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MOBILE APPLICATIONS AS A MEANS OF FOREIGN LANGUAGE LEXICAL COMPETENCE FORMATION OF NON-PHILOLOGICAL SPECIALTIES' STUDENTS

Abstract. The article addresses the problem of developing foreign language lexical competence among students of non-linguistic specialties. It is established that foreign language lexical competence constitutes the foundation of foreign language communicative competence, which, in turn, is an essential component of professional training for future specialists. The relevance of using mobile technologies in the process of foreign language instruction is substantiated with the aim of improving the quality level of lexical competence.

It is determined that mobile learning, as an innovative direction of e-learning, offers significant advantages over traditional teaching methods due to the intensification of independent learning activities, individualization of instruction, and increased cognitive engagement and learning motivation. The use of mobile devices facilitates the integration of work, study, and leisure, enabling learning in real contexts anytime and anywhere.

The theoretical and methodological conditions for the formation of students' foreign language lexical competence through mobile applications are examined. An analysis of mobile applications for foreign language learning is carried out. It is found that there is no unified approach to the development and implementation of specialized mobile applications for foreign language learning oriented toward the specific needs of students' future professional activities. The positive impact of specialized mobile applications on students' level of foreign language professional vocabulary acquisition is confirmed.

Keywords: lexical competence, communicative competence, higher education, methodology of teaching a foreign language, information and communication technologies, mobile learning, mobile application.

Problem setting. Ukraine's integration into the global community requires future specialists to attain a high level of foreign language proficiency. At the same time, scholars emphasize that the number of hours allocated to foreign language instruction in higher education institutions is insufficient for the development of foreign language communicative competence (Горбатюк, Тулашвілі, 2013). Consequently, there is a growing need to improve the methods, tools, and technologies used in foreign language teaching and learning.

A considerable number of scholarly studies devoted to the application of information and communication technologies in the process of foreign language instruction at higher education institutions confirm the ongoing informatisation of language pedagogy. Furthermore, the rapid development of mobile technologies, together with the proliferation of mobile applications, contributes to the innovative integration of mobile learning technologies into higher education. However, Ukrainian researchers note that despite the widespread availability and use of mobile phones among students, mobile learning remains insufficiently implemented in Ukrainian higher education institutions (Щеглова, 2016). Therefore, the investigation of both theoretical and practical aspects of integrating mobile applications as tools of mobile learning into the educational process for the development and acquisition of students' foreign language communicative competence remains highly relevant.

Analysis of basic research and publications. In pedagogical science, considerable attention has been devoted to the issue of developing students' foreign language communicative competence. The theoretical and methodological foundations of the formation of foreign language communicative competence have been investigated by O. Ye. Kravets, O. Kucheruk, V. Osadchyi, I. Sviridenko, S. Stoiko, O. Tarnopolskyi, A. Shcheglova, and other scholars. The specific features of developing foreign language lexical competence among students of higher educational institutions have been highlighted in the works of S. Smolina, L. Ternavska, O. Shauerman, and I. Yarema.

Research in the field of mobile learning and the use of mobile devices in the educational process has been conducted by V. Bykov, R. Horbatiuk, R. Hurevych, J. Traxler, Yu. Tryus, Yu. Tulashvili, Yu-Chang Hsu, and Yu-Hui Ching. The prospects for the use of mobile applications in the development of foreign language competence have been examined in the studies of A. Avramenko, H. Jarvis, P. Liu, O. V. Mardarenko, L. Smolina, K. Chen, and N. Shcherba.

Despite the significant number of scholarly works addressing the issues of mobile learning, the use of mobile devices in the educational process, and the development of foreign language lexical competence, a number of issues remain relevant. These include the theoretical foundations for the integration of mobile applications into the higher education learning environment, the methodology for the pedagogically effective use of mobile applications, and the development of specialized mobile applications oriented toward the specific nature of students' future professional activities.

