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**PROGRAM ORGANIZING AND CONDUCTING PEDAGOGICAL
EXPERIMENT OF SCIENTIFIC RESEARCH ON THE SUBJECT OF
SERVICEMEN PROFESSIONAL FOREIGN LANGUAGE TRAINING**

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The article highlights the goals and tasks, methods and means of experimental work dedicated to professional foreign language training of servicemen.

It also determines the stages, general structure of the experiment, procedure of experimental research, as well as program of the experiment. The author defines professional foreign language competence as a result of foreign language training. The paper also reveals the following components of professional foreign language competence of the servicemen: valuable and motivational, functional, cognitive and communicative, evaluative and reflective. It also suggests the research methods such as observation, questionnaire, interview, conversations as well as pedagogical experiment.

Key words: *foreign language training, methods and means of experimental work, professional foreign language competence, stages of experiment, formation of competencies, components of foreign language competence, research methods.*

Кандидат педагогічних наук, доцент, Канова Л. П. Програма організації та проведення педагогічного експерименту наукового дослідження з теми професійної іншомовної підготовки

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У статті висвітлено цілі та завдання, методи та засоби експериментальної роботи з професійної іншомовної підготовки військовослужбовців.

Виділено етапи, загальну структуру експерименту, порядок проведення експериментального дослідження, а також програму експерименту. Автор визначає професійну іншомовну компетентність як результат професійної іншомовної підготовки. У роботі також розкрито такі компоненти професійної іншомовної компетентності військовослужбовців: ціннісно-мотиваційний, функціональний, когнітивно-комунікативний, оцінно-рефлексивний. Також запропоновано такі методи дослідження, як спостереження, анкетування, інтерв'ю, бесіда, а також педагогічний експеримент.

***Ключові слова:** іншомовна підготовка, методи та засоби експериментальної роботи, професійна іншомовна компетентність, етапи експерименту, формування компетенцій, компоненти іншомовної компетентності, методи дослідження.*

Introduction. The necessity of the professional foreign language competence formation and the expediency of checking the effectiveness of the technology determined the conduct of experimental research. This section highlights the goals and tasks, methods and means of experimental work.

The experimental work was carried out in accordance with the tasks of the research, which included the definition of its stages, the development of the experimental program, the criteria of evaluating its results, the selection of the experimental base, the identification of the conditions for the implementation of the tasks, the conducting of the ascertaining and

formative stages of research work of the experiment, as well as the verification of the obtained results for validity. Research, as a complex set of scientific-theoretical, methodological and organizational measures, covered several stages: preparatory (preparatory and organizational), ascertaining, formative and resultative stages.

The aim of this article is to present the program of organizing and conducting pedagogical experiment of scientific research, define the stages of experimental work and the tasks as well as some of the results of the research work dedicated to the foreign language competence formation according to NATO 6001 standard.

The purpose of the preparatory and organizational stage was to determine the general structure of the experiment, choose the procedure for experimental research, as well as develop the program of the experiment, a package of application programs for processing and analyzing statistical data. At this stage of the research, monographs, dissertation studies, legal documents, scientific articles, curricula were analyzed and the electronic resources of the Internet computer network were used; a set of research methods was applied, in particular, content analysis of basic concepts, observation, interviewing, conversations, modeling, etc.

The following tasks have been carried out:

- 1) definition of the object, subject, goal and objectives of the research;
- 2) analysis of the conceptual and categorical apparatus;
- 3) development of a research program;
- 4) selection of research methods;
- 5) preparation of tools for collecting and analyzing information;
- 6) development of questionnaires, tests, interview projects, information analysis forms, etc.

At the first stage of experimental work, based on the preliminary study of psychological-pedagogical and methodical literature [1; 3; 5], analyzing

the state of professional training of servicemen, it was concluded that professional foreign language competence consists of a number of competencies: professional, linguistic, thematic, social and cultural, communicative, educational and thematic. Based on the main points of the language policy in Ukraine and taking into account the participation in international exercises in which Ukrainian military personnel are involved, we have highlighted the following components of professional foreign language competence of military: motivational-evaluative, functional, cognitive communicative and control-evaluative.

The second stage of the experimental work was the conducting of an ascertaining experiment, the implementation of which, according to the goals and objectives set before it, involved two sub-stages.

The purpose of the ascertainment experiment (2020-2021) was to study the state of professional foreign language training of military experts, officers, cadets and conduct an ascertainment section in order to clarify the materials and conditions for introducing the developed technology for the formation of professional foreign language competence of future officers.

Entrance language testing, questionnaires and interviews were chosen as the main methods of conducting the experiment.

According to the research program, the following tasks were solved at this stage of the experiment:

- identification of the level of professional foreign language competence of servicemen;
- identification of servicemen's indicators of readiness for the formation of professional foreign language competence with the aim of further clarifying the content of the developed training technology;
- processing of received data [2, p. 310].

