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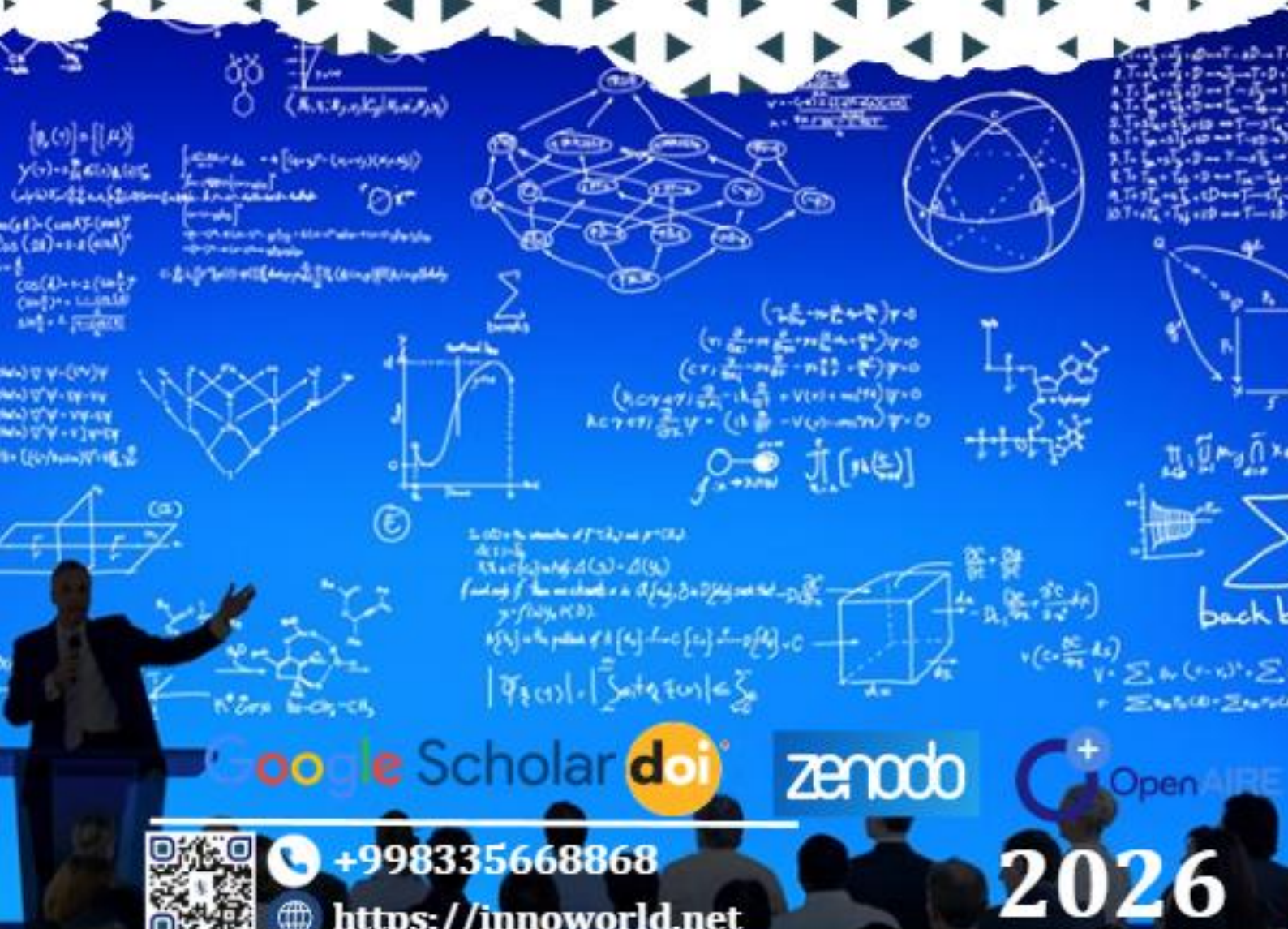
# ZAMONAVIY ILM-FAN VA TA'LIM: MUAMMO VA YECHIMLAR

