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THE USE OF INFORMATIONAL AND COMMUNICATIONAL TECHNOLOGIES IN THE PROCESS OF TEACHING CHILDREN WITH DISABILITIES

Summary. The article considers the use of information and communication technologies in the education of children with disabilities. Information and communication technologies help to make the learning process of a child with a disability more individualized, varied and effective. The lesson with the use of modern information technologies for children with disabilities contributes to the solution of one of the main tasks of correctional education – the development of the student's personality, his ability to navigate and adapt in modern society. It was found that the computer significantly facilitates the process of information exchange of children with the world around them, access to relevant information and presentation of the results of their own information activities in a common form, and expands real opportunities for participation in various spheres of sociocultural life, including education and professional activities. The modern content of education involves the active introduction of computer technology in educational institutions. New technologies will not replace teachers, textbooks or the classroom, they help to focus on student learning, create new opportunities for the development of the entire education system.

Keywords: communication, technology, learning, health, opportunity.

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ВИКОРИСТАННЯ ІНФОРМАЦІЙНО-КОМУНІКАЦІЙНИХ ТЕХНОЛОГІЙ У ПРОЦЕСІ НАВЧАННЯ ДІТЕЙ З ОБМЕЖЕНИМИ МОЖЛИВОСТЯМИ ЗДОРОВ'Я

Анотація. У статті розглянуто питання застосування інформаційно-комунікаційних технологій при навчанні дітей з обмеженими можливостями здоров'я. Інформаційно-комунікаційні технології допомагають зробити процес навчання дитини з інвалідністю більш індивідуалізованим, варіативним і ефективним. Урок із застосуванням сучасних інформаційних технологій для дітей з обмеженими можливостями здоров'я сприяє вирішенню однієї з основних завдань корекційного виховання – розвитку індивідуальності учня, його здібностей орієнтуватися і адаптуватися у сучасному суспільстві. З'ясовано, що комп'ютер істотно полегшує процес інформаційного обміну дітей з навколишнім світом, доступ до потрібної інформації і представлення результатів власної інформаційної діяльності в загальноприйнятій формі, і розширює реальні можливості участі в різних сферах соціокультурного життя, включаючи освіту та професійну діяльність. Сучасний зміст освіти передбачає активне впровадження комп'ютерних технологій в освітні установи. Нові технології не замінять вчителів, підручників або клас, вони допомагають поставити в центр уваги навчання учнів, створюють нові можливості для розвитку всієї системи освіти. Сучасні інформаційні технології відкривають учням доступ до джерел інформації, підвищують ефективність самостійної роботи, знайомлять з предметним світом і сприяють розвитку інформаційної компетентності. Інформаційні технології дають можливість вчителю застосовувати як окремі види навчальної роботи, так і будь-який їх набір, тобто спроектувати навчальне середовище, що дозволяє реалізувати принципово нові форми і методи навчання. Учитель отримує додаткові можливості для підтримки і напрямки розвитку учня з обмеженими можливостями здоров'я, пошуку і організації їх спільної роботи, розробки і вибору найкращого варіанту навчальної програми. Необхідність використання інформаційно-комунікаційних технологій на уроках незаперечна. Для дітей з обмеженими можливостями здоров'я інформаційно-комунікаційних технологій є помічником в освоєнні і пізнанні нового, розвитку мотивації, один із способів соціалізації. Найбільш важливими причинами необхідності застосування комп'ютера в навчанні дітей з обмеженими можливостями здоров'я є: організація процесу навчання відповідно психоемоційними і фізіологічними особливостями дітей; реальна можливість технологізувати процес індивідуалізації та диференціації навчання; розширення можливості дотримання основних принципів корекційної освіти.

Ключові слова: комунікація, технології, навчання, здоров'я, можливість.

Formulation of the problem. Training of children with disabilities and people is one of the priority areas of the education system. One of the priority areas for improving education is to provide children who have problems in psychophysical development, medical and psychological support and special learning conditions. Information and communication technologies serve as promising means of correctional and developmental work for children with disabilities. Information technologies open up access to sources of information, increase the efficiency of independent work, introduce the subject and help the formation of information competence. They enable the teacher to use not only certain types of educational work, but also a learning environment that uses new forms and methods of teaching.

