

# ГУМАНІТАРНІ ПРОБЛЕМИ МЕДИЦИНИ ТА ПИТАННЯ ВИКЛАДАННЯ У ВИЩІЙ МЕДИЧНІЙ ШКОЛІ

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## **PROBLEM-BASED LEARNING AS PEDAGOGICAL STRATEGY TO INCREASE MEDICAL STUDENTS' MOTIVATION TO WORK INDEPENDENTLY**

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*Problem-based Learning (PBL) is designed to apply knowledge instead of just acquiring knowledge and has been called one of the best examples of a constructivist pedagogical approach. PBL is especially recommended as a promising approach with respect to skill development and getting new knowledge. One of the key constructs in a typical PBL curriculum is working in small groups: five to eight students work together in a group, under the supervision of one or more tutor(s). The tutor has an important role, as authors argue that especially average students (in comparison with students who are academically stronger) may depend more on the tutor to guide and motivate them in order to achieve the learning goals. The tutor has a role as the facilitator of learning without being a primary information resource. One of the key characteristics of PBL is the own responsibility of the learners to be self-directed and self-regulated in their learning. In Ukraine, implementation of the main PBL key provisions aimed significantly improve the level of medical education and bring closer the physician's training quality to European standards. Problem of medical educational system reorganization appeared during that period, when the foreign and domestic professionals began to emphasize a discrepancy of existing educational system and contemporary paces of society development. Search of the new and improvement of the traditional forms of students' auditorium independent work that imply existence of PBL elements directed on the future professional activity for the third year students in specialty "Dentistry". Along with optimization of out-of-class work, it is necessary to improve the in-class independent work under direct lecturers' supervision. It is known, that stimulation of active work is possible by increasing interest of auditorium and logical justification of question practical meaning, which submitted for study. Collective approach to the tasks implementation is the most effective and justified. Besides advantages seeing active discussion of possible variants solutions of specific situation, upholding own opinions in the group, exists an important educational aspect – the formation mastering of collaboration work in collective. In addition, increased verbalizations of concepts during the reporting phase also led to higher achievement. Collaborative learning is significant in the PBL process, and may be more important than individual study in determining students' achievement. The goal of that approach is to stimulate students' cognitive activity through careful organization of independent work. In the productive education, present method is a requisite for the optimization of creativity in cognitive activity, formation of independent learning ways. In the course of Surgical Dentistry, the independent work in the form of abstract lecture widely used in the Ukrainian-speaking and English-speaking groups. Efficiency of independent work depends of organization and control forms of present kind of students' activity. Active using of PBL strategy for improvement of auditorium self – directed independent work under lecturer supervision create the conditions for development of clinical thinking, logical sequence of diagnostic and treatment stages that will become the basis of future specialists – professional formation.*

Key words: problem-based learning, higher medical educational institutions, independent work.

### **Introduction**

Earlier research has shown that important skills such as critical thinking, problem-solving, communication, collaboration, and self-regulation can be stimulated and developed by problem-based learning (PBL) [3,4,6,7]. PBL is designed to apply knowledge instead of just acquiring knowledge and has been called one of the best examples of a constructivist pedagogical approach [6, 8, 10]. PBL is especially recommend as a promis-

ing approach with respect to skill development and long-term retention of knowledge [9]. One of the key constructs in a typical PBL curriculum is working in small groups: five to eight students work together in a group, under the supervision of one or more tutor(s) [5]. The tutor has an important role, as authors argue that especially average students (in comparison with students who are academically stronger) may depend more on the tutor to guide and motivate them in order to achieve the learning goals [4]. The tutor has a role

as the facilitator of learning [6,7] without being a primary information resource [10]. One of the key characteristics of PBL is the own responsibility of the learners to be self-directed and self-regulated in their learning [7].

In Ukraine, implementation of the main PBL key provisions aimed significantly improve the level of medical education and bring closer the physician's training quality to European standards. Problem of medical educational system reorganization appeared during that period, when the foreign and domestic professionals began to emphasize a discrepancy of existing educational system and contemporary paces of society development [1]. Reformation of the higher medical education system' directed to enhance the role of students independent work in knowledge receiving. Some authors meaning, that this form of work is not only important, its have to becomes the basics in learning [4]. That is why, before the lecture of higher medical school there is the most important task: search, elaboration and using such pedagogical methods, which would facilitate the acquisition of skills of the self - directed scientific and practical, research and search activities; development of their intellectual, creative, moral and social qualities, the aspiration for self-development and self-education [6]. Formation of professionally orientation of personal qualities contributes to such organization of educational process that allows using the elements of PBL. Wide interpretation of notion "self - directed work" includes the totality of all students in activities in auditorium and outside of it in contact with lecture [1]. During the discussion about organization of self - directed work in Higher Educational Institutions the emphasis is on outside of auditorium student's independent work and little attention is paid to methodical aspects and forms of independent work in auditorium, that can realized on the practical and laboratory classes, during the lectures. Considering all of the above, it becomes obvious fact, that in the current conditions of education reformation in Higher School should pay attention on a search of forms and approaches to the organization of auditorium independent work under lecturers' supervision, which will provide the highest level of students independence and will improve the quality of specialists training.

