



¹ Department of Foreign Languages,
National Defence University of Ukraine,
Kyiv, Ukraine.

² Chair of Germanic Languages, World
Literature and Methods of Teaching,
Department of Ukrainian Philology,
Foreign Languages and Social Com-
munications, Volodymyr Vynnychenko
Central Ukrainian State University, Kro-
pyvnytskyi, Ukraine.

³ Department of Foreign Languages,
Faculty of Training Specialists for Units
of Pre-Trial Investigation, Donetsk
State University of Internal Affairs,
Kryvyi Rih, Ukraine.

⁴ Foreign Languages Department, Fa-
culty #1, Donetsk State University of
Internal Affairs, Kryvyi Rih, Ukraine.



MODERN SOLDIER LANGUAGE ACQUISITION FOR DUTY: INSIGHTS AND POTENTIAL

AQUISIÇÃO DA LINGUAGEM DO SOLDADO MODERNO PARA
O SERVIÇO: INSIGHTS E POTENCIAL

LA ADQUISICIÓN DE LENGUAS POR EL SOLDADO MODERNO
PARA EL SERVICIO: PERSPECTIVAS Y POTENCIALIDADES

Viktoriia ROMANIUK¹
vikaromanjuk@gmail.com
Tetiana DATSKA²
dakatania@ukr.net
Vira AKSONOVA³
gon4ik2007@gmail.com
Yaroslav CHERNIONKOV⁴
yarcher78professor@gmail.com
Iryna SNISARENKO⁴
irynasnis72@gmail.com



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ABSTRACT: This article addresses the need to improve the language skills of Ukrainian military personnel to strengthen international cooperation, participate in peacekeeping missions, and operate in multinational operations. Given the growing importance of international tasks, the aim is to develop modern teaching practices adapted to the demands of military service. The objective is to identify effective methods of teaching foreign languages to military personnel. The methodology included a literature review, questionnaires administered to military personnel with linguistic training, and a comparative analysis of traditional and innovative methods. The results indicated that blended learning, integrating in-person and online instruction, was the most effective, followed by simulation-based training in environments like real-life service situations. Gamification also had a positive impact, increasing motivation and engagement. The conclusion is that hybrid and interactive methods enhance military personnel's language proficiency and communicative efficiency.

KEYWORDS: English for Law Enforcement. English for Specific Purposes. Foreign Language Teaching Methods. Military Terminology. Language Training.

RESUMO: O artigo aborda a necessidade de aprimorar as competências linguísticas dos militares ucranianos para fortalecer a cooperação internacional, participar em missões de paz e atuar em operações multinacionais. Diante da crescente importância das tarefas em contextos internacionais, busca-se desenvolver práticas de ensino modernas adaptadas às exigências do serviço militar. O objetivo é identificar métodos eficazes de ensino de línguas estrangeiras para o pessoal militar. A metodologia incluiu revisão bibliográfica, aplicação de questionários a militares com formação linguística e análise comparativa entre métodos tradicionais e inovadores. Os resultados indicaram que a aprendizagem combinada, integrando ensino presencial e online, foi a mais eficaz, seguida pela formação por simulação em ambientes próximos às situações reais de serviço. A gamificação também apresentou impacto positivo, aumentando a motivação e o engajamento. Conclui-se que métodos híbridos e interativos potencializam o domínio linguístico e a eficiência comunicativa dos militares.

PALAVRAS-CHAVE: Inglês para aplicação da lei. Inglês para fins específicos. Métodos de ensino de línguas estrangeiras. Terminologia militar. Ensino de idiomas.

RESUMEN: El estudio aborda la necesidad de mejorar las competencias lingüísticas del personal militar ucraniano para fortalecer la cooperación internacional, participar en misiones de paz y operar en operaciones multinacionales. Dada la creciente importancia de las tareas en contextos internacionales, buscamos desarrollar prácticas docentes modernas adaptadas a las exigencias del servicio militar. El objetivo fue identificar métodos eficaces para la enseñanza de lenguas extranjeras al personal militar. La metodología incluyó una revisión bibliográfica, cuestionarios administrados a militares con formación lingüística y un análisis comparativo de métodos tradicionales e innovadores. Los resultados indican que el aprendizaje combinado, que integra el aprendizaje presencial y en línea, fue el más eficaz, seguido del entrenamiento con simulación en entornos cercanos al área de servicio. La gamificación también tiene un impacto positivo, aumentando la motivación y el compromiso. La conclusión es que los métodos híbridos e interactivos mejoran la competencia lingüística y la eficiencia comunicativa del personal militar.

PALABRAS CLAVE: Inglés para aplicación de la ley. Inglés para fines específicos. Métodos de enseñanza de lenguas extranjeras. Terminología militar. Formación en idiomas.

