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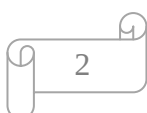


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# ІНТЕЛЕКТУАЛЬНИЙ ПОТЕНЦІАЛ СУЧАСНОСТІ

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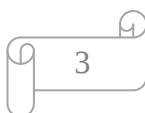
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**ОБИРАЙТЕ ПЕРШИХ! ДОВІРЯЙТЕ СПРАВЖНІМ! ЦІНУЙТЕ УНІКАЛЬНІСТЬ!**

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У свою чергу, глобалізація – процес розширення меж спілкування у всіх сферах людської діяльності, процес виникнення глобального інформаційного простору, появу якого викликає безліч соціальних наслідків і, перш за все, зростання взаємозалежності і необхідність вироблення узгоджених рішень. В основі мобільності інформації лежать сучасні інформаційні і комунікаційні технології (ІКТ), а також засоби масової комунікації (ЗМК), які також мають великий вплив і на розвиток автоматизованих систем перекладу.

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## **1.2. Polyparadigmatic approach to foreign language training of military officers: theory, methodology, and practice**

**Relevance of the Study.** In the context of globalization and the fundamental transformation of the international security architecture, Euro-Atlantic integration has become a strategic priority for the development of the Armed Forces. A key prerequisite for the successful implementation of integration processes is achieving full operational interoperability with the armed forces of NATO member states during joint exercises and peacekeeping missions. This significantly increases the importance of professionally oriented foreign language training for military officers.

Effective intercultural and tactical interaction in multinational environments is impossible without a confident command of English as the lingua franca of contemporary military discourse [1]. The current requirements of the STANAG 6001 standard necessitate a transition from traditional grammar-translation methods to polyparadigmatic and communicative-cognitive approaches to language instruction [2]. This need is particularly evident in high-technology branches of the armed forces, especially the Navy, where the accurate interpretation of English military terminology is directly related to navigational safety and the successful execution of operational tasks [3]. Therefore, the discrepancy between the increasing NATO requirements for military personnel's language competence and the conventional approaches to teaching English for Military Purposes (EMP) determines the relevance of the present study.

**Object of the Study.** The process of professionally oriented foreign language training of current and future officers within the system of higher military education.

**Subject of the Study.** Pedagogical conditions, contemporary methodological approaches, and instructional content for teaching professional English (based on the terminology system of the Navy) aimed at achieving language interoperability in accordance with the STANAG 6001 descriptors.

**Purpose of the Study.** To provide a theoretical foundation, develop, and experimentally validate the effectiveness of a comprehensive linguodidactic methodology for officer training based on a polyparadigmatic approach, taking into account the specific features of military professional thesaurus formation.

**Objectives of the Study:**

To conduct a systematic analysis of theoretical and methodological literature on foreign language training for military personnel in the context of Euro-Atlantic integration.

To identify the linguistic and structural-semantic characteristics of military discourse and summarize the principles for designing bilingual specialized glossaries.

To develop an integrative instructional model combining classical didactic principles with modern digital learning tools.

To experimentally evaluate the proposed methodology through a pedagogical experiment, monitor the dynamics of language proficiency development among the target group of military personnel, and assess the results using methods of mathematical statistics.

**Methodological Framework.** The study is based on the fundamental principles of the polyparadigmatic approach, which synergistically integrates systemic-structural, learner-centered, communicative-cognitive, and competency-based approaches to higher military education. It also draws upon the theoretical foundations of linguoculturology and intercultural communication within specialized professional environments.

**Research Methods.** To accomplish the research objectives and verify the proposed hypothesis, a combination of complementary research methods was employed:

**Theoretical methods:** critical analysis and synthesis of scientific, pedagogical, and linguistic literature; conceptual modeling of the educational process; structural-semantic and definitional analysis of naval terminology.

**Empirical methods:** pedagogical observation of the educational process; questionnaire surveys; standardized language testing based on STANAG 6001 proficiency levels; formative pedagogical experiment involving continuous monitoring of the target group's learning progress.

