

### THE ROLE OF ICT IN INCLUSIVE EDUCATION

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**Annotation.** Effective development of the potential of electronic educational resources in the conditions of inclusive education is possible only in the process of improving the professional competence of teachers in the field of information and communication technologies, which are only a tool for solving certain issues of intensification of the correctional and educational process, so their use should not be turned into an end in itself.

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*technical support, education model.*

Inclusive education is one of the leading transformations of the last decades in the world educational space. In recent years, a number of steps have been taken to promote inclusive education. By 2020, it is planned to cover about 80% of children with psychophysical development with inclusive forms of education. The focus is on the policy in the field of inclusive education, the practice of such education, the formation of an inclusive culture. It is an indisputable fact that inclusive education is one of the leading transformations of the last decades in the world educational space. The main problem area for teachers - policy for inclusive education (conceptual framework development, inclusive education through the prism of the Convention on the rights of persons with disabilities, etc.), practice of inclusive education, the formation of an inclusive culture (the willingness of teachers to implement inclusive education, professional competence and personal qualities of a teacher inclusive education)[2].

In the course of studying these issues, theoretical approaches to the creation of an adaptive educational environment of inclusive education institutions are determined, difficulties and risks are identified, experience in the organization of an adaptive educational environment in educational institutions implementing special education programs is accumulated. It should be noted the undoubted importance of the use of information and communication technologies in the organization of adaptive educational environment.

A unified information and communication environment is an ideal to strive for. Currently, it is

quite difficult to imagine educational institutions of any level in which teachers would not use information and communication technologies. This is a consequence of the informatization of society, in particular the informatization of the education system-an evolutionary process, which in a broad sense is the restructuring of the information environment of the educational space and is aimed at developing a methodology for the use of modern means of transmitting and receiving information, as well as providing resources for the implementation of this methodology.

Information and communication environment is a set of hardware, software and telecommunications facilities and information resources. It assumes the presence of normative-organizational, educational-methodical and technical support[2].

The information and communication environment of an educational institution can be considered unified when the following conditions are met:

- all computer resources of the educational institution are combined into a local computer network;
- authorized access to the dedicated server with the Internet is provided;
- information resources are integrated in such a way that information is not duplicated and

is available for processing by different applications;

- similar approaches, interfaces and software tools are used to automate business processes;
- the software used ensures the completeness and consistency of business processes;
- in the information environment, there is a single authorization system for all applications.

The most important modern trend in the development of education is its focus on Informatization as a necessary condition for improving the efficiency and quality of the educational process; the special importance of information and communication technologies as one of the tools of socialization of children with disabilities. Information and communication technologies allow students to access a variety of sources of information, provide ample opportunities for the design of the learning environment, the implementation of fundamentally new forms and methods of learning, open opportunities for creativity, acquisition and consolidation of professional skills, organization of joint work[1].

Over the past decades, significant theoretical and practical experience in the application of information and communication technologies in special education has been accumulated. Information and communication technologies can be used both in the process of implementation of the content of inclusive education and in correctional work in the framework of the organization of leisure activities of children with psychophysical development.

Versatile and multifaceted use of information and communication technologies in the correctional and educational process with children with peculiarities of psychophysical development is due to their capabilities and advantages over traditional pedagogical technologies. Rational application of information and communication technologies allows:

- To form the cognitive activity of children in accordance with the activity approach to the pedagogical process, taking into account all its links (needs-motives-goals-conditions-means-actions-operations);
- Individualize the educational process while maintaining its integrity due to the programmability and dynamic adaptability of automated computer programs;
- To create an opportunity to build an open education system that provides each child with peculiarities of psychophysical development with its own trajectory of education and upbringing;
- To organize an effective management system of information and methodological support of education.

One of the most popular electronic educational resources used in the field of special education are electronic learning tools. These tools, based on digital technologies, are used directly in the process of education and training. Modern electronic means of training include: training programs, testing and controlling programs, game training and developing computer programs.

- They provide an opportunity to provide differentiated and individual approaches in the organization of correctional and educational process;

- characterized by accessibility to perception, compactness, content, structure and a large expressive possibility of placement and presentation of educational and additional material;
- interactivity and feedback between teachers and children; variability in the creation of effective learning systems depending on pedagogical and methodological preferences, children's age, their special educational needs and level of training.

Today, the computer market is significantly replenished with all kinds of electronic means of education-General and special, which can be successfully used in the correctional and educational process. At the same time, without exception, all electronic means of education do not allow to fully meet the special educational needs of a particular child with peculiarities of psychophysical development.

In this case, an important role is assigned to teachers, who must have the appropriate competencies:

- know the technical capabilities of the computer, have the skills to work with it; clearly comply with sanitary norms and rules for the use of computers in the classroom with children with mental and physical development;

- be able to adapt electronic learning tools, develop guidelines for them, the system of tasks in accordance with the capabilities and needs of children;
- create new computer products.

