

III. ПЕРЕДОВЫЕ МЕТОДЫ ОБУЧЕНИЯ И ПРЕПОДАВАНИЯ

CHALLENGING ISSUES OF ADAPTING THE EDUCATION SYSTEM OF UZBEKISTAN TO THE DIGITAL GENERATION

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Abstract. With the current trends across the globe on ever-growing impact of digitalization to different sides of human being, the necessity for higher education to be rethought becomes an important issue. Due to the active expansion of new technologies, we live in a digital world wherein fast-paced, technology-driven social change influenced our younger generation, and educators should fundamentally rethink the ways they provide teaching and learning in a new digital landscape. It causes transformation of education - a good chance for business and economic growth, being a tool for the global market entry. In this document authors discuss the issues of adapting the education system to the digital generation, while considering the directions and challenges, requirements for the digital transformation process, applying information and communication technologies in education, taking into account the terms of reforming process and further modernization of the higher education system in Uzbekistan. Moreover, based on the experience of HiEdTec project the shift of educational paradigm is demonstrated when additional prerequisites should be defined for educators on teaching in the unconventional way.

Keywords: education system, higher education, digital generation, digital transformation, adaptation of education.

ЎЗБЕКИСТОН ТАЪЛИМ ТИЗИМИНИ РАҚАМЛИ АВЛОД ТАЛАБЛАРИГА МОСЛАШТИРИШНИНГ МУҲИМ МАСАЛАЛАРИ

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Аннотация. Ҳозирги кунда дуне микесида рақамлаштиришнинг инсонлар ҳаётининг турли томонларига тобора таъсири ўсиб бораётган бир пайтда, олий таълим тизими тамойилларини қайта кўриб чиқиш зарурияти муҳим муаммога айланиб қолмоқда. Янги технологияларнинг фаол тарқалиши туфайли биз рақамли дунеда ҳаёт кечиришимиз, ундаги жадал ривожланаётган технологиялар асосида ижтимоий ўзгаришлар бизнинг еш авлодимизга таъсир кўрсатиши ўқитувчилар томонидан янги рақамли шароитда таълим бериш ва ўқитиш усулларини тубдан қайта кўриб чиқишлари талабини кучайтиради. Ушбу мақолада таълим тизимини рақамли авлодга мослаштириш масалаларини муҳокама қилган ҳолда, рақамли трансформация жараенининг йўналишлари ва муаммолари, таълим жараенида ахборот-коммуникация технологияларини қўллаш талабларини кўриб чиқилган. Ўзбекистонда олий таълим тизимини янада такомиллаштириш мақсадидан келиб чиққан ҳолда, HiEdTec лойиҳаси тажрибаси асосида ўқитувчилар учун ноанъанавий тарзда ўқитиш учун қўшимча шартлар белгиланиши ва таълим парадигмаси ўзгариши кўрсатиб берилган.

Калит сўзлар: таълим тизими, олий таълим, рақамли авлод, рақамли трансформация, таълимни мослаштириш.

Introduction. The widespread introduction of information-communication technologies (ICT) in various fields of human activity contributed to the emergence and development of the global informatization process. In the field of education there

are several reasons affecting directly/indirectly to overall ICT strategy and implementation, namely:

- ICT in society entail radical social changes, substantially and almost all aspects of society's life;
- increasing the amount of information necessary for a successful professional activity;
- educational challenges with respect to human adaptation to live in the conditions of new information environment;
- availability, functionalities and technical characteristics of ICT tools for different category of users.

These are crucial for the sphere of higher education in Uzbekistan which is featured by the continuing the reform process and further implementation of respective legislation. At the same time, the experience gained shows the necessity of taking into account the development of the labor market and specific socio-economic conditions in Uzbekistan [1]. Although there are all required prerequisites set through in legal, personnel, scientific, methodological, material, technical and financial terms, there are unresolved issues to ensure the reform of the higher education system duly emphasized. Additional measures are required so far to contextually complementing and attract the structural reform and modernization of the higher education, with taking into account the government set priorities for the further development of the education system:

- widespread use of new information technologies and modern pedagogical methodologies;
- creation of a nationwide computerized educational network of all universities;
- development provision of new educational materials;
- professional development of the faculty of universities, especially in the field of technical sciences (oil, gas, textile industry, agriculture, civil engineering, automotive, etc.);
- improvement of the forms and methods of research of the labor market, analysis of needs in specific areas and specialties of higher education;
- implementation of a quality assurance system.