The purpose of the article is to investigate the role of mobile applications in the development of foreign language communicative competence among students of

higher educational institutions in general, and lexical competence in particular; determines the theoretical and methodological conditions for the formation of students' foreign language lexical competence through the use of mobile applications.

Presentation of the research material. A synthesis of theoretical developments in pedagogy provides an extended definition of communicative competence. Communicative competence is defined as «an individual's ability to establish and maintain necessary contacts with other individuals. It comprises a set of knowledge, skills, and abilities that ensure effective communication. This type of competence presupposes the ability to vary the depth and scope of communication, as well as to understand and be understood by communication partners» (Саєнко, 2013). In the work of Yu.Fedorenko, the following components of communicative competence are identified: linguistic, speech, lexical, grammatical, and phonetic.

An analysis of the scholarly works by M. Hreb, S. Smolina, Yu. Fedorenko, and I. Yaremahas demonstrated that one of the key determinants of students' communicative competence is lexical competence, which involves the conscious and motivated acquisition of lexical means of a language and the ability to use them appropriately. Lexical competence is defined as «an individual's ability, based on lexical knowledge, to use vocabulary resources, instantly retrieving a word pattern from long-term memory depending on a specific communicative task, appropriately employing selected expressions, proverbs, sayings, and phraseological units within professional development, as well as ensuring the maintenance of these skills at the required level and continuously monitoring the process of lexical enrichment of speech» (Ярема, 2012).

It should be noted that the development of students' foreign language lexical competence in the process of foreign language instruction is a complex process of creating the necessary conditions for the purposeful expansion of vocabulary; the formation of skills for identifying lexical units (a word, fixed collocation, «ready-made sentence») in texts; the development of lexical skills; and the ability to select verbal associations for communicative interaction (Смоліна, 2010).

In the field of foreign language teaching, it is emphasized that approximately in the middle of the language learning process, the issue of improving the effectiveness of vocabulary instruction becomes particularly relevant. This is due to the fact that students accumulate a certain lexical repertoire, and it becomes increasingly difficult for them to memorize new words and retain them in long-term memory. As a result, lexical units begin to be forgotten. Consequently, the quality of speech (both spoken and written) deteriorates, since it is directly dependent on the size of vocabulary.

Moreover, the expanding range of communicative situations requires a greater number of lexical units and more robust lexical skills. Therefore, there arises a need to expand students' vocabulary, to consolidate and retain lexical units in memory, and to organize more intensive practice of their use in producing independent speech, as well as in performing high-quality translations. This is not possible without changing not only the content of instruction but also the overall approach to teaching this subject. It is necessary to move away from outdated textbooks and traditional

forms of work and, instead, introduce modern information technologies and achievements of scientific and technological progress.

New opportunities emerge with the advent of mobile technologies. The main advantages of mobile technologies for educational purposes include user mobility, relatively high computational power, and the possibility of constant Internet connectivity. These features provide significant potential for the innovative application of mobile technologies in education. In addition, mobile devices are gaining popularity due to the availability of a wide range of user-friendly mobile applications (Биков, 2018).

V. Bykov notes that the development of mobile technologies directs the evolution of education through a shift from distance learning technologies toward open learning systems. Issues of mobility in contemporary psychological and pedagogical research should be considered both as an object of study and as a means of professional activity.

Mobile learning involves the use of mobile technologies either independently or in combination with other information and communication technologies (ICT), enabling learners to study anytime and anywhere. The functionality of smartphones and mobile phones ensures the multifaceted nature of such learning: users can access educational resources, communicate with others, and create their own digital content.

Research findings by A. Avramenko demonstrate a high level of mobile competence among young people and students' readiness to use mobile technologies in learning.

UNESCO recommendations on mobile learning emphasize that the mobile device market is vast, and the accessibility of mobile devices for all segments of the population is increasing daily, making them one of the most widely used ICT tools. This makes mobile learning significantly more accessible than before.

In general, most researchers conclude that mobile learning is a natural evolution of e-learning. However, its uniqueness compared to traditional e-learning and blended learning approaches lies in the fact that students are not tied to a specific time or place, having continuous access to learning materials at any convenient time (Attewell, Traxler, Riordan, Dennett, 2008).