A set of questionnaires specially developed by us served as means of implementing the set tasks.

Monitoring was chosen as the method of conducting this series of experiments - collecting, analyzing and processing data on the main components of the professional foreign language competence of military personnel.

The task of the third stage of the research was to conduct a formative experiment using innovative techniques and methods of forming professional foreign language competence.

Participation in the development of the concept of language training took place jointly with such higher military educational institutions: Korolov Zhytomyr Military Institute, Lviv Polytechnic National University, The Military Institute of Taras Shevchenko National University of Kiev, the National Defence University of Ukraine as well as Odesa Military Academy, which is defined as one of the auxiliary factors in the professional foreign language competence formation of officers of the Armed Forces of Ukraine. Totally 502 servicemen took part in the pedagogical experiment.

The purpose of the formative stage of the study was to identify the effectiveness of the proposed methodology dedicated to the step-by-step formation of officer's professional foreign language competence.

At the main (experimental) stage (2022-2023) of the program experimental work, the following tasks were to be solved:

- 1) development of professional foreign language competence formation model of the servicemen;
- 2) implementation of the step-by-step technology of professional foreign language competence formation of officers;
- 3) selection of content of forms, methods of professional foreign language competence formation of officers.

The research methods were observation, questionnaire, interview, conversation, pedagogical experiment (declarative and formative) as well as expert evaluation method.

In the process of experimental training, diagnostic sections were conducted, after which the content and structure of stages, forms and methods of training were clarified and corrected. The introduction of experimental tools ensured the actualization of fundamental, theoretical and practical professionally significant knowledge of a foreign language. The use of business games contributed to the achievement of the learning goal and the professional development of the personality of the future specialist.

At the final, fourth (resultative, 2023) stages of experimental work, the following tasks were to be solved:

- analysis of the effectiveness of experimental research technology;
- identifying deficiencies in mastering professional foreign language competence;
- determination of quantitative and qualitative indicators and levels of professional foreign language competence formation of servicemen.

That stage involved data preparation for processing (summarization of open answers, data entry into a PC); mathematical processing of the received information and its analysis; verification of data for reliability; preparation of publications, educational recommendations, manuals and the text of dissertation research.

In the course of experiment, graphic methods had been used, which made it possible to get an idea of the object of research and to display the components of professional foreign language competence. As a result, the study was enriched with diagrams, histograms and graphs.

Increasing the level of independence and creativity of servicemen was facilitated by step-by-step formation of the officer's professional foreign language competencetechnology; informing students about the dynamics of the development of professional foreign language competence at various stages of the professional foreign language competence formation, the criteria of assessing the formation of professional skills. The formation of

professional foreign language competence of servicemen ensured the development of a creative thinking style and the need for self-improvement[3, p.209].

We consider it expedient to use the system of scientific methods of cognition within the limits of our research. We define and justify research methods and approaches.

The process of professional foreign language competence formation of officers in higher educational institutions is a complex and versatile process, the effectiveness of which increases due to the application of a complex of approaches in the process of building the model of professional foreign language competence.

Since we consider the educational process from the point of view of systematicity, we consider it expedient to use a systematic approach.

Formation of professional foreign language competence of servicemen is possible under the condition of formation of a number of competences, and therefore the competence approach was necessary when conducting experimental work in the educational process.

The implementation of the communicative approach in the process of learning a foreign language took place due to the formation of foreign language speech skills, abilities and the implementation of foreign language speech activities by a serviceman.

The activity approach was aimed at the selection and organization of the cadet's activities, at activating and transferring him to the position of a subject of knowledge, work and communication, which involved the development of the skills to choose a goal, plan an activity, organize, execute, regulate, control it, analyze and evaluate the results.

In order to form future officers as versatile and harmoniously developed creative personalities, capable of self-development and self-improvement, we used a person-oriented approach.

So, the main approaches on which our research is based are defined as: system, competence, communicative, activity, functional, personal-activity and cultural approaches.

Among the methods of scientific knowledge, general methods, including theoretical and empirical research methods, have become the most widely used in dissertation research.

The survey was used at all stages, especially at the initial stage of information collection. The main tool that made it possible to collect primary information were questionnaires for determining the level of needs of servicemen in a foreign language, which were developed at the Canadian Armed Forces School in Ottawa. In addition, the method of testing (success tests), expert evaluation and self-evaluation, scaling and methods of mathematical statistics were actively used.

Conversation and interview methods were used in work with military personnel to identify motives for learning a foreign language.

Content analysis was applied to the construction of the definition of the concept of "professional competence". It allowed interpreting the content of information through quantitative indicators. It also made it possible to single out certain semantic concepts and the frequency of their use in the text.

To determine the formation of the cognitive and communicative components of professional foreign language competence, the testing method according to the NATO STANAG 6001 standard was used. For this purpose, we chose one of the variants of the standardized language test according to the NATO STANAG 6001 standard from four types of speech: listening, speaking, reading and writing[5, p.1].