In recent years, the digitalization of the educational process in the Republic of Uzbekistan has risen to the level of state policy. There is a number of legislation documents supporting this activity, e.g. President Decrees #5847 dated 08.10.2019 'On approval of the Concept of development of the higher education system of the Republic of Uzbekistan until 2030', Resolution #4699 dated 28.04.2020 'On measures for the widespread introduction of the digital economy and e-government' to provide for the widespread introduction of digital technologies at all stages of the education system and the modern economy. Increasing the level of digital knowledge, improving educational infrastructure, and opening digital knowledge training centers in all regions of the country by 2022 are within the priorities of the 'Five Initiatives' [2,3].

In Uzbekistan, as elsewhere in the world, a digital generation has emerged, as generation of seven screens - a TV, computer, tablet, phablet, smartphone and smart watch. As a result of the presence of such a dense digital environment and constant interaction with it, the thinking of today's students and information processing procedures are fundamentally different from the ways of thinking and the information processes of their predecessors.

So far, we refer reader to the important statement on how the digital transformation in higher education can create engaging and more effective education process. In other words, when speaking about digital transformation one should emphasize the significance of 'cultural' aspect, rather than technological innovation. From this point of view, hereinafter we open the discussion on adaptation of education system to the calls of digital generation – somehow specific issue but crucial from the point of human-centered concept of educational environment.

Digital Generation: Why and how it matters to educators

We live in a world (at least for the last couple of decades) wherein almost every aspect of our lives is being digitized [4]. By 'creating a digital industry of the future' we are ensuring long-term sustainability, launching the country's digital transformation by increasing the level of human capital development. Today's classrooms are much different than they were a decade ago and classrooms have computers, iPads, and Smart boards, and other types of technology in the classroom [5].

As a consequence, the digital generation cannot and should not be trained in the same way as its parents did. One may not and should not write on a blackboard with a white chalk while teaching this generation. Replacing the blackboard with a white one and the chalk with a marker does not change things, i.e. this is not the way to motivate students of today to gain knowledge and to develop skills for successful integration on the job market.

What needs to be done is to adapt the education system to the digital generation by massive and effective applying of ICTs based innovative educational technologies and didactic models. Along with that, it is necessary to actively use the research approach to learning, which is aimed at developing students' skills in scientific research and at the formation and development of creative thinking and creative abilities based on IT competencies [6].

From the other hand, we have to emphasize that ICTs are not a 'panacea to all problems' in the education system, rather they are just a tool which could make lectures and seminars more informative and more attractive to the digital generation [7]. Educators will retain their key role in an interactive teaching process oriented to learners' needs.

Here we should also mention that the reputation of an educator and the effect of his/her activities will depend more and more not only on his/her level of mastery of the course content and on his/her pedagogic competence, but also on the extent to which he/she applies modern information and communication technologies for collecting, processing and delivering the specific teaching material.

In other words – the education in the digital era has to be redefined and the educational paradigm must be shifted, because learners do not want to study the traditional way anymore and educators should not keep on teaching in the conventional way.

Such priorities are set within of the Education, Audiovisual and Culture Executive Agency at the European Commission where different initiatives and programs are being developed and implemented. In this regard, the project "Modernization of Higher Education in Central Asia through New Technologies-HiEdTec" (<https://hiedtec.ecs.uni-ruse.bg>), KA2 – Capacity Building in the Field of Higher Education: 598092-EPP-1-2018-1-BG-EPPKA2-CBHE-SP under the leadership of Angel Kanchev University of Ruse in collaboration with universities in Central Asia and Europe, can be considered as best suited for digital transformation tasks. The goal of the HiEdTec project and the works carried out within the framework of the project will be consistent with the process of digitizing the higher education system in Uzbekistan and agreed with it. The Concepts developed by HiEdTec partners has been produced with the support of the European Commission under the ERASMUS+ Program [8].

HiEdTec aims to adapting the education system in the Central Asian (CA) countries to the digital generation through the introduction and effective implementation of ICT-based innovative educational technologies and didactic models in the teaching process as well as enhance the international dimension of education and training through strengthened links between the European Union and CA universities, exchange of expertise and good practices in the areas of digital pedagogies and innovative educational technologies (IET). During the HiEdTec project, the following objectives were set:

1. Develop a Sustainable academic network for sharing experience and exchange of good practices in the field of IET and didactic models.
2. Develop Concepts of adapting the education system to the digital generation by taking into consideration the specific conditions of each of the partner countries.
3. Create IET Centers, active learning classrooms, virtual classrooms in all partner universities; a prerequisite for the development of the Centers is the EU requirement for opening up education through new technologies.
4. Organize courses for trainers and lecturers for the acquisition of digital skills and innovative teaching and learning methods.
5. Develop virtual library of the digital educational resources.
6. Raise awareness of the need to adapt the education system to the digital generation in the partner university and in society at large.