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INTRODUCTION

The growth of international military cooperation and the active participation of Ukrainian servicemen in peacekeeping missions, joint exercises and operations as part of multinational units place increased demands on the level of their language skills. Mastery of foreign languages is becoming not just an additional competence, but a prerequisite for effective interaction, operational decision-making and ensuring a high level of situational awareness in the performance of official tasks. Of particular importance is the study of specialized vocabulary, command phrases, communication protocols and professional terminology used in NATO military structures and other international organizations.

Recent decades have been characterized by the active introduction of modern methods of teaching foreign languages that consider the specifics of military service. Particular attention has been paid to the communicative approach, situational modelling, blended learning, gamification, and the use of simulation training simulators that allow military personnel to practice language skills in realistic conditions (Biesold et al., 2022). At the same time, the digitalization of the educational process has contributed to the widespread use of mobile applications, distance learning platforms, and artificial intelligence systems that personalize the learning process and adapt training materials to the level of training and specific professional tasks of military personnel (Batsurovska et al., 2024; Kreutzer, 2024).

Despite significant progress in this area, a few problems remain that require further scientific consideration. In particular, the effectiveness of various methods in the context of training military specialists of various categories - from enlisted personnel to officers - as well as the peculiarities of integrating digital platforms and simulators into the service training systems of units performing tasks in combat or international missions have not been sufficiently studied. The issues of developing adaptive platforms that combine language training with professional training and consider the specifics of working with military audio data, situational scenarios, and command protocols require further study (Kim et al., 2024; Wood, 2024).

Modern research pays considerable attention to the area of English for Law Enforcement, which is focused on developing practical language skills in military personnel and law enforcement officials necessary to perform tasks during patrols, document checks, interrogations, and official reports. English for Specific Purposes (development of specialized English as a language of communication for professional purposes) is one of the most important forms of language training approach, which consists in developing English language curricula taking into account the specifics of special activities of the military, law enforcement agencies, etc. Instead of such difficult and traditional ways of foreign language training, such as seminars, practical, theoretical and modern methods of teaching foreign languages (blended learning, simulations, situational modelling, digital platforms) are used that allow practice-oriented language training

appropriate to the current needs of military units and to develop effective interstate and international cooperation.

The aim of the study is to determine the optimal methods of teaching foreign languages to the military personnel with respect to their payoffs and limitations, to specify what are the prospects for improvement of the language training system with regard to military service and the Armed Forces of Ukraine.

LITERATURE REVIEW

Currently, research on teaching foreign languages to military personnel involves integrating traditional and digital methods regarding individual peculiarities of service and professional duties (Batsurovska et al., 2024). Specifically, artificial intelligence tools are examined for how it enables curricula to be adapted based on the level of training and for content to be personalized based on the per service training need (Kreutzer, 2024; Wood, 2024). An important field is building integration of the gamification and the simulation trainers, the latter creating a feeling of realism in the language situations and at the same time provide motivation to learn. Online platforms for providing access to the training materials, organization of distance learning, and monitoring the results have been analysed.

The method of introduction of foreign languages to military servicemen for professional purposes with the help of technology, adaptation and blended learning is modern. In “Teaching Military English: Looking Back 30 Years to Calculate Regression to the Mean” (2024), Siegel et al. (2024) discuss their years of experience in teaching military English and the importance of communicative methods and specialized training programs. As Tuncay (1996) indicates, achieving the task-oriented learning requires integration of language skills with actual real world military scenarios. As stated by Er (2012), English as a globally used language for coordination of military operations is an important point in defining curricula, where the content involves intercultural competence. Finally, the use of technology is also promising in the process of learning that is examined in the work on technology supported in learning military language education (Popescu et al., 2013), focusing on the advantages of a personalized approach and digital resources. In this respect, Pateşan and Zechia (2018)’s study also contributes to this discussion by placing emphasis on the impact of simulation exercises and interactive methods on the communicative competence developed by military personnel. Therefore, modern methodologies are based on the use of traditional and innovative technologies that allow us to increase the effectiveness of military specialists’ language training in general.

By focusing on the specific aspects of training military personnel in international operations to participate in international operations whose language competence is essential to

the performance of a task and of effective coordination (Biesold et al., 2022; Eriksson, 2024). Other climatic and environmental factors are also being considered as being important as they impact on military training and thus curriculums require proper adaption (Estève, 2023). Particularly important are modern technologies including automatic translation systems, mobile applications, interactive environments, as they affect the development of language competencies in the context of operative service (Fan, 2023; Klimova et al., 2023). However, it is also emphasized that the implementation of such approaches is successful based on technical support of the units and the degrees of qualifications of the teaching staff (Petursdottir & Oliveira, 2023; Shruthi et al., 2025).

