

Андреев А. Н. Результаты внедрения технологии организации инновационной деятельности учащихся в процессе практической подготовки будущих учителей физики

В статье рассматривается проблема подготовки будущих учителей физики к организации инновационной деятельности учащихся. Приведены результаты апробации авторской технологии организации инновационной деятельности учащихся в учебном процессе по физике. Одним из показателей эффективности этой технологии в частности и соответствующей методической системы подготовки учителя физики в целом является значительное количество призеров международных и всеукраинских физико-технических конкурсов. С использованием биномиального критерия была отклонена гипотеза о случайности достижения учащимися высоких результатов на государственных и областных этапах Всеукраинского конкурса-защиты научно-исследовательских работ учащихся – членов Малой академии наук Украины. Это дало основание считать, что высокие результаты, достигнутые учащимися на этом конкурсе, не являются случайными. Эти и другие образовательные результаты указывают на действенность авторской технологии организации инновационного поиска учащихся в учебном процессе по физике.

Ключевые слова: будущий учитель физики, практическая подготовка, инновационная деятельность учащихся, технология организации инновационной деятельности учащихся, педагогический эксперимент, учебный процесс по физике, международные и всеукраинские физико-технические конкурсы, биномиальный критерий.

Andreev A. M. The results of the implementation of the technology of the organization of innovative activity of students in the practical training of future teachers of physics

The article deals with the problem of preparation of future teachers of physics to the organization of innovative activity of students. The results of approbation of author's technology of organizing the innovation activities of students in the learning process in physics are described. One measure of the effectiveness of this technology in particular and appropriate methodological training system of teachers of physics in general, there are a significant number of students – winners of international and all-Ukrainian physical-technical competitions. To justify the importance of quantitative indicators carried out their statistical analysis. This gave reason to conclude that the high results of the students of the experimental group in this competition are not random – they had a higher level of preparedness for the competition, compared to other students. Educational results, obtained by students in the experimental group during the pilot experiment, indicated the validity of the author's technology of the organization of innovative search students in the learning process in physics, as well as give the reasons for putting forward hypotheses about the efficiency of the developed methodical system of preparation of future teachers to the organization of innovative activity of students.

Key words: future teacher of physics, practical training, innovative activities of students technology innovation activities of students, pedagogical experiment, learning process in physics, international and all-Ukrainian physical-technical competitions, binomial test.

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Batsurovska I. V.

**PEDAGOGICAL ASPECTS OF IMPLEMENTATION
OF MASSIVE OPEN DISTANCE COURSES IN UKRAINE**

This paper investigates the features of the implementation, conduct, analysis and implementation of the use of massive open distance learning courses in Ukraine. The article deals with the main advantages and disadvantages of massive open distance learning courses, presents a comparative analysis of national and foreign scholars on the issue of implementation of open distance learning courses. The article outlines the basic course requirements. It contains an analysis of the current state of massive open distance learning courses use in higher educational institutions. The article presents a number of recommendations for the development of national education system towards democratization of higher education.

Key words: massive open distance learning courses, distance learning forms, self-education, e-learning, learning environment, educational activity, the latest technologies, prospect, interactivity.

Reflecting modern trends in education over the past decade, distance learning has become an integral phenomenon of educational and informational culture around the world. Practice of its implementation has opened up new prospects for spreading of knowledge and giving educational opportunities for millions of people and made an effective instrument of modernization of education systems to meet the new economic and sociocultural conditions. However, numerous studies conducted by western teachers showed that distance learning isn't inferior in quality than traditional one, and sometimes it is higher. In the national education the innovation processes related to distance education began much later, than in other countries and occur in very difficult conditions: socio-economic, political and ideological, which occasionally affect both the development of the education system and the general development of the country.

