



THE ROLE OF THE DEVELOPMENT OF THE DIGITAL EDUCATIONAL ENVIRONMENT IN THE QUALITY AND EFFECTIVENESS OF EDUCATION

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Annotation. This article explores the impact of digital educational environments on the quality and effectiveness of education. The author discusses the theoretical foundations for the development of such environments and highlights the benefits they offer, including increased access to educational resources, personalized learning experiences, and improved collaboration among students and teachers. The article also addresses potential challenges and limitations of digital education, such as the need for adequate infrastructure and digital literacy skills. Overall, this article provides valuable insights into the role of digital educational environments in shaping the future of education.

Keywords: digital education, educational technology, digital literacy, personalized learning, collaboration, access to education, quality education, effectiveness of education..

INTRODUCTION

Digital transformation is not just another educational reform, it is a multi-year work program that affects all levels of Education. As in the field of Service and material production, the digital transformation of education should focus on results and improve the quality of work of educational organizations at all stages of the implementation of the program. Digital technologies help to radically improve the quality of teaching students, form all their necessary abilities, form the ability to actively (consciously and creatively) use all available digital tools, materials and services to solve the problem. The basis of the digital transformation of educational institutions is the transition to a personalized Organization of the educational process, in which the introduction and use of digital technologies is most effective¹.

Changing the activities of educational organizations requires changing the normative framework for digital transformation of Education. Developers of digital educational resources will receive help here in the preparation of initial requirements and technical tasks, testing their materials so that they are as convenient and effective as possible in their application, as well as in accurate

¹ Петрова Н.П., Бондарева Г.А. Цифровизация и цифровые технологии в образовании // Мир науки, культуры, образования. 2019. № 5 (78). С. 353-355.





adjustment. Before the growth of the number of innovation platforms and the widespread spread of the personalized Organization of the educational process in the country, the following works must be carried out – - connecting all educational institutions to a broadband Internet network; – formation and development of their digital infrastructure-a radical improvement of the regulatory legal framework for the digital transformation of Education. The situation with the problems that arise in the educational process is gradually and still fully resolved, but this is not the most important thing, it is necessary to continue the development and assimilation of various forms of education during the period of digital transformation. The introduction of a personalized Organization of the educational process will help to increase and reduce the effectiveness of training time as a result of the active involvement of students in educational work . The transition to a personalized Organization of the educational process requires a specially organized digital educational environment that helps the student distinguish educational work in each cycle of educational work. The use of new forms of work (different models of mixed education, etc.) requires a revision of the salaries of professors.

Even if the most advanced professor of digital competencies does everything possible to transfer classes to the online environment, you should not expect high results, they write several online lectures, post text materials and upload tests to the platform. Important requirements for the distance education system are its reliability, the bandwidth of Internet channels, the simplicity of content creation and placement, the availability of platforms for teachers and students. Therefore, taking into account the available external resources in universities, it is advisable to develop requirements for educational process formats that are acceptable for measures for the implementation of distance education and the level of IT infrastructure development. Therefore, each educational institution has its own set of tools and measures for organizing training sessions in an online environment. The faster technological, organizational and other conditions change, the shorter the life cycle of certain components of educational resources. Many educational organizations have long been using a variety of Information Systems and services to develop teaching materials and manage the learning process (e.g. LMS MOODLE, etc. The most popular system among educational institutions is the LMS MOODLE - the basis of the educational activity management system. Its main use is to develop, manage and distribute online learning materials with local access. The system can include a wide variety of products for training, individual tasks, project work,





educational elements, books, test materials, etc. This can include and organize an e-Learning Complex in general. Thanks to new achievements in the field of information and communication technologies, the mandatory transition to distance education once again proves the need to introduce digital transformation in education. A.V.Uvarov writes that changing the work of educational organizations requires changing the regulatory framework for digital transformation of Education².

The latter is impossible without relying on practice without comprehensive testing and accurate adjustment of this base on innovation digital education sites during extensive experience. The situation with the problems that arise in the educational process is astasekin and is still fully solved, but this is not the most important, it is necessary to continue to develop and master various forms of education during the period of digital transformation. Informatization of education should be aimed at solving the increasingly complex tasks of forming computer literacy of students and improving the effectiveness of the educational process. Today, the idea of the role and role of computers in the educational process has changed once again. Computers were seen as a means of transforming education, learning, without leaving students behind and moving towards personalized Organization of the learning process. In recent times, special attention is paid to public open online courses. The expected changes from their distribution and the prospects for their use are being discussed. One of the main issues of informatization of education is the formation of information and communication, technological competencies of students. How and to what extent the educational system solves this problem can serve as a good indicator of the effectiveness of work on the digital transformation of education in general.

