Central Asian Journal of Medicine

Volume 2022 | Issue 1 Article 10

2-1-2022

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Recommended Citation
Komilova, Malokhat O. (2022) "METHODS OF INCREASING THE LEVEL OF COGNITIVE ACTIVITY OF STUDENTS WHEN IMPLEMENTING MIXED FORMS IN MEDICAL EDUCATION," *Central Asian Journal of Medicine*: Vol. 2022 : Iss. 1 , Article 10.
Available at: https://uzjournals.edu.uz/tma/vol2022/iss1/10

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METHODS OF INCREASING THE LEVEL OF COGNITIVE ACTIVITY OF STUDENTS WHEN IMPLEMENTING MIXED FORMS IN MEDICAL EDUCATION

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ABSTRACT

The article reveals the use of blended forms of education in a seminar, which is relevant today, since in the modern world it is very important to use various forms of blended learning. The paper analyzes the literature and Internet sources, analyzes the possibilities of forms of blended learning in the study of pedagogical disciplines. The problem, goal, research objectives, methods for its implementation are determined. At the same stage, a survey was conducted among students of the Tashkent Medical Academy. In the article, when studying the forms of blended learning at the stage of collecting empirical data, empirical methods were carried out: observation and conversations with students, questioning students; and theoretical methods: analysis, synthesis, design and modeling of lessons on "Educational technologies" based on the technology of blended (hybrid) learning. Using the "Change of working areas" method, it is possible to achieve the goal of using blended forms of education in medical education, which assesses the level of cognitive activity of students in a medical university.

The experiment involves students of the 3rd year of biomedical science and the 4th year of the faculty of vocational education (general medicine) on the subject "Educational technologies", in which a comparative analysis was carried out in the first and fifth lessons. The object of the research is the process of teaching forms of blended learning in a medical university in the study of pedagogical disciplines. The results of the study confirm the assumption that the educational process in distance form will be effective when using forms of blended learning, modern Internet resources, services, video hosting sites, platforms that are presented in this work. The relevance of the article lies in the fact that it is necessary to consider blended learning as a tool for the implementation of a remote form of work, which opens up prospects for further research in the application of various forms of this technology at various levels and stages of education in the process of pedagogical training during the period of potential quarantine measures.

Studying the problem of using forms of blended learning in these conditions, we can conclude that it is necessary to achieve the systematic use of various forms of blended learning in the classroom, the perception of the teacher not as a bearer of knowledge and a controlling subject of knowledge, but as a coordinator, organizer of independent information activities; to learn cooperation, the use of group, collective individual forms of work, where students cease to be passive participants in the educational process.

Key words: education, blended learning, forms, admission, hybrid, online learning, digital format, software platforms

INTRODUCTION

The current epidemic situation in the world required the search for new approaches to organizing the educational process at a medical university, the development of new online technologies, and the search for platforms and IT resources that are acceptable for medical education. Modern medical education is undergoing a serious change, which is undoubtedly associated with the process of digitalization of the educational process. The transition to digital online education made it necessary to revise the curriculum, as well as to make changes and use ICT technologies, teaching methods, as well as the development and correction of forms of psychological and pedagogical support of the educational process. Digital learning involves the mobilization of all social and communicative resources of the organization and self-organization of the educational process. Significant changes taking place in modern society, digitalization of all spheres of human activity, processes of globalization and integration into the world educational space, actualize the development of new axiologically significant dominants of higher medical education. This corresponds to the implementation of the main task of the higher medical school to create conditions for the fullest possible disclosure of the possibilities and abilities of the personality of a student who has not only professional qualifications, but is also capable of consciously appropriating universal and professional values in the axiologically significant environment of digital education. Hybrid learning (combined, blended, integrated learning) is a relatively "young" term that appeared thanks to the research of foreign teachers. Such scientists as Pete Sharma, Curtis Bonk, Barney Barett, Martin Oliver, firstly, tried to formulate a definition of "hybrid learning", and secondly, they tried to translate the ideas of this model in the scientific field. Initially, hybrid learning was called a method based on e-learning technology. The first results of using the hybrid learning model in an educational organization (university) appeared after the publication of the books by Kurtis Bonck and Charles Graham “Handbook of Blåndéd Läarning”, and Randy Garrison and Norman Vaughan “Blendéd Learning in High érducations and Research and Development”.