In order that the electronic means of training used in work with children with features of psychophysical development had correctional and developing character, it is necessary to consider special (for all categories) and specific (for separate category of children or the specific child) the requirements shown to their development and application.

The most significant special requirements include:

- the requirement of pedagogical functionality based on the significance, completeness of coverage of the directions of the educational process in accordance with the curriculum of preschool education (depending on the nosological group of children), the possibility of individualization and differentiation of correctional work;
- the requirement of adaptability, which consists in adapting the electronic means of education to the needs and characteristics of the child by varying the depth and complexity of

the material studied, the use of assistive means (connection of a pneumatic sensor, a helmet pointer, an ultra-sensitive video camera, a touch screen, etc);

- the requirement of providing correctional orientation, consisting in the presence of tasks and exercises that will allow the teacher to solve correctional and educational and correctional-developmental tasks in accordance with the special educational needs of children;
- the requirement to use rhythmic modular screensavers, which exclude the effect of saturation in the work, and the alternation of types of tasks and exercises with different visual load, supporting the performance and increasing the productivity of children throughout the class.

In addition to the obvious educational meaning, information technology carries a wide range of opportunities for correctional work. It is a new stimulus for activation of all mental processes and especially for operational components of thinking, the most favorable environment for formation of skills of transfer and a condition of transition from visual levels of thinking on abstract. In these conditions, the learning process combines two interrelated and complementary functions of the computer: a means of formalization of knowledge about the subject world and an active element of this world, a tool for measuring, displaying and influencing it. The traditional approach to learning is usually limited to working with conditional images. The child's actions with the symbolic objectivity of the computer should be constructed in such a way that they initially contain the possibility of returning, as necessary, to the objective-practical actions with natural clarity and form a single whole with it[2].

As a means of training, education and development of students with disabilities computers are applicable in almost all forms of educational process: in the classroom, group, elective classes, for independent work of both strong and weak students. They serve to enhance learning activities, individualize learning, save time, control knowledge and other purposes.



The peculiarity of the use of computer programs in the conditions of inclusion is the interaction of students with the machine through the teacher. There is a kind of didactic triangle: computer-teacher-student. The computer world is changing rapidly, here the countdown is not years, and sometimes not even months. It is gratifying to note that it serves not only the interests of business, but also finds a wider application in special education, significantly expanding the horizons of correctional activity of the teacher.

Computer programs designed for correctional education of children, first of all, take into account the laws and peculiarities of their development, as well as rely on modern methods of overcoming and preventing deviations in development. Multimedia computer technologies allow to expand the range of traditional learning tools. Their use increases the efficiency of the educational process by introducing diversity at different stages of the lesson, gives a rich additional material for preparing for the lesson to the teacher and students, allows you to show some processes in dynamics (video clips, animation), enhances visibility.

Computer technology today has become an integral part of the lives of many children. They often perceive these technologies with more interest than a normal school textbook. Computer programs allow for individualization of learning, make it possible to organize independent actions of students. Everyone has the opportunity to work at their own pace, not depending on the weaker or Vice versa stronger students. The use of a computer in the classroom helps to increase cognitive activity and motivation, allows the teacher to significantly diversify the learning process, making it more interesting[1].

The main areas of application of computer technologies that can have a significant impact on the system of special education:

- Production of educational material. The undeniable advantage of the electronic method of preparation and storage of information is to accelerate and simplify the process of processing and updating.
- Storage and quick search of information regardless of its storage location on hard, flexible, video disks or in a database.
- Creation of computer-based communication systems (e-mail, teleconferencing), allowing students, teachers to communicate with each other at a distance and even conduct group seminars and discussions from their terminals.

Psychological and pedagogical expediency of use of computers in training of children with lacks of mental and physical development consists in creation at the child of initial model of interaction with the computer.

ICT and e-learning in special education are an integral part of pedagogical technologies and involve the use of not only computers, but also a variety of modern technical means of education, for example, information processing devices, peripheral computer equipment,

communications, multimedia, as well as special hardware for users with OPFR.

The use of ICT and ESO in the implementation of educational programs of special education allows:

- to improve methods and technologies of selection and formation of the content of education;
- introduce and develop new specialized subject areas, academic subjects, areas of remedial studies related to computer science and information technology;
- to increase the effectiveness of training due to its greater individualization and differentiation, the use of additional motivational levers;
- organize new forms of interaction in the learning process;
- change the content and nature of the activities of the teacher and the student;
- improve the management mechanisms of the education system;

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- reduce the cost of organizing and conducting training activities by transferring part of the daily routine functions from teachers to the means of computer support of the learning process;
- to increase motivation of pupils, to expand spheres of their independent activity;
- ensure accessibility in the perception of educational material, etc.

### **Literature:**

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