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IMPROVING THE ORGANIZATION OF TEACHING INFORMATICS AND INFORMATION TECHNOLOGIES IN SCHOOLS USING THE INNOVATIVE CLUSTER METHOD

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ABSTRACT

In modern society, innovation technologies expand to almost every field of human activity, including such wide field as education. Due to integrating innovation technologies into the educational process practice, this phenomenon gained special significance within improvement and modernization of the established educational system. Currently, the problem of active integration and wide application of innovation technologies in education is highly significant. Present study explores innovation technologies of learning in the modern education.

Keywords: Informatics, Information technology, teaching methodology, cluster method, technology.

INTRODUCTION

Our goal is to determine which methods of teaching computer science and information technologies are effective. Each model is unique and represents different learning methods. According to the recommendations given, the methods that can be used in the teaching and learning of computer science and information technology may differ. Undoubtedly, a teacher of a general secondary school cannot work with each student individually. This factor definitely depends on time distribution. That is why the teacher's work in the classroom with groups of students gives effective results. The assignments given by the teacher serve to form not only the intellectual potential of the students in the groups, but also the ability to express their opinion in the team. The use of the cluster method in the teaching of informatics and information technologies causes students of the general secondary school to think creatively and work on new ideas. We conduct lessons using other methods to assess the knowledge of schoolchildren. Our goal is to determine which methods of teaching computer science and information technologies are effective. The opinions of general secondary school students are analyzed. Recommendations are given on the methods that can be used in the lessons conducted in the field of informatics and information technologies.

In traditional teaching, it is difficult to intuitively present natural phenomena and scenes of life in the classroom. By using information technology tools in the educational process, turning the pictures shown to the students into animation directly or creating special animations directly to the students it will be possible to refer. This increases students' interest in the lesson.

METHODOLOGY

Innovations in the field of informatics and information communication technologies are one of the main directions of innovative development of education in Uzbekistan and around the world. The educational process should be organized in such a way that the student should participate in the lesson actively, with interest and enthusiasm, and see the results of his work. Only then can the student appreciate the lesson being conducted.

In schools, classes are mainly conducted using the traditional form of education, and traditional education is dominated by teachers. Teachers rarely use information technology tools in teaching and management, they use computers only for conducting open lessons and recording basic teaching statistics. In schools, it is appropriate to use information technologies not only in open classes, but also in all types of lessons. Informatics and information technology classes can be conducted using various innovative methods. In this case, it is appropriate to use methods based on the essence of the training topic.

Teaching modern informatics and information technologies has its own didactic possibilities and advantages. Playing an important role in the formation of the new educational system of teaching modern informatics and information technologies, the purpose and content of pedagogical technologies, it allows to increase the effectiveness and quality of the educational process in its most diverse aspects.

Innovation in education manifests itself as a creative search for new ideas and principles, which turns them into typical projects that include conditions for their adaptation and application in particular cases. In conducting the research, we used the following types of methods: theoretical (analysis, synthesis, classification, generalization, deduction, induction, analogy and modeling); empirical (observation, survey, questionnaire and interview); experimental (identification, development and diagnostic experiment); statistical (statistical analysis of data, qualitative and quantitative analysis of research results).

The methodological basis of the research is the foundations of modern education, the fundamental statements of general secondary education and higher education

pedagogy (Abdulina, 1995; Babansky, 1992; Ilina, 2001), the theory of professional competence development (Adolf, 1998; Bespalko, 2004 ; Kozberg, 2000; Stukalenko).

RESULTS

The analysis of the learning problem showed that in modern times, innovative changes are being implemented in the following directions:

- development of new content of education;
- development and application of new educational technologies;
- use methods and means of learning new programs;
- creating conditions for self-determination of the person during the educational process;
- changing the way of thinking of teachers and students, changing their attitudes, creating and developing creative and innovative teams.

Innovative education is a creative process, related to the development and application of research, research, modeling of educational processes and other types of activities in the educational process. Undoubtedly, solving educational problems begins with the professional training of teachers. A modern teacher should not only be able to teach his subject, but also be adept at using innovative technologies and be able to use them effectively in a specific field of education. In such conditions, the goal is to prepare not only a teacher who can use new technologies, but also a researcher, innovator and experimenter, creative research, critical assessment of historical pedagogical heritage, and a person who can adapt to modern society and the conditions of society. The process of goal setting in pedagogical technology is the main problem, which is solved in two aspects:

1. Setting a diagnostic goal and objectively controlling the quality of students' mastery of educational material;
2. General development of the person. The "goal" element in any system is system integration.