The relevance of research. Recent significant changes in the education system of students with severe multiple developmental disabilities have made it possible to create a regulatory and legal framework, the main theoretical provisions governing the activities of the system of special education and upbringing, to enrich the psychological and pedagogical classification, to highlight typological features, to determine the mechanisms

of differential diagnosis and psychological, pedagogical support of young people, to develop approaches to the system of inclusive education of children with disabilities and their peers with normative development. However, as before, the need to improve teaching technologies for certain educational areas and academic disciplines, contributing to the successful socio-cultural adaptation of students with severe multiple developmental disorders and their integration into society, has not lost its relevance. We refer to persons with severe multiple developmental disabilities as students with disabilities who combine intellectual, sensory, motor, emotional-behavioral and other developmental disabilities that do not correspond to age standards.

Analysis of research and publications. A large number of researchers have devoted their work to the philosophical and pedagogical aspects of teaching children with disabilities, namely: A.N. Leontiev, A.I. Naumov, M.M. Potashnik, S.L. Rubinstein, P.I. Tretyakov; conceptual provisions on the specifics of the learning process and learning ability of children with developmental problems were considered by: B.G. Ananiev, P.Ya. Galperin, Z.I. Kalmykova, H.A. Menchinskaya, E.I. Meshcheryakova, S.L. Rubinstein, N.F. Talyzin.

Subject of research: the process of teaching children with disabilities.

Object of research: information and communication technologies in the process of teaching children with disabilities.

Aim of the research: to analyze the effectiveness and ways of using information and communication technologies in the process of teaching children with disabilities.

Main material. Information and communication technologies allow solving the following didactic tasks: to control and diagnose errors; to differentiate and individualize the learning process; to form a culture of cognitive activity; to enhance the motivation for learning (for example, visual means of the program or game situations); to simulate and simulate processes or phenomena; develop the ability to make the best decision; to exercise self-control and self-correction of educational activities; to develop a certain type of thinking; to visualize educational information. These tasks are solved using hardware (computer, copier, printer, projector, scanner, sound recording devices, photographic and video multimedia equipment) and software (simulators, virtual constructors, the Internet, integrated training packages, search engines) tools [4].

Currently in Ukraine, a great deal of attention is paid to inclusive education. A state educational standard for students with disabilities is being introduced, regulatory legal acts of various levels are being developed and implemented, adapted educational programs are used, a large number of scientific developments in this area are being carried out, social projects are being introduced, etc. The process of searching for forms of the most effective education of children is being intensively carried out with disabilities (e. In inclusive education, all children, regardless of their physical, mental, intellectual and other characteristics, are included in the general education system and study at the place of residence together with their peers without disabilities in the same educational institutions, where take into account their special educational needs and provide the necessary special support [3].

Children with disabilities can realize their potential for social development only if they start on time and adequately organize education and upbringing. Now the experience of inclusive education of children with disabilities is actively developing in a general educational environment on a par with normally developing peers. This type of education poses a number of problems for the mass school and teachers: how to organize a lesson in an inclusive classroom, what forms of report to use for a child with a disability.

The importance of research in this area is dictated by the need to develop a flexible education system, taking into account the individual needs of students. Modern education proposes to use two interrelated forms of teaching children with disabilities – inclusive (in an educational institution, when the child is included in the life of the class) and individual (an individual curriculum is being developed, implemented in home schooling) [3]. Inclusive education provides equal access to education for all students, taking into account special educational needs and individual opportunities, allowing a child with special educational needs to adapt to the conditions of general education schools, in a regular class. Since not every child has the opportunity to attend an educational institution for health reasons, for medical reasons, individual education becomes relevant.

Individual education is «a form of education that a child receives at home, and the learning process itself is built according to an individual curriculum» [2, p. 10]. Individual education of children with disabilities is becoming even more relevant in connection with the growth of disability among the population, with the need to ensure the availability of education for all children with disabilities, regardless of its severity. Individual education for a child with a disability involves home schooling. A significant advantage of this form of education is that the teacher works with a specific educational request and a real educational situation – an individual training program is developed and implemented that best meets the needs and capabilities of the child (in accordance with the physiological, psychological, intellectual and pedagogical characteristics of the child, the timing of mastering that or other academic subject, forms and methods of teaching, schedule, etc.).

