

Open Access Article

THE ROLE OF MODERN TEACHING METHODS IN ENHANCING STUDENTS' KNOWLEDGE AND FORMATION SKILLS

Guloyim Avezova Sattarovna

associate professor of Tashkent Medical Academy, Tashkent, Uzbekistan

Shukhrat Adilov Kayumovich

associate professor of Tashkent Medical Academy, Tashkent, Uzbekistan

Saida Sharipova Nigmatjanovna

Senior teacher of the Uzbekistan State University of Physical Culture and Sports, Tashkent,
Uzbekistan

Gulchekhra Khazratova Sharipovna

Senior teacher, PhD student of the branch center for retraining and in-service training of Academic
staff under Tashkent Medical Academy, Tashkent, Uzbekistan

Suyunova Elmira Shavqiddinovna

Senior teacher of the branch center for retraining and in-service training of Academic staff under
Tashkent Medical Academy, Tashkent, Uzbekistan

Abstract. A teaching method comprises the principles and methods used by teachers to enable student learning. These strategies are determined partly on subject matter to be taught and partly by the nature of the learner. For a particular teaching method to be appropriate and efficient it has to be in relation with the characteristic of the learner and the type of learning it is supposed to bring about. Modern Teaching Technologies are necessary for students as well as teachers. Therefore it is necessary to prepare them for the age of Modern Teaching Technology. Student-centered methods contain a great number of various instructional methods, for example project-based learning, problem-based learning, just-in-time teaching, and discussion methods. All these methods are inductive, based on constructivist approach.

Key words. Teaching method, modern teaching technologies, student-centered methods, project-based learning, problem-oriented learning, case study teaching.

抽象的。教学方法包括教师为使学生学习而使用的原则和方法。这些策略部分取决于要教授的主题，部分取决于学习者的性质。一种特定的教学方法要适当和有效，它必须与学习者的特征和它应该带来的学习类型有关。现代教学技术对学生和教师来说都是必要的。因此，有

Received: October 05, 2021 / Revised: October 31, 2021 / Accepted: November 30, 2021 / Published: December 31, 2021

About the authors : Guloyim Avezova Sattarovna

Corresponding author- *Email:

必要让他们为现代教学技术时代做好准备。以学生为中心的教学方法包含大量的各种教学方法，例如项目式学习、问题式学习、即时教学、讨论式教学等。所有这些方法都是归纳的，基于建构主义的方法。

关键词。教学方法、现代教学技术、以学生为中心的方法、基于项目的学习、问题导向的学习、案例教学。

Year after year, the present teaching methods require unification, modernization, and, as a result, improvement, due to the vast flow of information, their quick updating, and the ever-increasing opportunities for obtaining new knowledge.

Modern Educational Technology is a theory and practical technology based on modern educational theory, using modern scientific and technological achievements and systematic science to improve teaching efficiency and optimize the process of education and teaching, it solves the problem of education and teaching by studying the learning process and learning resources [1,3,6,8,20].

We must radically alter our way of thinking and acting. Today, attending a higher educational institution, or academy, is a conventional teaching method that is focused on the teacher, his requirements, and views on the problem. Learning, on the other hand, should be learner-centered and dependent. Interest and motivation are the two most important factors in a student's learning process. These methods necessitate a shift in the curriculum [9,12,13].

Apprenticeship was used as a teaching method for the first time in medicine. The training method has improved over time, and

now all training takes place in a hospital setting. Separate schooling at the university and the hospital is also being implemented. Apprenticeship is the primary idea of teaching, which means that it is centered on the teacher, his needs, and expectations.

In 1910, an approach in medical education was introduced: innovation - integration teaching at the university (medical institute) and the hospital. Training began with 1st-3rd year students in theoretical disciplines, followed by 4th- 6th year students in clinical fields. The teacher appeared to be an "expert," while the student claimed to be a "learner." Lectures were the primary means of disseminating information. As a result, the teacher was still centered of the teaching.

A second innovation in medical education occurred between 1960 and 1990. It involved implementing problem-based learning, using Harden's curriculum, and incorporating a McMaster University innovation (Canada). The most significant distinction with the second innovation was the beginning of student-centered learning [17].

What was the essence of Harden's curriculum, aside from the fact that it was centered on the student's interests? A new

learning approach based on solving the patient's problems and selecting the optimal solution was offered. Starting in the first year, students receive integrated training in both theoretical and clinical fields. Furthermore, the new learning approach was regarded as having a wide range of optional courses [12].

