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«Synergy of Knowledge:
Innovations at the Intersection of Disciplines»

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1st International Scientific and Practical Internet Conference "Synergy of Knowledge: Innovations at the Intersection of Disciplines" is devoted to interdisciplinary knowledge exchange, innovations in science, education, and practice, as well as the development of new approaches to addressing the pressing challenges of modern society.

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- technical sciences;
- medical sciences;
- chemical sciences;
- biological sciences;
- physical and mathematical sciences;
- other professional sciences.

Dnipro, Ukraine – 2025

THE EFFECTIVENESS OF APPYING PROJECT-BASED LEARNING TECHNOLOGY IN POSTGRADUATE PROFESSIONAL TRAINING OF DENTAL LISTENERS OF THEMATIC IMPROVEMENT IN POSTGRADUATE PROFESSIONAL TRAINING AT THE FORMATIVE STAGE OF THE EXPERIMENT

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Abstracts. *The article presents an analysis of the effectiveness of the use of project-based learning technology in the professional training of dental listeners of thematic improvement cycles at the postgraduate stage of education in teaching the cycle of TI «Modern Views on Periodontal Diseases in Adults and Children» that theoretically substantiated and experimentally tested. The work investigates an effectiveness of using project-based learning technology in the professional training of dental listeners at the postgraduate stage of education in the experimental and control groups at the formative stage of the experiment in the process of teaching the discipline «Modern Views on Periodontal Diseases in Adults and Children». Methodical recommendations for the implementation of project-based learning technology in the professional training of dental listeners at the postgraduate stage of education have been developed at the formative stage of the experiment, which indicate a positive trend in the level of success of listeners. The methodological recommendations contain practical advice on creating projects and the possibility of their implementation in the process of teaching the discipline «Modern Views on Periodontal Diseases in Adults and Children».*

Key words: *project-based learning technology, dental listeners of thematic improvement, postgraduate stage of education, formative stage of the experiment.*

Reforming the healthcare system is aimed at rethinking the role of healthcare professionals and puts forward new requirements for the level of professional competencies, for multi-level training of «highly qualified specialists who successfully compete in the labour market, are able to continuously improve their professional and universal knowledge, professional self-development, etc.» [1]. Since a healthcare professional must have a set of social, cognitive and emotional skills necessary for successful social adaptation, control of the social situation and professional activity, cooperation with colleagues, patients, etc., there is a need to develop the social competence of healthcare professionals, in particular during postgraduate education [2, 3].

In Ukraine, more than 70% of the population has higher education, but the potential of higher education in Ukraine is not fully utilized by society and the economy. [4]. Thus, modern information technologies help to update and supplement all types of activities, including the educational process, and become integral in the study of most academic disciplines.

The global process of transition from an industrial to an information society and the socio-economic changes taking place in Ukraine require significant changes in higher education, and especially in postgraduate medical education, which is aimed at the professional development of a specialist throughout the entire professional activity of a doctor [5]. The rapid growth of medical knowledge and the need to ensure a high qualification level of medical personnel make it expedient to use modern information technologies in the educational process, which make it possible to improve the quality of education, make the process of acquiring knowledge systematic and highly efficient [6].

These features of training a modern medical specialist should be taken into account when using all modern e-learning technologies, which should be considered an important prerequisite for ensuring the quality of education [7].

One of the problems of modern education is that dental listeners at the postgraduate stage of education experience some difficulties in applying theoretical knowledge in practice. The ability to apply the acquired knowledge, skills and abilities in professional activities cannot appear by itself, it needs to be taught. To solve this problem, it is necessary to introduce the project method into the educational process.

Therefore, we understand that project technology can be one of the promising teaching technologies that can be used in the training of dental listeners at the postgraduate stage of education and will contribute to the creative self-realisation of future specialists, increase motivation to gain knowledge, and develop intellectual abilities.

The aim of the study was to investigate the effectiveness of using project-based learning technology in the professional training of dental listeners at the postgraduate stage of education in the experimental and control groups at the formative stage of the experiment in the process of teaching the discipline «Modern Views on Periodontal Diseases in Adults and Children».

Materials and methods. The study was conducted during the spring semester on the basis of the Department of Dentistry of the Faculty of Postgraduate Education of KhNMU. The study was attended by listeners of the cycle of thematic improvement in teaching the discipline «Modern Views on Periodontal Diseases in Adults and Children» in the amount of 26 people. Two groups were formed: EG - classes were conducted using project-based learning technology and CG - classes were conducted according to the traditional methodology.

The research methods used were comparison, synthesis, analysis, generalisation, observation, surveys, questionnaires, interviews, pedagogical experiment, and statistical analysis.

Results of the study. To carry out the formative stage of the experiment, it was planned to update the educational and methodological support of the discipline and develop methodological recommendations for teachers. Also, to test the effectiveness of the project-based learning technology, we analysed the curriculum of the discipline «Modern Views on Periodontal Diseases in Adults and Children» and identified topics that would be more suitable for project implementation. We identified the following topics for practical training: «Selective tooth grinding technique», «Criteria for determining the severity of periodontitis», «Determination of periodontal indices».

The project «The ABCs of Manual Scaling» aroused considerable interest among listeners, which aims to explore the possibilities of manual scaling instruments and study the types of kits for professional periodontal tissue treatment, as well as to learn treatment protocols for manual curettes and determine the indications and contraindications for the use of manual instruments in the local treatment of periodontal diseases using project-based learning technology.

Performance evaluation is an essential element of project management. Project performance is the ratio of planned expectations to the final results of work.

Methodological recommendations that were developed on the basis of the master's research were considered by the methodological council of the Department of Dentistry of the KhNMU and recommended for implementation in the educational process for the purpose of professional training of dental applicants at the postgraduate stage of education.

Conclusions

1. At the formative stage, the features of the application of project-based learning technology in the professional training of dental listeners at the postgraduate stage of education were identified. The educational and methodological complex of the discipline was updated and improved, and projects were introduced in practical classes of the educational discipline «Modern Views on Periodontal Diseases in Adults and Children».

2. Methodical recommendations for the implementation of project-based learning technology in the professional training of dental listeners at the postgraduate stage of education

have been developed based on the results of a pedagogical experiment, which indicate a positive trend in the level of success of listeners. The methodological recommendations contain practical advice on creating projects and the possibility of their implementation in the process of teaching the discipline «Modern Views on Periodontal Diseases in Adults and Children».

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