Some previous studies have examined the problematic role of non-formal learning and the use of collaborative technologies in improving the language competence of military personnel. Related to information security, considerable attention is given to digital platforms in the military (Arora et al., 2024; Sahu et al., 2024). As a result, it is acknowledged that the approach to the language training with the participation in professionally oriented tasks, the simulation of combat situations, and the use of modern digital platforms is the most effective in the current conditions of the military service (Sun et al., 2025; Wu & Wang, 2024). The literature analysis shows the necessity for the further development of adaptive platforms in considering the peculiarities of the military activities and artificial intelligence application for personalization of the learning process and increase in access to interactive language simulation.

In addition to that, the current research is about developing and analysing different teaching methods in combination with the issue of language training for military people, including the development of language and professional competencies (Klimova et al., 2023). The reaction focuses particularly on the function of adaptive platforms and Artificial Intelligence in building of individual learning trajectories (Kreutzer, 2024). Batsurovska et al. (2021).

The study was carried out in the digital media environment, on the formation of professional competences of students in the process of teaching foreign languages including multimedia technologies integration into the process of teaching and studying foreign languages. Kim et al. (2024) describe a process in which one can create a special audio dataset aimed to provide such situational awareness and increase the perception level of the language information under difficult conditions, especially during combat operations. Arora et al. (2024) study the effect of data protection in the process of distance and blended learning for military personnel, which seems to be urgent when using platforms congruent with features of artificial intelligence. Military aspects of information technology use are also analysed in the context of creating secure environments for language training (Sahu et al., 2024).

Some works (Eriksson, 2024; Wu & Wang, 2024) consider the historical aspects of military education, which allows us to trace the evolution of approaches to language training in different countries and in different historical periods. At the same time, some researchers emphasize the impact of climate change and global challenges on the organization of training programs for military personnel (Estève, 2023), which requires further adaptation of the training content. A separate group of studies is devoted to the introduction of technological innovations in the learning process.

For example, Sun et al. (2025) analyse the use of automatic object recognition systems in the military, which may have the potential to create interactive language simulators with voice control functions. At the same time, Wood (2024) explores the ethical aspects of introducing artificial intelligence technologies into the military environment, in foreign language teaching. Several studies focus on the transformation of language learning in the context of the COVID-19 pandemic, when digital platforms have become the main means of supporting the learning process. At the same time, the authors emphasize that the emergency transition to a distance format has revealed both positive aspects of digitalization and a number of problems related to the lack of preparation of teachers to work in the online environment.

Despite significant progress in research, the issue of adapting language programs for different categories of military personnel, including junior staff and technical specialists, as well as the integration of informal approaches to improving language competence in the process of professional training, has not been sufficiently studied.

RESEARCH METHODS

The study was conducted at the Ivan Cherniakhovskyi National Defense University of Ukraine between January and February 2025, involving 120 servicemen of various categories, from privates to officers. The main method of data collection was a questionnaire survey, which allowed us to study the attitude of students to various modern teaching methods, determine their effectiveness, and find out the practical experience of using digital platforms, simulation simulators, and blended learning. The questionnaire is presented in the Appendix. To evaluate the effectiveness of the applied methods, we analysed the changes in students' language skills before and after the training, as well as compared the results of different groups that were taught using traditional and modern methods. The combination of quantitative analysis of questionnaire data and qualitative analysis of servicemen's feedback provided a comprehensive view of the effectiveness of modern approaches to language training in the context of the professional needs of the military.

RESEARCH RESULTS

One of the most effective methods of training military personnel is the communicative approach, which involves the development of language skills through simulating real-life communication situations typical of military service. Particular attention is paid to developing the ability to negotiate, write reports, work with orders and command protocols in a foreign language.

This approach contributes to the rapid development of practical skills required in the professional activities of the military. The method of situational modelling is actively used to prepare military personnel for participation in international peacekeeping operations or joint exercises. The idea is to create situations as close to reality as possible (patrolling, checking documents, working at checkpoints), in which the military must use a foreign language to solve practical problems. This format allows not only to master the terminology but also to learn how to respond quickly to changing circumstances (Biesold et al., 2022).

Modern training methods actively use the capabilities of digital platforms, mobile applications and specialized programs for self-study. Servicemen and women have access to interactive simulators, multimedia courses, and testing systems that allow them to adapt their training to individual needs and service schedules. Of particular importance are artificial intelligence-based systems that analyse mistakes and offer personalized recommendations (Kreutzer, 2024).

The immersive learning method involves creating a language environment in which servicemen and women are constantly in the process of communicating in a foreign language. It includes both the use of the language during exercises and the organization of informal activities with foreign instructors or service partners. Such immersion not only helps to quickly overcome the language barrier but also builds confidence in communicating on professional topics (Madej, 2017). Blended learning combines traditional classroom instruction with online courses and independent work through digital platforms. This form of learning is especially convenient for military personnel, as it allows them to combine service with continuous language training. Blended learning also ensures continuous monitoring of progress and adaptation of learning content according to the level of knowledge of the students (Batsurovska et al., 2024).