The author's experience and the wide possibilities of the Internet made it possible to consider the possibilities of synthesizing traditional teaching and learning, which implies the use of online resources [1].

Curtis Bonck and Charles Graham collected and analyzed information about this technique, and later proposed the author's definition of the term “Blended learning”. By hybrid learning (Blended Learning Systems) they understood

learning systems, which were a synthesis of face-to-face learning and computer-based learning [3].

The problems associated with the introduction of various forms of blended learning into the pedagogical process have been considered in a number of works by Russian and foreign authors.

An analysis of these and other publications allows us to conclude that a unified generally accepted classification of blended learning models has not yet been fully developed. The following blended learning models are most often distinguished: Rotation model (Station rotation, Lab Rotation, Individual Rotation, Flipped Classroom), Flex model, A La Carte model, Enriched Virtual model. These models assume the functioning of the following components:

- a component containing elements of the traditional direct (face to face) interaction of all participants in the learning process;

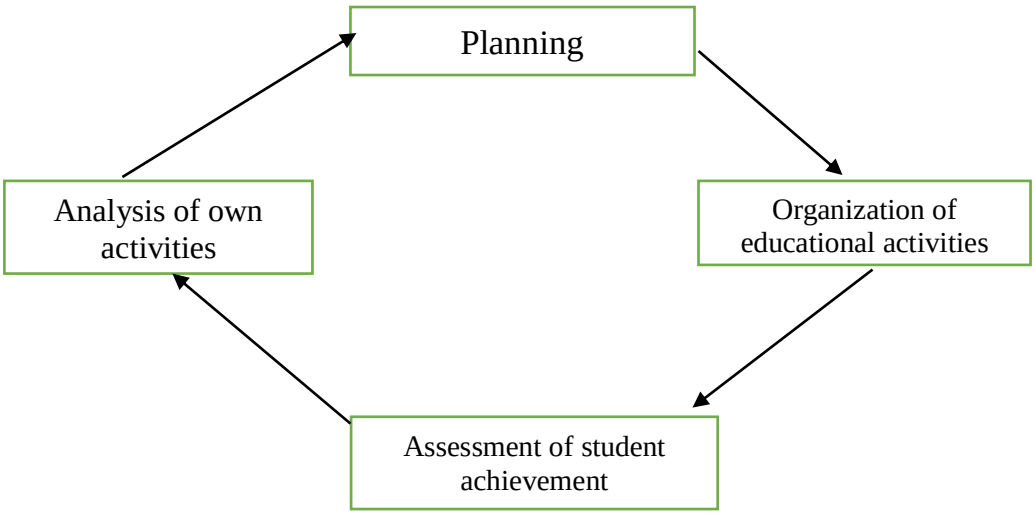
- a component containing a certain set of elements of interactive interaction based on various modern information and communication technologies and various electronic resources;

- a component focused on self-education.

The purpose of our research: To study pedagogical and methodological literature on the forms of blended learning, also to analyze the form of blended learning "Change of working zones", to assess the level of cognitive activity of students in a medical university in the study of pedagogical disciplines, as well as difficulties encountered during work.

The scientific novelty of the research consists in: - clarification, based on the analysis of domestic and foreign scientific and pedagogical literature, of the content of the concept of "blended learning", which is considered by the author as an educational technology that integrates offline and online learning; determination of the conditions necessary for the effective implementation of blended learning of pedagogical sciences using distance technologies; - in determining the main directions for further research in the field of blended learning application for the implementation of interactive methods in education in general.

The planning of educational activities in blended learning in the educational process is a technological cycle that includes the implementation of educational activities, assessment of student achievement, analysis and assessment of educational activities with the aim of correction in subsequent planning. In general, the teacher's activity can be represented in the form of a cyclogram as follows:



METHODS

The Tashkent Medical Academy has developed a program for the modernization of training courses with the involvement of distance learning technologies through distance learning. The LMS MOODLE system has been introduced within two years. This system provides an opportunity for managing the independent work of students and contributes to the introduction of forms of blended learning, in which distance education is combined with its traditional forms. In the process of introducing e-learning, pedagogical sciences are selected, the study of which took into account the total load and the characteristics of group work allocated for the independent development of the content blocks of subjects.

