The Information and Computer Technologies in Special and Inclusive Higher Education in Uzbekistan

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ABSTRACT: One of the leading trends in the process of informatization of higher education is the active introduction of new tools and teaching methods focused on the use of information technologies. Modern information technologies have a powerful educational potential, have a wide range of capabilities, allow the implementation of fundamentally new forms and methods of teaching, and intensify the educational process at all levels. Computer technologies act as a means of forming (organizing and managing) educational activities, setting and solving educational problems, and performing professional actions in the full range of their components. A computer can be considered as a specific means of modeling educational activities, which is capable of performing several fundamental functions–as a means of modeling the subject content of learning objects.

KEYWORDS: special higher education, inclusive higher education, informatization, teaching methods, information technologies, powerful educational potential, educational process, computer technologies, professional actions, educational activities, fundamental functions, learning objects, disabled students.

INTRODUCTION

In Uzbekistan, improving the quality of education and training of competitive specialists based on ensuring targeted integration of science and production, taking into account the demands and needs of the labor market, is becoming increasingly important. To solve these socio–political problems, it is necessary to change the content and design of flexible modern methods, information and communication technologies that meet the learning needs of students, especially students with disabilities. Such important tasks as "increasing the capabilities of quality educational services, training highly qualified personnel in accordance with modern needs of the labor market" have been identified. This requires clarification of the pedagogical and psychological conditions for the formation of professional and information and communication competencies among students, and the didactic requirements for creating an adaptive learning environment in higher education.

This dissertation research to a certain extent serves the implementation of the tasks defined by Decrees of the President of the Republic of Uzbekistan No. DP–5270 "On measures to radically improve the system of state support for persons with disabilities" dated December 1, 2017, No. DP–60 "On the Development Strategy of New Uzbekistan for 2022–2026" dated January 28, 2022, No. PD 5847 "On approval of the Concept for the development of the higher education system of the Republic of Uzbekistan until 2030" dated October 8, 2019, Resolution No. DP–2909 dated April 20, 2017 "On measures for further development higher education system", No. DP–3775 "On additional measures to improve the quality of education in higher educational institutions and ensure their active participation in large–scale reforms carried out in the country" dated June 5, 2018 and a number of other regulatory documents related to this topic.

MATERIALS AND METHODS

In the process of teaching special subjects to students with disabilities, including modules such as "General Psychology", the disabilities of students with disabilities were taken into account. The texts of the lectures of all the listed modules were presented to deaf students with sign language translation. The process of using ICT can be considered effective and convenient only if it does not cause mental and information load for students.

During the study, the content, forms and methods of using ICT were systematized. At the same time, the variety of combinations of technologies made it possible to flexibly reconfigure the information system according to the following algorithms: a clear statement of the purpose of using the technology; determine the conditions for introducing the technology; determining the

need for the use of technology by students with disabilities; take measures to control the regulation of the operation of equipment; development and implementation of a system for monitoring and diagnosing.

In the Republic Defacademy Google play (formerly Android market) is a mobile application that allows third–party companies to offer Android device owners to install and purchase various applications, as well as an officially registered mobile application from the Google games and books store.

The result of the use of information technology is the changes that have occurred in the theoretical knowledge, practical skills and psychological characteristics of a disabled student under the dominant influence of this technology in a certain period of time.

The features of the electronic educational platform arcane.uz and the Defacademy mobile application for disabled students of various categories with psychophysiological disorders have been determined: increase the motivation of activity, relying on the tendency of students with disabilities to engage in manipulative–search activities; specifics of receiving and processing information; modeling of objects that cannot be presented to students' perception in traditional conditions; leading activity–characteristics of the type of training; creating effective conditions for obtaining theoretical knowledge and practical activities; providing the educational process with additional tools, support and others; changes in the education system for students with disabilities; level of development of IT technologies.

The development of an educational–cluster model of vocational education using information technologies at universities at the present stage" indicates that the new paradigm of higher education is characterized by the following features: the opportunity to receive education from anywhere in the world; lifelong learning; at special courses. The main goal of lifelong education–the continuous enrichment of a person's creative potential–can only be realized in a cluster environment. Therefore, the goal of introducing the model in a cluster environment is to ensure scientific, methodological, organizational and methodological development of inclusive education for people with disabilities and persons with disabilities at the university. There was a need to correctly define the tasks that ensure the achievement of the goal: analysis of existing approaches to the organization and development of higher professional education for people with disabilities and persons with limited health capabilities in Uzbekistan and in the practice of foreign countries; development of mechanisms for managing the process of inclusive education at a university and creation of an organizational structure; creation of an information space for the implementation of inclusive policies regarding people with disabilities and persons with disabilities; development and implementation of a system of material, technical, scientific and methodological support for inclusive education.

Thus, it is advisable to unite the efforts of stakeholders in the implementation of the cluster model for the development of inclusive education in universities, to use all the advantages of the cluster for the development of the vocational education system.

RESULTS AND DISCUSSIONS

During the experiment, it was determined that 87 disabled students participated in the teaching experiment at the Chirchik State Pedagogical University, 110 at the Tashkent State Pedagogical University, 80 at the Jizzakh State Pedagogical University. These students were involved in experimental training. In the process of organizing the study, two stages of the experiment were identified–training and control.