**Statistical methods:** quantitative and qualitative analysis of experimental data using mathematical statistics to ensure the objectivity, validity, and reliability of the obtained results.

### **Theoretical and methodological foundations of foreign language training for military personnel.**

*The polyparadigmatic approach in higher military education: Synergy of tradition and innovation.*

The contemporary stage of higher military education is characterized by a transition from classical transmission-based models of instruction to more flexible and multidimensional educational frameworks. In the context of rapidly changing geopolitical realities and the increasing complexity of tasks assigned to the Armed Forces, a monoparadigmatic approach – predominantly based on the traditional knowledge-centered paradigm – has demonstrated significant limitations [1]. Consequently, it is being replaced by a polyparadigmatic approach, understood as a methodological framework that allows the simultaneous coexistence and complementary integration of multiple educational paradigms.

Within the context of foreign language training for future military officers, the polyparadigmatic approach is implemented through the synergy of the following methodological perspectives:

**Competency-based approach,** aimed at developing the ability to apply language knowledge effectively in authentic operational, tactical, and staff environments.

**Communicative-cognitive approach,** which facilitates an understanding of the underlying mechanisms governing the production and comprehension of military discourse in a foreign language.

**Learner-centered activity approach,** placing the cadet at the core of the educational process as an active participant in military-professional communication.

The integration of these approaches makes it possible to avoid methodological eclecticism and establish a coherent linguistic learning environment. Traditional principles of military pedagogy – including strict discipline, hierarchical organization, and systematic skills training – are harmoniously combined with contemporary educational priorities such as the development of critical thinking, adaptive decision-making, and the ability to communicate spontaneously under stressful operational conditions [2]. Such methodological synergy contributes not merely to the acquisition of lexical and grammatical knowledge but to the development of comprehensive foreign language professional competence required for effective performance in multinational military environments.

### *The specificity of the concept of English for military purposes (EMP) in contemporary officer training.*

English for Military Purposes (EMP) constitutes an independent and rapidly evolving branch within the broader framework of English for Specific Purposes (ESP). The distinctive nature of EMP is determined by the high-risk operational environment in which military personnel perform their professional duties, where communication errors or inaccurate interpretation of commands may result in critical or even fatal consequences [3].

In the contemporary context of officer training, the concept of EMP has undergone substantial transformation. Whereas earlier instructional practices primarily emphasized the memorization of standardized radiotelephony phraseology and prescribed communication protocols (e.g., Standard Marine Communication Phrases and NATO standardization agreements), current educational priorities focus on achieving operational interoperability across tactical, operational, and strategic levels.

The principal characteristics of contemporary EMP for military officers include:

High terminological density and extensive use of abbreviations, requiring the rapid and accurate decoding of complex military terminology, acronyms, and abbreviations.

Pragmatic orientation of military discourse, characterized by the predominance of imperative structures, concise syntactic patterns, and the strict regulation of communicative genres, including orders, situation reports, operational briefings, and official military correspondence.

Multi-level language proficiency, in accordance with the STANAG 6001 framework, which differentiates language competence from basic survival communication (Level 1) to professional operational proficiency (Level 3) and expert-level performance (Level 4), where officers are expected to justify tactical decisions, conduct negotiations, and critically analyze geopolitical and operational situations [4].

Consequently, EMP extends far beyond the boundaries of a conventional linguistic discipline. It functions as an essential instrument for developing professional military thinking, enhancing decision-making capabilities, and ensuring effective communication within multinational military operations and international defense cooperation.

*Integration of artificial intelligence and digital technologies into the language education process of military academies.*

The digital transformation of education has created fundamentally new opportunities for enhancing the effectiveness of professional English language instruction. The integration of artificial intelligence (AI) technologies and digital simulation environments into the language education process of military higher education institutions has evolved from an innovative practice into a pedagogical necessity [5].

The principal directions for implementing digital technologies include:

Adaptive Learning. AI-driven algorithms analyze individual cognitive characteristics and learning progress, identify gaps in the acquisition of military vocabulary and grammar, and automatically adjust personalized learning pathways to optimize educational outcomes.