Classroom training is equally represented by lectures and seminars. The presence of practical classes, the lack of laboratory work and a large proportion of independent work in the study load determine our choice in favor of the development of online classes in pedagogical disciplines.

The form of blended learning "Change of working zones" is analyzed, where the assessment of the level of cognitive activity of students is made. A comparative analysis was carried out in the first and fifth lessons.

At the stage of collecting empirical data, empirical methods were carried out: observation and conversations with students, questioning of students; and theoretical methods: analysis, synthesis, design and modeling of lessons on "Educational technologies" based on the technology of blended (hybrid) learning.

CONCLUSIONS AND DISCUSSIONS

The development and implementation of distance learning DLCS made it possible to conduct a conversation and questionnaire on the effectiveness of blended learning in training students in pedagogical disciplines. In the course of

the experiment, classes were held in mixed forms of education, namely, using the "Change of working areas" model. The purpose of the experiment is to evaluate the effectiveness of training using the "Change of working areas" model in blended learning.

On the subject "Educational technologies" in the 3rd year of biomedical science and in the 4th year of the faculty of vocational education (general medicine), where the groups were divided into 3 working zones.

The essence of the “Change of working areas” model is that students are divided into three groups according to the types of educational activities, each group works in its own part of the group (station): a station for working with a teacher, an online learning station and a project work station. All stations have different goals of work: working with a teacher - getting feedback; online training - the development of skills for independent work, personal responsibility for the result, self-organization of educational actions; project work - the application of knowledge in solving practical problems, the development of communication skills and receiving feedback from fellow students. During the lesson, groups move between stations so as to visit each of them. The composition of the groups from lesson to lesson changes depending on the pedagogical task.

The station for working with a teacher allows you to fully track the level of mastering the material, take into account the characteristics of each group.

The online work station allows each student to work independently, taking into account the pace and rhythm of work. Such work includes creating mind maps, performing online tests, and providing access to Internet resources, taking into account the needs and interests of each student.

In the lesson, students work with already independently studied material and a written synopsis. Sources for work are provided by the teacher in distance learning LMS MOODLE, where theoretical material is processed from paper form to Word and Power Point; the practical part includes mind maps, links to online lessons, testing, control questions, group discussions.

The student independently determines for himself the option of working as part of a group. Each group had 10 minutes to work. in one zone, after which there was a change of jobs. At the end of the lesson, students received grades in accordance with the completed assignments. The diagrams show the level of students' cognitive activity.

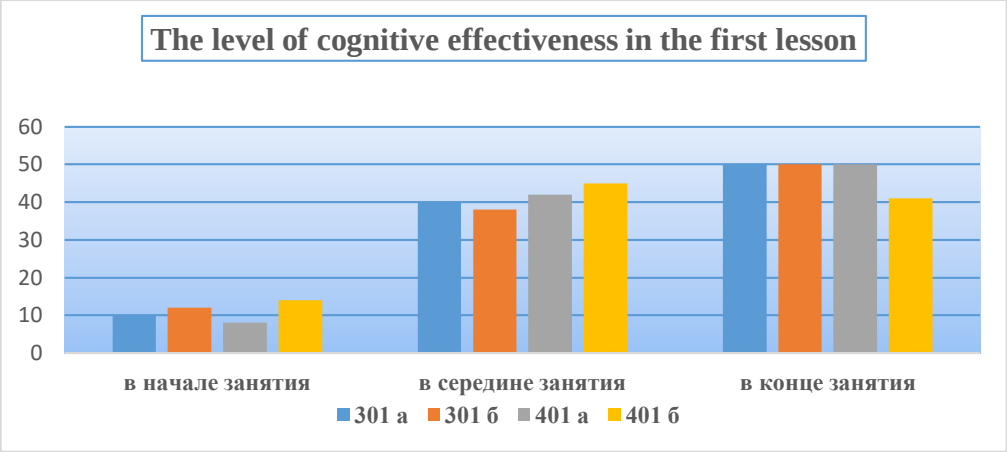


Fig 1. The levels of cognitive activity in the first lesson

Discussion of the problem with the teacher helps to gradually increase the level of students' cognitive activity in the first lesson in the discipline "Educational technologies" on the topic: "Distance technologies in education: problems and innovations" in the middle and at the end of the lesson, because blended learning contributes to the creation of a comfortable learning environment for each individual student and mentor.