It should be noted, that the methods and techniques of distance learning are based on self-regulation of students' speed of learning activities, adjusting the direction of their future self-education and, most importantly, they are

based on distance learning forms of interaction. The average graduate is able to learn printed textbooks (textbooks, reading books, and methodical manuals) himself, because the methodology of working with these learning tools is introduced to him at school. Practical skills with applications are trained within a given school course "Fundamentals of Informatics". The use of audio and video also does not cause any difficulties. However, the most problematic sector of practice in distance learning is the use of the new tools of computer communications. Secondary school is not yet able to master the methods of culture and ethics of online interaction, rules of conduct, business-writing skills, which is the exchange of electronic messages in distance learning system. Furthermore, from a psychological point of view the work in distance learning system requires considerable willpower, mental effort, perseverance, etc. There are still problems in the development of motivation for a large number of students and teachers: rejection of the absence of direct contact with the teacher; the insufficient level of information readiness (willingness to search, percept, study information using a variety of resources); monitoring of the effectiveness and quality of education, taking into account the psychological characteristics of students; lack of self-education skills and self-reflection skills required at all stages of distance learning, especially in the beginning.

So, we can say, that today the national system of distance learning is just forming. Taking into account the scale and complexity of distance learning as a phenomenon, a wide range of educational services, forms and models of organization for its implementation and building at a high-level we need to solve many difficult conceptual problems. Among others, the issue of quality of distance learning – one of the most controversial [2, p. 376].

The modern concept of lifelong education is particularly important. This is a response to a challenge that world throws us. It is the world where changes occur very quickly. For each person lifelong education has to become a process of forming and meeting his cognitive requests, spiritual needs, the development of skills in various educational institutions through various forms of education and by self-education, self-development. Lifelong education has evolved as a practice phenomenon and as a pedagogical concept. The idea was conceptually framed by well-known theorist of lifelong education P. Lenhandom on the UNESCO conference in 1965 [1, p. 15].

Purpose of the article. The object of study in this paper is a massive open distance learning courses (MOOC). The subject of the analysis are pedagogical aspects of the implementation of massive open distance learning courses. The subject of the analysis are methods and learning tools through massive open distance learning courses. The quality assurance of higher education belongs to the most urgent contemporary issues among many others problems of national education. It is related directly to Ukraine's integration into the European educational space and, therefore, related to the problems of correspondence to European standards and criteria of quality of education and competitiveness of leading Ukrainian universities in European education market.

The basis for determining the nature of distance learning lies in the works of both foreign (H. Becker, W. J. Hasson and others) and Ukrainian researchers (V. Bykov, V. Kuharenko, B. Shunevych etc.). In national pedagogics J. Capska, A. Lynenko, J. Pasty, O. Yaroshenko and others investigate the problem of willingness. However, the readiness of students for such individualized process of acquiring knowledge, skills and methods of human cognitive activity, which is, mainly, occurs through mediated interactions educational process participants, which are distant from each other in a specialized environment that operates on the basis of modern psycho-pedagogical, information and communication technologies are remained aside. In the distant form of education the role and requirements of teachers and students are changing. Many teachers and parents do not know the specifics of distantly organized training. This results in students' ignorance [5, p. 123].

We understand the open distance learning as a system that provides active communication between teacher and student with the use of modern technologies and multimedia. Its purpose is to provide educational services with the help of teaching modern information and communication technologies for specific educational or educational levels in accordance with state educational standards; training programs for citizens to enter the educational institution, training foreigners and qualification extension [4, p. 212]. Distance learning, by A. Andreev's definition, is a form of education and at the same time a set of educational technologies for the delivery of the bulk of the studied material to students; interact students and teachers in the process of learning, providing students opportunities for the self-study of the material as well as in the process of studying [4, p. 67].

The use of massive open distance learning courses is widely used in foreign teaching practice. The basis of this trend is the work of Stephen Jones and George Siemens (connectionism theorists). Results of these courses can be found in the publications of other authors. On the territory of the CIS countries relevant studies and similar courses were not observed. However, there was an attempt to hold such open courses in 2011 in Ukraine. The initiator of the first event "e-learning strategy in the organization" was Professor V. Kuharenko. V. Kuharenko and co-author of this publication held the second course "Social Services in distance learning". Researchers highlight the following advantages and disadvantages of massive open distance learning courses (MOOC):

Advantages:

1. The possibility of such a course in any conditions, where there is available communication (Internet or a local connection, for example, Wi-Fi).
2. Possibility of course in any language (including the basic language of your intended audience).
3. Ability to use any on-line tools that are relevant to your intended audience or participants have already used them in daily and professional activities.
4. The possibility of transcending time zones and physical boundaries.