## ILMIY-AMALIY KONFERENSIYA



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# «INNOVATIVE WORLD» ILMIY TADQIQOTLARNI QO'LLAB-QUVVATLASH MARKAZI

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# THE ROLE OF MOBILE APPLICATIONS (E.G., DUOLINGO,MEMRISE) IN VOCABULARY ACQUISITION

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**Annotation.** This study investigates the effectiveness of mobile applications such as Duolingo and Memrise in vocabulary acquisition among language learners. With the rapid advancement of digital technology, mobile-assisted language learning has emerged as a significant component of modern education. The paper focuses on how these applications facilitate vocabulary learning through spaced repetition, gamification, and multimodal input, while also promoting learner autonomy. The findings suggest that mobile applications, when combined with traditional classroom instruction, can significantly enhance learners' vocabulary knowledge and overall language proficiency.

**Keywords:** mobile applications, vocabulary acquisition, language learning, Duolingo, Memrise, mobile-assisted learning

**Аннотация.** В данной статье рассматривается эффективность мобильных приложений, таких как Duolingo и Memrise, в усвоении словарного запаса изучающими иностранные языки. В условиях стремительного развития цифровых технологий мобильное обучение становится важной частью современного образования. Статья сосредоточена на том, как эти приложения способствуют изучению лексики через повторение, элементы геймификации и мультимодальный ввод, а также на развитии автономности учащихся. Результаты показывают, что мобильные приложения в сочетании с традиционным обучением значительно повышают словарный запас и общую языковую.

**Ключевые слова:** мобильные приложения, усвоение словарного запаса, изучение языка, Duolingo, Memrise, мобильное обучение

**Annotatsiya.**Mazkur maqolada Duolingo va Memrise kabi mobil ilovalarning chet tilini o'rganishda lug'at boyligini oshirishdagi samaradorligi o'rganiladi. Raqamli texnologiyalar jadal rivojlanayotgan bir davrda mobil ta'lim zamonaviy ta'lim tizimining muhim qismiga aylanmoqda. Maqola mobil ilovalar takrorlash, o'yin elementlari va multimodal kirish vositalari orqali lug'at o'zlashtirishni qanday qo'llab-quvvatlayotganini, shuningdek, o'rganuvchilarning mustaqil o'rganish qobiliyatini rivojlantirishini tahlil qiladi. Tadqiqot natijalari shuni ko'rsatadiki, mobil ilovalar an'anaviy darslar bilan birga qo'llanilganda o'quvchilarning lug'at boyligini va umumiy til malakasini sezilarli darajada oshiradi.

**Kalit so'zlar:** mobil ilovalar, lug'at boyligini oshirish, til o'rganish, Duolingo, Memrise, mobil ta'lim

In addition to their pedagogical design, mobile applications contribute to vocabulary development by gradually shaping learners' learning habits. Daily reminders, streak systems, and short tasks encourage learners to return to the

application regularly, even when motivation is low. Over time, this regular exposure builds discipline and transforms vocabulary learning into a routine activity rather than an occasional effort. Such habitual engagement is particularly important in vocabulary acquisition, as lexical knowledge develops through continuous contact with language rather than isolated study sessions. The ability of mobile applications to sustain this continuity distinguishes them from many traditional learning resources[7].

Another aspect that enhances vocabulary acquisition through mobile applications is the balance between recognition and recall. Learners are not only asked to recognize correct answers but are also frequently required to actively produce words through spelling, translation, or sentence completion tasks. This shift from passive recognition to active recall strengthens memory traces and increases the likelihood that vocabulary will be accessible during real communication. As learners progress, the increasing complexity of tasks encourages deeper processing of lexical items, moving beyond surface-level memorization. Mobile applications also expose learners to variation in language use, which plays a crucial role in vocabulary development. Words may appear in different grammatical forms, collocations, or contextual environments, allowing learners to build flexible lexical knowledge. This variability helps learners understand that vocabulary is not static but adapts to context and communicative purpose. Through repeated exposure to such variation, learners gradually develop a more nuanced understanding of word meaning and usage, which is essential for advanced language proficiency. Creativity in mobile applications is further reflected in the integration of narrative and thematic progression. Some applications structure vocabulary learning around topics, scenarios, or story-like sequences, enabling learners to associate words with meaningful content rather than isolated lists. This thematic organization supports associative memory and allows learners to mentally connect new vocabulary with prior knowledge and personal experiences. When vocabulary is learned in this way, it becomes more memorable and easier to retrieve in authentic situations.

