

## The usage of remote technologies in teaching children with motor diseases

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### Abstract

*The problem of teaching children with musculoskeletal disorders remains open today. This is primarily due to the fact that the birth rate of children with this type of pathology continues to increase. Among children with motor impairment, the category of children with cerebral palsy stands out (from 3 to 7 per 1000 births). The pathological syndromes of infantile cerebral palsy affect not only the motor, but also the mental sphere. Taking into account that many children with cerebral pathology have potentially intact prerequisites for the development of intelligence, it is necessary to form cognitive activity in babies, develop activities, various interests and motivation for learning. Distance learning has a number of features that make it quite effective in working with people with disabilities and, in particular, with children with cerebral palsy. The use of distance learning for children with motor pathology allows to take into account the needs, interests and capabilities of each child and to conduct classes at a convenient and suitable time for him. In addition, it allows an individual pace of advancement in the process of mastering the educational material.*

**Keywords:** distance learning, children with motor diseases, teaching

### 1 Introduction

The relevance of our research is determined by the requirements of the modern stage of socio-economic development of society to the quality of education. Currently, fundamental changes are taking place in the education system, caused by a new understanding of the goals and values of education, the development and implementation of new education technologies at its various levels. The problem is of particular relevance and practical importance in connection with the change in the social services commissioning in the field of education - the creation of a sufficiently flexible educational system that takes into account the individual needs of the individual, providing equal access for "all Russian citizens to education at different levels, regardless of place of residence and family income level" [4].

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Taking into account that many children with cerebral pathology have potentially intact prerequisites for the development of intelligence, it is necessary to form cognitive activity in babies, develop activities, various interests and motivation for learning [3].

### 2 Children with motor pathology as participants of the educational process

One of the areas of activity that can contribute to the transformation of children with developmental disabilities into full and useful members of society is the creation of conditions for their rehabilitation with the help of the potential of education, which this category of children is in desperate need of.

The rehabilitation potential of education is realized subject to the maximum inclusion of children with developmental disabilities in a variety of feasible types of educational, labor,

cultural, physical and social activities aimed at understanding and realizing physical and spiritual capabilities and social ties, teamplay and cooperation both with other disabled people and with healthy people.

However, the majority of children with disabilities, provided that they have educational or vocational training opportunities, require limited rehabilitation. The point is that many of them are deprived of equal opportunities to receive a broad education, as a result they find themselves somehow "pushed out" into secondary roles in the labor market. Thus, one of the most important tasks in solving the problems of people with disabilities is related to finding ways to include as many people with disabilities as possible in the education system. Solving this problem will facilitate the process of their further integration into society.

Accordingly, the rehabilitation of children presupposes the following organizational and pedagogical conditions and means: adaptation of the learning environment of educational institutions, taking into account the needs of disabled children; creation of a barrier-free environment for an educational institution: variability of education through the use of multilevel educational programs, variability of teaching rates, variability and organizational flexibility; organization of the activities of disabled people, taking into account their interests and capabilities; organization of opportunities for the provision of social, psychological and pedagogical assistance.

It can be noted that it is distance education, which is currently beginning to be most actively used in Russia, that really meets most of the organizational and pedagogical conditions listed [1].

### **3 The use of distance technologies in teaching children with physical disabilities**

In Russia, distance education appeared with the opening of the "i-School" in Moscow in 2003. Training takes place using video communication, the Internet telephony, chats, forums, etc. The school is attended by children with cerebral palsy, diabetes, oncological, nervous diseases, kidney and heart diseases, etc [2].

In the Krasnodar Territory, the project "Development of distance learning for children with disabilities" began in 2010. In accordance with the order of the Department of Education and Science of the Krasnodar Territory dated 16.10.2009 No. 3255, in the structure of the State Educational Institution of the Krasnodar Territory, the Regional Institute of Additional Pedagogical Professional Education created the Center for Distance Education for Disabled Children. By order of the Department of Education and Science of the Krasnodar Territory No. 3892 of 20.07.2011 "On the modernization of educational institutions by organizing distance learning for students" in Krasnodar, four basic schools which organize distance learning were approved. The education process takes place using distance educational technologies for programs of primary general, basic general and secondary (complete) general and additional education, as well as for educational programs of special (correctional) educational institutions.

The model for organizing distance learning for children with disabilities implemented in the region assumes:

1. Voluntary participation of children in the project (based on the application of parents or people replacing them).
2. Transferring of computer equipment to families of disabled children under an agreement with the regional operator of the project, net connection.
3. Teaching students, their parents, teachers who carry out home education, the basics of computer literacy in adapted programs of basic ICT - competence.
4. Choice by students and their parents of training courses from the list of recommended ones for mastering in a distance form.
5. Continuation of a child's studies in a municipal educational institution in accordance with federal and regional documents regulating the organization of home education for sick children, taking into account the additional possibilities of distance learning technologies.

6. Fulfillment of the role of teacher-curators in the development of educational material by students on the basis of the Internet resources by teachers of municipal educational institutions who teach a child at home.

Distance learning for children with disabilities contributes to the solution of such socially significant problems as:

- stiffening the level of education of society and the quality of education;
- realization of the need for educational services;
- meeting the country's needs for high-quality trained specialists;
- increasing social and professional mobility of the population, its entrepreneurial and social activity, the level of self-awareness, broadening the horizons;
- preservation and augmentation of knowledge, human and material potential accumulated by the domestic higher education;
- development of a unified educational space within Russia, implying the provision of the possibility to obtain a standardized education at any point in the educational space.

The teacher's activities are carried out in several stages:

1. Planning and preparation. At this stage, there is a diagnosis of the needs of students for accompaniment and support; determination of the initial level of their knowledge and skills; preparation of a package of methodological support materials.

2. Accompanying training. It implies deepening knowledge, developing the skills and abilities of students; counseling on specific problems, testing; information and analytical support; organization of information exchange and contacts between students; actualization of their internal forces and reserve capabilities.

3. Use of learning outcomes and summary analysis. This stage assumes the consolidation of the acquired knowledge, skills and abilities.

#### **4 Conclusion**

So, distance learning has a number of specific qualities that make it very effective when working with children with disabilities:

- individualization of training. The child can study the discipline as much as he personally needs to master it; studies according to a convenient schedule for him;
- psychologically and technologically comfortable education of children in a family setting.
- drawing up individual programs for each student, taking into account his individual characteristics, that is, in each case, the teacher works with a specific educational request and a real educational situation.

Distance learning has a number of features that make it quite effective in working with people with disabilities and, in particular, with children with cerebral palsy. In this case, it means that each child can work according to a convenient schedule. The pace of the lessons is also selected individually and everyone can do exactly as much as it is required personally for him to master any subject. The usage of interactive elements makes it possible to carry out a dialogue not only with the teacher, but also with other children - participants in the training. Completing assignments and tests stimulates children's independent work and self-control skills. Using the feedback allows learners to analyze and correct mistakes which were made. In a number of programs the computer allows to record the result without scoring, delicately pointing out wrong answers and providing the necessary help. Thus, a situation of learning success and motivation for further learning is created.

The use of distance learning for children with motor pathology allows to take into account the needs, interests and capabilities of each child and to conduct classes at a convenient and suitable time for him. In addition, it allows an individual pace of advancement in the process of mastering the educational material.

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