The language proficiency skills described are broken down into six levels coded 0 through 5[4, p.6]Language testing is conducted within standardized language proficiency levels (SLPs) that correspond to the levels of speech competence according to the NATO language standard

STANAG 6001, namely: SLP 0 (Lack of practical ability); SLP 0+ (Memorized minimum); SLP1 (Survival); SLP 1+ (Survival +); SLP 2 (Functional); SLP2+ (Functional+).

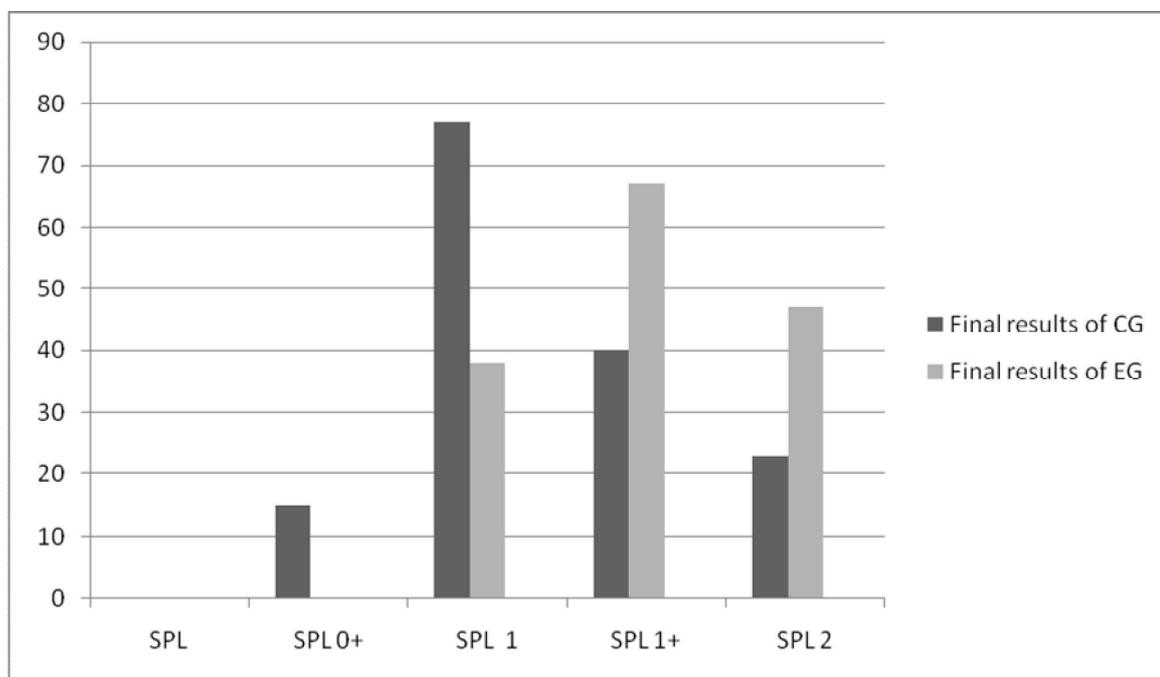


Fig.1. The results of the entrance and final language testing of the experimental and control groups of officers of the Armed Forces of Ukraine.

According to the results of the formative experiment, 15 officers of the control group received SPL (Standard Proficiency Level) 0+, which is equivalent to the "satisfactory" rating of the national evaluation system. However, a positive result of CG is the absence of SPL 0 when passing the language test (see Fig. 1). 77 officers of the entry-level control group and 38 servicemen of the experimental group achieved SPL (1, which is equivalent to a rating of "good" in the national evaluation system. The difference between the indicators of the groups is +39 in the control group, which indicates the successful application of the methodology of professional foreign language training in EG of officers. This level allows servicemen to communicate on general everyday topics without making mistakes that do not interfere the understanding of the interlocutor. 40 CG (control group) officers and 67 EG (experimental group) students of foreign language

courses received SPL 1+, which is equivalent to the rating "very good" of the national evaluation system. The difference between the indicators of the groups is -27 KG of officers, which indicates the success of the experiment in EG.23 CG (control group) officers of foreign language courses and 47 EG servicemen received SPL 2, which is equivalent to the grade "excellent" of the national evaluation system. The difference between the indicators of the groups is -24 KG of officers, which indicates the successful formation of professional foreign language competence of the servicemen of the Armed Forces.

Conclusion

In the process the experimental work at different stages, the effectiveness of the technology of step-by-step formation of the professional foreign language competence of officers by means innovative forms and teaching methods (communicative, situational, testing, self-assessment) have been tested. According to the results of the formative experiment there was a decrease in low-level indicators and an increase in high and medium levels of professional foreign language competence of officers in the experimental group. The results of the formation of foreign language component (cognitive and communicative) testify the reliability of the obtained results, which were confirmed by the use of the STANAG 6001 test.

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