Their diagnostic ability is considered a necessary requirement for determining the goals of the pedagogical system. That is, the existence of an objective method of determining the level of achievement of these goals. Therefore, educational technology is characterized by the principle of diagnostic goal-orientation in relation to transformation, that is, in order to have a real educational technology, it is necessary to set such a goal that the degree of realization of the goal allows objective and precise control of this goal.

DISCUSSION

The results of the research allow us to draw the following conclusions: solving the identified problems, especially in the lessons conducted in general secondary schools, teachers are slowing down due to the lack of theoretical and methodological bases for the use of innovative educational technologies. In our opinion, there is a certain degree of dependence of the level of practical mastering of knowledge and skills on the organization of the school educational process on a technological basis, on the effectiveness of the professional and communicative skills of the graduates of pedagogic higher education institutions. The issue of improving the educational activity of teachers on the basis of innovative approaches, its structure and the content of relevant abilities that provide it remains open. In order to eliminate these problems, we would like to emphasize that it is necessary to create a single platform for general secondary school teachers to directly or indirectly monitor the lessons of leading school teachers.

REFERENCES

1. Boymurodov, A. X., Azimqulov, S. N., & Davlatova, A. R. (2021). ZAMONAVIY TA'LIM TIZIMI AFZALLIKLARI VA IMKONIYATLARI. Academic Research in Educational Sciences, 2(11), 1389-1395.
2. Боймуродов, А. Х., & Азимқулов, С. Н. (2021). ТАЪЛИМ САМАРАДАОРЛИГИГА ЭРИШИШДА ТИЗИМДА ИННОВАЦИОН УЛУЛЛАР. ACADEMIC RESEARCH IN EDUCATIONAL SCIENCES, 2(4), 839-843.
3. Seytov, A.J., Khurramov, A.J., Azimkulov, S.N., Sherbaev, M.R., Kudaybergenov, A.A., & Khasanova S.Kh. (2021). Optimal control of pumping station operation modes by cascades of the Karshi main canal. International Journal of Advanced Research in Science, Engineering and Technology, 8(4), 17177-17185.
4. Azimkulov Saykhun Niyozaliyevich. (2021). DEVELOPMENT OF METHODOLOGY OF TEACHING INFORMATICS AND INFORMATION TECHNOLOGIES WITH CLUSTER. Galaxy International Interdisciplinary Research Journal, 9(12), 938–940.
5. S.N. Azimqulov. (2021). Hududiy ta'lim sohasida informatika va axborot texnologiyalari fani o'qitish metodikasini klaster usuli yordamida rivojlantirish. Respublika ilmiy-amaliy konferensiyasi maqolalar to'plami, Volume 3, Special ISSUE 8, pp: 191-195.