Mobile devices offer extensive opportunities for organizing foreign language instruction. The use of smartphones and tablets in foreign language classes enables work with authentic materials and encourages students' creativity, mobility, and cognitive flexibility (Sarrab, Mohamed, et al, 2013). Tasks involving mobile devices contribute to the development of communicative, intercultural, informational, cognitive, and social competences. Mobile devices integrate work and learning, making it possible to collect, evaluate, and process information at any time and in any place, as well as to learn in real-life contexts (Fu, Qing-Ke, and Gwo-Jen Hwang, 2018).

Work with mobile devices in foreign language classes contributes to learner-centred instruction, providing extensive opportunities for differentiated, autonomous, and individualized learning. It also supports the implementation of innovative teaching approaches and the expansion of traditional methods of foreign language instruction.

At the same time, mobile applications as tools for the passive presentation of learning content do not introduce fundamental didactic innovation (Кравченко, 2012). The genuinely innovative feature in the educational context is the interactivity of mobile applications, which enables active acquisition of lexical units and the development of lexical identification skills, thereby significantly reducing the time required for the formation of foreign language lexical competence.

It should be emphasized that mobile devices should be integrated with established teaching methods in the classroom. Tasks presented in instructional materials aimed at developing all types of language skills (reading, speaking, writing, and listening) can also be completed by students using smartphones and tablets. The teacher supports this process by explaining, guiding, monitoring task completion, and providing consultation where necessary.

Mobile learning involves the use of virtual learning environments that allow grouping participants in the educational process for the purpose of role-based and task-based activities, as well as assessing their performance within the course structure. Virtual learning environments can be classified into those with teacher portals (Moodle, Edmodo, Fronter, Blackboard, ILIAS, Smart School, etc.) and those without dedicated portals (LinguaLeo, Duolingo, Busuu, etc.). Based on accessibility criteria, they may be divided into paid platforms (Frog, Kaleidos), freemium models (Easy generator, etc.), and free platforms (Edmodo, Sloodle).

Virtual learning environments are used for the acquisition of theoretical knowledge and the development of skills and competencies. The advantages of Edmodo include its free access, mobile version, and user-friendly interface. While completing tasks in Edmodo, students can upload multimedia files from their personal computers in text, graphic, video, or audio formats. The use of virtual learning environments as instructional platforms is highly effective, as it facilitates the integration of mobile learning with classroom-based instruction.

A significant methodological potential for the development of lexical competence among students of non-linguistic specialties is offered by game-based learning platforms such as Kahoot, which enable the creation of multiplayer quizzes. Students can complete tests created by the instructor using tablets, laptops, or smartphones - i.e., any Internet-enabled device. Tasks designed in Kahoot allow the inclusion of images and video fragments. The pace of quizzes and tests is controlled by setting a time limit for each question. To participate in a test, students access the platform and enter a PIN code provided by the instructor. The Kahoot application can be used for practicing and consolidating lexical items, as well as for obtaining immediate feedback.

At present, a considerable number of mobile applications and programs for foreign language learning aimed at developing lexical skills have been developed, including free applications (Duolingo, Memrise, HiNative) and platforms offering both free and paid content (Lingualeo, Easy Ten, Busuu, Effortless English, LingQ, Anki, British Council resources, Words).

It should be noted that, firstly, with the exception of Lingualeo, all other mobile applications do not provide the possibility of user-generated content and are not adapted to the development of professional lexical competence; secondly, not all

applications offer sufficient language material and a variety of task types, and they do not fully exploit the technological capabilities of modern mobile devices.

Developers pay limited attention to the creation of applications containing professionally oriented texts for foreign language learning, and free applications of this kind are virtually absent.

Over the past half-century, the role of the English language as an indicator of an individual's success and level of education has significantly increased. More than 80% of all information stored on over 200 million computers worldwide is in English; 85% of all international telephone conversations are conducted in English. Instructions for computer software and the software itself are often available exclusively in English. More than half of the world's scientific journals are published in English.