The Concept for adapting the education system of Uzbekistan to the digital generation has been developed within the framework of the project which sets the main goals, objectives, directions and critical issues for modernizing the education system of the Republic of Uzbekistan in terms of emergence and development of the

information society and broadening the skills, knowledge and experience of education process stakeholders. Moreover, it defines the basic principles, approaches and conditions for the successful adaptation of education system to digital generation, with respect to the external (policy and regulation) and internal (institutional) scales. The analytical research has been done by the authors prior to the defining the statements of this concept and specific issues (given below) emphasized in this respect as opportunities to customize the learning and teaching in new ‘digital era’ conditions.

Directions for adopting the education system to the Digital Generation

Updating and modernizing the technical infrastructure of the education system

The computer to become an effective toolkit of educational process for diverse academic subjects or disciplines. Educational institutions to arrange mobile classrooms with laptops and tablets; priority to provide equipment for classrooms with modern video projection equipment (multimedia complex).

Educational process to be updated in order to maximize the involvement of mobile devices for personal and collective use, so far affordable wireless networks becomes required in campuses allowing access to information resources of the institution, the national education system, to the Internet from most classrooms and study places.

The security system for authenticating users and personalizing their activities in networks to be arranged, built using electronic smart facilities such as RFID or related technologies.

Developing the electronic educational resources

Electronic textbooks and tutorials that provide the basic capabilities for the digital generation are to form the basis of electronic educational resources, including those providing availability of interactive tests to check the material duly grasped, and intelligent tools to determine current and previously discovered gaps in knowledge.

Upgrading the system of Internet sites and platforms of educational institutions

Considerable attention should be paid to the development of web sites based on general requirements for their content and technological platforms, including the experience of leading EU institutions.

Ensuring network interaction of participants in the educational process

A modern information and educational environment should support all possible forms of communication within educational portals, social networks, etc [9].

The educational process within the framework of e-learning and mobile learning to be provided through communications (‘teacher/instructor-student’), both in traditional forms of education, as well as through active networked interaction of students sharing knowledge and organizing collective work. The communication of pedagogical staff is important, allowing the opportunity to actively discuss, use, improve the developed methods, technologies, and sharing teaching experience.

Implementing and distribution of distance education

The distance learning/education to be considered as one of the forms of e-learning, which has the ability to study 'any time', 'anywhere' flexibly and cost effective.

Arranging mobile learning

The organization of a new type of educational process - mobile learning, with taking into account flexible educational programs (task specific, student specific etc.), new timetables (for group and individual lessons, consultations, and other events), in some cases, the legal - normative consolidation of the full/partial acknowledgement of educational documents in the forms of electronic analogues [10].

Ensuring availability of appropriate methodological, organizational, personnel provisioning

It is necessary to solve the problem of developing methods for the effective and reasonable use of ICT in the educational process, leading to significant educational results.

The introduction of ICT should help create a new atmosphere in educational institutions, the most important element of which will be the culture of knowledge.

Capacity building measures to periodic training and development of institutional faculty members, who should have the necessary qualifications in the use of ICT in the educational process. In particular, the mobile learning opportunities should be accompanied by the creation of a fundamentally new system of organizing a network of scientific and methodological services, providing personal and professional development and information and methodological support for teachers.

Improving the education and learning management system

To focus on the provisioning of electronic services to all stakeholders of the educational process. Duly set the management automation, allowing to simplify routine administrative operations, and supplement with popular electronic services (electronic journal, electronic diary, electronic recording, etc.).

To implement management system in different levels (institutional, sectoral, countrywide) whereas unified electronic document management system set in place, information-analytical systems ready for governing bodies at all levels with timely, reliable and complete information necessary to support management decision-making.

Challenging issues for educational system

Reshaping the role and behavior of teacher and student

The role of teacher/instructor in education process is shaped depending both on personal capabilities and administrative requirements (government involvement).

These vary depending on specialty/direction of education (technical, engineering, etc.) and technology impact influencing the perceptions. Teacher/instructor becomes the 'extractor' for student's ability to consider their

thinking attitude and previous experience, apply different approaches for higher order thinking, taking into account diversity (including cultural and social) of students. In this respect the crucial task is to explore opportunities and challenges teacher/instructor is faced to and ways to ensure students can obtain effective learning experience [11].

Building programs and courses by teachers to ensure real-world applicability

Teachers need to concern the structure and content in building programs and courses to ensure real-world applicability. In this case, the design and delivery (method) serve as required components for successful digital education. Innovative approaches should ensure learning new ideas, technologies, and ways of doing things, so student be closer to state of the art in respective area.

Every teacher has to innovate and adjust curricula and syllabuses in proactive way related to fields of expertise, recognizing trends, listening and learning, and then forecasting and planning desired curriculum changes and goals. The digital generation forces change in pedagogy landscape, when adaptation is critical for both teacher and student.

