accurately in a new context. Assessment should therefore combine recognition tasks with productive activities, including sentence writing, short explanations, descriptions, and oral presentations.

Teachers should also help students develop realistic independent study habits. Learners need guidance on selecting a manageable number of words, reviewing them over time, recording examples, and identifying vocabulary items that remain challenging. Without such guidance, access to an application may result in irregular practice rather than sustained learning.

6. CONCLUSION

Online tools have expanded opportunities for learning English vocabulary. Gamified platforms can make revision

more engaging, digital flashcards support repeated retrieval, and multimedia or AI-supported applications provide additional ways to encounter and practise words. The studies discussed in this review report encouraging outcomes in several contexts, particularly in vocabulary test performance and opportunities for regular review.

Nevertheless, digital resources cannot replace effective teaching. Their effectiveness depends on the learning objectives, the relevance of the vocabulary, learners' proficiency levels, and the quality of the activities. High scores and successful word recognition are useful indicators of performance on specific tasks, but they do not necessarily demonstrate learners' ability to use vocabulary independently.

The central implication is that online tools are most effective when connected to meaningful language use. Students should not stop after matching a word to its definition or completing a quiz. They need opportunities to explain, describe, discuss, and write using the vocabulary they have practised. When digital review is combined with teacher guidance and purposeful communication, it can become a valuable component of vocabulary instruction.

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