6. Azimkulov Saykhun Niyozaliyevich. (2021). Innovative cluster approach to teaching computer science and information technology in the general secondary education system. Journal of Pedagogical Inventions and Practices, 3, 176–178.
7. Azimqulov, S. N. (2020). ZAMONAVIY TA'LIMNI AXBOROTLASHTIRISH TUSHUNCHASINING NAZARIY ASOSLARI. ТАЪЛИМДА ЗАМОНАВИЙ АХБОРОТ ТЕХНОЛОГИЯЛАРИДАН ФОЙДАЛАНИШНИНГ ИННОВАЦИОН УСУЛЛАРИ, 4(44), 124-126.
8. АЗИМҚУЛОВ, С. (2021). ТАЪЛИМ ЖАРАЁНИНИ ИННОВАЦИОН ПЕДАГОГИК ТЕХНОЛОГИЯ АСОСИДА ТАШКИЛ КИЛИШДА ҚУЛЛАНИЛАДИГАН ЎҚИТИШ УСУЛ ВА ТЕХНОЛОГИЯЛАРИ. ЎзМУ ХАБАРЛАРИ, 2(1), 54-57.
9. Azimqulov Sayxun Niyozali o`g`li. (2022). UMUMIY O`RTA TA'LIM MAKTABLARIDA FAOL O`QITISHNI KLASTER USULI YORDAMIDA TASHKIL ETISH. Conferencea, 71–74.
10. Азимқулов, С. Н. (2021). КЛАСТЕРНЫЙ ПОДХОД И ЕГО ИСПОЛЬЗОВАНИЕ В НАУЧНО-ПЕДАГОГИЧЕСКИХ ИССЛЕДОВАНИЯХ. Academic Research in Educational Sciences, 3(2),826-861.
11. Azimkulov Saykhun Niyozaliyevich. (2021). Innovative cluster approach to teaching computer science and information technology in the general secondary education system, Journal of Pedagogical Inventions and Practices,Volume, 3, 176-178.
12. Azimkulov Saykhun Niyozaliyevich. (2021). DEVELOPMENT OF METHODOLOGY OF TEACHING INFORMATICS AND INFORMATION TECHNOLOGIES WITH CLUSTER. Galaxy International Interdisciplinary Research Journal, 9(12), 938–940.
13. Azimqulov S. N., Raxmatov F.A., Nursaidov N.Y. (2019). Tibbiyot axborot tizimlarida hujjat almashish jarayonini tashkil etish muammolari tahlili. "Axborot kommunikatsiya texnologiyalari va dasturiy ta'minot yaratishda innovatsion g`oyalar". Respublika ilmiy-texnik anjumanining ma'ruzalar to`plami, 196-198.
14. Сайхун АЗИМҚУЛОВ. (2022). УМУМТАЪЛИМ МАКТАБЛАРИДА ИНФОРМАТИКА ВА АХБОРОТ ТЕХНОЛОГИЯЛАРИ ФАНИ ЎҚИТИШДА ТАЪЛИМ КЛАСТЕРИ ЁРДАМИДА РИВОЖЛАНТИРИШ. ЎзМУ ХАБАРЛАРИ, 1(9), 2181-7324.
15. AZIMQULOV, S. (2020). INFORMATIKA DARSLARIDA O'YIN TEXNOLOGIYALARI. ЎзМУ ХАБАРЛАРИ, 2(7), 176-179.
16. Азимқулов, С.Н., Зохиров, Қ.Р., (2019). ИНСОН ТАНАСИНИНГ ФИЗИК ЖАРАЁНЛАРИНИ КОМПЮТЕР ТЕХНОЛОГИЯЛАРИ ОРҚАЛИ ТАДБИҚ

ЭТИШ ВА ҚАЙТА ИШЛАШ БОСҚИЧЛАРИ. ИЖТИМОИЙ СОҲАЛАРНИ РАҚАМЛАШТИРИШДА ИННОВАЦИОН ТЕХНОЛОГИЯЛАРНИНГ ЎРНИ ВА АҲАМИЯТИ, 1(25), 68-69.

17. Азимқулов, С.Н., Жиянов, О.П. (2017). ХАВФСИЗЛИК МУАММОСИДА АХБОРОТ ТИЗИМЛАРИНИ ҚЎЛЛАШ. Касб-ҳунар коллежларида таълим жараёнинитакомиллаштириш муаммолари, 2(83), 213-216.
18. Азимқулов, С.Н. Халиярова, Ф. Х. (2017). ТАЪЛИМ ЖАРАЁНИЖА ИНТЕРФАОЛ МЕТОДЛАРДАН ФОЙДАЛАНИШ АСОСИДА ТАЪЛИМ. ЗАМОНАВИЙ АХБОРОТ - КОММУНИКАЦИЯ ТЕХНОЛОГИЯЛАРИНИ ФАН, ТАЪЛИМ ВА ИШЛАБ ЧИЫАРИШГА ТАДБИЫ ЭТИШНИНГ ДОЛЗАРБ МУАММОЛАРИ, 1(10), 44-47.
19. Азимқулов, С.Н., Нарзуллаева, Н. У. (2017). ПОДГОТОВКА КОНКУРЕНТОСПОСОБНЫХ КАДРОВ СРЕДСТВАМИ ИНФОРМАЦИОННЫХ ТЕХНОЛОГИЙ В СФЕРЕ ОКАЗАНИЯ УСЛУГ. Хизмат кўрсатиш соҳаси инновацион ривожланишининг муаммолари, 5(11), 244-246.