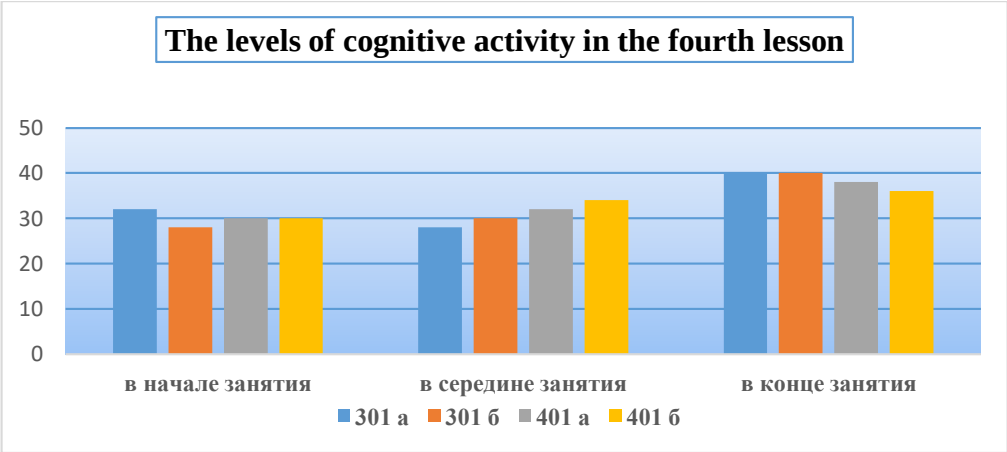


Fig 2. The levels of cognitive activity in the fourth lesson.

The level of cognitive activity in the fourth lesson in the discipline "Educational technologies" of students increased than in the first one, because students know the lecture material and freely discuss issues at each seminar. Knowledge of didactic material on a given topic, the ability to discuss a problem in a group, find creative solutions to problem situations.

Comparing the cognitive activity of students in the first and fourth lessons, we can say that those who took into account the teacher's recommendations and completed the MOODLE tasks showed high results, which helps to deepen understanding of the subject matter

CONCLUSION

During the study of the problem of the effective use of blended learning in various conditions, the following results were achieved:

1. The use of blended learning technology will give significant results only if it is used systematically, from lesson to lesson. [8]

2. Development of independent learning activities of students, the application of the knowledge gained in practice, a close connection between learning and life, a clear understanding of where and how the knowledge gained can be used in practice;

3. Perception of the teacher not as a bearer of knowledge and a controlling subject of knowledge, but as a coordinator, organizer of independent information activities;

4. Training in cooperation, the use of group, collective individual forms of work;

5. Students cease to be passive participants in the educational process.

6. The results of the pilot study allow us to say that the use of blended learning technology when studying the topic "Distance technologies in education: problems and innovations" allows you to activate the cognitive activity of students in the first lesson in the middle and at the end of the topic, and in the fourth lesson the level of cognitive activity begins to increase already at the beginning of work.

7. In the course of the lesson, the material that was studied at home is consolidated and systematized; frontal work is minimized; interactive teaching methods are used with a predominance of solving tests, discussions, solving situational tasks for the application of the studied material

In modern conditions, teaching pedagogical disciplines based on blended learning, combining the traditional form of education with elements of distance learning by means of LMS MOODLE.

The use of blended learning in the educational process has shown that this problem is very relevant and requires the teacher to have good knowledge not only of the content of university material, but also the skills of including information resources for organizing active cognitive activities of students in the development and application of the studied material both online and offline format. [8]

Such work allows the teacher to intensify the cognitive activity of students, conditions are created for improving the professionalism of teachers, their professional competencies associated with the ability to design, implement and reflexive analysis of pedagogical activity in the context of education modernization.

The chosen form of blended learning, information technologies allow solving problems of teaching and improving pedagogical skills and abilities, are of practical importance and can be used in teaching the subject "Educational technologies" in traditional and distance work. Blended learning technology, which is an effective educational technology that meets the requirements of state educational standards, allows you to effectively implement the educational process in distance learning.

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