Why is it vital to be innovative? An increase in average life expectancy, an increase in elderly patients, a prevalence of chronic diseases, a tendency toward lower birth rate, a decrease in infectious diseases, and a fall in death rates all contributed to facilitate this. A strategic shift in the health-care system has occurred as a result of global trends. [18]. Treatment of diseases started shifting from fundamental principles focused at inpatient treatment, a mass approach:

Emphasis on primary health care
 Individualized, holistic approach to patients
 High patient information content
 Evidence-based diagnosis and treatment, as well as ongoing monitoring
 Introducing new technology approaches
 Increasing the number of services available to patients and improving the quality of those services

Strategic changes must also take place in medical education:

- Skill-based (critical analysis, problem solving, decision making)
- Focused on primary care
- Learner / student centered
- Self-directed learning

- Targeted
- Rich in data

The new type of medical student will have to pay attention to the nursing process, clinical analysis, and critical thinking as a result of the necessary modifications. From an evidence-based medicine approach, understanding the results will be possible.

Doctor of a new type at present:

- Integration and synthesis of knowledge
- Selection of active information
- Necessary information based on evidence-based medicine

The third innovation in medical education is currently expected, and it is aimed at the fact that medical students of the future will and are already studying basic subjects on a modular system, with flexibility in changing the content and structure of classes and curricula, as well as reducing actual overload. Students "consume" knowledge during their years of study at the medical academy, thousands of hours of interaction between students and teachers, because they do not have time to analyze it. Self-study, on the other hand, will contribute to each student receiving knowledge in a way that he perceives and comprehends better.

Self-training stimulation is primarily based totally on motivating college students to gather new understanding and skills. The present day modern student has to actively acquire knowledge that multiplies daily.

The overall competence (critical thinking, problem solving, managing patient condition and

team) of the student is expected to increase. The movement towards evidence-based medicine will promote patient orientation and problem solving.

In order to effectively teach the formation of knowledge, thinking and skills in students, it is required to select the right teaching methods.

The teaching method is an orderly way of organizing the interrelated activities of the teacher and the student to achieve a given learning goal.

Teaching methods are key to the highly complex process of joint teacher and student efforts to achieve learning goals. Methods ensure that certain results are achieved: what students need to know, understand at the end of a particular study period, and be grateful (value direction and attitude, motivation). ..

The designation of teaching methods as a means of joint activity of teachers (teaching) and students (learning) to achieve teaching goals allows them to be grouped according to the nature and results of the educational activity as the following [6,10,13]:

1. Methods that provide prescription learning activities and the assimilation of knowledge by students at the 1st level.

These include: Lecture, Explanation, Illustration, Video, Story, Briefing, Show

2. Methods that ensure reproductive learning activities and the assimilation of knowledge and skills by students at the 2nd level.

These include: Working with a book, Laboratory method, Exercise

3. Methods that impart a discussion, developmental and creative character to learning, productive, partially exploratory learning activity and the assimilation of knowledge by students at the 3rd level. These include: Conversation, Discussion, Brainstorm, Insert, Educational game, Pin board.

4. Methods that stimulate and activate independent learning, understanding and solution of the problem by students, their research activities and the assimilation of knowledge at the 4th level.

These include: Problem-based learning, Project-based learning (Designing), Case – study.

In the educational practice of the Republic's universities, the teaching approach connected to I, II, and III groups is rather extensively applied. One of the most successful and current techniques of training doctors in medical universities around the country is the IV group of teaching methods. However, until now they are not widely used in the educational process. In view of the above, we wanted to cover the ice methods a little more broadly.

The problem-solving approach is one of the teaching methods that have been acknowledged by the world's top institutions. The goal of this style of training is not to solve a problem, but to find information about a problem, analyze the data, and solve it. Finding knowledge takes up the majority of the preparation and training time. Students that are given a problem as an assignment recognize and understand why they are gathering data, and, more significantly, they use the data they obtain [16].

To master and apply this teaching methodology, compliance with the conditions. First, students must preliminarily acquire knowledge of the problem presented. Secondly, the problem is presented in such a way that students determine what information they require on their own. Thirdly, the application of the acquired knowledge in practice is carried out first, and then the theory is analyzed.

The problem-based learning technique is a unique key to motivating students to begin a search for extracurricular creative activities, with an emphasis on self-preparation [19].

Students obtain a role from a problem scenario and generate ideas in a process in which they formulate a problem, “educational questions,” determine what to know about a given problem. They also form a number of educational questions in order of significance, and assign who will consider which issue. The necessary sources are determined where can be researched a particular issue, and then the essential knowledge is gathered via individual and group research. This is followed by a stage of independent research - students analyze the task in the classroom. In the course of the analysis of the task and the analysis of the results obtained, the comprehension of the problem occurs, which will provide better training, as well as synthesize knowledge that develops skills.

