INTER EDUCATION & GLOBAL STUDY

Original paper

TA'LIMNI RAQAMLASHTIRISH: AFZALLIKLARI VA YOQIMSIZ OQIBATLARI

IE&GS

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Annotatsiya

KIRISH: ushbu maqola ta'limni raqamlashtirish mavzusi ko'rib chiqilgan, uning afzalliklari va istalmagan oqibatlarini ta'kidlfngan. Tez rivojlanayotgan texnologiyalar va onlayn ta'lim formatlariga oʻtish kontekstida muallif raqamlashtirishning ijobiy tomonlarini muhokama qiladi, masalan, ta'lim olish imkoniyatini oshirish, ta'lim sifatini yaxshilash va innovatsion oʻqitish usullari. Shu bilan birga, talabalarning ijtimoiy moslashuvining yomonlashishi, ma'lumotlar xavfsizligi muammolari va sogʻliqqa noaniq ta'sir kabi salbiy jihatlar ham ko'rib chiqilgan.

MAQSAD: ta'limni raqamlashtirishning asosiy tarkibiy qismlariga nafaqat texnik vositalardan foydalanish, balki raqamli oʻquv materiallarini ishlab chiqish, elektron platformalar va ta'lim dasturlarini ishlab chiqish, shuningdek, oʻqituvchilarni oʻz faoliyatida raqamli texnologiyalardan foydalanishga oʻrgatishni daqiq qilissdan iborat.

MATERIALLAR VA METODLAR: ta'limni raqamlashtirish konsepsiyasi ta'lim jarayonida axborotkommunikatsiya texnologiyalari va raqamli vositalardan foydalanishga strategik yondashuv hisoblanadi. U ta'limning qulayligi, sifati va samaradorligini oshirish, shuningdek, talabalar oʻrtasida raqamli koʻnikmalarni rivojlantirishga qaratilgan. Ta'limni raqamlashtirish oʻquv jarayoniga texnologiyalarni integratsiyalash, raqamli ta"lim resurslarini yaratish va ulardan foydalanish, oʻqitish va baholashning yangi modellarini ishlab chiqish, oʻqituvchilarni raqamli vositalardan foydalanishga tayyorlash kabi turli jihatlarni oʻz ichiga oladi.

MUHOKAMA VA NATIJALAR: ta'lim sohasidagi oʻzgarishlar bir qator omillar ta'sirida yuzaga keladi: texnologik yangiliklar, ijtimoiy-iqtisodiy tartibdagi oʻzgarishlar, siyosiy institutlarning oʻzgarishi. Ta'lim tizimining raqamli koʻrinishda rivojlanishi yangi texnologik tartibdagi iqtisodiyot ehtiyojlarini qondirish uchun moʻljallangan. Raqamli ta'lim vositalari ta'lim jarayoni samaradorligini oshirishga, uning mazmunini diversifikatsiyalashga va oʻqituvchilar va ta'lim muassasalari administratorlarining muntazam ishlarini optimallashtirishga imkon beradi.

XULOSA: ta'limni raqamlashtirish dinamik jarayon bo'lib, u rivojlanishda davom etadi va o'zgaruvchan ehtiyojlar va texnologik imkoniyatlarga moslashadi. Bu zamonaviy ta"limning yangi istiqbollarini ochib, innovatsiyalar, yangi ta"lim modellarini ishlab chiqish va umuman ta"lim sifatini oshirish uchun zamin yaratadi.

Kalit so'zlar: raqamlashtirish, ta'lim tizimi, ijtimoiy moslashuv, raqamli transformatsiya.

ЦИФРОВИЗАЦИЯ ОБРАЗОВАНИЯ: ПРЕИМУЩЕСТВА И НЕЖЕЛАТЕЛЬНЫЕ ПОСЛЕДСТВИЯ

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Аннотация

ВВЕДЕНИЕ: данная статья рассматривает тему цифровизации образования, освещая как её преимущества, так и нежелательные последствия. В контексте быстро развивающихся технологий и перехода к онлайн-форматам обучения, автор обсуждает положительные аспекты цифровизации, такие как повышение доступности образования, улучшение качества обучения и инновационные методы преподавания. Одновременно рассматриваются и негативные аспекты, такие как возможное ухудшение социальной адаптации студентов, проблемы безопасности данных и неоднозначное влияние на здоровье.