Intelligent Natural Language Processing (NLP) Systems. The application of AI-powered chatbots, virtual tutors, and speech-based training systems enables cadets to practice military communication skills, including radiotelephony procedures, operational briefings, and prisoner-of-war interrogation scenarios in environments closely approximating real operational conditions. These systems provide immediate feedback on pronunciation, intonation, grammatical accuracy, and the appropriate use of military terminology.

Immersive Technologies (Virtual and Augmented Reality). The development of virtual tactical simulations – for example, naval command operations under complex navigational conditions or peacekeeping patrol missions – creates fully immersive learning environments in which all communication is conducted exclusively in English [6]. Such simulations promote experiential learning while reducing the psychological barriers associated with spoken communication under operational stress.

At the same time, the implementation of AI technologies within military educational institutions requires careful consideration of several domain-specific constraints. These include ensuring the protection of sensitive information and personal data, maintaining cybersecurity standards, and enabling the autonomous operation of intelligent educational systems within secure military intranet environments. When integrated within a polyparadigmatic educational framework, these digital technologies substantially enhance the effectiveness of English for Military Purposes (EMP) instruction by combining individualized learning, authentic communicative practice, and technologically supported professional competence development.

### **Linguistic aspects and terminological framework (based on naval forces terminology).**

*Characteristics of naval terminology: Structural-semantic analysis and challenges of accurate translation.*

Naval terminology constitutes one of the oldest, most conservative, and at the same time dynamically evolving subsystems of military discourse. Its distinctive character results from the integration of highly specialized military vocabulary with traditional maritime terminology, including the Standard Marine Communication Phrases (SMCP), thereby creating a unique linguistic, cultural, and professional environment [1].

A structural-semantic analysis of English naval terminology reveals a high degree of lexical compression and analytical complexity. The predominant structural pattern consists of multi-component terminological phrases, typically containing three to five lexical elements. Examples include anti-submarine warfare shallow water operation and surface-to-air missile launcher. From the perspective of translation studies, such terminological constructions require the application of syntactic expansion, lexical-semantic transformation, and contextual adaptation to ensure semantic accuracy and avoid distortion of meaning [2].

A particularly significant challenge for accurate translation is presented by domain-specific polysemy and lexical homonymy. Numerous lexical units undergo substantial semantic shifts when transferred from general military discourse to the naval domain. For example, the term *bridge*, commonly referring to a physical bridge or crossing in land-force terminology, denotes the ship's bridge in naval communication. Likewise, the word *draft*, which ordinarily signifies a preliminary version of a document or military conscription, acquires the specialized maritime meaning of a vessel's draught (the depth of a ship below the waterline).

An additional challenge arises from national and cultural variations in naval terminology. Differences in the classification of military ranks, ship categories, and operational concepts among the navies of different English-speaking countries – particularly between the United States Navy and the Royal Navy—require translators and military language specialists to possess extensive extralinguistic knowledge alongside advanced linguistic competence. Consequently, effective translation within the naval domain depends not only on lexical equivalence but also on a comprehensive understanding of military doctrine, operational procedures, and the institutional traditions underlying specialized maritime communication.

#### *Principles for designing bilingual military glossaries in accordance with current nato standards*

Achieving tactical and operational interoperability within multinational naval formations is impossible without the standardization of military terminology. The development of bilingual, professionally oriented military glossaries therefore constitutes a crucial component of the linguodidactic support system in military higher education institutions.

The design of contemporary military glossaries aligned with NATO standards (NATO Standards in Focus) requires adherence to a number of fundamental lexicographic principles.

The principle of functional relevance. Terminological units should be selected on the basis of authentic NATO documentation, including STANAG agreements, the AAP-06 NATO Glossary of Terms and Definitions, official naval manuals, doctrinal publications, and current operational regulations. This ensures that the lexical material reflects authentic professional communication rather than generalized military vocabulary.

The principle of macrostructural comprehensiveness. A high-quality military glossary should provide sufficient lexical coverage of all major areas of operational activity. For officer training purposes, a core bilingual glossary typically comprises approximately 1,500 carefully selected terminological units, encompassing navigation, weapons systems, maritime operations, tactics, command procedures, logistics, and radiotelephony communication [3].