Thus, problem-oriented learning involves students in an extraordinary complex volatile problem, for which there is no “ready-made recipe” and established approach. Generating their own questions, plans and goals encourages students to become deliberate, intentional learners. This type of teaching encourages students to work together on solving the problem,

to collaborate with more knowledgeable students and contributes to their mutual development. All this leads to the achievement of the desired result for the student: the goal of learning arises, mutual understanding, critical, creative thinking, and effective cooperation and develops the skills of multifaceted communication [2,5,7,13].

Problem formulation. One way to design questions suitable for seeking evidence is by drafting the question according to the PICO formula:

PICO: P - (Population) - patient or problem; I - (Intervention) - intervention or impact; C - (Control) - comparison or control; O - (Outcome) - outcomes

PIO: P - Patient or problem; I – impact; O- Outcome.

Adept: A- etiology; D-diagnosis; E –Etiology; P –prognosis; T-treatment

Thus, a good situational challenge for professional education and training is:

- The student's desire to learn about a real-life interest situation that he will encounter in practice;
- Asks important questions that require answers and discussion;
- Leads students to identify and find the information they need;
- Quite difficult, requiring the work and effort of the whole group;
- Requires decision making, discussion and analysis of options (development of high-level thinking).

- Based on the material covered and focused on the curriculum of the subject

Case study (case-specific situation, study-training) is a teaching method based on a problem-situational analysis of a specific real or artificially created situation, set out in a case and orienting students to formulate a problem and search for options for an expedient solution.

Students will have a ready-made solution in their hands after studying and evaluating the practical situation presented in the case, identifying and fixing the challenges inherent in the situation. This solution may be implemented in similar circumstances in future professional activities.

Case - study - learning technology, which is an ordered set of optimal methods and means of teaching, research and analysis, information, communication and management, which instrumentally ensure the implementation of the set educational goal and guaranteed achievement of predicted educational results in the process of solving the problematic practical situation described in the case[4].

The case was first applied at Harvard Law School in 1870. The widespread introduction of the case as a teaching tool began in 1920, when the teachers of Harvard Business School, relying on the experience of teaching lawyers, chose the analysis and discussion of specific situations from economic practice as the main method of teaching.

Case structure: Introduction, Included at the discretion of the caseologist, Historical description of the object, Situation: description for a certain period,

Questions for discussion/assignments to the case.

The introduction of the case contains: the relevance of the case, the teaching goal, and the supposed learning outcomes.

The historical description of the case object is certainly present in voluminous cases. The information provided allows conducting a retrospective analysis of the problem, identify its causes and determine development trends.

The situation described in the case is a list of relevant (essential for solving the problem) data about the object of the situation. The description of the situation and its information support in the case can be different in volume: from a few sentences to hundreds of pages.

Questions for discussion and assignments to the case. If the case belongs to the categories of questions, then at the end of the situation described in it, a number of questions are given for discussion in the process of analyzing and solving the problem situation. If this is a case task, then after the formation of the problem field in the "Introduction" a task is given that students have to complete in the process of solving the case.

Case study teaching has been shown to improve exam performance in an anatomy and physiology course, increasing the mean score across all exams given in a two-semester sequence from 66% to 73% [21].

Project-based learning allows solving urgent problems of education and meets the requirements of the time:

-provides the opportunity to carry out training in an environment as close as possible to real life;

-allows linking theoretical material with practical activities and involve students in an active independent cognitive process;

-ensures the formation and development of professional and key competencies [15].

Design - a set of documentation for the creation of any complex developments. Project - is used to designate a certain organizational form of building purposeful activities aimed at achieving certain results - a unique product of the project.

Designing in the context of education is a purposeful educational activity performed in specially organized by the teacher ("laboratory") conditions that provide the student with the opportunity to act independently from searching for a problem, organizing and planning activities to solve it upon presenting a found way to solve it (intellectual or material product) for public assessment.

Project-based learning is a training module in which the teacher organizes independent educational activities of students, which have the character of design.

Problem situation -Search for ways and means of solving- Problem-

Action planning-Product-Defense presentation-redicting new problems

Solution of design problems-Product design-Compilation of a report -

Preparation of results presentation-Public presentation for defense-Reflection - Delivery of the report.

Types of training projects: 1. Dominant types: research; practice-oriented; informational.

2. Subject-content area: monoproject (within one area of knowledge); interdisciplinary project

3. Nature of project coordination: with open coordination; with hidden (implicit) coordination.

4. Type of project by the number of participants:individual; group.

5. Duration of the project: short; average duration; long-term.

Stages of educational project activities: A. Preparatory phase; B. Project Stage; C. Final stage.