ЦЕЛЬ: к основным компонентам цифровизации образования относится не только использование технических средств, но и разработка цифровых учебных материалов, электронных платформ и образовательных программ, а также обучение учителей использованию цифровых технологий в своей деятельности.

МАТЕРИАЛЫ И МЕТОДЫ: концепция оцифровки образования представляет собой стратегический подход к использованию информационных технологий и цифровых инструментов в образовательном процессе. Он направлен на повышение удобства, качества и эффективности обучения, а также на развитие цифровых навыков среди студентов. Цифровизация образования включает в себя различные аспекты, такие как интеграция технологий в учебный процесс, создание и использование ресурсов цифрового образования, разработка новых моделей обучения и оценки, а также подготовка учителей к использованию цифровых инструментов.

ОБСУЖДЕНИЕ И РЕЗУЛЬТАТЫ: изменения в образовании происходят под влиянием ряда факторов: технологических инноваций, изменений социально-экономического порядка, изменения политических институтов. Развитие системы образования в цифровом виде призвано удовлетворить потребности экономики нового технологического порядка. Цифровые образовательные инструменты позволяют повысить эффективность образовательного процесса, разнообразить его содержание и оптимизировать рутинную работу педагогов и администраторов образовательных учреждений.

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ЗАКЛЮЧЕНИЕ: оцифровка образования-это динамичный процесс, который будет продолжать развиваться и адаптироваться к меняющимся потребностям и технологическим возможностям. Это открывает новые перспективы для современного предложения, создавая основу для инноваций, разработки новых моделей предложения и повышения качества предложения в целом.

Ключевые слова: цифровизация, образовательная система, социальная адаптация, цифровая трансформация.

DIGITALIZATION OF EDUCATION: ADVANTAGES AND UNDESIRABLE CONSEQUENCES

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Annotation

INTRODUCTION: this article examines the topic of digitalization of education, highlighting both its advantages and undesirable consequences. In the context of rapidly developing technologies and the transition to online learning formats, the author discusses the positive aspects of digitalization, such as increasing access to education, improving the quality of learning, and innovative teaching methods. At the same time, negative aspects are also considered, such as the possible deterioration of students' social adaptation, data security problems, and ambiguous health effects.

AIM: the main components of digitalization of education include not only the use of technical means, but also the development of digital educational materials, electronic platforms and educational programs, as well as training teachers to use digital technologies in their activities.

MATERIALS AND METHODS: the concept of digitization of education is a strategic approach to the use of information technologies and digital tools in the educational process. It aims to improve the convenience, quality and effectiveness of learning, as well as the development of digital skills among students. Digitalization of education includes various aspects such as the integration of technology into the learning process, the creation and use of digital education resources, the development of new learning and assessment models, as well as the training of teachers to use digital tools.

DISCUSSION AND RESULTS: changes in education are influenced by a number of factors: technological innovations, changes in the socio-economic order, changes in political institutions. The development of the digital education system is designed to meet the needs of the economy of the new technological order. Digital educational tools make it possible to increase the efficiency of the educational process, diversify its content and optimize the routine work of teachers and administrators of educational institutions.

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CONCLUSION: Digitization of education is a dynamic process that will continue to evolve and adapt to changing needs and technological opportunities. This opens up new perspectives for the modern offer, creating the basis for innovation, the development of new supply models and improving the quality of the offer as a whole.

Key words: digitalization, educational system, social adaptation, digital transformation.

Digitalization of education is the use of applications, programs and other digital learning tools in schools, universities, and distance learning courses. For example, when students, complete tasks not in a notebook, but using a platform on the Internet. Digital technologies also relate to the organization of education.

The digital approach to learning leads to increased learning opportunities for both students and teachers. If something was impossible or difficult to implement in traditional learning, then digitalization "frees the hands" of a creative approach.

These technologies make it possible to introduce new teaching methods and focus on the preferences of schoolchildren, which helps to attract lagging students and increases their educational results. Adaptive and interactive learning allows you to achieve the highest level of material development.