The principle of contextualization. Presenting terminology in isolation is pedagogically insufficient. Each lexical item should be accompanied by a concise definition together with authentic contextual examples illustrating its use in operational orders, situation reports, mission briefings, naval documentation, and other forms of professional military discourse. Context-based presentation facilitates deeper semantic processing and improves long-term retention.

Such lexicographic resources perform considerably more than a purely reference function. They constitute an important instructional tool that enables cadets to organize and internalize the conceptual framework of naval operations, strengthen professional vocabulary acquisition, and develop the linguistic competence required for effective communication within multinational NATO environments. Consequently, well-designed bilingual military glossaries serve as an essential bridge between specialized linguistic knowledge and practical operational performance.

#### *Lexical-semantic challenges in developing the professional thesaurus of future naval officers*

The development of a professional thesaurus – a structured cognitive network of concepts and terminology reflecting the professional worldview – represents one of the central objectives of foreign language training for future naval officers. This process is associated with a range of lexical-semantic, cognitive, and intercultural challenges that influence the acquisition and practical application of professional military vocabulary [4]. The transition from General English to the specialized discourse of English for Military Purposes (EMP) requires learners to reorganize their existing cognitive frameworks and construct new conceptual associations based on military operational realities.

The principal challenges include:

Terminological interference. The influence of the learners' native language frequently leads to incorrect interpretation of specialized terminology and the occurrence of false cognates. For example, *ammunition* refers to munitions rather than military equipment or personal gear, while *officer* may denote not only a commissioned military officer but also an official or person holding a position of authority in civilian contexts. Such semantic discrepancies require explicit instruction and systematic contextual reinforcement.

Abbreviations as a cognitive barrier. English military discourse is characterized by an exceptionally high concentration of abbreviations, acronyms, and initialisms (e.g., ASW, ROE, C4ISR). Their acquisition is complicated by the fact that many abbreviations are polysemous or possess different interpretations depending on doctrinal, operational, or tactical contexts [5]. Consequently, learners must master not only the expanded forms of abbreviations but also the situational conditions governing their appropriate use.

Metaphorical language and professional naval jargon. Despite the highly standardized nature of official military communication, everyday interaction within naval environments incorporates numerous conventional metaphors, idiomatic expressions, and professional colloquialisms that are generally absent from official NATO glossaries. Familiarity with such expressions is essential for successful integration into English-speaking multinational crews, as they contribute significantly to authentic professional communication and the development of intercultural competence.

Successfully overcoming these challenges requires the application of cognitive-discursive teaching methodologies that move beyond the mechanical memorization of vocabulary lists. Instruction should instead facilitate the formation of durable cognitive associations between specialized English terminology and the operational concepts, procedures, and professional experiences encountered in naval service. Such an approach promotes the development of a coherent professional conceptual framework and enables future officers to employ military English accurately, efficiently, and confidently in authentic operational environments.

### **Practical implementation and quality monitoring of foreign language training.**

*Pedagogical conditions for developing communicative competence: From basic language proficiency to professional mastery.*

The successful transformation of theoretical linguodidactic models into measurable educational outcomes requires the establishment of a comprehensive system of pedagogical conditions specifically designed for military language education. The development of foreign language communicative competence among military personnel represents a nonlinear process involving the gradual transition from mastering the fundamental structures of General English to the confident use of specialized professional terminology within the framework of English-language military discourse [1].

The effectiveness of this transition depends on several interrelated pedagogical conditions.

Professional contextualization of the learning environment. Educational activities should simulate authentic military situations, including operational briefings, mission planning, staff coordination, radiotelephony communication during emergency scenarios, and multinational exercises. Such professionally oriented simulations encourage learners to employ English not as an academic subject but as a practical tool for accomplishing operational and command-related tasks.

Motivational and value-based support. Future officers should develop a clear understanding of the direct relationship between foreign language proficiency, career advancement, operational effectiveness, and successful participation in multinational NATO headquarters and coalition operations. Internalizing the professional value of English significantly enhances learner motivation and long-term engagement.