The use of game-based methods and simulations in teaching foreign languages to military personnel helps to increase motivation and efficiency of learning. By completing missions, solving tasks in a game format, or training in virtual environments, military personnel learn to use the language in conditions close to combat or service realities.

Modern conditions of military service require not only a high level of professional training, but also foreign language skills. The growth of international military cooperation,

participation in peacekeeping operations, joint exercises and work in multinational units make knowledge of foreign languages an integral part of professional competence. Language proficiency not only ensures effective communication but also facilitates quick decision-making in combat or crisis situations (Biesold et al., 2022). Below are the main specific needs of military personnel in learning foreign languages to perform their service tasks (Table 1).

Table 1

Specific needs of military personnel in learning foreign languages to perform their service tasks

No.	Specific needs	Examples of use cases
1	<i>Mastery of professional terminology</i>	<i>Working with orders, instructions, reports</i>
2	Negotiation and official correspondence skills	Participation in international exercises, conclusion of contracts
3	Work with maps, diagrams and technical documentation	Planning of operations and logistics
4	Use of radio communications and means of communication in a foreign language	Coordination of actions with foreign units
5	Understanding the cultural and linguistic characteristics of partners	Participation in peacekeeping missions, work in multinational headquarters
6	Use of modern digital platforms and automated translation systems	Working with military databases and analytical systems
7	Quick perception of oral information in conditions of noise and stress	Command in combat conditions, emergency response
8	Ability to translate and adapt operational documents	Preparation of reports and presentations for international partners

Note. Created by the author based on Biesold et al. (2022), Kreutzer (2024).

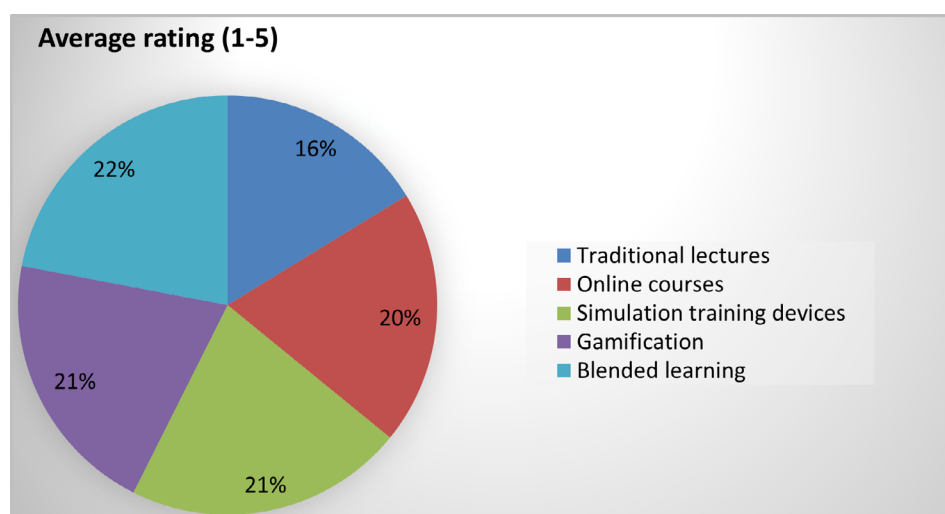
The specific needs of military personnel in learning foreign languages directly depend on the nature of their service, the level of involvement in international cooperation and the performance of professional tasks in the international environment. Effective foreign language proficiency ensures not only professional mobility but also increases the level of mutual understanding and efficiency in performing joint tasks with partners in international coalitions (Biesold et al., 2022). This requires the implementation of targeted language training programs adapted to the needs of specific military specialties and real conditions of service.

A study of the effectiveness of modern methods of teaching foreign languages to military personnel was conducted at the Ivan Chernyakhovsky National Defense University of Ukraine in January-February 2025. The study involved 120 servicemen and women who received language training at various levels—from basic to advanced professional (English for

Specific Purposes and English for Law Enforcement courses). Among the respondents, 37.5% were officers, 41.7% were NCOs, and 20.8% were enlisted personnel. A questionnaire survey method was used to collect data, which allowed us to find out the attitude of students to various modern teaching methods, assess their effectiveness and study the practical experience of using digital technologies, simulation training and blended learning in the language training process. The results of the study are presented in Figures 1-3.

Figure 1

Evaluation of the effectiveness of the methods (average points)



Note. Created by the author.

Figure 1 shows the average rating of the effectiveness of different methods of teaching foreign languages to military personnel on a five-point scale. The highest scores were given to blended learning (4.6 points) and simulation training (4.5 points). This indicates the high effectiveness of methods that combine traditional classes with digital technologies and create the most realistic conditions for practicing language skills in the context of professional tasks.