The spread of digital technologies (CT) leads to qualitative changes not only in the field of production and in global markets. Changes are also taking over the social sphere and education. Natural resources and cheap labor, although important, are becoming secondary factors of socio-economic development. The transition from mass production of standardized products to the production of publicly available individualized products has begun [1].

Attention to the widespread use of information and communication technologies, or digital technologies (ICT, or CT) in education increases and decreases in our country in waves and is associated with a change in attitudes in the field of socio-economic development. The task here is to form each person's ability to manage their own teaching. In the Educational Standard, this is a requirement.

It is formulated as a task of mastering educational activities. However, there is no clear evidence that this requirement is actually fulfilled for each of the trainees [2].

The spread of global information systems and AI methods promises to help make the necessary changes for this. Currently, the main focus of academic work is on studying data, familiarizing with information, obtaining and mastering knowledge. The formation of the ability to solve non-standard tasks, transfer what has been mastered to atypical situations, independently master new things, evaluate one's own achievements remains outside the framework of the traditionally organized educational process. The spread of

intelligent information retrieval and information processing tools leads to changing traditional approaches to the content of education.

Today, the development of CT has led to the transition in developed countries from mass production of standardized products to flexible production of publicly available individualized products.

The digital transformation of education is a departure from "passing the material", a transition to the formation of the required competencies for each student.

The main components of the digital transformation of the work of an educational organization: the transition from "passing the material" to the formation of competencies; changing the roles of participants in the educational process; transition to personal study plans; changing the space and methods of conducting educational work; digital educational environment for the support of the educational system; updating the regulations of the educational organization.

Transition to the personalized organization of the educational process requires a special an organized digital educational environment that helps to differentiate the educational work of each student in each cycle of academic work.

Moreover, there are several advantages and disadvantages of digitalization in education.

First of all, the process expands access to education. To be clear, digitalization of education overcomes geographical and social barriers, allowing students to receive education regardless of their location. Virtual classes and online courses make knowledge accessible to everyone, even for those who previously had no opportunity to receive a high-quality education.

Individualization of learning is one of the benefits of digitalization. Digital technologies make it possible to create personalized educational programs, taking into account the specific needs and learning speed of each student.

Digital technologies play an important role in the formation of competencies such as IT literacy, critical thinking, collaboration and communication [4].

Expanding access to specialized knowledge is another advantage of digitaliation. Students can communicate with teachers and students from different regions, share experiences and interact in the global educational community. It promotes intercultural understanding, broadens horizons and helps students develop interpersonal skills.

Next plus is saving the family budget. Digitalization of education frees parents from the annual purchase of notebooks, textbooks, diaries and other stationery. The student receives all educational materials and manuals from the Internet. Of course, for successful work you will need constant access to the world wide web, a laptop or tablet of good quality.

Furthemore, with the aid of this process, students learn to be independent. The transition to online learning assumes that the student will study independently most of the time. This is certainly a big plus in the development of a young person who consciously receives an education. Independence is one of the important skills that will help you achieve and follow your goals in later life.

As for every strength there is a weekness, the digitalization process has some pros and cons. And some disadvantages will be mentioned.

Firstly, Low socialization. When, a student comes to an educational institution, he receives not only knowledge and skills, but also finds friends, learns to work in a team and build relationships. The electronic learning system significantly reduces the level of live communication. Besides, digitalization assumes that most of the time the student is in a sitting position and constantly looks at the screen. This primarily affects posture, vision, and fine motor skills.

Nevertheless, digitalization is the reality of today. And whether we want it or not, we and our children will have to live with it. Progress cannot be stopped.

And we are already so used to digitalization in all spheres of life that we hardly want to return to our former lives [5].

One of the highest risks of digitalization is the risk of campaigning, that is, the lack of planning and systematization in this work. What is happening with digitalization now is reminiscent of the restructuring and acceleration of the 80s, when they said that now they would run and accelerate everything. Now they say that they will run and digitalize everything. Digitalization is often for the sake of digitalization itself. Digitalization should be done wisely. And when we talk about fast campaigning, there are two effects that many do not think about.

Undesirable effects of digitalization in campaigning.