Implementation of the principle of information-rich learning environments. Instruction should incorporate authentic, non-adapted materials, including military manuals, operational doctrines, standard operating procedures, tactical publications, and recordings of real naval communications. Exposure to authentic professional discourse enables learners to develop listening and reading comprehension skills under conditions of linguistic complexity and information overload, closely resembling real operational environments [2].

The systematic implementation of these pedagogical conditions facilitates the transition from elementary survival communication to functional and professional language proficiency. Moreover, it helps learners overcome the plateau of linguistic stagnation that frequently occurs during intermediate stages of language development, ultimately supporting the formation of communicative competence required for effective performance in multinational military settings.

### *Organization and results of the empirical study: Analysis of a four-month pedagogical experiment*

To verify the effectiveness of the proposed integrative instructional model, a formative pedagogical experiment was designed and conducted. The study lasted four months and was aimed at monitoring the development of foreign language communicative competence under conditions of intensive professional language training.

Organization of the Experiment. The experimental group consisted of 11 military personnel representing different military ranks. The participants demonstrated heterogeneous initial levels of English language proficiency, thereby reflecting the authentic conditions typically encountered when organizing language training groups within military units [3].

The experiment comprised three consecutive stages:

Diagnostic Stage. An initial assessment was administered to establish baseline proficiency levels across all four language skills – listening, speaking, reading, and writing. The results were subsequently correlated with the proficiency descriptors of the STANAG 6001 language standard.

Formative Stage. Participants completed a four-month intensive instructional program based on the polyparadigmatic approach. The training incorporated the specially developed bilingual glossary of NATO terminology, task-based instruction, and simulation-based activities designed to facilitate the acquisition and practical application of specialized naval terminology in professionally oriented communicative situations.

Control Stage. Upon completion of the instructional program, participants underwent comprehensive post-testing to objectively evaluate changes in their language competence and determine the effectiveness of the proposed instructional methodology.

Research Findings. Comparative analysis of the pre-test and post-test results demonstrated a statistically significant improvement in the participants' foreign language proficiency. The most substantial gains were observed in the receptive language skills, particularly in reading specialized military documentation and comprehending authentic radiotelephony communication. Detailed monitoring of individual learning trajectories, taking into account military rank and initial proficiency level, confirmed that the integration of professionally oriented bilingual terminology resources together with quasi-professional simulation activities significantly reduced the time required for learners to progress to the next STANAG 6001 proficiency level. These findings provide empirical support for the effectiveness of the proposed linguodidactic model in enhancing professional English language competence among future and serving naval officers.

*Specific features of english language assessment in strict compliance with the requirements of stanag 6001.*

The evaluation of foreign language proficiency among military personnel requires the use of valid, standardized, and internationally recognized assessment instruments. Within the Euro-Atlantic security framework, this function is performed by STANAG 6001 (Language Proficiency Levels), which establishes detailed proficiency descriptors for language competence across six levels, ranging from Level 0 to Level 5 [4].

A distinctive characteristic of the STANAG 6001 assessment system is its criterion-referenced nature. Unlike internationally recognized academic examinations such as IELTS or TOEFL, which primarily evaluate general academic language proficiency, STANAG 6001 measures a service member's functional ability to perform specific communicative tasks within authentic military and professional contexts. Consequently, language proficiency is assessed according to operational performance rather than purely linguistic knowledge.

Assessment outcomes are presented in the form of a Standardized Language Profile (SLP), a four-digit numerical code representing proficiency levels in the four principal language skills: Listening, Speaking, Reading, and Writing. Each component is evaluated independently against standardized performance descriptors.

The principal challenges associated with STANAG 6001 assessment include:

Assessment of productive language skills (Speaking and Writing). Evaluation extends beyond grammatical accuracy and lexical range to include pragmatic appropriateness, communicative effectiveness, adherence to military conventions, the ability to observe hierarchical communication protocols, deliver concise operational reports, justify tactical decisions, and participate effectively in professional military discussions.

