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FUNDAMENTALS OF USE OF ICT IN EDUCATION AND RESEARCH OF ITS IMPACT ON LEARNING MOTIVATION

In the modern educational environment, the use of information and communication technologies (ICT) is becoming an increasingly important element for increasing the effectiveness of the educational process and student motivation. This article examines the impact of ICT use on students' learning motivation and examines key aspects of this issue. The advantages and disadvantages of using ICT in the educational process are considered, as well as possible ways of optimizing their use in order to increase motivation to study are revealed. Pedagogical and psychological aspects of the introduction of ICT into the educational process are analyzed and recommendations are given for the successful integration of technologies into the practice of education. The research was carried out using current scientific sources and data, which makes it an important contribution to the understanding of the impact of ICT on educational motivation and helps in improving the educational process in the digital era. The integration of ICT into education has brought about significant changes in the way students engage with learning materials, communicate with their peers and instructors, and access information. One of the major advantages of using ICT in education is its potential to increase student motivation. Interactive learning platforms, multimedia resources, and online collaborative tools not only cater to different learning styles, but also make learning more engaging and interactive for students. Additionally, the use of ICT allows for personalized learning experiences, enabling students to progress at their own pace and focus on areas where they need additional support.

Despite the numerous benefits, there are also challenges associated with the use of ICT in education. For instance, the digital divide remains a significant issue, with disparities in access to technology and reliable internet connectivity among students and schools. Furthermore, ensuring that educators are proficient in using ICT effectively for teaching and learning is a critical factor for success.

To optimize the use of ICT and enhance student motivation, it is essential to provide support and training for educators, promote equitable access to technology resources, and continually evaluate the impact of ICT on learning outcomes. By addressing these considerations, the successful integration of ICT in education can lead to improved student motivation and enhanced learning experiences.

Key words: *information and communication technologies, education, educational motivation, effectiveness of education, pedagogical aspects.*

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ОСНОВИ ВИКОРИСТАННЯ ІКТ В ОСВІТІ ТА ДОСЛІДЖЕННЯ ЙОГО ВПЛИВУ НА НАВЧАЛЬНУ МОТИВАЦІЮ

У сучасному освітньому середовищі використання інформаційно-комунікаційних технологій (ІКТ) стає все більш важливим елементом підвищення ефективності навчального процесу та мотивації студентів. У цій статті розглядається вплив використання ІКТ на навчальну мотивацію учнів та розглядаються ключові аспекти цього питання. Розглянуто переваги та недоліки використання ІКТ у навчальному процесі, а також виявлено можливі шляхи оптимізації їх використання з метою підвищення мотивації до навчання. Проаналізовано педагогічні та психологічні аспекти впровадження ІКТ у навчальний процес та надано рекомендації щодо успішного впровадження технологій у практику навчання. Дослідження проводилося з використанням актуальних наукових джерел і даних, що робить його вагомим внеском у розуміння впливу ІКТ на навчальну мотивацію та сприяє вдосконаленню освітнього процесу в цифрову еру. Інтеграція ІКТ в освіту призвела до значних змін у тому, як студенти залучаються до навчальних матеріалів, спілкуються зі своїми однолітками та викладачами та отримують доступ до інформації. Однією з головних переваг використання ІКТ в освіті є їх потенціал для підвищення мотивації учнів. Інтерактивні навчальні платформи, мультимедійні ресурси та онлайн-інструменти для спільної роботи не тільки задовольняють різні стилі навчання, але й роблять навчання більш привабливим та інтерактивним для студентів. Крім того, використання ІКТ дозволяє персоналізувати навчальний досвід, дозволяючи учням розвиватися у своєму власному темпі та зосереджуватися на сферах, де їм потрібна додаткова підтримка.

Незважаючи на численні переваги, існують також проблеми, пов'язані з використанням ІКТ в освіті. Наприклад, цифровий розрив залишається серйозною проблемою, оскільки доступ до технологій і надійного підключення до Інтернету серед учнів і шкіл різний. Крім того, забезпечення того, щоб викладачі володіли навичками ефективного використання ІКТ для викладання та навчання, є критичним фактором успіху.

Щоб оптимізувати використання ІКТ і підвищити мотивацію студентів, важливо забезпечити підтримку та навчання викладачів, сприяти справедливому доступу до технологічних ресурсів і постійно оцінювати вплив ІКТ на результати навчання. Враховуючи ці міркування, успішна інтеграція ІКТ в освіту може призвести до покращення мотивації учнів і покращення досвіду навчання.

Ключові слова: інформаційно-комунікаційні технології, освіта, навчальна мотивація, ефективність навчання, педагогічні аспекти.