#### **Aim**

Search of the new and improvement of the traditional forms of students' auditorium independent work that imply existence of PBL elements directed on the future professional activity for the third year students in specialty Dentistry.

#### **Results and Discussion**

Organization of independent work on the course of Surgical Dentistry needs the special attention seeing presence of significant quantity of practical skills within the confines of teaching

clinical discipline. Today the question of perfect mastery of medical professional education practical training is actually, whereas it seen as one of significant factors of specialists training. Along with optimization of extracurricular work, it is necessary to improve the auditorium independent work under direct lecturers supervision. It known, that stimulation of active work is possible by increasing interest of auditorium and logical justification of question practical meaning, which submitted for study. Therefore, the forms and methodical methods that are using in practical classes during the independent work focused on these psychological aspects of students' activity. Time amount that usually assigned to this kind of work on practical class fluctuates within the 20 – 30 % of the total. Independent work, as a rule, organized on the principle of collective or individual activity, thought perform certain types of work in small groups with the participants' number from 5 to 10 persons. Collective approach to the tasks implementation is the most effective and justified. Besides advantages seeing active discussion of possible variants solutions of specific situation, upholding own opinions in the group, exists an important educational aspect – the formation mastering of collaboration work in collective. In the practical classes of Surgical Dentistry actively implemented the next forms of independent auditorium work:

A). Decision of problematic issues in the form of case studies of practical directivity directly in practical class. The work experience of case studies using allows to confidently saying about high efficiency of its collective solution. Each group of students receives, usually no more than two tasks, which will have to perform for a certain time. At the beginning of work, lecturer guiding the students and consulting them about the eventual outcome and methods through it will receive. At the end of time, that assigned to solve the problem, groups are exchanging of ways of problem decision and work in the form of concilium for review. The work assessment has two components: - assessment of the correctness and completeness of resolving problems; - assessment of reviewing. According to the eventual outcome, all the students in the group receive the same evaluations. The operational experience on this scheme showed high interest of the students in a positive result. Responsibility of everyone for the result significantly increases the efficiency of work. Besides, introduction of competition' elements for certain places on the results of the work implementation are more interested for future doctors in discussion specific clinical case.

B). Creation of correct diagnostic and treatment schemes after previous discussion of theoretical issues. In this instance, students have to create independently the protocols of examining, diagnostics, surgical stages and conservative treatment in pathological conditions. In practical

class offer the several versions of those tasks with previously familiarization of students with the basic principles of clinical examination' stages. That kind of independent work allows systematize knowledge, activate the logical thinking, form the own vision of the picture of a certain clinical case, that is, to introduce elements of creativity in the work of each student. In addition, besides the benefit of this kind of work for students, there are specific advantages of its using, when lecturers evaluating of the knowledge in practical classes in condition of Credit – Modular system in educational process organization necessitates the requires an assessment of each student in a group of 10 people in a limited period of time. When each student receives individual task to establish the clinical situation, with a mandatory need to explain it, the possibility of copying virtually eliminated. Furthermore, independent work is using for evaluation of initial level of knowledge. Thus, increases the objectivity of lecturers' evaluation of each student' knowledge.

C). Filling medical records, logical construction of schemes of diagnosis and treatment, require the analysis of theoretical material and allow systematize received knowledge. Present variety of work is actively using in the control initial and final levels of expertise in Module 1 "Inflammatory Processes" practical classes in cycle of Surgical Dentistry.

D). Using the method of abstract report, as a form of the students' extracurricular work report. This method belongs to the traditional, but productive forms of education. The goal of that approach is a stimulation of students' cognitive activity through the independent work' organization. In the productive education, present method is requisite for the optimization of creativity in cognitive activity, formation of independent learning ways. In the course of Surgical Dentistry, the independent work in the form of abstract lecture widely used in the Ukrainian-speaking and English-speaking groups. Stages of this approach implementation look as follows:

1. Tasks formation: lecturer is determining the abstract' theme for students' group, indicates the direction of the search for its implementation.