Strict criterion thresholds. The STANAG 6001 framework does not permit compensation between language skills. High performance in one area cannot offset deficiencies in another. Failure to demonstrate consistent mastery of all descriptors associated with a particular proficiency level in any one language skill results in the assignment of the lower proficiency level for that component of the Standardized Language Profile.

Accordingly, preparation for STANAG 6001 assessment cannot be reduced to the acquisition of examination techniques or test-taking strategies alone. Rather, it requires the systematic development of comprehensive military-professional communicative competence, including the acquisition of specialized terminology, operational discourse skills, and functional language abilities applicable to authentic military environments. The findings of the present empirical study further support this conclusion by demonstrating that sustained, professionally oriented instruction based on authentic military communication and specialized terminology contributes more effectively to proficiency development than examination-focused preparation alone [5].

## **Conclusion.**

### *Summary of the theoretical and empirical research findings.*

The present study has provided a comprehensive examination of the problem of foreign language training for military officers within the context of Euro-Atlantic integration. The theoretical analysis, grounded in the principles of the polyparadigmatic approach, confirmed the necessity of integrating traditional methods of military education with contemporary innovations in language pedagogy. The findings indicate that effective preparation in English for Military Purposes (EMP) cannot be achieved independently of the requirements for operational interoperability established by the STANAG 6001 language proficiency framework.

The empirical component of the study, consisting of a four-month formative pedagogical experiment involving 11 military personnel, supported the proposed research hypothesis. The results demonstrated that the instructional model developed for this study – combining a specialized bilingual military glossary comprising approximately 1,500

terminological units with simulation-based instructional methods – produced a statistically significant improvement in participants' communicative competence. One of the most important outcomes of the experiment was the successful reduction of cognitive barriers associated with naval terminology, lexical interference, and the extensive use of military abbreviations and acronyms.

The study further demonstrated the effectiveness of quasi-professional learning environments, which enabled participants to progress from theoretical acquisition of specialized vocabulary to its functional application in operational planning, staff communication, and military decision-making. These findings suggest that authentic professional simulations facilitate the transfer of linguistic knowledge into practical communicative competence significantly more effectively than traditional language instruction alone.

Overall, the research confirms that the success of foreign language training for contemporary naval officers depends less on the quantity of memorized vocabulary than on the systematic development of a coherent professional thesaurus and the ability to employ specialized terminology appropriately within the strict communicative standards established by NATO. Professional language competence therefore represents an integration of linguistic knowledge, operational thinking, and context-sensitive communication skills.

*Directions for future research in military language pedagogy.*

The findings of this monograph identify several promising avenues for further research in the field of military language education.

Exploring the educational potential of Generative Artificial Intelligence (GenAI). Future studies should investigate the capacity of large language models and intelligent tutoring systems to create adaptive, personalized learning environments capable of simulating authentic military communicative situations, generating profession-specific discourse, and providing immediate feedback on specialized military language use.

Developing multimodal instructional methodologies. Further research is required to examine the pedagogical effectiveness of integrating virtual reality (VR), augmented reality (AR), and digital navigation simulators into military language instruction, particularly with regard to accelerating the development of listening and speaking skills under conditions of cognitive and psychological stress.

Investigating discourse strategies in multinational military headquarters. Additional research should focus on the communicative strategies employed by officers whose first language is not English during multinational NATO operations, with particular attention to negotiation, conflict resolution, collaborative decision-making, and intercultural military communication.

Advancing assessment methodology and assessment literacy. Future investigations should contribute to the refinement of STANAG 6001 assessment procedures through the development of more comprehensive evaluation criteria capable of measuring higher-order communicative competencies, including critical thinking, operational reasoning, leadership communication, and negotiation skills required of senior military officers.

The research presented in this monograph provides both a theoretical foundation and practical recommendations for the continued modernization of higher military education. Its findings contribute to the development of more effective foreign language training systems capable of enhancing operational interoperability, strengthening multinational military cooperation, and supporting the professional readiness of military personnel within the contemporary Euro-Atlantic security environment.

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