5. The possibility of such a rapid organization of such course that is equal to the speed of post about its beginning.
6. Education occurs in setting that is more informal.
7. Content can be open to all.
8. Training is provided due to informal knowledge created in the course through the exchange of information and experience between its members.
9. Possibility to use these courses as well as in a corporate and in the academic sector.
10. Possibility of creation their own personal learning environment and own personal learning network with the help of participants of the course.
11. Possibility to improve participants' skills for lifelong learning, because these courses force them to improve and develop.
12. At the end of the course information is not removed. These created educational networks are more stable.

Disadvantages:

1. Randomness and a large amount of information.
2. Education in MOOC requires computer skills.
3. Each participant determines his educational goals and self-regulates his activities.
4. Each participant builds his own trajectory in the course [6, p. 279].

Methods of research: analysis, synthesis, generalization.

The most famous example of Ukrainian MOOC is "Online University" platform. It is the first project in Ukrainian massive online courses created by Kyiv National Taras Shevchenko University. "Brend-Management" is the current course organized there. Taking into account all predictions about MOOC given by the US and the UK, we can distinguish the following positive aspects of courses:

First, massive online courses attract talented speakers and entrepreneurs willing to share their knowledge and experiences with students from all over the world completely free. At the same time, instructors cannot provide individual control of each student. Due to the lack of control about 90% of students, who enrolled in MOOC, drop out.

Next risk is reducing the profit and the number of working places in traditional schools, if the rate of MOOC will be counted as academic credits. It seems that teaching online classes cannot displace a university education in the near future. It may seem that MOOC courses solve the problem of insufficient financing of higher education, but it is not so. Many of those, who signed up for online learning, have a degree and they use distance learning course as a hobby. On the other hand, the situation can change, if the MOOC will be included into the academic course as a complementary resource. Hampson-Jones offers to make the course MOOC paid as part of obtaining degree. At the end of the free part in order to update and enroll the course in diploma one will have to pay a fee. One can continue learning both online and in campus. Professor Bean argues that there will not be university credits awarded at the courses "Future Learn". This platform will always be outside the university standard [1, p. 321].

MOOC can be useful for the students as the possibility to test different educational programs. Also online course can be useful to those, who have linked his professional career with some industry and want to improve their knowledge in a particular field. MOOC is certainly useful for self-esteem improvement: he, who passed through online learning, is able to do something that 90% of the registered are unable.

Today distance learning in school is implemented at the level of experimentation. According to the order of Ministry of Education and Science (29.12.2009 № 1231) Department of research and design of learning environment IITZN Pedagogical Sciences of Ukraine an experiment in distance learning for students was conducted (Project Supervisor – PhD Yuri Nikolaevich Bohachkov) from March 1, 2009 to September 30, 2011. Kyiv schools and other schools from different regions of Ukraine took part in the project. Conceptual statements of the experiment and the obtained results allow to optimize the process of implementing distance learning in general education in Ukraine [3, p. 155].

In my opinion, there is interesting on-line system "Getting knowledge" (<http://disted.edu.vn.ua/>) for remote learning support in schools, lyceums, gymnasiums in Ukraine. This educational online resource was created by Vinnitsa city center of students' distance learning and the Agency of Information and Communication Technologies, which operates in the physic-mathematical Vinnitsa school №17. The site is a part of the information-educational environment in which the creators dream "load" the whole educational process in physic-mathematical Vinnitsa school №17, and then – in all schools in the region, and further – in whole Ukraine. This online resource offers students distance learning courses, consultations and lessons. The portal is open to all users interested in this field and to potential authors of courses. Each new course passes expert assessment and requires from authors really a high professional level.