Gamification is only slightly inferior (4.3 points), which indicates a high motivational component of this approach. The use of game elements, including language missions and tasks with elements of teamwork, promotes active involvement of servicemen in the learning process and increases the level of learning.

Online courses received a score of 4.1 points, which indicates their overall effectiveness, but also points to some difficulties in ensuring proper interactivity and monitoring of students' progress. Traditional lectures received the lowest score among all methods (3.4 points). This may indicate that passive forms of training without the use of modern digital tools and interactive technologies are perceived as less effective in the context of the needs of military personnel.

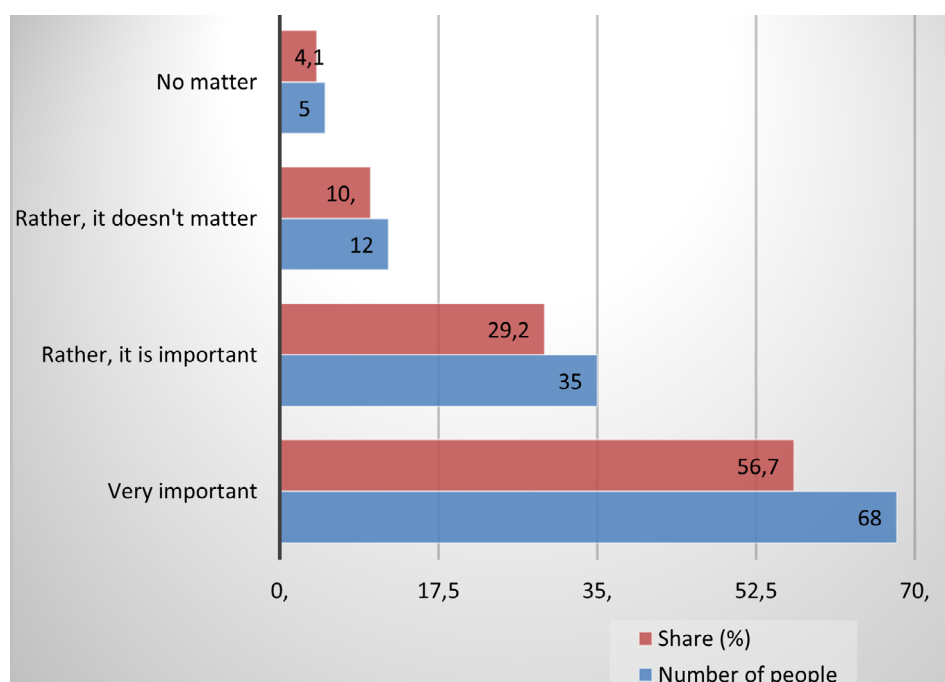
In general, the data obtained confirm the tendency to increase the importance of interactive and practice-oriented methods based on digital technologies and modelling of

real-life service situations in the process of professional language training of military personnel (Batsurovska et al., 2024).

The data presented in the graph in Figure 2, indicate the high importance of digital technologies in the process of learning foreign languages by military personnel. 56.7% of the respondents (68 people) noted that digital technologies are very important for them in the learning process. Another 29.2% (35 people) consider them rather important, which in total accounts for more than 85% of positive assessments.

Figure 2

The importance of digital technologies in education



Note. Created by the author.

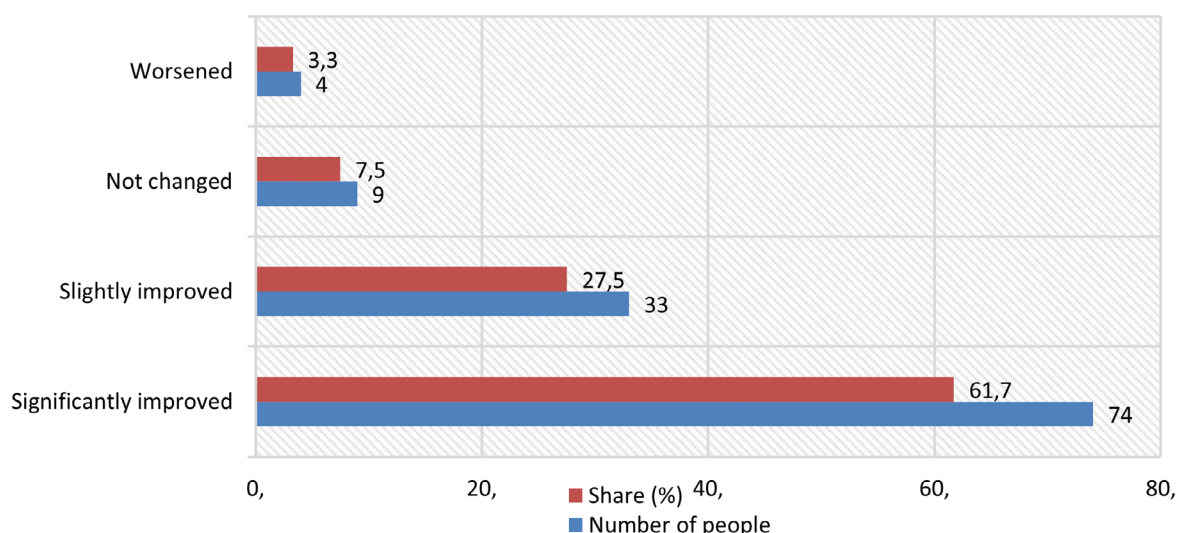
Only a small proportion of respondents—10% (12 people)—expressed the opinion that digital technologies are rather unimportant for their learning, and only 4.1% (5 people) consider them completely unimportant. These figures confirm the general trend towards a gradual transition of military language training to modern digital platforms that provide flexibility, accessibility of training materials and interactivity of the learning process.

