THE USAGE OF ICT IN MODERN EDUCATION METHODS

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ABSTRACT

Information Communication Technologies (ICTs) continue quick changes in society and they affect all aspects of human life. Politicians, school leaders, teachers, parents and everybody understand the issues associated with integrating ICT in schools. Because ICTs provide both teachers and students great amount of opportunities in adapting teaching and learning to their individual demands and needs. According to Watson's description, while technology is going on developing, they are transferring education system more than before. As a result of this integration, if schools still train their students in past skills and technological equipment, they may not be so effective and fit in tomorrow's world. Kofi Annan, the former United Nations Secretary general, points out that the information and ICTs unlock the door of education systems. It shows the expanding demand and important place of ICT in education. On the one hand, ICT provides great opportunities for students and teachers to adapt their learning and teaching process to their individual needs, on the other hand education system needs to give appropriate response to the technological innovation. Thus, the main aim of this article is to discuss the benefits of ICT in education, the view of different authors about advantages and disadvantages of using technology in the teaching process and to make the teachers, school administrators and other educators pay the sustainable attention to integrate the technology in their teaching methodologies in an effective way.

Key words: education, ICT in education, modern teaching methods

XÜLASƏ

Müasir dövrdə həyatımızın əsas hissələrindən birinə çevrilən İKT-nin təhsil sahəsinə inteqrasiyası gündən-günə artmağa davam edir. Texnologiyadan istifadə dərs prosesinin daha maraqlı və interaktiv metodlarla təşkilinə kömək etməklə yanaşı, müəllimlərin işini asanlaşdırır, şagirdlərin dərs prosesində aktiv iştirakını təmin edir. Texnologiyanın müasir tədris metodlarında təzahürü təhsil səviyyəsinin yüksəlməsinə gətirib çıxarır, lakin bəzi təhsil işçilərinin, müəlliflərin fikirlərinə əsasən texnologiyanın zərərləri onun faydalarından daha çoxdur. Bu alimlərin fikrincə texnologiya vasitələri uşaqları dərs prosesindən yayındırır, onların oyunlara, onlayn ünsiyyət saytlarına olan marağını artırır. Digər tərəfdən isə, Amerika, İngiltərə,Fransa kimi inkişaf etmiş dövlətlər ilə, Çili, Braziliya, Bulqarıstan və s. kimi inkişaf etməkdə olan dövlətlər arasında İKT vasitələri ilə təchiz olunma baxımından kəskin fərqlər yaranır. Bəzi ölkələr İKT-dən aktiv şəkildə istifadə etsələr də, bəzi ölkələr maddi baxımdan texnologiyadan əhatəli şəkildə istifadə ede bilmirlər. Bu da təhsil səviyyələri arasında kəskin fərqlərin yaranmasına gətirib çxarır. Başqa birproblem kimi müəllimlərin texnologiya vasitələrindən istifadə sahəsində kifayət qədər bilik və təcrübəyə sahib olmamaları göstərilir və bu səbəblə müəllimlərin əksəriyyət hissəsi dərs prosesində texnologiya vasitələrindən istifadəyə üstünlək vermir, dərsi ənənəvi tədris metodlarına əsasən təşkil edirlər, Bu məqalədə texnologiyanın təhsil siteminə inteqrasiyası, təhsil işçiləri və müəllimlərin bu sahədə qarşılaşdıqları çətinlikər və bu çətinliklərin üstəsindən gəlmə yolları, İKT-dən istifadə sahəsində müxtəlif müəlliflərin bir-birinə zidd olan fikirləri tədqiq olunmuş, texnologiyanın təhsil sahəsində effektli şəkildə istifadə yolları izah olunmuşdur. Müvəffəqiyyətli və parlaq gələcəyə aparan yolların bu günün tədris metodları və bu metodların effektiv şəkildə tətbiqindən keçdiyi vurğulanmışdır.

