Digitization Of Education At The Present Stage Of Modern Development Of Information Society

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ABSTRACT

The article discusses the concepts and principles of digitalization of education at the present stage of development of the information society, the use of digital technologies in education, integration into the educational process, professional competencies.

KEYWORDS

Competence, specialist, digital education, ICT, technology, integration, digital generation, didactics, intellectual, electronic, online, virtual, pedagogical, informatics, computer, interdisciplinary communication.

INTRODUCTION

At present, the demand for specialists with competency, who have professional mobility of the economy, who can work in changing economic conditions, is increasing. In the decree of the president of the Republic of Uzbekistan № PF-4947 "on the strategy of

actions for the further development of the Republic of Uzbekistan" the task of improving the quality of training of modern specialists, determined by the requirements of the labour market, employers, in general, the entire digital economy, is becoming more important [1-6].

Opinions are expressed by scientists about the completion of the information phase of Education. Educational institutions in all parts of the country are equipped with computer equipment, educators have gone through the process of training and retraining on the use of ICT in the educational process. A new stage in the development of society can be called "digitization", including the priority direction of modernization of the educational system of Uzbekistan, which is replaced by modern trends and information [7-10]. The process of digitization manifests itself in the deep convergence of digital technologies with material and socio-humanitarian, including educational technologies and practices. It is possible to see that digitization in education is aimed at ensuring its individualization on the basis of large volumes of data (big data), virtual and filled reality (VR, AR), Cloud Computing of mobile technologies and others in the use of advanced learning technologies (advanced learning technologies), including the continuity of the learning process (VR, AR). Qualitative use of digital technologies in education, involvement of educators in independent research, selection of information, participation in design activities in the formation of XXI century compartments in future specialists, including ICT compartments.

MATERIALS AND METHODS

The creation of a digital educational process in educational institutions should be based on digital didactics, which is considered a new branch of pedagogical science – a scientific science about the organization of the educational process in the digital educational environment[11-16]. Being the subject of digital didactics is not the validity of digital educational tools, but the activity of a person. Digital didactics can be viewed as a trans-integrative field of scientific knowledge, characterized by the mutual transfer of certain scientific ideas and approaches from one field to another and their integration into another. The subject of digital didactics in vocational education and training is "the acquisition of the entire educational process as a system for the organization of the educational process in the digital educational environment", which includes the objectives of teaching (in accordance with the requirements of the digital economy and the digital society), the content of teaching and the requirements for its formation, the methods, it takes on the impact of teaching technology and techniques (maximum use of didactic capabilities of digital technologies), teaching tools (including networked and programmatically integrated into a digital – unified complex), the digital learning process in vocational education and training on the development of society and the economy.

Also, as scientists have noted, the strategy of working with representatives of the digital generation should come from this, according to which "it is practically impossible to integrate them into the traditional educational

process. Therefore, it is necessary to significantly transform the educational process depending on the capabilities of the digital generation, as a result of which a new digital learning process will be formed [17-24].

Being the uniqueness of the structure of the digital educational process, the introduction and use of digital technologies are considered, and many of them will have the following didactic properties: the search for different information in the global network landkin; personality (unlimited opportunities for the personal adjustment in accordance with the needs and peculiarities of the educational community); interactivity (the provision of); multiculturalism (the complex movement of various channels of information Reception-Perception); hypertext (free movement by text, the use of cross-references, the peculiarity of informational features of information, etc.); subjectivity (compatibility with the image of the world, which is typical for the digital generation).

In addition, in today's digital learning process, digital learning technologies (mixed learning, mobile learning, distance learning technologies, electronic (online) learning, etc.) are also significant, which rely on the use of technology tools as well as specialized interactive devices (flip, laptop, tablet, robotics kits, interactive writing boards, electronic flipcharts, interactive panel, interactive Sandbox, Interactive threshold, interactive cubes, etc.).

For the organization of the digital educational process, the potential of highly qualified, trained personnel of educational institutions will be necessary. The potential of personnel with the necessary compensation in the

conditions of constantly growing digitization in all spheres of the economy can become the main source of increasing competitiveness and labour productivity of the subjects of the Republic of Uzbekistan and the economy as a whole. In order to prepare it, it will be necessary to significantly modernize the professional education system, make educational programs compatible with the needs of the digital economy, introduce a wide range of digital technologies into the educational processes in educational institutions, provide opportunities for citizens to receive education for the rest of their lives [25-29].