The importance of digital tools is especially high among students who have been trained in mixed-format programs that combine classroom classes with online courses and independent work on digital platforms (Batsurovska et al., 2024). Specialized military platforms with training simulations, mobile applications for training professional vocabulary, and adapted language simulators for practice in conditions close to real-life service situations also play an important role. Overall, the findings confirm that digital technologies not only increase the

effectiveness of training but also meet modern requirements for the training of military personnel performing service tasks in an international environment.

The data in Figure 3 demonstrates the level of change in the language skills of servicemen and women after training using modern methods, including the use of simulation training, digital platforms, and blended learning. Most respondents—61.7% (74 people)—noted a significant improvement in their language skills. Another 27.5% (33 people) reported a slight improvement. It is worth noting that only 7.5% (9 people) did not feel any changes in their language competencies, and 3.3% (4 people) indicated a deterioration in their language proficiency, which may be due to insufficient adaptation of some methods to individual learning characteristics or unequal access to learning materials.

Figure 3
Changes in language skills as a result of training



Note. Created by the author.

In general, the results obtained indicate the high efficiency of the combination of digital technologies, interactive methods and situational modelling in improving the level of language training of military personnel. A significant percentage of positive changes confirms the expediency of further development of comprehensive training programs focused on the practical needs of military service and adapted to the conditions of real life (Batsurovska et al., 2024).

The introduction of specialized methods of teaching foreign languages to military personnel is a prerequisite for high-quality language training in the context of modern requirements of military service and international cooperation. Such methods consider the specifics of the military's professional activities, are adapted to military terminology, communication situations and service tasks. At the same time, the use of these methods has both significant advantages and certain limitations that should be considered when developing training programs (Table 2).

Table 2*Advantages and disadvantages of implementing specialized methods of teaching foreign languages to military personnel*

No.	Advantages	Disadvantages
1	Practical orientation – modelling of real situations in which the military work	Limited access to modern platforms and simulators in some units
2	Adaptation of training materials to military terminology and specific tasks	The need for teachers with dual qualifications (language and military)
3	Use of simulators to create a realistic language environment	Difficulty in adapting programs for different military specialties
4	Combining classroom training with digital platforms and mobile applications	High cost of developing multimedia courses and interactive simulations
5	Using gamification to increase motivation and engagement	Combining language training with an intensive service schedule creates an additional burden

Note. Created by the author based on Biesold et al. (2022), Batsurovska et al. (2024), Li et al. (2019).

Despite some limitations, specialized methods of teaching foreign languages to military personnel are highly effective and meet modern requirements for professional language training in the context of growing international military cooperation and participation in peacekeeping missions (Biesold et al., 2022). The further development of these methods should be aimed at expanding the digital infrastructure, training a new generation of teachers, and adapting the content to the specifics of various types of military activities.

DISCUSSION

The results of the study confirmed the importance of introducing modern methods of teaching foreign languages to military personnel. High scores for the effectiveness of blended learning elements, simulation training and gamification indicate that combining the theoretical material with interactive and practice approach can increase considerably the language proficiency.

According to the research conducted by Madej (2017), it is the engagement with digital platforms matched with professional needs that yields increased effectiveness of language training. And while this was at the same time, some respondents rated traditional lectures and online courses lower than other methods suggesting that passive forms of learning without practical practice of language skills in situations like real life work conditions are not very effective. The conclusions are similar in works which stress the necessity to reveal professionally oriented communication tasks in the process of language learning for the military.

Some authors, such as Batsurovska et al. (2024), emphasize that digital technologies alone do not guarantee successful learning if they are not supported by a clear system of

control and adaptation of learning materials to specific tasks and the level of students' training. Our study partially confirms this thesis, as servicemen who received blended learning with the involvement of teachers and instructors demonstrated better results than those who studied only through online courses.