Moreover, mobile applications create opportunities for incidental vocabulary learning. While learners may initially focus on completing tasks or achieving goals within the application, they are simultaneously exposed to new lexical items without deliberate memorization. This incidental learning mirrors natural language acquisition processes, where vocabulary is absorbed through repeated exposure in meaningful contexts. Over time, such exposure contributes significantly to vocabulary growth, especially when combined with intentional learning strategies. The role of feedback in mobile applications should also be emphasized. Immediate feedback allows learners to notice gaps in their knowledge and adjust their understanding accordingly. Unlike delayed correction in traditional settings, instant feedback supports rapid learning cycles and prevents the fossilization of errors.

[7] Kukulska-Hulme, A. (2012). Mobile-assisted language learning. In C. A. Chapelle (Ed.), The Encyclopedia of Applied Linguistics. Oxford: Wiley-Blackwell.

This responsiveness encourages experimentation and reduces fear of making mistakes, which is particularly beneficial for vocabulary learning, where trial and error play a central role from a cognitive perspective, mobile applications support vocabulary acquisition by reducing cognitive overload. Lessons are typically broken into small, manageable units that align with learners' attention spans. This micro learning approach allows learners to focus on a limited set of vocabulary items at a time, increasing concentration and reducing fatigue. As a result, learners are more likely to complete learning sessions successfully and maintain positive attitudes toward vocabulary study.

Mobile-assisted vocabulary learning also aligns well with modern learners' lifestyles. The portability of mobile devices enables learners to engage with language during moments that would otherwise be unproductive, such as waiting, commuting, or taking short breaks. This integration of learning into everyday life increases total exposure time and reinforces the idea that language learning is not confined to formal educational settings. Over time, this increased exposure can have a substantial impact on vocabulary size and retention.

Despite the many advantages of mobile applications, their effectiveness ultimately depends on how learners use them. Passive or inconsistent use may limit vocabulary gains, while strategic and reflective use can lead to significant improvement. Learners who combine app-based learning with active language use, such as reading, speaking, and writing, are more likely to transfer vocabulary knowledge into communicative competence. Therefore, mobile applications are most effective when viewed as part of a broader learning ecosystem rather than as standalone solutions.[8]As digital education continues to evolve, mobile applications are likely to play an increasingly important role in vocabulary acquisition. Advances in artificial intelligence and data analytics may further personalize learning experiences, providing more precise feedback and adaptive content. Understanding the mechanisms through which these applications support vocabulary development allows learners and educators to make informed decisions about their use and integration into language learning practices. When used thoughtfully, applications like Duolingo and Memrise offer not only convenience but also meaningful opportunities for sustained lexical growth and language development[9]. The use of mobile applications in language learning has opened new possibilities for vocabulary acquisition that go beyond traditional methods. Unlike rote memorization, many applications now incorporate multisensory input, presenting words with images, sounds, and short stories. This combination allows learners to connect meaning, pronunciation, and context simultaneously, which strengthens memory and helps in transferring vocabulary to real-life usage[1]. Moreover, some apps encourage learners to create their own content, such as personal word lists or example sentences, allowing them to take an active role in their learning and reinforcing their understanding of new words[2].

[8] Nation, I. S. P. (2013). Learning Vocabulary in Another Language. Cambridge University Press.
[9]Schmitt, N. (2010). Researching Vocabulary: A Vocabulary Research Manual. Palgrave Macmillan.