2. Stage of orientation and development: students by means of lecturer are discussing the primary questions of abstract report' implementation – determining the goals, defining the tasks, the methods of problem decision, individual tasks of the project participants, collective tasks of group, information sources, that should be used.

3. Stage of abstract report' implementation: independent students' work on the implementation of the report: intermediate discussion of the results, achieved with the lecturer – tutor, report' design.

4. Stage of report results' presentation: preparation of presentation, report defense (obligatory multimedia support).

5. Stage of lecturer - tutor assessment of report.

Reports themes that offered, relating to the most urgent issues of Surgical Dentistry and contemporary scientific directions, approved by model program for the discipline and the most frequent clinical cases. Presentation' experience – reports' defense showed the high students' activity, since the themes that proposed for study, have the practical value for the future professional activity and daily life. The report' preparation lasts during one or two practical classes. In preparation of abstract report and its presentation, the students received invaluable experience of independent study of new material, of scientific search, public presentation skills and mastering of obtained results discussion. The last form of independent work consists in harmonious unification of auditorium and extracurricular self – direct activity under lecturer's supervision, who able to give advice, guide and support the students' creative findings. In addition, increased verbalizations of concepts during the reporting phase also led to higher achievement. Collaborative learning is significant in the PBL process, and may be more important than individual study in determining students' achievement [4]. Furthermore, all-above forms of independent work are highly efficient because include the next compounds: problematic character and professional direction, formation of students' clinical thinking and creative abilities, effective collaboration in a small social systems "student – student", "student – lecturer", the presence of a logical sequence of all working stages and a mandatory report on the results, using of advanced information technology.

### **Conclusion and perspective**

Efficiency of independent work depends of organization and control forms of present kind of students' activity. Active using of PBL strategy for improvement of auditorium self – directed independent work under lecturer supervision create the conditions for development of clinical thinking, logical sequence of diagnostic and treatment stages that will become the basis of future specialists – professional' formation.

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### Реферат

ПРОБЛЕМНО-ОРИЄНТОВАНЕ НАВЧАННЯ ЯК СТРАТЕГІЯ В РЕАЛІЗАЦІЇ ПІДВИЩЕННЯ МОТИВАЦІЇ СТУДЕНТІВ ВИЩИХ МЕДИЧНИХ НАВЧАЛЬНИХ ЗАКЛАДІВ ДО САМОСТІЙНОЇ РОБОТИ

Бурера Ю.О.

Ключові слова: проблемно-орієнтоване навчання, вищі медичні навчальні заклади, самостійна робота.

Метою роботи став пошук нових та удосконалення традиційних форм самостійної аудиторної роботи студентів, які припускають наявність елементів проблемно-орієнтованого навчання, спрямованих на майбутню професійну діяльність студентів III курсу за спеціальністю "Стоматологія". Ефективність самостійної роботи залежить від форм організації та контролю даного виду діяльності студентів. Активне використання стратегії проблемно-орієнтуватися навчання для удосконалення аудиторної самостійної роботи під керівництвом викладача створює умови для розвитку клінічного мислення, логічної послідовності етапів діагностики та лікування, які стануть основою становлення майбутнього фахівця-професіонала.

### Реферат

ПРОБЛЕМНО-ОРИЕНТИРОВАННОЕ ОБУЧЕНИЕ КАК СТРАТЕГИЯ В РЕАЛИЗАЦИИ ПОВЫШЕНИЯ МОТИВАЦИИ СТУДЕНТОВ ВЫСШИХ МЕДИЦИНСКИХ УЧЕБНЫХ УЧЕРЕЖДЕНИЙ К САМОСТОЯТЕЛЬНОЙ РАБОТЕ

Бурера Ю.А.

Ключевые слова: проблемно-ориентированное обучение, высшие медицинские учебные заведения, самостоятельная работа.

Целью работы явился поиск новых и усовершенствование традиционных форм самостоятельной аудиторной работы студентов, которые предполагают наличие элементов проблемно-ориентированного обучения, направленных на будущую профессиональную деятельность студентов III курса по специальности "Стоматология". Эффективность самостоятельной работы зависит от форм организации и контроля данного вида деятельности студентов. Активное использование стратегии проблемно-ориентированного обучения для усовершенствования аудиторной самостоятельной работы под руководством преподавателя создаёт условия для развития клинического мышления, логической последовательности этапов диагностики и лечения, которые станут основой становления будущего специалиста-профессионала.