Supporting organizational changes

Higher education institution (administrative and managerial level) needs to emphasize the changes that drive organizational (internal and external) implications. ‘Reengineering the business processes’ at institutional level requires technological, political, economic, government, and social changes which can force organizations to implement change for digital generation.

Effective classroom management in the online teaching modality implies on teacher and student to increase their understanding (e.g. how to select the right videos, choose content related to the assignment, and so on).

The wide range of advances in technology enables the design of learning environment with active student-centric approach while student can select the style of learning experience and arrange the knowledge outcomes.

Interactions between teacher and student bring possibilities to control when and how they learn, motivating faculty members to change the methods they are using currently. Student –centric environment should be arranged with all possible approaches and methods, including participatory technologies for higher education.

Conclusion

Referring to the experience of HiEdTec project and inspired by the necessity of current situation in Uzbekistan, in this paper authors made an effort to contributing to the significant issues of adapting the educational system to digital generation. However, there are many fundamental sides to the success of digital transformation in higher education as change the way we learn and teach, coping with needs of environment where everything is interconnected. The further research envisions the developing of pillars for ecosystem of digital transformation in higher education whereas technologies and services can shape the collaborative and interactive environment, attracting the needs of all stakeholders of educational process.

References

1. Uralov O.Sh., Internationalization of higher education in Uzbekistan//Social Sciences & Humanities Open, vol.2, issue 1, pp. 1-7, 2020.
2. Resolution of the President of the Republic of Uzbekistan "On measures for the widespread introduction of the digital economy and e-government"//No. PD-4699 dated 28.04.2020. <https://lex.uz/docs/4800661>
3. Presidential Decree of the Republic of Uzbekistan on 2019, August 8 "On approval of the Concept of development of the higher education of the Republic of Uzbekistan until 2030". www.lex.uz/ru/docs/-4545884
4. Nicky H., The digital generation/in ELT Journal Volume 65/3 July 2011; doi:10.1093/elt/ccr041 Published by Oxford University Press, 2011.
5. Ivanova A., Smrikarov A. The New Generations of Students and the Future of e-Learning in Higher Education//International Conference on e-Learning and the Knowledge Society - e-Learning'09, 2009.
6. Kozhuharova G., Ivanova D. Didactic models for applying ICT in education // Trakia Journal of Sciences, vol. 13, no. 1, pp 462-467, 2015.
7. Mohamed I., Osama A. Impact of Interactive Learning on Knowledge Retention // Human Interface, Part II, HCI 2007, LNCS 4558, pp. 347–355, 2007.
8. Concept for adapting the education system to the digital generation. Ministry of Higher and Secondary Special Education of the Republic of Uzbekistan//With the support of the Erasmus+ programme of the European Union, 2019.
9. Islam S., Jahan N. "Digitalization and Education System: A Survey"//International Journal of Computer Science and Information Security, vol. 16, no. 1, 2018.
10. Romprasert S., Monjagapate J. "Digitized Educational System" // E-Services, pp.1-12. DOI: <http://dx.doi.org/10.5772/intechopen.87781>
11. Knight J., De W. Internationalization of higher education. Past and future//Journal of International higher education, The Boston College Center for international higher education. Number 95, 2018.

O'QITISH TIZIMIDA O'QUVCHI-TALABALARDA DISLEKSIYANING BARTARAF ETISH YO'LLARINI TAHLIL ETISH

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Annatsiya. Ushbu maqolada disleksiyani tadqiq etishning joriy holati tavsif etilgan. Professor-o'qituvchilarni disleksiya bilan bog'liq bazaviy ma'lumotlar bilan ta'minlash, hamda disleksiya doirasida pedagogikaning asosiy nazariy savollari mavzusi ochib berilgan.

Kalit so'zlar: disleksiya, hayajon, IDA, turg'unlik, kontent, fonologiya, morfologiya, semantika.

ANALYSIS OF HOW TO PREVENT DYSLEXIA AMONG SCHOOLCHILDREN-STUDENTS IN THE EDUCATION SYSTEM

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Abstract. In this document the current state of dyslexia research is described. It helps to provide the staff with basic information about dyslexia; furthermore, it answers main theoretical questions of pedagogy in the framework of dyslexia.

Keywords: dyslexia, stress, IDA, depression, content, phonology, morphology, semantology.

Bolalardagi disleksiya mukammaligining darajasi insondan insonga o'tadigan miya rivojlanishidagi meros bilan hamda insonni o'qitish turi bilan bog'liq hisoblanadi. Miya normal, ba'zida juda aqlli bo'lgan insonlarning kuchi tildan ko'ra