Teachers with a high level of professional competency, including ICT competency, "in principle, the new educational tasks that the digital age puts before education; development of readiness for continuous changes that require the transformation of the system of ordinary values to a certain extent; training of social responsibility in the system of relations "human-digital means-society".; it will be necessary to take into account" the formation of internal boundaries between a virtual and a real being, the development of the ability to differentiate these entities and the types of responsiveness that corresponds to them; the ability to critically analyze information and filter out information noise, advertising and the like".

For the training of personnel with competence, it will be necessary "to modernize the vocational education system to the required level, to bring educational programs in line with the needs of the digital economy, to introduce digital technologies into the educational processes in educational organizations, to provide opportunities for

citizens to be able to receive education for the entire lifetime – at any time and

In terms of the problem of formation of ICT competency in the training system, the training of future teachers will depend on the psychological and pedagogical, didactic, methodological and meaningful opportunities of the organization of the educational process on the many sides, the creation of a modern informational and educational environment (later-ATM) in educational institutions. The legislation on the relevance and importance of the ATM in educational organizations, accordingly, is considered to be a "system that ensures the full adoption of electronic information resources, electronic educational resources, information, telecommunication technologies by the recipient of the technological means and educational recipients of the corresponding state, regardless of where they are located, educational programs." Thus, the ATM of educational institutions is the basis for the formation of ICT competency of future teachers [30,31].

The establishment of a digital learning environment is becoming increasingly important. Today, if the modern digital educational environment is fully transferred to the digital format, the conditions for continuous education of citizens of all categories will be created on the account of the development of the digital education space of Uzbekistan.

Analysis of normative documents, recommendations, research in the field of digitization of education, giving an opportunity to distinguish the conditions for

digitization of education, it is possible to include the following in them:

- Digital generation of educators;

- To create a legislative framework for the digitization of Education;

- Resource support of digitization of Education, which includes the digital educational environment of educational institutions;

- Training of personnel capable of digital education with ICT competency that receives digital literacy;

- Digital pedagogical technologies and digital technologies of educational significance.

From the point of view of the emergence of the specified conditions for the digitization of education and the formation of ICT competency, we carry out the analysis of normative documents regulating the preparation of future teachers in the vocational education system.

In recent times, several measures are being taken by the state in the direction of improving the system of training future teachers.

In addition to other trends in the training of future specialists and the processes of modernization of the entire educational system as a whole, actively developed and applied professional stations are increasingly affected.

One of the ways that it is possible to check the quality of training of specialists, the degree to

which their professional competencies have developed, is to know and understand the capabilities of the specialist ICT components (Microsoft Office; SMART Notebook; SMART Table and other similar programs); the specialist can apply ICT in the process of training, can prepare documents using the Microsoft Office program, It is necessary to be able to work in SMART Notebook and SMART Table applications, apply educational-significant digital technologies used in education (for example, virtual and filled reality, components of robotics, digital technologies for specialized educational purposes).

The mandatory requirement for the preparation of the future educator is the competence, ability and preparedness of ICT, demonstrating in his professional activity the skills, ability and readiness to solve professional tasks using ICT tools and digital technologies of educational importance.

The study of the content of the information course, which is regulated by the students ' science programs, is offered at an in-depth level within the framework of the "Informatics" general educational science. With this standard, the requirements for the subject results of deepening the course "Informatics" are defined, which include the following:

- To acquire a base knowledge system that reflects the contribution of Informatics in the formation of the scientific image of the modern world;

- Mastering the concept of algorithm complexity, knowledge of the basic

algorithms for processing digital and text information;

- The structure of modern computers, the formation of a picture of the trends in the development of computer technology;

- The formation of an idea of the general principles of the development and operation of internet applications;

- The formation of an image of computer networks and their role in the present tense;

- The formation of an idea of the basic principles of the organization and operation of computer networks, the norms and rights of Information Ethics, the principles of ensuring information security, methods and means of ensuring the reliable operation of the means of ICT, etc.

Thus, the subject of this study is directed to the acquisition of knowledge and skills in the field of Computer Science and the formation of computer literacy and a deeper study of the basics of Computer Science, the formation of foiling skills from ICT, taking into account the peculiarities of the future professional activity of teachers.

"Informatics and Information Technologies", "Information Technologies in education" are the peculiarities of Educational Sciences and are not developed for specific specialities of the content of these Educational Sciences. "Informatics" as a general education science is aimed at studying the basic concepts in the field of Informatics and information tools, acquiring the necessary set of user skills.