Methods and means of individualized education for children with disabilities should take into account the principle of individualization. Information and communication technologies have such potential. Information and communication technologies are understood as «methods that implement the capabilities of modern means of communication for the transmission and processing of educational information in real time» [4, p. 23]. Informational and communicational technologies are actively being introduced into the educational process, including the education of children with disabilities, making this process more flexible, variable, and consistent with the child's capabilities. These technologies are used in distance learning for children with disabilities (distance learning is

one of the forms of individual learning). Distance learning is «a complex of educational services provided to children with disabilities using a specialized information and educational environment based on the means of exchanging educational information at a distance (satellite television, radio, computer communications, etc.)» [3]. This form of education allows to solve the problem of individualization of education, as well as many difficulties in the socialization of children with special educational needs: fear of communication, fear of difficulties and obstacles, scarcity of social contacts, self-doubt, poverty of social experience. Online communication with teachers helps not only to fill all the gaps in self-study, but also contributes to the acquisition of experience of communication with an educated adult, to overcome communication barriers. The methods used in the distance form allow the student with disabilities to acquire skills and ability to work in a team, children learn to solve problems together, to conduct discussion conversations.

The informational and communicational technologies are used in distance education for children with disabilities are different. They include e-mail, Skype, social networks, specialized information resources, and others designed to communicate with teachers and other students. To attract attention not only with a bright image, but also with video, sound, special effects, multimedia presentations are used. Internet technologies help a child find information on an issue of interest to him in a short time. Visual and colorful computer programs are used, including game elements (for example, the program «Living Mathematics»). Special correctional educational programs are being developed for a specific category of children with disabilities. For the blind and visually impaired, the use of computer technology has an additional compensatory value, allowing them to independently perform many of the things in which they previously had to resort to outside help. The main correctional goals of the informatics and informational and communicational technologies lesson for children with visual impairments: 1. To form algorithmic and structural-logical thinking. 2. To teach rational ways of processing information using keyboard shortcuts that allow you to perform operations without using a mouse and significantly reduce the time you work at the computer. 3. To teach how to work with screen access programs that allow to voice the interface using speech synthesizers [4]. Information science for visually impaired children is no less important than for sighted children. Such students lack information about the world around them. A computer science course can help you productively find missing information. When drawing up a work program for schoolchildren with visual impairments, psychological characteristics of children should be taken into account, characteristic approaches to organizing a lesson should be determined: ophthalmological regime, sanitary and hygienic requirements for equipment, correctional orientation of teaching methods and techniques [4]. This helps to ensure that students with visual impairments can start using a wide range of information technologies to solve significant practical problems, as early as possible, and allows to increase the efficiency of the educational process. The concept of the role of disabled people in society has changed significantly. This category of people can master complex professions with the help of a computer. Totally blind and visually impaired, if trained to do this, they can do almost any work on a computer thanks to a device for enlarging text, braille lines and a speech synthesizer. Everything that happens on a traditional monitor when connected to a computer with installed special software receives sound recording.

During the school period, the auditory analyzer acquires special significance for cognitive activity. Both during classroom activities and in extracurricular activities, visually impaired students use their hearing extensively [5]. It should be noted the importance of earlier entry into the subject of children with visual impairments, starting from grade 5. The study of special programs in parallel with the educational material of the course «Informatics» allows you to organize a more gentle regime for students, which helps to assimilate the material more deeply, taking into account the psychological characteristics of blind and visually impaired children, who poorly retain information in memory and remember it for a long time. It is advisable to begin practical exercises on any topic with a demonstration of the capabilities of the speech access program, with the obligatory commentary on your actions. The combination of keys and the action that occurs in the following is necessarily pronounced aloud. Individual work of blind children should only be carried out using headphones. The main tasks solved in informatics lessons: search, analysis, selection, organization and transmission of information [5]. The informatics lesson allows you to purposefully form the educational and informational skills of schoolchildren with visual impairments.

Conclusion. The use of information technology helps to solve complex and interesting problems, helps to get rid of the shortcomings of traditional education. A significant motivation for children with disabilities is that for many of them information and network technologies are almost the only means of communication with other people. Observations have shown that all children with disabilities are interested in learning computer science using information and communication technologies, they master the subject material better, their cognitive abilities improve, and social adaptation is easier. In connection with the increase in the number of children of correctional education, it becomes necessary to develop a general program, which includes both teaching lessons on working with computers and classes in subjects using information and communication technologies. It is also necessary to think over the content of computer software, games and exercises, which would be aimed at developing the cognitive abilities of children and have teaching functions in subjects. Based on the foregoing, we can conclude that the implementation of the capabilities of modern information technologies expands the range of types of educational activities, allows you to improve existing and gives rise to new organizational forms and methods of teaching.

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