TRANSITION TO DIGITALIZATION OF EDUCATION IN UZBEKISTAN

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ABSTRACT

The article considers the necessity and challenges of transition to the digitalization of education in Uzbekistan. The research is actual due to the shortcomings that the educational sector witnessed during COVID 19 lockdown. This research is empirical and descriptive; the outcomes provide some practical solution, which might be applied to tackle to existing problems.

Keywords: Digitalization, transition, challenges. solutions, projects, online learning.

Digitalization is the requirement of the contemporary world, where all the processes occur extremely fast. It has become an extensive phenomenon, taking place almost in every sector. Legner (2017) defines digitalization as the process of the technical method of changing Information and data from analog into digital formats, which means adoption and usage of binary digits). Secondly, digitalization (the processes of transition toward non-physical information storage, transmission, and the process by using digital technologies); finally, digital transformation (comprehensive applications of digital technologies altogether sides of society to boost and extend product and services, and therefore it requires the creation of new digital alternatives). This demands the interrelated adaptation of society and communication technologies to provide a smooth transition to digitalization. It is also necessary to invest both money and time to reach positive results.

As any other country, Uzbekistan has faced a sharp necessity in the digitalization of numerous economic and education sectors. The country has all the prerequisites for the successful realization of governmental initiatives. As Alibembekov (2021) states that a great deal of effort and money is invested into the digitalization of the major sectors in Uzbekistan, many remain unchanged.

Currently, the Republic of Uzbekistan has had low access to information and communication technologies. In terms of the utilization of ICT in 2017, it ranks ninety-fifth within the world among 176 countries in keeping with the ICT Development Index. in keeping with the Telecommunications Infrastructure Index, Uzbekistan is the leading state among the CIS countries, and with an indicator of 0.3307, it lags behind Russia, European nation and Asian nation by virtually two times.

The digital progress of the country, in keeping with experts, is forced by an occasional level of public confidence in digital documents and services, lack of extremely qualified specialists within the field of digital technologies, inefficient and short government funding for digital projects. Despite the higher than mentioned obstacles, the Republic of Uzbekistan has been actively digitalizing most industries. With this scenario and the adoption of regulative documents, in March 2020, President Shavkat Mirziyoyev signed a resolution, "On measures for the widespread introduction of digital technologies in the town of Tashkent." This provides for the main attraction of residents of the Technological Park of software package merchandise and knowledge Technologies that has incorporated 350 domestic enterprises to the implementation of the excellent program Digital capital. The program is geared toward digitalizing municipal services management and making an integrated information setting for social facilities, industrial, road transport, and utility infrastructure, with the following unfold of eminent experiences to different regions of the republic. The Digital Tashkent program may be a follow-up of the initiatives, the president suggests in his address to the Oliy Majlis, where he declared 2020 to be the Year of Science, Education, and Digital Economy. The initiative has to be unprecedentedly advanced and timely. Yet, some weeks later, the whole world was gripped by the pandemic.

In 2020, the whole educational sector of Uzbekistan had to shift to an online mode of teaching and learning. Schools and universities did not have a unique platform for the conduction of classes, mainly TV channels, Telegram massager, and Zoom platform were used by teachers and students. These immediate measures allowed keeping up the process of teaching and learning during the lockdown on the spring of 2020. However, apparently, this tough period resulted in the worsening of quality assurance in teaching and learning and requested a solid database and a platform for blended leading and self-study.

Schmidt and Tang (2020) consider the following four main challenges of transition to the digitalization of education:

1. Incorporating flexibility: flexibility and management are rarely given to students. However, the combination of learning activities is realized. This is often a very crucial challenge to deal with, requiring the consideration of such factors as time and place (relating to the benefits for combining asynchronous and synchronous activities via online technology), and the levels of path and pace (relating to the order or sequence of content exploration and the speed at that this exploration occurs).

2. Stimulating interaction: social interaction is usually stirred up through introductory face-to-face meetings, and the challenge is a way to extend and maintain interaction over the enlarged psychological and communication area (referred to as transactional distance, wherever social interaction becomes more difficult because the transactional distance increases), together with each cluster and two-way interactions.

3. Facilitating student learning processes: personalization and observance of students' learning progress is often organized through online tutorial activities, though an additional pivotal factor is encouraging the use and development of organizational skills (including organization, discipline, time management, technology use, and self-efficacy to manage students' own learning processes).