Implementation of the elements of distance learning in school requires from teachers educational activities with the use of new technologies, testing and implementation of new learning techniques. The introduction of distance learning is impossible without the use of ICT as a tool that helps to expand opportunities for both students and teachers, and to make a decisive impact on the process of changing and improving education. The use of advanced ICT changes the role of the teacher, encourages them to the introduction of new teaching methods and approaches in preparation for the lesson. Such qualities as the ability to apply innovative ways to use the computer and the opportunities it provides, a high level of technical literacy enhancement and new knowledge are quite important for

development of the cognitive activity. Teachers should master the techniques and DL technologies at the professional level, become tutors, and to pass the necessary training and education for this purpose. You can pass courses for tutors (teachers in distance learning) in "Remote Academy". It is important for teacher to acquire skills to design his own course and to be able to organize distance learning. Today massive online courses – only convenient and accessible form of gaining knowledge or extension qualification. But this form of education is developing rapidly. Tomorrow school graduate may ask: If I can get a better university diploma for a little money, why should I enter a less prestigious one? This is a threat to Ukrainian universities in regions. Therefore, our universities must act quickly in order to compete with the best institutions worldwide. By the way, even leading American, European universities are concerned about the rapid development of online education. Here is an example: "There is a very strong Georgia Institute of Technology in the USA. A few months ago, it offered the world's first master's program in computer science, based on online courses. They plan to provide education for ten thousand people at the same time within this program. Due to the online format of this program, to obtain Master's Degree will cost seven times cheaper than usual one" [4, p.152]. Of course, not all knowledge can be passed "virtually". Individual approach and work in research laboratories are required for many specialties. What about technical universities? Do they have to refuse to new forms and methods in education? Massive online courses are only one of great variety of education forms. Today they work out blended format, or as they called "hybrid" courses. For example, Massachusetts Technological University (one of the best polytechnic universities in the world) offers the online circuitry course for various universities in the US. These lectures are very similar in all universities. Americans decided not to repeat the same thing. This is principle opportunity to improve the quality of education in the country! Education will benefit, if the best professors read online lectures and teachers work directly with students.

Lack of budget funding is not only Ukrainian problem. It exists in the universities in many countries. However, the "cry" for lack of money is not accepted in the world. Respect those, who are trying to solve the problem. In California (USA), for example, lack of funding has led to a decrease in the number of "budget places". As a result, there was a huge virtual "queue" of those, who want to get an education [7, p. 195].

Experts claim that online education spreads faster than any other technology in history. Currently, experimental projects turn into "chain" of related courses. Recently, the head of the project EdX Anand Agarwal said: "the issue of obtaining diplomas in online education will be decided during the year". Kyiv National University also will not stand aside. In the nearest future, they will develop courses in law, political science and computer science. We have some reasons for optimistic future in the "education revolution" in Ukraine. The most fundamental one is that people understand the importance of education and new knowledge" [7, p. 246]

Conclusions. The problem of quality of massive open distance courses is extremely important. The massive open distance course must correspond to the main didactic principles. They include scientific content, availability, systematic presentation of educational material, adaptability, visibility, connection with practice, completeness (integrity), interactive, self-consciousness, the development of intellectual capacity and so on. Ergonomic quality is one of the requirements for distance learning courses. Requirements for color characteristics, spatial placement of information on the screen, sound, alphanumeric symbols and signs requirements, requirements of dialogue etc. are worth mentioning [3, p. 315]. Undoubtedly, the development of massive open distance courses must attract leading scientists of the country, qualified scientists, educators, psychologists and programmers. It is necessary that all courses have to pass specific certification.

We believe that only this approach to distance education in the near future will make it versatile, efficient, cost-effective and affordable, will reveal and realize all its potential opportunities for the development of national education system towards democratization of higher education.