Açar sözlər: təhsil, təhsildə İKT, müasir təlim metodları

РЕЗЮМЕ

Интеграция ИКТ в образование, которое стало одной из основных частей нашей жизни в наше время, продолжает расти день ото дня. Использование технологий не только помогает организовать учебный процесс более интересными и интерактивными методами, но и упрощает работу учителей, обеспечивает активное участие студентов в учебном процессе. Проявление технологии в современных методах обучения приводит к повышению уровня образования, но, по мнению некоторых педагогов и авторов, недостатки технологии перевешивают ее преимущества. По мнению этих ученых, технологии отвлекают детей от процесса обучения, повышают их интерес к играм и сайтам онлайн-общения. С другой стороны, с такими развитыми странами, как США, Великобритания, Франция, Чили, Бразилия, Болгария и другие. Между развивающимися странами существуют резкие различия в доступе к ИКТ. Хотя некоторые страны активно используют ИКТ, некоторые страны не могут использовать технологии в полном объеме. Это приводит к резкой разнице уровней образования. Другая проблема заключается в том, что учителя не обладают достаточными знаниями и опытом в использовании технологий, и поэтому большинство учителей не предпочитают использование технологий в учебном процессе, организуя уроки в соответствии с традиционными методами обучения. Трудности, с которыми они сталкиваются в процессе обучения. области и способы их преодоления, изучаются противоречивые взгляды разных авторов в области использования ИКТ, объясняются способы эффективного использования технологий в сфере образования. Было подчеркнуто, что путь к успешному и светлому будущему лежит в сегодняшних методах обучения и эффективном применении этих методов.

Ключевые слова: образование, ИКТ в образовании, современные методы обучения

Even though, ICTs are important part of human life, there is the reality of digital divide- the gap between societies who use the technology frequently and control it and those who do not, make a huge difference in the use of ICTs. The introduction and integration of ICTs at different types and levels of education is the most problematic issue. One of the most common challenges using technology in education is economic and social inequalities among the developed, developing and the third world countries. Motivated by social, economic, educational and technological gains, both developed and developing countries try to bring new educational reform with a clear focus on ICT integration in education. It is essential to note that big investments in educational technologies don't only happen in developed countries like the United States, South Korea, Germany or Australia, statistics shows that developing countries make great reforms about using technology in schools and universities. For instance,950 primary schools received tablets in Jamaica, 1500 schools in Rwanda had 'smart classrooms', over 6000 state schools in India got advanced computer laboratories, and so on. Azerbaijan is one of the developing countries in Europe. After 26 years of independence, it has changed and improved a lot. The President Haydar Aliyev was the great defender of technology integration in education, he always tried and succeed to integrate the technology into the education system effectively, so that he signed 'The National Strategy about Using Information and Communication Technology to Develop Azerbaijan Republic' in 2003 and Ilham Aliyev, the President of Democratic Azerbaijan Republic, follows his father's footsteps very successfully. One of the most important project, 'Nation-Computer' project was launched between 2008-2012, and is still applied around the country. 'Intel-Azerbaijan' supported by MICROSOFT

company is an informative course for teachers and all educators about new technology and how to use them effectively in classrooms [8]. Like Azerbaijan, many other countries have invested a great amount of money, resources, expertise to integrate the technology as early as possible, so the classroom environment can be more effective for teaching and learning process. Another fact that much research in the area of technology integration shows that there is a huge difference in technology integration between developed or developing and third world countries. On the one hand, developed countries possess the great amount of knowledge, skills and expertise, which poor nations do not. On the other hand, the countries using technology in education gain a lot by learning and adapting 'ready-made' skills and they do it with less money.

Recently, the question is being asked: What are the main educational benefits of ICT integration? The use of ICT is making many differences in the learning of students and teaching approaches. Several studies show that students who use technological enhances generally show mostly higher results than those who do not use. For example, 75 studies in The United States showed the following: '*Students who used computer technology in natural science, mathematics, and social science score higher on test in these subjects. These findings also showed that primary school students who used tutorial software in reading scored significantly higher in reading tests. Young students using the computers for writing scored higher on writing skills'* [2, 15-

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31]. It is assumed that the most important benefit which affects the quality of learning is the design of the learning experience and there is a close link between teachers' pedagogical practices and learning opportunities which are made available to students. Volman and Van Eck give detailed information about the integration of technology to education system: '*Recently strong arguments have been put forward for the introduction of advanced ICT applications as a means of creating a powerful learning environment. This involves new forms of learning and teaching (transformation) in which students deal with knowledge in an active, self-directed and constructive way, leading to learning results that are more transferable situations outside school than are the results of traditional teaching methods'* [3, 613-634].