4. Fostering an affective learning climate: very little attention is paid to instructional activities that foster an effective learning presence of face-to-face environments, which may cause learner isolation, decrease in motivation, and even drop-out. Efforts ought to be taken to enable learners to feel safe, accepted, and valued and to promote positive attitudes toward a course and educators.

As the experience of online teaching and learning during the COVID 19 lockdown as shows, all the above-mentioned challenges proved to be obstacles. Another serious problem is related to Internet provision in the country. In 2020, Uzbekistan took up 181st place in the rating of the countries having the slowest Internet speed. Moreover, not all layers of society have access to the Internet and devices. As the UNICEF reports (2021), 68% of young females aged from 14-60 years old have never used the Internet. A prevailing proportion of females, i.e., 43, 5%, are computer illiterate, and 30% of males have the same problem.

Thus, the Ministry of Innovation, together with numerous digital projects, has launched a number of projects to introduce several e-learning platforms and hubs to

provide cloud solutions. As the State Unitary Enterprise "Center for Electromagnetic Compatibility" reports (2021) the first resource center was initiated in 2005; the ZiyoNET network and its branches at the Ministry of Education and the Ministry of Education and Science were established on September 28, 2005, on the basis of the Decree of the President of the Republic of Uzbekistan No. PP-191 "On the creation of a public educational information network of the Republic of Uzbekistan". In 2006, the first version of the ZiyoNET portal was developed and launched, with the address www. ziyonet.uz

The ZiyoNET portal currently contains Library, Audiobooks, e-Darslik, Entrant, Questions and Answers, Groups, Figures, Games, Foreign Languages, Websites, Educational Institutions, Cultural Heritage of Uzbekistan, Gifted Youth, Satellite Sites.

Since the beginning of 2015, more than 44,250 users have been signed up on the new ZiyoNET Portal. Since the beginning of 2015, the portal has had more than 2.2 million visitors and has been viewed by about 15.2 million. pages. The most visited sections of the portal are Cultural Heritage of Uzbekistan with the Campaign "Seven Wonders of Uzbekistan", Library, Audiobooks with recordings of broadcasts uRadio.uz, Entrant, and Figures. Systematic work to improve the convenience of using the portal and filling it with useful content gives results in the form of increased attendance.

In addition to the portal, the complex of resources of the ZiyoNET network includes popular projects Tanlov.uz, uTube.uz, Fikr.uz, uForum.uz, NIPS WWW.UZ, ID.UZ, satellite sites, uMail.uz , Meros.org, Chakchak.uz, Index.uz and uRadio.uz . On the basis of the Cultural Heritage of Uzbekistan section, in which 377 objects are collected, the Action "Seven Wonders of Uzbekistan" is being held. The platform has ongoing development of the resources of the ZiyoNET network like:

- Creation of the "Electronic Academy" resource to provide distance learning opportunities;

- Further development of the ZiyoNET portal, including popular social media features (news feed, like, share, etc.);

- Adding a subject on using the capabilities of the ZiyoNET network to the curriculum of educational institutions;

- Creation of the English version of the resources of the ZiyoNET network;

- Creation of a resource for job search for graduates of educational institutions.

The platform has a fruitful collaboration with several IT projects in Uzbekistan as well. In accordance with the report of IT Park (2021), for the first time in the UAE, a project on distance learning of programmers called "One million Arab Coders" was launched. During the official visit of the President of Uzbekistan Shavkat Mirziyoyev to the United Arab Emirates in March 2019, agreements were reached in a number of areas, including in the field of Information Technology. The Government of the United Arab Emirates, having studied the possibilities of exporting the project to Uzbekistan, developed a plan to adapt the concept to the conditions of the country and launched an initiative at the local level called "One million Uzbek programmers."

The project in Uzbekistan is being implemented by the IT Park, the Ministry for the Development of Information Technologies and Communications of the Republic of Uzbekistan, in cooperation with the Dubai Future Foundation, Inha University in Tashkent, the IT Academy in the IT Park, and the Mohammed Al-Khorazmiy IT School. The project is free distance learning for the general population through a specialized online portal. The purpose of the program is to train a generation of digital technology specialists, to equip them with all the tools - programming skills. The project covers the four most popular specialties in the global labor market: Data Analytics, Android Development, Frontend Development, and full-scale development. The general course is designed for 120 hours of training. The result of each level will be the preparation of laboratory work and the receipt of appropriate certificates.