Introduction. In today's fast-paced world, often referred to as the digital age, information technology has evolved into a vital tool and foundation for effective operations across diverse fields. Education is no different, and the integration of information and communication technologies in this sector holds substantial promise for reshaping the educational process. By incorporating ICT into education, there is a shift towards more student-centered learning, allowing for personalized and interactive learning experiences (Misra, S. and Bajpai, A., 2010). This shift in pedagogy has the potential to greatly impact learning motivation.

Problem statement. Issues related to the use of information and communication technology in education belong to a number of complex issues that require an integrated approach. First, there are technical issues such as the development and implementation of new software tools, creation of infrastructure for their use, and ensuring accessibility for all participants of the educational process. Secondly, there are psychological and pedagogical challenges including adaptation of students and teachers to new technologies, ensuring a high level of didactic competence among teaching staff, and most importantly addressing the impact of ICT on learning motivation (Desai, S., 2010). Utilizing ICT in education can provide various opportunities to assess students' knowledge, motivation, and academic interest.

The object of the research is precisely the influence of the use of information and communication technologies on the educational motivation of students. Student motivation is one of the key components of successful learning and development. Understanding how these technologies can affect it is critical to improving the quality of education. This study aims to identify the advantages and disadvantages of using ICT in education from the point of view of stimulating students' educational activity, fostering their motivation for independent learning, and helping them achieve educational goals by themselves. The findings of this study will contribute to the existing knowledge on the impact of ICT on learning motivation and provide insights for educators and policymakers on how to effectively utilize technology to enhance student motivation in the education system (Oduma, C., 2014). Furthermore, the paper examines the role, challenges, and impact of ICT in education, highlighting its potential for future growth and development (Razali, M, A, H., 2019).

This article opens a debate on the importance and prospects of using Information and Communication Technology in education. It contributes to the understanding of their impact on student motivation while also contributing to the further improvement

of the educational process in this digital era by providing insights into its potential benefits. The research conducted in this paper aims to explore the impact of ICT on learning motivation and how it can be effectively utilized in education (Razali, M, A, H., 2019).

The analysis of research and publications. The research and publications regarding the usage of ICT in education and its effect on students' motivation have provided valuable insights into the integration of technology in the educational process. Several studies have emphasized the advantages and disadvantages of using ICT in education and its potential impact on student motivation. Additionally, the research has delved into the pedagogical and psychological aspects of introducing ICT into the educational process and has highlighted the challenges associated with this integration. Overall, the research suggests that the use of ICT in education has the potential to positively impact students' motivation for learning (Stošić, L., Dermendzhieva, S. and Fedeli, L., 2020).

The results of these studies suggest that integrating ICT into education can have a notable impact on student motivation. Interactive learning platforms, multimedia resources, and online collaborative tools accommodate various learning preferences and create more dynamic and engaging learning experiences for students. Furthermore, the personalized approach to learning made possible by ICT allows students to advance at their own speed, consequently heightening their motivation to learn. Additionally, utilizing ICT in education gives students access to abundant information and resources, thereby enriching their comprehension of subjects and nurturing their curiosity and desire to learn (Razali, M, A, H., 2019). Moreover, the integration of ICT in education promotes active and participatory learning, providing students with opportunities to actively engage in the learning process and take ownership of their education.

However, it is crucial to acknowledge the challenges associated with integrating ICT in education, such as the digital divide and the need for educators to be proficient in using technology effectively for teaching and learning. Addressing these challenges is essential to optimize the use of ICT and enhance student motivation in the educational process. In conclusion, the utilization of ICT in education has the potential to greatly impact students' motivation for learning (Zafar, T, S., 2019).

The comprehensive analysis of research and publications on the usage of ICT in education and its effect on students' motivation provides valuable insights for educators and policymakers. By understanding the impact of ICT on learning motivation, educators can effectively utilize technology to enhance student motivation in the education system. Furthermore, the findings contribute to the ongoing debate on the importance and prospects of using Information and Communication Technology in education, with the aim of improving the educational process in the digital era. The integration of ICT into education has been found to have a positive relationship with motivation and academic performance (Ghavifekr, S. and Rosdy, W.A.W., 2015).

The presentation of the main material. It has been widely established that every student acquires new knowledge in unique ways. In the past, it was challenging for educators to tailor their approach to each student. However, with the introduction of computer networks and online resources, schools now have the means to present information in a manner that aligns with the individual learning needs of each student. This individualized approach to learning can greatly enhance student motivation as it allows them to engage with the material in a way that is personally meaningful and relevant to them.