According to the authors' general view of using technology in education system, technology usage improves engagement, it means technology provides various opportunities to make learning and teaching process more fun and enjoyable in terms of teaching the same things in new ways. Over time, student engagement strategies were improved and more widely implemented as a way to manage classroom behaviors. It is clear that students live in a world which is totally different than the world their parents and teachers experienced. Those students respond to this world and have completely changed over the last few decades in response to their engagement within the technology. It is obvious that their needs, goals, learning strategies are more different than the students in the past. On the other hand, there are some critics who don't believe today's students demand special educational concessions. They think educators are dumbing down a whole generation through coddling. As Professor Baron mentioned: *'It is very common to hear people say, 'Here the Millennial or the digital generation, and we have to figure out how they learn. We get to mold how they learn.' Administrators push professors to use technology in the classroom because they believe that is what today's students want. And faculty members feel pressured to shorten lectures, increase group-discussion time, and ignore the 'multitasking' student who is e-mailing his friends in the back of the room- all to attract and satisfy a generation that doesn't have the discipline of its predecessors. 'We think that the students will come if we teach in a way that meets the expectations we have of what the students want. At some point, what we are doing is killing higher education'* [1, 52]. Another advocate of negative effect of technology, Edison who is the co-founder of the Massachusetts Institute of Technology Media Lab claim that technology will completely change the education system and that will cause a dramatic decrease in students' performance. However, this view belongs to minority; the majority of literature support the idea that technology helps to improve students' engagement.

No one learns in the same way because everybody has own different learning strategies and abilities. Many authors support the idea that technology encourages individual learning. Present technology will allow you enter numerous resources what you want to learn, it is a simple process to click a button and look through the millions of information in your desktop for a second. To gain writing abilities in a foreign language was very difficult process for both teachers and students few decades ago, because teachers had to check every

papers carefully, correct each grammar, vocabulary, structure mistakes and then explain them to each students one by one. Nowadays, there are many websites which students enter their texts and after clicking 'Check' button, they are able to see all their mistakes with clear explanations for few seconds. With technology in hand, students don't need facial contact with the respective person they want to get information and learn from, many ways like emailing, texting, instant messaging, voice or video calling will help them very easily. Using technologies in education help students to learn useful life skills essential for 21th century. Modern learning is about solving complex problems, critical thinking, collaborating with others, developing various forms of communication and leadership skills, improving productivity and motivation. The use of ICTs in education helps to increase the number of activities and responsibility of students and decrease the role of the teachers to supporting, advising, coaching students rather than transmitting knowledge. The gradual process of using technology changes from learning about computers to learning computers, and finally to learning with computers [2, 15-31]. Technology is an administrative tool for teachers, because apart from the classroom instruction, teachers are able to keep the students' records, lesson plans, to prepare exam papers and perform some type of statistical analyses on marks and so on. Geographical distance was a great problem to communicate with the people around the world few decades ago, but technology has recently changed that, because through network and the Internet, it is now possible to communicate with anybody in the world.

Like other projects, technology integration in education requires a well-prepared plan. Without proper plan, need-analysis and management activities, it will be impossible to make any progress in technology integration. The plan should be produced, not only to put the technology in the classroom, but also to reflect the needs of schools to produce enhanced learning environments [4, 17]. Another advocate who emphasize the importance of systematic planning and implementation of computers in schools is John Cheever, he divided this process into three phases: strategic planning, management control and operational control. Strategic planning involves creating organizational goals at state/district level, identifying the important resources and disposition of resources, examples of strategic planning activities are the writing long term plan for the integration technology in schools or the appointment of citizens. Management control involves the actual acquisition of the necessary resources and these activities are the formulation of instructional objectives of certain subject at a certain grade level. Operational control involves the day-to-day usage of computers in the classrooms, these activities are scheduling of computer access to teachers and students, and creating exact computer usage policies. Levine and Cheever informed us about the importance of planning at different levels according to the different needs of students and schools and they mentioned that effective technological education can be real with a well-prepared plan. Therefore, technology integration requires the preparation, evaluation and implementation of plans at different levels.