At the first stage of the experiment, electronic content containing materials for the module "General Psychology" was prepared, and students were trained on its basis. For a detailed introduction to these modules, audio and video lectures with sign language translation on the educational electronic platform Arcane.uz, as well as the Defacademy mobile application, were used. Quizzes, Zoom platform and teacher feedback were also posted on the e–learning platform to reinforce the teaching material. The high assessment of the virtual practice model conducted with the participants of the experiment–students in the field of pedagogy and special pedagogy–is important additional evidence in favor of the need to include it in the educational process of higher education.

The development of students' professional competencies was assessed according to the following criteria. In order to analyze the level of students' mastery of theoretical and practical skills in using ICT in the course sections, tests were developed. Control tests for the course "General Psychology" in the 2020–2022: An academic year included a total of 50 tests. We scored at the following levels: "successful" score of 5 points, "advanced" score of 4 points, "basic" score of 3 points, "threshold" score of 2 points, and "below threshold" score of 1 point.

From the statistical analysis it became clear that the experimental work to determine the effectiveness of teaching the level of development of professional and information competence of students with disabilities using the Defacademy media complex was effective. At the end of the experiment, an efficiency of 20% was achieved at Chirchik State Pedagogical University, 17% at Tashkent State Pedagogical University, and 16.5% at Jizzakh State Pedagogical University.

CONCLUSION

Taking into account the psychophysical characteristics of applicants with disabilities entering higher educational institutions, a psychological, medical, pedagogical commission was formed with the participation of defectologists in the entrance exams and commissions. The media–complex educational materials (audio lectures, video lectures with sign interpreter) adapted for students with disabilities, appropriately included in the system of education and professional training of students, to improve the quality of education and professional training making a huge contribution. Work to develop professional knowledge, skills and abilities. Also, great attention was paid to the development of speech, vision and hearing skills in children with developmental disabilities. They complement traditional means of developing professional competencies in the area under consideration for students with disabilities and create special learning conditions that cannot be implemented using traditional methods. A system of exercises of specially designed information media complexes on the arcane.uz educational platform, as well as the Defacademy mobile application, form reflection in students–the experience of personal perception, understanding of their professional activities, and also increases independence and activity in choosing a strategy for professional actions in the process of work.

The creation of an inclusive, barrier–free educational environment, as well as resource centers, where the entire system of conditions in which students with disabilities can move freely, study, receive the necessary information, communicate with peers, participate in various forms of public life, receive high–quality professional education that provides demand and competitiveness in the labor market.

REFERENCES

1. Arkhipova E. F. Ranyaya diagnosis and correction problem development. Первый год жизни ребенка. – Moscow: Mozaika–Sintez, 2012. – p. 160.
2. Abdullaeva G.S. The program of hearing development and pronunciation training in individual classes at the deaf children's school // Instructional manual. – Tashkent: "Republic Education Center". 2013. – p. 38.
3. Rau, F.F. The problem of integration of the deaf / F.F. Rau // Education and training of children with developmental disorders. – 2013. – p. 52–54.
4. Rechitskaya, E.G. The use of screen–sound devices in a lesson with students–teachers of the deaf / E.G. Rechitskaya // Ways to improve the training of future teachers–defectologists: Interuniversity collection scientific works. – M., 2004. – p. 127.
5. Solving motion problems [Application program]: Specialized software and methodological complex. Version 2 / I.V. Bolshikh, O.I. Kukushkina, Z.M. Kordun. – M.: Polygraph service, 2000.
6. Robert, I.V. Theoretical foundations of the development of informatization of education in modern conditions of the information society of mass global communication / I.V. Robert // Computer Science and Education, 2008. – p. 3–15.
7. Rozanova, T.V. Principles of psychological diagnosis of developmental disorders in children / T.V. Rozanova // Defectology. – 2005. – p. 16–21.
8. Klyueva N.V. I send technology to the psychologist. – Moscow: Sphere, 2012. – p. 185.
9. Митяева А.М. Здоровьесберегающие педагогические технологии: учеб. пособие для студ. вузов, обуч. по спец. Москва: Академия, 2012. – p. 208.
10. Aismontas B.B. Social rehabilitation and integration into society of students with disabilities: (experience, problems, prospects) // Psychological assistance to socially unprotected persons using distance technologies (Internet counseling and distance learning): Materials of the III International Scientific and Practical Conference, Moscow, February 27–28, 2013 / Edited by B.B. Aismontas, V.Y. Menovshchikov. M.: MGPPU, 2013. pp. 223–229.
11. Baylukova N.A. Organization of distance learning for children with disabilities. Information technology for a New school. Conference materials. Volume 3. – St. Petersburg: GBOU DPO TSPKS SPb "Regional Center for quality assessment of education and information technologies", 2013.

12. Barinova T.P., Kazakova V.N., Karyukina S.V. Distance learning as one of the possibilities of creating an accessible environment for children with disabilities. Information technology for a New school. Conference materials. Volume 3. - St. Petersburg: GBOU DPO TSPKS SPb "Regional Center for quality assessment of education and information technologies", 2013.

13. Belyaeva E.O. The importance of distance learning for children with developmental disabilities. Information technology for a New school. Conference materials. Volume 3. – St. Petersburg: GBOU DPO TSPKS St. Petersburg "Regional center for quality assessment of education and information technologies", 2013.

14. Boikov D.I. The use of new information technologies within the block of psychological and pedagogical training of students–defectologists. Abstracts of the international seminar "Actual problems of learning, adaptation and integration of children with developmental disabilities". St. Petersburg, 1995. pp. 34–35.

15. Bolshykh I.V., Kukushkina O.I. Computer technologies and mathematics in a special school // Defectology. № 2., 1995.