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CREATION OF OPEN INFORMATION-EDUCATION ENVIRONMENT AND IMPROVEMENT OF USE COMPETENCES FOR BIOLOGY TEACHERS IN GENERAL SECONDARY EDUCATION INSTITUTIONS

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Abstract
In this article, continuity, consistency, improvement of natural scientific literacy in the field of pedagogical education for general secondary educational institutions, organization and management of the educational process at a high level, open information and education in improving the efficiency of the qualifications of biology teachers information on creating an environment and improving usage indicators is covered.

Keywords: Multimedia, GIF animation, integration, open information and educational environment, information and communication technologies, pedagogical technologies, interactive technologies, distance learning, didactic, technological, organizational and communicative competencies.

ANNOTATSIYA
Ushbu maqolada umumiy o‘rta ta’lim muassasalari uchun pedagogik ta’lim sohasidagi uzluksizlik, izchillik, tabiiy ilmiy savodxonlikni oshirish, o‘quv jarayonini yuksak darajada tashkil etish va uni boshqarish, biologiya fani o‘qituvchilarining malakasini samaradorligini oshirishda ochiq axborot-ta’lim muhitini yaratish va foydalanish ko‘rsatkichlarini takomillashtirish bo‘yicha ma’lumotlar yoritilgan.

Kalit so‘zlar: Multimedia, GIF-animasiya, integratsiya, ochiq axborot-ta’lim muhiti, axborot-kommunikatsiya texnologiyalari, pedagogik texnologiyalar, interfaol texnologiyalar, masofadan o‘qitish, didaktik, texnologik va tashkiliy-kommunikativ, kompetensiyalar.

АННОТАЦИЯ
В этой статье рассматриваются вопросы непрерывности, последовательности и повышения естественнонаучной грамотности в области педагогического образования для учреждений общего среднего образования, организации учебного процесса на высоком уровне и его управления, создания и использования открытой информационно-

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образовательной среды для повышения квалификации и эффективности работы учителей биологии.

Ключевые слова: Мультимедиа, GIF-анимация, интеграция, открытая информационно-образовательная среда, информационно-коммуникационные технологии, педагогические технологии, интерактивные технологии, дистанционное обучение, дидактические, технологические и организационно-коммуникативные, компетенции.

INTRODUCTION

Meeting the demands of a developing society requires today's teacher to have deep theoretical knowledge, high morality, a high level of culture, a sense of responsibility and accountability in educating students and trainees to the level of a perfect person for the advancement of the homeland, a pedagogical interest in developing the creative potential of their students, innovation activities, self-improvement, and professional activity capabilities, as well as a number of other qualities. In our republic, the education system can be viewed as having positive reforms with the aim of ensuring stable development, including "qualitatively updating the content of the continuous education system, as well as preparing, retraining, and improving the qualifications of professional personnel, and introducing modern information and communication technologies (open information education) and innovative projects into the field of public education" [4,5], the adoption of the law "On Education" [8], and the decision on the introduction of a national testing system for assessing the level of knowledge in general education subjects [3]. Additionally, enhancing the intellectual and spiritual potential of citizens living in society has been designated as a priority task. In this regard, the pedagogical opportunities for creating and implementing open information-educational environments are expanding.

1. To increase the quality and effectiveness of preparing teachers for professional-pedagogical activities and to guarantee results, it is necessary to ensure the integrity and synthesis of pedagogical and technical knowledge in students.
2. It is necessary to improve the methodology for developing the personal qualities of future teachers.
3. The development of future teachers' communication skills and speech should focus on shaping the pedagogical competence of the teacher.