The formation of ICT competency in the study of the above-considered Educational Sciences is the main tool for the formation of ICT competency of future teachers, which arises only within the framework of laboratory-practical training of students and the implementation of independent work.

Nowadays, many researchers consider it necessary to take into account the integration of science-based on information and communication technologies for the systematic formation of their ICT competency during the training of future teachers.

A.A.Khasanov provides the basis for the need to integrate the content of educational materials in the educational disciplines aimed at the formation of ICT competency of future teachers in his doctoral dissertation with the integration of scientific preparation and the formation of structural interdisciplinary links. Also, this author emphasizes the need to integrate ICT and didactic units in the educational process in the future professional activity, and for the successful formation of ICT competency of the future educator, it is necessary that "a general training scheme should be drawn up, which can be presented in the form of a program on the basis of a training plan.

CONCLUSION

Based on the above-mentioned it will be possible to draw several conclusions as follows:

- Analysis of normative documents, recommendations, studies in the field of digitization of the economy, allowing to distinguish the conditions for digitization of education in general, it is possible to

include the following: the digital generation of Education recipients; the creation of legislative bases for digitization of education; the resource provision of digitization of Education, which includes the digital educational environment of educational institutions; the;

- Digital pedagogical technologies and digital technologies of educational importance (volumetric data, distributed register systems, artificial intelligence, robotics components, wireless communication technologies, technology of virtual and filled realities, technology of digital visualization, technology of electronic identification and authentication, digital technologies for specialized educational purposes, Internet of materials);

- The data part of the training program of specialists of the middle ear allows the provision of conditions for the formation of ICT competency, which is still relevant today.

REFERENCES

1. Abdurashidovich, X. A., & Nigmanovna, M. F. (2019). Access to electronic educational resources in the education system. European Journal of Research and Reflection in Educational Sciences Vol, 7(12).
2. Khasanov, A. A. (2017). Methods and methods of forming economic education through interdisciplinary communication through information technology. Journal, (3), 38.

3. Urokova, S. B. (2020). Advantages and disadvantages of online education. ISJ Theoretical & Applied Science, 09 (89), 34-37.

4. Urokova, S., & Tuhtashev, U. (2019). Trends of electronic education development. European Journal of Research and Reflection in Educational Sciences, 7(12), 768-771.

5. Hasanov, A. A., & Gatiyatulina, R. M. (2017). Interdisciplinary Communication as a Didactic Condition of Increasing the Efficiency of Educational Process. Eastern European Scientific Journal, (5).

6. Sharipov, D., Abdukadirov, A., Khasanov, A., & Khafizov, O. (2020, November). Mathematical model for optimal siting of the industrial plants. In 2020 International Conference on Information Science and Communications Technologies (ICISCT) (pp. 1-3). IEEE.

7. Zikirov, M. C., Qosimova, S. F., & Qosimov, L. M. (2021). Direction of modern design activities. Asian Journal of Multidimensional Research (AJMR), 10(2), 11-18.

8. Hasanov, A. A. (2020). Peculiarities of preparing teachers for the development and use of e-learning resources. Theoretical & Applied Science, (9), 15-17.

9. Khasanov, A. A. (2018). Didactic Foundations of Interdisciplinary Connections at Subject Teaching. Eastern European Scientific Journal, (6).

10. Hasanov, A. A. (2012). Mezhpredmetnye svjazi kak didakticheskie uslovija povyshenija jeffektivnosti uchebnogo processa [Interdisciplinary communications as didactic conditions for increasing the effectiveness of the educational process]. Obrazovanie cherez vsju zhizn': nepreryvnoe obrazovanie v interesah ustojchivogo razvitija, 10(2). (in Russian).

11. Hasanov, A. A. (2012). Mezhpredmetnye svjazi i ih funkcii [Interdisciplinary connections and their functions]. Otechestvennaja i zarubezhnaja pedagogika, (2 (5)).). (in Russian).

12. Sulejmanova, R. M., & Inojatov, S. D. O. (2019). Programmnye sredstva nelinejnyh obrazovatel''nyh tehnologij [Software facilities of nonlinear educational technologies]. Aktual'nye nauchnye issledovanija v sovremennom mire, (4-7), 68-72. (in Russian).

13. Suleymanova, R. M. (2020). Technological process of creation of electronic educational resources. Theoretical & Applied Science, (9), 38-40.

14. Gulomova, N. (2021). Use of interactive methods for students in teaching drawing lessons (on the example of views). Academicia: an international multidisciplinary research journal, 11(1), 1637-1642.