It is undeniable fact that ICT simplifies and facilities human activities, but it has many limitations as well. The limitations can be classified as teacher related, student related and technology related and all of them

limit the benefits of technology to education. Teachers' attitude has great importance on using technology in the classroom, because many observations show that some teachers do not have clarity how technology is important in teaching-learning process. Teachers' lack of enthusiasm to use ICT in education system is the greatest limitation. Most of the teachers don't have required computer skills and that is why, they feel uncomfortable and hesitate to use the technology equipment in front of the whole class. [1] On the other hand, students themselves are the big limitation to use ICT in education. Appropriate use of computer and internet are very beneficial for students' learning process, but they are interested in spending their time with leisure time activities, like games or social network sites rather than learning and studying. Yousef and Dahamini described Facebook, Instagram, online gaming, chat rooms and other communication sites as the biggest problem of using technology in education, because these kind of sites distract their attention away from their lessons easily [5, 34]. According to some literature in this area, computers limit students' imagination, critical thinking and analytical skills; it has negative physical effects such as visual problems; students tend to copy the information easily and it makes plagiarism become the big issue; students do not practice the oral speech and hand writing; students may easily visit the unwanted websites, and it is difficult and waste of time for teachers to control each students one by one; weaker students may have problem to work independently and they need more support from their teachers. Another limitation of using technology in classrooms is technology itself because of high cost of technological equipment, interruptions of internet connection, virus attack of software and so on. Learning content and language also challenge the use of technology in education. As we know, English is the dominant language in many of educational software and English proficiency isn't so high in some developing countries, so language is one of the biggest barrier in the integration of ICT to education system. ICTs in education demand a great amount of money, and another challenge is capital investment and developing countries need to balance the use of technology and financing issues according to the existing alternatives [4].

Despite all of these limitations, technology is still effective, beneficial and helpful for education system, but the main thing is to know how to use it more effectively and purposefully. The fact that, the same technology, app or website can be used with different reasons by different people, and that makes it very hard to find the exact solution to use ICT in an effective way in the classrooms for the educators and learners. Here are some solutions and strong tips for integration technology to education system effectively:

- To help teachers to integrate the technology into their teaching methodology and professional development should give higher priority for schools and district, and it has to be ongoing and collaborative. Rather than how to use a specific technology device, teachers have to focus on what students need to learn with technology device.

- Technology should be learned in the context in which it is going to be used. If students are only excited about the technology alone, they will not learn anything about the required subject. The excitement

should be about the activities and tasks which are done for learning new information with using the technology. And the main role of the teacher is to create engagement and different opportunities for students with the help of technology whenever they need it.

- The learning outcomes and pedagogical approaches are always the main goals of teaching process. Teachers need to cooperate their teaching goals, their students' needs and the ways of how to teach with the help of technology effectively at the same time.

- To provide the device in a classroom is not enough, because teachers themselves should be well – trained and informed about the technology as well, they need to be sure of the limited access to the Internet and some unwanted websites and it is necessary to use parents' guidance on their children work with computer at home.

- Teachers need to remember that technology is not here to replace them, it is here to enhance their capabilities. A good 21st century teacher is a teacher who is a learner herself and always learn new ways of teaching and improves herself as a learner, too.

I was inspired by the words of Marion Ginapolis, he wrote: '*It is not about the technology; it's about sharing knowledge and information, communicating efficiently, building learning communities and creating a culture of professionalism in schools. These are the key responsibilities of all educational leaders*'.

This article attempts to answer questions on the roles and benefits of ICTs in education, the limitations on using it in the classrooms, the greatest challenges that the educators face while using ICT in education and how technology can be used effectively in the education by the teachers and educators. Therefore, educators need to evaluate and recognize the roles of ICT in education in order to work more effectively in their methodology and education systems.

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