LITERATURE ANALYSIS AND METHODOLOGY

Research on the development of the professional competencies of teachers is being widely conducted in the countries of the world. In particular, foreign scholar F. Amiri [5] substantiated the importance of effective use of modern pedagogical programs in enhancing teachers' professional competencies, and the significance of the implementation of electronic manuals created based on subject modules in the educational process by Z. Tatli and A. Ayas [4] is emphasized. Studies related to the theory and practice of media education, the use of interactive methods and intellectual game technologies in teaching subject areas have been carried out by S. Goodman [6], R. Kozma [7], M. K. Clemence [10], L. Masterman [12], L. Henderson, and

J. Klemes [10]. Special attention is being paid to improving the methodology of teaching subjects included in the biology category in the continuous education system, modernizing and developing the teaching of the subject based on innovative technologies, developing didactic materials related to the subject and increasing the effectiveness of educational activities by utilizing them, and fostering creativity skills in students.

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ANALYSIS AND DISCUSSION OF RESULTS

The sharp increase in the information environment requires specialists working in various fields to have theoretical knowledge and practical skills on the formation of competence in the use of information and communication technologies. In this regard, in the Decree of the President of the Republic of Uzbekistan dated April 29, 2019 No. PF-5712 on approval of the concept of development of the public education system of the Republic of Uzbekistan until 2030, «Taking into account the modern trends in the development of information and communication technologies raising the level of computerization in the educational process; taking measures to systematically organize the process of developing and using multimedia products in education; priorities such as effective use of computer technologies and the Internet among young people have been defined[1,2]. Therefore, today, based on modern technical means, the application of computer technologies to the educational process and all aspects of society's activities has become the demand of the time.

In teaching with the help of an open information-educational environment, the possibilities of information and communication technologies in the formation of competencies of students in subjects in general secondary schools have not been sufficiently studied. It is not enough to fully use information tools and information and communication technologies in teaching subjects in general secondary educational institutions. In practice, such tools, of course, should develop methods of forming practical skills in them by providing theoretical knowledge on the ideological base of educational informatization, as well as the use of various electronic programs in educational processes in general education schools [9,11].

Informatization of the educational and educational process of general education subjects, regardless of the direction of its implementation, is a wide and multifaceted field of human activity and is important in the further activity of the student.

It includes the scientific basis of creating, testing and using an open information-educational environment in the informatization of subjects taught in general secondary schools. There are still unsolved problems in this area. These include the compatibility of the open information-educational environment with the educational process, the need to increase the level of scientific, semantic and stylistic culture in it, the need for interface, technological and information communication between personal educational publications, resources involved in various fields of schools.

Therefore, in order to use the open information-educational environment in the teaching of subjects in general secondary educational institutions, it is necessary to pay attention to the following:

- introduction to the positive and negative aspects of using an open information-educational environment;

- formation of ideas about areas of effective use of open information-educational environment;
- formation of knowledge about the requirements for creating and using an open information-educational environment, the main principles and methods of evaluating their quality;
- Teaching the strategy of practical use of open information-educational environment;
- teaching the methodology of informatization of education [10].

Preparation of the teacher for innovative activities should be carried out in two directions: 1) formation of innovative readiness to perceive innovation;
2) teaching to act in a new way".

As a result of the establishment of innovative activities, the introduction of innovations into the pedagogical process is carried out in 4 stages:

1. Identifying the problem based on analysis;
2. Design of the intended educational system;
3. Planning changes and news;
4. Making changes

The purpose of preparing future biology teachers for innovative activities is to develop their desire for innovation along with acquiring knowledge, to form the skills and qualifications of independent work on themselves, to use new pedagogical technologies, interactive methods, in general secondary education institutions in addition to improving the skills of conducting classes, extracurricular and extracurricular activities in higher education institutions, as well as forming professional-pedagogical competence in them. It can be seen that innovative activity necessarily requires the formation of a certain innovative environment [7,8,15].

CONCLUSION

In conclusion, we should emphasize that the formation of methodical, general scientific and educational basic competencies in pedagogues is the basis for forming the competence of the open information-educational environment in them. An open information-educational environment for subjects taught in general secondary schools encourages students to independently study educational information related to science. As a result, the student's interest in science increases and his thinking develops.

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