At the same time, there is another approach that emphasizes the importance of widespread use of artificial intelligence to personalize learning. Our results indicate that while individualization of the learning process is an important factor, direct language practice in the form of simulations, especially in critical situations (document verification, radio conversations), remains the most effective way to develop the necessary skills.

Comparison of our results with the findings also demonstrates some differences in approaches to identifying key factors for successful learning. For example, Western models focus on the development of intercultural competence, while in Ukrainian realities, operational language training for specific tasks in combat operations and peacekeeping missions is of greater importance.

In general, the results confirmed the initial hypothesis of the study that specialized methods adapted to the specifics of military service are the most effective for developing professional language skills of military personnel. At the same time, the study had certain limitations, in particular, it covered only students of one educational institution, which may limit the generalization of the results to the entire military training system.

Given the rapidly changing technological environment and the growing demands on language training in the context of international cooperation, further research should focus on the development of integrated adaptive platforms that combine artificial intelligence, simulation training, and individualized trajectories of professional development for military personnel. Particular attention should also be paid to studying the effectiveness of such approaches for different categories of military personnel, from junior staff to officers, considering the specifics of their duties.

CONCLUSION

The conclusions of the study demonstrate that the introduction of modern methods of teaching foreign languages to military personnel is a necessary element in the formation of their professional competence in the context of strengthening international military cooperation and participation in multinational operations. The obtained results confirmed that the most effective methods are those that combine digital technologies, practice-oriented tasks and modelling of real operational situations, but their implementation requires significant resources and appropriate qualifications of the teaching staff.

The novelty of the study is to determine the optimal combination of methods for different levels of military training, considering the specifics of service duties and the real needs of military formations. The practical significance of the results lies in the possibility of developing adaptive language training programs that can be integrated into the educational process of military universities and advanced training courses.

At the same time, the study has certain limitations, in particular, it covered only one educational institution and a limited sample of students, which requires expanding the geography and number of respondents in future work. Further research should focus on developing personalized digital platforms for the military with adaptive learning algorithms, creating interactive simulations for practicing language skills in crisis situations, and evaluating the effectiveness of such approaches at different stages of a military career.

Particular attention should be paid to studying the impact of artificial intelligence on building individual language trajectories for military personnel with different service tasks and levels of language training.

REFERENCES

- Arora, P., Khullar, V., Kansal, I., Kumar, R., & Popli, R. (2024). Privacy-preserving federated learning system (f-PPLS) for military focused area classification. *Multimedia Tools and Applications*, 84, 11221–11247. <https://doi.org/10.1007/s11042-024-19358-7>
- Batsurovska, I. V., Dotsenko, N. A., Lymar, O. O., Gorbenko, O. A., & Kurepin, V. M. (2024). Implementation of open educational resources in the context of a student-centred approach. *Educational Dimension*, 12, 14–23. <https://doi.org/10.55056/ed.807>
- Batsurovska, I., Dotsenko, N., Gorbenko, O., & Kim, N. (2021). The technology of competencies acquisition by bachelors in higher education institutions in the conditions of the digital media communication environment. In *ICNTLLSC-2021: International Conference on New Trends in Languages, Literature, and Social Communications* (pp. 206–213). Atlantis Press. <https://doi.org/10.2991/assehr.k.210525.025>
- Biesold, K. H., Zimmermann, P., & Barre, K. (2022). Military. In A. Maercker (Ed.), *Trauma sequelae* (pp. 441–459). Springer. https://doi.org/10.1007/978-3-662-64057-9_24
- Er, M. (2012). The role of foreign language in the success of global military operations and English as a global lingua franca. *International Journal of Social Sciences and Humanity Studies*, 4(1), 279–286. <https://dergipark.org.tr/tr/download/article-file/257282>
- Eriksson, F. (2024). Military history and military theory. In A. M. Sookermany (Ed.), *Handbook of military sciences* (pp. 1–16). Springer. https://doi.org/10.1007/978-3-030-02866-4_90-1
- Estève, A. (2023). Preparing the French military to a warming world: Climatization through riskification. In S. Aykut & L. Maertens (Eds.), *The climatization of global politics* (pp. 101–119). Palgrave Macmillan. https://doi.org/10.1007/978-3-031-17895-5_6
- Fan, X. (2023). Accelerated English teaching methods: The role of digital technology. *Journal of Psycholinguistic Research*, 52, 1545–1558. <https://doi.org/10.1007/s10936-023-09961-4>
- Kim, J. W., Yoon, C., & Jung, H. Y. (2024). A military audio dataset for situational awareness and surveillance. *Scientific Data*, 11, 668. <https://doi.org/10.1038/s41597-024-03511-w>
- Klimova, B., Pikhart, M., & Benites, A. D. (2023). Neural machine translation in foreign language teaching and learning: A systematic review. *Education and Information Technologies*, 28, 663–682. <https://doi.org/10.1007/s10639-022-11194-2>
- Kreutzer, R. T. (2024). Military sector. In *Understanding artificial intelligence: Fundamentals, use cases and methods for a corporate ai journey* (pp. 401–406). Springer. https://doi.org/10.1007/978-3-658-46131-7_10