Successful graduates of the courses will be able to compete for grants and continue their studies in one of the more than 100 programs of the Udacity Nanoeducation Platform. To do this, you need to successfully pass the final exam and enter the top 150 students with the highest scores. It should be noted that Nanodegree diplomas are recognized by such giants of the IT industry as Google, AT&T, Autodesk, Salesforce, and many others.

For the entire period of the project implementation, the platform uzbekcoders.uz registered 85 thousand people, of which 22 thousand students received certificates of project participants (stage 1), and 10 thousand students received certificates of completion of the course.

Introductory online seminars were also organized for 251 teachers of higher educational institutions, activists of about 450 agencies of the Youth Union, as well as computer science teachers of more than 400 specialized schools. In 2137 schools of the

Republic of Uzbekistan, along with the subject "Computer Science", training under the program "One million Uzbek Coders" will be introduced.

Within the framework of the project, three qualifying rounds were held, according to the results of which the holders of 150 grants (50 for each round) for free training under the Udacity Nanodegree program were determined.

The project was also implemented in the free services of the educational portal "ZiyoNET," the mobile operator Uzmobile and the Internet provider Uzonline. The information resources of the Million Uzbek Programmers project are included in the unified register of information resources of the ZiyoNET network. It is worth saying that the contest with a prize fund of 6 thousand US dollars, organized for active participants of the project, which was attended by 12 thousand people.

In order to develop schoolchildren in the field of information technology and popularize this field among young people, the project "One Million Uzbek Coders" will be introduced into the curriculum of secondary schools in the subject "Informatics" from grades 5 to 11. Also, the curricula of grades 5-11 on the subject of "Computer Science and Information Technology" will provide for the teaching of programming languages. Thanks to the Million Uzbek Coders project, many people were able to get acquainted with the world of information technology, find like-minded people and create a good programming base that will help them continue to conquer the heights of IT and become professional IT specialists.

Westminster International University in Tashkent, in collaboration with the University of Westminster, launched a joint project on the introduction of SMARTEST Hub in Uzbekistan; SMARTEST has been evolved in the Research UK Global Challenges Research Funding project "EduHub" (2020-2021). To enhance the smooth and right entry to college from schooling, the 2019–2023 Uzbekistan improvement plan calls for greater publications via progressive online resources. Contributions to this initiative are being made through supplying a unique service - Digital Educational Hub, or EduHub. The platform offers intuitive navigation via subjects and associated material. This hub lets lecturers build the educational content, and college students use wealthy and established transitional educational materials. Currently, the project undergoes a pilot scheme with colleagues from Westminster International University in Tashkent (WIUT). This pilot scheme helps have a look at for Basics of Quantitative Skills and English modules, and additionally for WIUT Lyceum, and numerous faculties in

Tashkent, which might be allotted to WIUT. The far-reaching initiative is to be incorporated into the projects ZiyoNet and "One million Uzbek coders".

On June 18 WIUT conducted a meeting with the representatives of the Ministry for development of Information Technologies and Communications, UZINFOCOM, Presidential IT school named after Al-Khorezmiy, IT park, INHA University, and Tashkent state university of Information. WIUT Rector Bakhrom Mirkasimov opened the meeting with a welcoming speech. It is worth noting that this was the second meeting devoted to the discussion of SMARTEST Platform Integration into the educational establishments of Uzbekistan, which has been developed in collaboration between the CPFS course and the University of Westminster in London. Prior to the official meeting, CPFS organized the online international conference where Dr. Alexander Bolotov, the Project Manager of SMARTEST and the Head of Pre-university Elena Aripova presented the Information about the joint project on June 15. SMARTEST Platform is a unique hub that has rich learning and teaching resources that have been piloted and widely used at CPFS, ALWIUT and local schools. During the meeting, all the present discussed the opportunities of SMARTEST integration into Ziyonet Platform, which will allow enriching learning and teaching content. Moreover. IT Park will consider the possibility of using SMARTEST project in the content part of GIGA Project. It was also offered to use SMARTEST content in teaching and learning of IT school named after Al-Khorezmiy. A working group has been created to implement all the discussed plans.

In summary, it can be said that the digitalization of education in Uzbekistan is being sustainably developed yet much has to be accomplished.

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