Today, the worldview of students is changing, as a result, the activities of universities are also changing, and students and professors are increasingly using existing digital teaching materials and tools to facilitate their work and improve their effectiveness. The requirements for general literacy, the knowledge and skills of modern workers, the requirements for a new economy and educational environment are growing rapidly. It is also clear that knowledge and skills will not be enough without the formation of appropriate qualifications. Now, within the framework of compulsory courses, everything that students need to know cannot be included in the curriculum. You need to teach them how to learn, manage their knowledge, find, analyze, evaluate and apply knowledge

² Меняйся или уходи. Цифровое образование бросает вызов преподавателям вузов [Электронный ресурс]. Режим доступа: <http://www.roisknews.ru/theme/edu/31969/> (дата обращения: 30.03.2020)





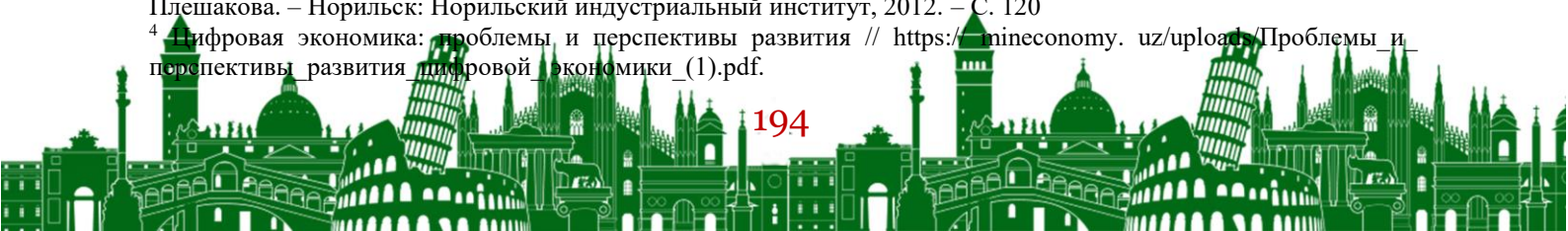
when necessary. The formation and development of such abilities requires a transition to active educational methods, the use of complex structured educational environments. In the current conditions, modern society is undergoing great changes as well as a process of globalization.

Among the universal changes that are taking place, the phenomenon of digitization occupies an important place. The concept of "digitization", which highlights the essence of its global phenomenon, which is recognized as a high peak in the development of information and Communication Technologies, was originally applied in language consumption in 1995 by Nicholas Negroponte (Nicholas Negroponte), an American information technology expert of Greek origin. The author says that the digital world, which as early as that time is based on digital technologies, in its essence covers a wide range of exercises. It can grow and transform continuously and continuously to a greater extent than previous, self-like systems. Nicolas Negroponte (Nicholas Negroponte) points out that the concept of "digitization" not only emphasizes the phenomenon associated with Informatics and the "digital economy", but also directly "the process of transition to new models of Business Processes, Management and production methods based on information technology of an enterprise or a holistic economic network." Looking back at Real life, Nicolas Negroponte's (Nicholas Negroponte) scientific hypothesis for digitization has found its proof. That is, digitization has gained a leading place in all spheres of society's life and, as a social value, has become an integral element of the historical development of mankind. Confirming the opinion of Nicholas Negroponte (Nicholas Negroponte), O.I.Voinova and V.A.Pleshakov argues that today's generation of humanity "is not in the role of an independent person, concentrating on the qualities that ensure his capacity to organize life activities, but as a subject of network cooperation against the background of performing various social functions in the cyberspace".³ The digital learning environment is a multi-stage, continuous, systematic process with its own characteristics. In this place is A.Kondakov draws attention to the fact that the peculiarities of the digital educational environment consist of:

Digital economy-economic activity related to the establishment of the consumption of digital technologies, as well as production, trade, products or services using e-commerce, web and Internet economy⁴. Digital education (or

³ Воинова О.И., Плешаков В.А. Киберонтологический подход в образовании. Монография / Под ред. В.А. Плешакова. – Норильск: Норильский индустриальный институт, 2012. – С. 120

⁴ Цифровая экономика: проблемы и перспективы развития // [https://mineconomy.uz/upload/Проблемы_и_перспективы_развития_цифровой_экономики_\(1\).pdf](https://mineconomy.uz/upload/Проблемы_и_перспективы_развития_цифровой_экономики_(1).pdf).