- Li, M., Li, G., & Wang, N. (2019). Thoughts about foreign language teaching planning reform in military academies. *Open Journal of Social Sciences*, 7(3), 491–498. <https://doi.org/10.4236/jss.2019.73040>
- Madej, P. (2017). The use of ICT tools for teaching foreign languages in the military sector. *Security and Defence Quarterly*, 15(2), 85–107. <https://doi.org/10.35467/sdq/103191>
- Pateşan, M., & Zechia, D. (2018). Foreign language education in the military. *International Conference Knowledge-Based Organization*, 24(2), 351–357. <https://doi.org/10.1515/kbo-2018-0114>
- Petursdottir, A. I., & Oliveira, J. S. C. D. (2023). Teaching foreign language. In J. L. Matson (Ed.), *Handbook of applied behavior analysis: Integrating Research into Practice* (pp. 1059–1076). Springer. https://doi.org/10.1007/978-3-031-19964-6_56
- Popescu, M., Buluc, R., Costea, L., & Tomescu, S. (2013). *Technology-enhanced learning and student-centeredness in a foreign language military class: A case study*. https://www.researchgate.net/publication/287054963_Technology-enhanced-learning_and_student-centeredness_in_a_foreign_language_military_class_-_a_case_study
- Sahu, K., Kumar, R., Srivastava, R. K., & Singh, A. (2024). Military computing security: Insights and implications. *Journal of The Institution of Engineers (India): Series B*, 106, 1091–1115. <https://doi.org/10.1007/s40031-024-01136-6>
- Shruthi, H. L., Radhakrishnan, A., Veigas, A. D., & Prasad, K. (2025). Analyzing pedagogy and education in English language teaching using information and communication technology. *Education and Information Technologies*, 30, 16551–16573. <https://doi.org/10.1007/s10639-025-13439-2>
- Siegel, A., Vance, M., & Nilsson, D. (2024). Military English language education: A scoping review of 30 years of research. *Innovation in Language Learning and Teaching*, 1–19. <https://doi.org/10.1080/17501229.2024.2370986>
- Sun, Y., Wang, J., Wu, W., & You, Y. (2025). YOLO-E: A lightweight object detection algorithm for military targets. *Signal, Image and Video Processing*, 19(241). <https://doi.org/10.1007/s11760-024-03808-8>
- Tuncay, H. (1996). Foreign language teaching for military task purposes: TASK: Oriented Foreign Language Education (TOFLE). In *Bureau for International Language Co-ordination Conference Report Book held in Lackland Air Force Base* (pp. 71–79). BILC. <https://hidayettuncay.com/makaleler/FOREIGN-LANGUAGE-TEACHING-FOR-MILITARY-TASK-PURPOSES.pdf>
- Wood, N. G. (2024). Explainable AI in the military domain. *Ethics and Information Technology*, 26(29). <https://doi.org/10.1007/s10676-024-09762-w>
- Wu, M., & Wang, D. (2024). Tracing the evolution of ancient Chinese military science through classical texts. *Heritage Science*, 12(431). <https://doi.org/10.1186/s40494-024-01536-3>

APPENDIX A

Questionnaire

Evaluation of the effectiveness of modern foreign language teaching methods

1. What was your level of foreign language proficiency at the start of the course?

- ☐ Beginner
- ☐ Intermediate
- ☐ Advanced

2. What teaching methods were used during your course? (select all that apply)

- ☐ Traditional lectures and group classes
- ☐ Online courses and platforms (Zoom, Moodle, etc.)
- ☐ Simulation trainers (military scenarios)
- ☐ Gamification (language games, mission-based tasks)
- ☐ Blended learning (combination of classroom and online classes)

3. Rate the effectiveness of each method on a 5-point scale (1 – ineffective, 5 – very effective)

Methodology	Rating (1-5)
Traditional lectures	
Online courses	
Simulation trainers	
Gamification	
Blended learning	

4. How important is the use of digital technologies in education for you?

- ☐ Not important
- ☐ Not very important
- ☐ Quite important
- ☐ Very important

5. Have your language skills improved thanks to the use of modern methods?

- ☐ Yes, significantly improved
- ☐ Yes, but slightly
- ☐ No change
- ☐ Worsened

6. Which technologies or tools were most useful to you? (Open question).

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