Ready–made solutions are taken from the market very quickly, as a rule, foreign–made. And instead of getting a new technological breakthrough, we are further deepening digital colonization, that is, our existing dependence on technologies from other countries, from foreign suppliers.

If we talk about law, unfortunately, legislation is now dramatically lagging behind digitalization. If we lawlessly introduce different technologies, won't this lead to some irreversible consequences? The third point about the risks of digitalization that I want to note is that modern information security tools that are on the market are almost hopelessly lagging behind. If earlier, with the advent of a new technology, a means of protecting it appeared on the market almost immediately (a new operating system – antiviruses for it; the new corporate security system is a whole range of information security solutions for it), now information security tools are lagging dramatically due to such rapid and global digitalization. We implement something that basically has no protection, then there are attacks on the so-called Internet of Things and the number of these attacks is growing year by year. Because they implement solutions that, in principle, have no protection.

If we turn to the threats of digitalization, then with these words, everyone immediately imagines theft, extortion, computer viruses, etc. But this is only a small part of them.

I would divide these threats into several large categories at once, which I will describe below.

Everything related to fraud, theft of funds, data, so-called credentials (credentials of users of computer systems and other human-identifying data, in particular biometric data).

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It is necessary to combat this by legislative methods, law enforcement officers must be involved, and electronic means of struggle must be used, which, as I said, are lagging behind.

Working with an ever–growing amount of data - leaks of this data. The more leaks there are, the more. For example, in 2020, only in the financial and banking sector of Russia there were 36.5% more leaks of personal data and payment information than in 2019. Digitalization is underway, very large databases are being created (for example, a database of covid patients becomes publicly available, databases of medical clinics with very sensitive data), confidential data leaks from them occur regularly. This problem has not been solved yet. The "leaked" data is then used for a variety of fraudulent purposes. For sure, over the past year, everyone present here at the round table has received calls from Sberbank's security services and other scammers on their mobile phones. They said that someone was trying to withdraw funds from your account or they were trying to give you a loan, and for this you need to perform such and such actions. You start communicating with scammers and then you are bred in some way for money. This is an entire industry for data theft and further use.

Possible failures in the maintenance of IT systems, errors, failures. And in the case of artificial intelligence (AI), it is also the making of wrong decisions by the system itself. This also needs to be given a lot of attention at the stage of implementation of any new system, because it must have a certain level of reliability. For example, for government information systems (GIS), the level of reliability should be expressed in several decimal places, that is, it should be very high. After all, there is absolutely sensitive data [6].

Dependence on foreign suppliers. The vast majority of the equipment being introduced in our country is foreign–made. This means that we depend on the fact that it can be remotely disabled at any time, its operation can be remotely influenced, data can be removed from this equipment, leaks of this data, espionage, etc. are possible. Sanctions are also important, despite the fact that the possibility of banning the supply of high technologies to Russia and China is now being considered, then this is a very significant risk for us, to remain without high–tech solutions in general, if we do not develop our own domestic software. An issue that affects our digital sovereignty.

I consider the violation of citizens' rights to be humanitarian risks, which happen all the time, and the loss of jobs due to their replacement by robots or other technologies. What the country will do with people who used to be engaged in routine work, whom digitalization will drive out of agriculture, taxi services, transport and other areas, is also little said, and this is a very important question.

No less important, according to the opinion, is the aspect of the emergence of the so-called "new digital power", which people (system administrators, technical managers, programmers, etc.) actually get access to digital technologies. No one appointed this class, it gets power in fact. Upon hiring, admission, and gaining access to other people's data. And these people do not have ethical or legislative restrictions on the use of this power. And almost no one thinks about it either.

In conclusion, it can be emphasized that the process of digitalization of education has both positive and negative aspects. Undoubtedly, digital technologies bring innovations, make learning more accessible and effective, and also contribute to the development of the educational environment. However, it is important not to forget about possible risks, such as the deterioration of students' social adaptation, data privacy issues, and uneven use of technology. Solving these problems requires an integrated approach, including the development of ethical standards, training teachers in new working methods, and ensuring information security. It is important to continue research in the field of digital education and find optimal ways to combine the benefits of digitalization with minimizing negative consequences for the educational system and students.

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