Foreign language learning comprises two essential dimensions: the cognitive component (the ability to mentally perceive and process external information) and the communicative component (the ability to engage in communication) (Саєнко, 2013). Without the cognitive component - namely, knowledge of vocabulary, fixed expressions, and set phrases - it is impossible to proceed to communicative interaction or foreign language speaking, as words form the basis of phrases and sentences. The larger the vocabulary, the easier it is to comprehend written texts and express one's thoughts) (Саєнко, 2013). Therefore, the development of a mobile application for the formation of students' foreign language lexical competence in non-linguistic specialties is highly relevant.

Conclusions and prospects for further research. In the contemporary educational context, mobile devices play a significant role in facilitating the learning process and expanding access to education. The emergence of social media, the growing popularity of mobile applications, and the open dissemination of educational and other digital resources contribute to the advancement of mobile learning.

The integration of traditional instructional approaches with mobile learning in foreign language education enables the intensification of students' independent learning activities, enhances cognitive engagement, and promotes individualized instruction. At the same time, it is essential to ensure that the acquisition of learning content through mobile technologies is purposefully guided and that its quality, reliability, and relevance are maintained. The development of specialized mobile applications contributes to making foreign language learning more convenient and effective for students of non-linguistic specialties in higher education institutions.

Further research is considered promising in terms of supplementing the mobile application with tools aimed at developing the phraseological component of students' foreign language communicative competence in non-linguistic specialties.

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МОБІЛЬНІ ДОДАТКИ ЯК ЗАСОБИ ФОРМУВАННЯ ІНШОМОВНОЇ ЛЕКСИЧНОЇ КОМПЕТЕНТНОСТІ СТУДЕНТІВ НЕФІЛОЛОГІЧНИХ СПЕЦІАЛЬНОСТЕЙ

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Анотація. У статті розглянуто проблему формування іншомовної лексичної компетентності студентів нефілологічних спеціальностей. Встановлено, що іншомовна лексична компетентність є основою іншомовної комунікативної компетентності, що, своєю чергою, є обов'язковим компонентом підготовки майбутнього фахівця. Обґрунтовано актуальність використання мобільних технологій у процесі навчання іноземної мови студентів з метою підвищення якісного рівня лексичної компетентності. Встановлено, що мобільне навчання як інноваційний напрямок електронного навчання має значну перевагу перед традиційними методами навчання внаслідок інтенсифікації самостійної діяльності, індивідуалізації навчання, підвищення пізнавальної активності й мотивації навчання. Використання мобільних пристроїв сприяє поєднанню праці, навчання і вільного часу, дає змогу в будь-який час і в будь-якому місці вчитися в реальному контексті. Розглянуто теоретико-методичні умови формування іншомовної лексичної компетентності студентів засобами мобільних додатків. Проведено аналіз мобільних додатків для вивчення іноземної мови. Встановлено, що немає однозначного підходу до розроблення та впровадження спеціалізованих мобільних додатків для вивчення іноземної мови, орієнтованих на специфіку майбутньої професійної діяльності студентів. У результаті дослідження були розроблені структура, функціонал і дизайн мобільного додатка для вивчення англійської мови студентами комп'ютерних спеціальностей. Розроблено мобільний додаток для формування англомовної лексичної компетентності для операційної системи Android за допомогою інтегрованого середовища розробки мобільних додатків Android Studio. Здійснено експериментальну перевірку результативності застосування на заняттях з іноземної мови мобільних додатків, орієнтованих на специфіку майбутньої професійної діяльності студентів. Підтверджено позитивний вплив спеціалізованих мобільних додатків на рівень володіння студентами іншомовною професійною лексикою.

Ключові слова: лексична компетентність; комунікативна компетентність; вища освіта; методика навчання іноземної мови; інформаційно-комунікаційні технології; мобільне навчання, мобільний додаток.

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