In addition, mobile applications often include gamified language tasks that simulate real-life situations. For instance, learners may complete mini-challenges that require using new vocabulary to solve problems or communicate in hypothetical daily situations. Such interactive scenarios promote active thinking, as learners must apply words meaningfully rather than merely recognizing them[3]. By embedding vocabulary in practical contexts, applications foster both comprehension and production, which accelerates the integration of new words into the learner's active lexicon. Another innovative feature of modern applications is the social and collaborative aspect. Learners can participate in peer correction, shared challenges, or friendly competitions. This engagement introduces accountability and motivation, as users are inspired to practice more consistently to keep up with peers. Additionally, exposure to peer-generated examples allows learners to see diverse uses of words and idioms, broadening their understanding of language in social contexts. Mobile-assisted learning also benefits from micro-learning techniques. Vocabulary is divided into small, manageable units that can be studied in short bursts throughout the day. Combined with spaced repetition, this approach maximizes retention and reduces the cognitive overload often associated with long study sessions. Short, frequent practice moments can be seamlessly integrated into everyday routines, such as during commutes, coffee breaks, or short waiting periods. The creative design of applications further supports learner autonomy. Users can choose topics that interest them, adjust difficulty levels, and set personal goals. By controlling the pace and content of their learning, learners develop a sense of responsibility and engagement. Some applications even adapt dynamically to the user's progress, offering challenges that match current proficiency, which encourages consistent growth without overwhelming the learner[10]. Finally, incidental vocabulary learning is promoted as learners engage with diverse exercises and interactive tasks. Words encountered incidentally while completing challenges or playing games are often remembered more effectively than words studied in isolation. Over time, this repeated, meaningful exposure helps learners internalize vocabulary naturally, mirroring how language is acquired in real-world contexts[11]. Beyond the core functions of vocabulary practice, mobile applications also emphasize real-world applicability, giving learners tasks that mirror everyday interactions. Users might be asked to describe objects in their environment, simulate conversations, or respond to prompts that reflect routine situations, which helps link words directly to meaningful contexts. By repeatedly encountering words in a variety of scenarios, learners develop a deeper intuition for usage, idiomatic expressions, and collocations, making language more natural and fluent. The incorporation of multimedia elements such as images, audio, and short interactive stories further enhances retention, as learners engage multiple senses simultaneously and connect vocabulary to concrete experiences. Moreover, modern applications often encourage creative engagement, challenging learners to

[10] Stockwell, G., & Hubbard, P. (2013). Some emerging principles for mobile-assisted language learning. TIRF.
[11]Ellis, R. (2008). The Study of Second Language Acquisition. Oxford University Press.

generate their own sentences, narratives, or problem-solving responses using new vocabulary. This approach fosters active participation, critical thinking, and personal connection with the language, moving beyond passive memorization. Social features such as collaborative challenges, friendly competitions, or community sharing provide additional motivation and exposure to diverse language usage, allowing learners to see how words function in various communicative contexts. These interactions can stimulate curiosity and reinforce vocabulary through peer examples and feedback, even in informal settings. Another key aspect of mobile-assisted learning is flexibility. Lessons are typically broken into short, manageable units that fit into daily life without overwhelming learners. The combination of micro-learning, gamification, and consistent short practice sessions encourages routine engagement and strengthens long-term retention. Learners can study during small pockets of free time, ensuring regular exposure and gradual accumulation of vocabulary. Over time, these strategies support the development of autonomous, reflective, and adaptable language learners who are capable of applying their knowledge creatively and effectively across different contexts[12].

Finally, the natural integration of vocabulary into interactive and enjoyable tasks promotes incidental learning. Words encountered incidentally while completing challenges or playing games are more likely to be remembered and used spontaneously. This mirrors the process of natural language acquisition, in which repeated exposure in meaningful contexts supports both comprehension and production. When used consistently, mobile applications provide a comprehensive, dynamic, and learner-centered approach to vocabulary acquisition that complements traditional educational methods while addressing the needs of modern language learners.

[12] Levy, M., & Kennedy, C. (2005). Learning languages via digital tools: A review. ReCALL Journal, 17(2), 145–167.

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**Websites / Online Resources**

BBC Learning English: https://www.bbc.co.uk/learningenglish/
Duolingo official website: https://www.duolingo.com/
FluentU language learning platform: https://www.fluentu.com/
Memrise official website: https://www.memrise.com/