The training project is

- a method of organizing students' independent educational activities aimed at finding, researching and solving a problem and formalizing the result in the form of a unique product (material or intellectual) addressed to a specific consumer;

- a teaching tool, a toolkit that allows you to apply theoretical knowledge in solving practical problems;

- an integrative didactic means of development, training and education, allowing to expand, deepen knowledge and form skills in the subject area, to work out and develop key competencies in students.

In conclusion, it should be noted:

- the basic rule for choosing a method in the design of technology training is not variety, but

compliance with the objectives of the training session.

-the main **requirement for methods** is just one thing to make them work.

-the main **criterion for the effectiveness of the method** is the adequacy and profitability of its application for solving the assigned tasks.

Thus, advantages of Modern Teaching Methods:

Modern teaching methods have many advantages. However, these advantages are the disadvantages of traditional teaching methods.

Unlike traditional teaching methods, modern teaching methods are more interactive and keep students intact. It maintains the interest of students by animations and videos.

The visual medium is way better than any other medium to give instructions. It helps to memorize the concept fast and for a more extended period than reading. Modern teaching methods are less time-consuming. Teachers take less time to cover the syllabus. Writing on the blackboard is not required.

Reference:

- Azizxodjaeva N.N. Pedagogik texnologiyalar i pedagogik mahorat -T., TDPU, 2003 y
- Farberman B., Musina R.G., Djumabaeva F.A.. Sovremennye metodi prepodavaniya v vuzax. – T., 2001.
- Farberman B. Ilg'or pedagogik texnologiyalar. – T.: «Fan», 2000 y.
- Ganieva M.A., Fayzullaeva D.M. Keys stadi o'qitishning pedagogik texnologiyalari to'plami. Metodik qo'llanma. T.,2013 y., 95 bet
- Imamov E., Fattaxov M.. Informatsion texnologiyalar. – T., 2002.
- Mamatqulov B.M., Avezova G.S. Maxsus fanlarni o'qitish uslubi. Darslik-Navro'z nashriyoti., Toshkent-2019, -301 bet
- Najmutdinova D. Q. va boshq. Muammoga asoslangan o'qitish. Uslubiy qo'llanma. Toshkent 2010. 24 bet.
- Raximov O.D. Innovatsion pedagogik texnologiyalar: Loyihalar uslubi ta'lim sifatini oshiruvchi asosiy texnologiya sifatida. Uslubiy qo'llanma. 2013 yil. 84 bet
- Rick Sullivan i dr. Metodika prepodavaniya klinicheskix navikov. 195 str.
- Teshaeв O.R va boshq. Pedagogik texnologiyalarni tibbiyotda loyihalashtirish va rejalashtirish. O'quv - uslubiy qo'llanma. Toshkent 2010. 133 bet.
- Tolipov U., Usmonboeva. M. Pedagogik texnologiya: nazariya va amali-yot. – T.: Fan, 2005.
- Xalmatova B.T., Ibragimov F.N., Yakovenko V.I. Metodicheskoe posobie po modulyu "vvedenie v kliniku". Tashkent 2010. 145 str
- Golish LV, Fayzullaeva D.M., Planning and design of modern pedagogical technologies. - T .: Tashkent State Economic University, 2010.
- Aksenov V.A. Management Learning: Choosing an Education Model //

-
- Problems of Theory and Practice of Management. 2014. No. 8. S. 129-135
- Holubová, R.(2008). Effective teaching methods – Project-based learning in Physics. *US-China Education Review*, Vol. 5, No.12. p. 27.
 - Jayawickramrajah, P.T. (1993). Impact of problem-based, integrated medical curriculum on students approaches to learning. *Baharin Medical Bulletin*, 15: 116-121
 - Sathaananthan, T. (2017). Harden’s Spices Model for Biochemistry in Medical Curriculum. *LIFE: International Journal of Health and Life-Sciences*, 3(1), 95 - 104.
 - Sathaananthan, T. and Karunakaran, K. E. (2009). Choice of assessment type for clinical teaching. Eighth Annual Research Session (ARS), Eastern University, Sri Lanka
 - Schmidt, H.G. (1993). Foundations of problem-based learning: some explanatory notes. *Medical Education*. Vol. 27, Issue 5, p. 422–432.
 - Su, W.L. (2021) How to Use Modern Teaching Methods to Cultivate Students’ Autonomous Learning Ability. *Open Access Library Journal*, **8**, 1-5. doi: 10.4236/oalib.1107232.
 - Cliff WH, Wright AW. Directed case study method for teaching human anatomy and physiology. *Adv Phys Educ*. 1996;15(1):S19–S28.