Teaching every child how to swiftly comprehend, adapt, and apply vast amounts of information into practical activities is crucial. It's essential to structure the learning process so that students engage actively and demonstrate enthusiasm in class while witnessing tangible results from their efforts. Use of ICT in education facilitates this process by providing opportunities for interactive and engaging learning experiences (Rodrigues, F, R. and Castro, T, D., 2020).

A blend of conventional teaching techniques and modern information technologies – including computers – can assist educators in addressing this demanding objective. Integrating computers into classroom settings enables flexible, well-defined instruction tailored to individual students' needs.

When preparing for an ICT lesson, the teacher needs to bear in mind that it is still a teaching session. This means creating a lesson plan aligned with its objectives, and selecting educational materials based on key pedagogical principles such as systematicity, accessibility, differentiated approach, and scientific rigor. It's important to note that while computers can be a valuable tool, they should not replace the role of the teacher, but rather complement it.

Such a lesson is characterized by the following:

• The principle of adaptability: adaptation of the computer to the individual characteristics of the child;

• Controllability: the teacher can correct the learning process at any time;

• Interactivity and dialogic character of education; – ICT has the ability to "respond" to the

actions of the student and teacher; "engage" with them in a dialogue, which is the main feature of computer training methods.

• Optimal combination of individual and group work;

• Maintaining the student's state of psychological comfort when communicating with the computer;

• Unlimited Learning: The content, its interpretations, and the application are as large as you like.

The computer can be used at all stages: both during lesson preparation and in the learning process: when explaining (introducing) new material, fixing, repeating, controlling.

Integrating a standard lesson with a computer enables the teacher to shift some of their tasks to the PC, enhancing the learning experience by making it more engaging, varied, and immersive. In particular, recording definitions, theorems and other essential parts of the content becomes more efficient as teachers don't need to repeatedly convey information (they can display it on screen), and students don't have to wait for specific fragments to be repeated.

Integrating ICT in education presents numerous advantages, but it also comes with its set of challenges. Insufficient technical support, inadequate training of teaching staff, lack of access to ICT outside the school, and security and privacy issues are some of the hurdles that need to be addressed to fully maximize the potential of ICT in education. Additionally, it is important to consider the digital divide and ensure that all students have equal access to technology and internet connectivity (Ghavifekr, S. and Rosdy, W, A, W., 2015).

To overcome these challenges, it is vital for educational institutions to invest in robust technical support infrastructure and provide continuous training and professional development opportunities for teachers to enhance their ICT competency. Additionally, ensuring access to ICT resources for all students, regardless of their socioeconomic background, is crucial. This may involve initiatives to provide laptops or internet access to students in need.

Addressing security and privacy concerns requires strict protocols and policies to protect students' personal data and ensure confidentiality in the use of ICT for educational purposes. Collaboration with parents and guardians to raise awareness about online safety and privacy is also essential.

The impact of ICT on student motivation is undeniable. By creating interactive and personalized learning experiences, ICT has the potential to significantly boost student engagement and enthusiasm for learning. The use of multimedia tools, interactive exercises, and educational games can make learning more stimulating and effective for students, ultimately contributing to their academic success and overall motivation to learn. Additionally, the use of ICT in education can also enhance students' critical thinking and problem-solving skills. Overall, the use of ICT in education has the potential to revolutionize the learning process and create a more dynamic and engaging environment for both teachers and students

However, it's crucial to acknowledge that the excessive dependence on technology and potential distractions from educational tasks are also significant factors that can influence student motivation negatively. Educators must strike a balance in leveraging ICT to enhance motivation while mitigating its potential downsides. Furthermore, research shows that the integration of ICT in education can lead to improved learning outcomes (Zafar, T, S., 2019).

Conclusion. Embracing ICT as a tool for personalized and engaging learning experiences can revolutionize the educational environment, catering to the diverse needs and motivations of students. Educators should continue to develop strategic approaches that harness the positive potential of technology while addressing its challenges. By doing so, they can cultivate a dynamic and effective learning environment that maximizes the benefits of ICT in education.

Furthermore, the integration of informatics into lessons offers students the opportunity to master computer literacy and utilize the computer as a powerful, universal tool across various subjects. It enables them to express their creativity and enhances their problem-solving skills, thus preparing them for the demands of the modern world.

While the advantages of integrating ICT into education are evident, it's important to acknowledge that challenges may arise during the preparation and implementation of such lessons. However, with the right strategies and support in place, educators can overcome these obstacles and create an environment that promotes holistic learning and development for all students. To sum up, the use of ICT in education has been proven to have a positive impact on learning motivation.

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