15. Gulomova, N., & Saidaliyev, S. (2020). Development of Emergency Image in Students Psychological-Pedagogical Problems. International Journal of Progressive Sciences and Technologies, 18(2), 181-186.

16. Valiev, A. N., Tulanova, D. Zh., & Gulomova, N. H. (2018). Sovremennye pedagogicheskie i innovacionnye tehnologii obuchenija na zanjatijah po

chercheniju [Modern pedagogical and innovative teaching technologies in drawing lessons]. Molodoj uchenyj, (3), 183-184. (in Russian).

17. Tulanova, D. Zh., & Gulomova, N. H. (2018). Tehnologija i uslovija provedenija didakticheskih igr v processe prepodavanija cherchenija v vuze [Technology and conditions for conducting didactic games in the process of teaching drawing at the university]. In Obrazovanie kak faktor razvitija intellektual'no-nravstvennogo potenciala lichnosti i sovremennogo obshhestva (pp. 89-93). (in Russian).

18. Sobitovich, B. S., Ahmedovich, M. N., Erpolatovich, T. N., Khotamovna, G. N., & Jurakhanovna, T. D. (2020). Principles of using scientific discoveries in modernization of the art education system. Journal of Critical Reviews, 7(11), 2020.

19. Valiev, A. (2021). About the features of the perspective of simple geometric shapes and problems in its training. Збірник наукових праць Scientia.

20. Tashimov, N., & Samandar, Z. (2021). Improving the quality and efficiency of teaching descriptive geometry in a credit-modular system. Academicia: An international multidisciplinary research journal, 11(2), 730-733. DOI:10.5958/2249-7137.2021.00398.0

21. Ravshanovich, J. R. (2021). Priorities for the development of painting. Conferences, 1 (1). Section 1, pp-39-49. https://doi.org/10.47100/conferences.v1i1.952

22. Jabbarov, R. (2021, April). Developing students'creative abilities through teaching "landscape color picture" in higher education system. In Conferences. https://doi.org/10.47100/conferences.v1i1.1088

23. Xolmuratovich, M. X. Jabbarov Rustam Ravshanovich. Amaliy va badiiy bezak san'ati. UO'K 76 (075); KBK 85.15; M88 ISBN 978-9943-6383-4-1. 2020 yil.

24. Mansurov, N., & Zhalilova, V. (2021). Metodika professional'nogo obuchenija-nauchnaja otrasl' professional'noj pedagogiki [Vocational training methodology is a scientific branch of professional pedagogy]. Збірник наукових праць SCIENTIA. https://doi.org/10.36074/scientia-26.03.2021

25. Valiev, A. N. (2021). Ob Osobennostjah Perspektivy Prostyh Geometricheskih Figur I Problemah V Ee Obuchenii [About Perspective Features Of Simple Geometric Shapes And Problems In Her Learning]. Central Asian Journal Of Theoretical & Applied Sciences, 2(4), 54-61. (in Russian).

26. Malikov, K. G. (2020). Theory and practice of construction of axonomertic projects. European Journal of Research and Reflection in Educational Sciences Vol, 8(9).

27. Rasulov, M. (2021). Nauchit'' studentov vo vneshkol''nyh ucherezhdenijah sostavljat'' kompozicii na urokah rez''by po derevu [Teach students in out-school institutions to make compositions in wood carving lessons]. Zbirnik naukovih prac' ΛΌΓΟΣ. https://doi.org/10.36074/logos-09.04.2021.v2.44

28. Akhmedov, M. U., & Kholmatova, F. (2021). Formation of creative

processes in students through teaching composition in fine arts. Збірник наукових праць ΛΌΓΟΣ. https://doi.org/10.36074/logos-09.04.2021.v2.03

29. Djumaevich, K. K., & Toshkuvatovich, D. S. (2021). The book of principle of human specialist. Annals of the Romanian Society for Cell Biology, 7077-7088. http://dx.doi.org/10.5958/2249-7137.2020.00837.X

30. Talipov, K. N. (2021). Is graphics important in painting?. Academicia: an international multidisciplinary research journal, 11(1), 984-990. DOI: http://dx.doi.org/10.5958/2249-7137.2021.00117.8

31. Talipov, N. X., & Aliev, N. S. (2021). The importance of perspective in teaching art to future fine arts teachers. Asian Journal of Multidimensional Research (AJMR), 10(2), 97-103. DOI:http://dx.doi.org/10.5958/2278-4853.2021.00051.3