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Бацуровська І. В. Педагогічні аспекти реалізації масових відкритих дистанційних курсів в Україні

У цій статті досліджуються особливості реалізації, проведення, аналіз стану та використання масових відкритих дистанційних курсів в Україні. У статті розглянуто основні переваги та недоліки масових відкритих дистанційних курсів, представлено порівняльний аналіз напрацювання вітчизняних та закордонних учених щодо впровадження відкритих дистанційних курсів, визначено основні вимоги до дистанційних курсів. Стаття містить аналіз поточного стану використання масових відкритих курсів дистанційного навчання у вищих навчальних закладах. У статті надано низку рекомендацій для розвитку національної системи освіти, що сприяє демократизації вищої освіти.

Ключові слова: масові відкриті дистанційні курси, дистанційні форми, самоосвіта, e-learning, навчальне середовище, освітня діяльність, новітні технології, перспектива, інтерактивність.

Бацуровская И. В. Педагогические аспекты реализации массовых открытых дистанционных курсов в Украине

В данной статье исследуются особенности реализации, проведения, анализ состояния и внедрения массовых открытых дистанционных курсов в Украине. В статье рассмотрены основные преимущества и недостатки массовых открытых дистанционных курсов, представлен сравнительный анализ наработок отечественных и зарубежных ученых по внедрению открытых дистанционных курсов, определены основные требования к дистанционным курсам. Статья содержит анализ текущего состояния использования массовых открытых курсов дистанционного обучения в высших учебных заведениях. Статья представляет собой ряд рекомендаций для развития национальной системы образования, способствует демократизации высшего образования.

Ключевые слова: массовые открытые дистанционные курсы, дистанционные формы, самообразование, e-learning, учебная среда, образовательная деятельность, новейшие технологии, перспектива, интерактивность.

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Блудова Ю. О.

**ОРГАНІЗАЦІЙНО-ПЕДАГОГІЧНА СИСТЕМА ФОРМУВАННЯ
ХУДОЖНЬО-ЕСТЕТИЧНОГО СМАКУ ДІТЕЙ МОЛОДШОГО ШКІЛЬНОГО ВІКУ
ЗАСОБАМИ РЕГІОНАЛЬНОЇ КУЛЬТУРНО-ІСТОРИЧНОЇ СПАДЩИНИ**

В умовах оновлення школи зростає роль і значення художньо-естетичного виховання як засобу формування духовного світу, естетичних ідеалів молоді, мета якого – всебічний розвиток особистості з високим національним культурним потенціалом, розвиненим почуттям прекрасного. Фундаментом художньо-естетичного виховання має стати регіональна культурна спадщина, скарби народнописенної, поетичної, декоративно-прикладної творчості, художніх ремесел тощо.

Створено модель організаційно-методичної системи виховання художньо-естетичного смаку дітей молодшого шкільного віку, яка містить такі блоки: цільовий (представлений метою та завданнями); теоретико-методологічний (містить підходи та принципи); змістовно-технологічний (форми, методи, засоби роботи, педагогічні умови); критеріально-результативний (складається з компонентів, критеріїв, рівнів сформованості художньо-естетичного смаку дітей молодшого шкільного віку та передбачуваного результату).

Передбачуваний результат побудови моделі організаційно-педагогічної системи – підвищення рівня сформованості художньо-естетичного смаку дітей молодшого шкільного віку.

Ключові слова: художньо-естетичний смак, регіон, культурно-історична спадщина, формування художньо-естетичного смаку, молодший шкільний вік, організаційно-педагогічна модель формування художньо-естетичного смаку, зміст, форми і методи формування художньо-естетичного смаку дітей молодшого шкільного віку.

Сучасний етап розвитку теорії та практики естетичного виховання та формування художньо-естетичного смаку в Україні характеризується пошуком відповіді на низку актуальних питань, пов'язаних з проблемою особистості, розвитком її потенційних сил і можливостей, формуванням системи духовних цінностей, на які б вона могла спиратися у повсякденному житті, навчанні, праці, спілкуванні, творчості.

Складна ситуація у питанні виховання дітей молодшого шкільного віку вимагає консолідованих дій з боку суспільства, сім'ї і школи, налагодження конструктивного діалогу, який би дав змогу вийти на якісно