digital system of education) is directly considered one of the most important areas of the digital economy. Digital literacy – 1) with the help of computers, the ability to understand and use information presented in a wide range of sizes and resources (media literacy – mastering the criteria for working with media; information literacy (search for the necessary information and tools for working with them, mastering the use of these tools; communicative competence-skills for communicating with other users; creative competence-production of information of various shapes and sizes; Paul Gilster, 1997)⁵; 2) the ability to achieve the necessary management, understanding, rounding, sharing, evaluation, compilation and use of security and information using digital devices and communication technologies to operate in economic and social life (UN)⁶. A scientific study conducted by employees of the National Agency for financial research (RF; nasionalnoe agentstvo finansovix issledovani – nafi) shows the formation and development of digital literacy on the basis of computer literacy, literacy in ICT, information literacy and media literacy, communicative literacy⁷. A digital education environment (or digital education system) is an environment that includes a set of information systems that ensure the provision of quality educational services in an online format. Management of the digital education system-methodological guidance on the provision of quality educational services in the online format in the system, the basis of which is a set of Information Systems. Digital education (didactics) - an important area of pedagogy aimed at organizing the educational process in the context of a digital society⁸.

Distance education-the provision of educational services using information and communication tools (video, audio, computer, multimedia, radio, television, etc.) from a certain point, the distribution and delivery of educational products, as well as traditional and innovative form, method, means-based education. Digital (electronic information) resources (EATR)-technologies that provide the possibility of transmitting digital (electronic) educational information on electronic information carriers (ICT, Internet communication, mobile technology) and tools (flash card, SD-ROM and other)in the digital (distance) education system⁹. Digital education technologies-a set of

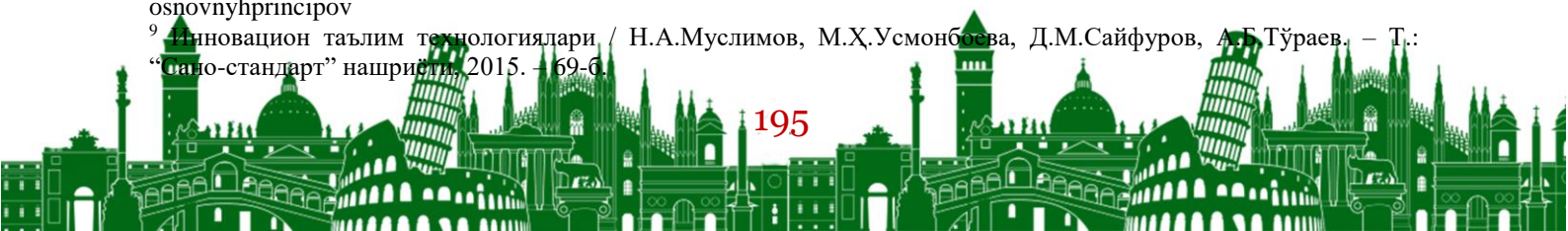
⁵ Кудимова Н.В., Мамонтов Д.И. Реализация модели “Цифровой класс” в Московской области. Методические рекомендации. – Долгопрудный: Физикон Лаб, 2019. – С. 6.

⁶ Цифровая грамотность российских педагогов. Готовность к использованию цифровых технологий в учебном процессе / Т.А. Аймалетдинов и др. – М.: Аналитический центр НАФИ и изд-во НАФИ, 2019 – С. 9-10.

⁷ Цифровая грамотность российских педагогов. Готовность к использованию цифровых технологий в учебном процессе / Т.А. Аймалетдинов и др. – М.: Аналитический центр НАФИ и изд-во НАФИ, 2019 – С. 9-10.

⁸ Цифровая дидактика: 11 основных принципов // <https://lala.lanbook.com/cifrovaya-didaktika-11-osnovnyhprintsipov>

⁹ Инновацион таълим технологиялари / Н.А.Муслимов, М.Х.Усмонбоева, Д.М.Сайфуров, А.Б.Тўраев. – Т.: “Садо-стандарт” нашрияти, 2015. – 69-б.





methods and devices for creating a modern educational environment using digital technologies¹⁰. The characteristics that are manifested in the digital educational environment mean the uniqueness and non-reproducibility of this environment. The fact that each educator is aware of the peculiarities and structural elements of the digital educational environment contributes to the effective organization of professional activities in the existing conditions.

CONCLUSION

Today, when the world has become a single information space, an artificial barrier cannot be placed in the path of any information. In the conditions of both good and bad effects, the presence of various attacks on our country, whose youth freely occupy the languages of the world and are on the verge of suffering "internetomania", the expansion of the individual's chances of being able to protect himself from psychologically negative influences is one of the most pressing problems.

¹⁰ Цифровые технологии в образовании // <https://www.uchportal.ru/publ/30-11-0-10201#::~:~:text>

