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The Role Of Information Technologies In Eliminating The Social Isolation Of Students In Hospital Education

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Abstract: This article provides a scientific analysis of the problem of social isolation of students undergoing long-term treatment and its solution using computer science and modern digital technologies. The study examines the experience of the Russian project "UchimZnayem" and the principles of development of hospital pedagogy within the framework of Resolution No. 234 of the Cabinet of Ministers of the Republic of Uzbekistan. The role of information technologies in increasing the cognitive activity of sick children, their psychological rehabilitation and social reintegration is substantiated.

Keywords: Hospital pedagogy, mehrli maktab, social isolation, computer science, digital educational environment, kind school, inclusive education, rehabilitation, "UchimZnayem," ICT.

Introduction: One of the most complex and humane areas of modern pedagogy is hospital pedagogy. For adolescents undergoing long-term treatment, school is not only a source of knowledge, but also a means of maintaining life motivation and social connections. Social isolation caused by the disease negatively affects the cognitive and emotional development of adolescents. In solving this problem, the possibilities of computer science are wide, which allows the student to connect with the outside world in a digital format.

The legal basis of this area in the Republic of Uzbekistan is the Regulation "On the Organization of Preschool and General Secondary Education for Children in Hematology, Oncology, Clinical Immunology, Other Inpatient and Long-Term Outpatient Care," approved by the Resolution of the Cabinet of Ministers of the Republic of Uzbekistan No. 234 dated May 5, 2022. This document not only guarantees the right of children in hospital conditions to education, but also defines the creation of all the necessary pedagogical and psychological conditions for their return to society as a state-level task.

METHOD

The most fundamental difficulty faced by adolescents undergoing long-term treatment in a hospital setting is what is called "closed space" (hospitalization) syndrome in the scientific literature. Social isolation causes a student to be completely disconnected not only from their peers and school life, but also from their usual roles in society. I.Yu. Doluyev and N.Yu. As Zenich emphasized in his research, the pedagogical approach used in a hospital-school setting should be maximally aimed at distracting the child's attention from painful thoughts about the illness and maintaining their vital and social activity [5]. In this process, the science of computer science, with its technological, interactive, and communicative nature, plays the role of a leading driver in educational rehabilitation.

According to the scientific conclusions of A.M. Glez and A.F. Loskutov, "Digital educational resources are the most effective means of increasing the cognitive motivation of hospital schoolchildren, transferring them from a passive state to an active cognitive state"[1]. Modern interactive simulations, virtual laboratories, and multimedia technologies used in computer science lessons eliminate such negative symptoms as boredom, depression, and apathy in the

student's psychophysical state. In particular, the integration of computer science lessons with natural and social sciences protects the student's worldview from narrowing in hospital conditions. For example, the principle of "mobile didactic materials," successfully applied in chemistry lessons by A.V. Dzenis and P.A. Orzhekovsky, is methodologically very relevant for computer science lessons [4]. With the help of modern tablets and laptops, a student can create complex algorithms, write program code in Scratch or Python, or independently implement digital design projects even while lying down in the room. This ensures the continuity of education and the preservation of the student's intellectual potential.

The task of a computer science teacher working in a hospital setting is not limited to conveying a program within the framework of state educational standards. As O.A. Ivanova and S.V. Sharikov substantiated, a hospital educator is a specialist who, along with possessing a high level of digital competence, has mastered the skills of tutoring and psychological support [8]. The computer science teacher is a moderator who unlocks secure digital channels between the student's closed room and the endless outside world. I.A. Gusev notes that during long-term treatment and restrictions (quarantine), elements of digital art pedagogy, in particular, the creation of artistic compositions on graphic tablets or engaging in video storing (video editing), yield very high results in stabilizing the emotional state of adolescents [2]. Through this, the reader externalizes their inner fears and experiences in the form of a digital work of art (externalization), which significantly reduces the psychological pressure caused by social isolation.

E.S. Zorina, in her many years of scientific observations, emphasizes the need to develop a model of integrated cooperation between specialists in the hospital school - doctors, psychologists, and subject teachers [7]. The computer science teacher is responsible for monitoring the student's "digital rehabilitation" and their social activity in this chain. For example, when a student is physically unprepared for the lesson after strenuous therapeutic procedures, cognitive journeys, carried out through short logical games based on neuropedagogy, offered by the computer science teacher, stimulate the child's brain activity and awaken their interest in life. This approach fully corresponds to E.S. Zorina's methodological recommendations for working with children with oncological and hematological diseases and the concept of "didactic portfolio" [8].

The "Mehrli Maktab" system, created in Uzbekistan on the basis of the Resolution of the Cabinet of Ministers No. 234, sets the creation of an innovative and unified digital space in the teaching of computer science as a strategic goal. I.Yu. The idea of a "Unified Digital Educational Space," put forward by Doluyev and A.F. Loskutov, finds its practical expression precisely in the conditions of a hospital school [6]. This digital space allows students to continue communicating with their school, classmates, and teachers at their place of permanent residence through online platforms, participate in distance science olympiads, and defend social projects, even while living within the walls of a hospital. This process breaks the depressing stereotype in the adolescent's psyche that "I am seriously ill" and translates him into a positive and healthy social position that "I am a successful learner."

The socio-pedagogical significance of teaching computer science in a hospital school lies in its orientation towards the future, that is, towards professional life. Information technology skills acquired by adolescents during long-term rehabilitation (web programming, data analysis, elements of artificial intelligence) help them find their place in life after illness. This is of vital strategic importance, especially for children whose physical capabilities are limited to a certain extent after treatment. The field of information technology is currently the most accessible area for remote employment, which is the most convenient and promising path for the full reintegration of a sick student into society. Thus, computer science lessons in hospital conditions serve not only as a sum of technical knowledge, but also as an important rehabilitation tool that restores the social status of the individual and adapts them to life.

CONCLUSION

Summarizing the research results, it can be concluded that in the life of adolescents in hospital conditions, computer science and information technologies are not just an academic subject, but a strategic rehabilitation tool for overcoming social isolation, overcoming psychological depression, and ensuring personal development.

Firstly, the Cabinet of Ministers of the Republic of Uzbekistan adopted

Resolution No. 234 of May 5 and the requirements of the Regulation approved by it legally guarantee not only the right to education for children undergoing long-term treatment, but also their integration into the digital world. The "Mehrli Maktab" system, created on the basis of this document, forms a national model of hospital pedagogy, in which information technologies act as a "digital bridge" between the student and the outside world.

Secondly, the analysis of scientific literature showed that in a hospital environment, the computer science teacher, unlike traditional pedagogy, should also assume the roles of a digital curator and rehabilitation specialist. As O.A. Ivanova and S.V. Sharikov emphasized, a hospital teacher must form a digital educational trajectory based on the individual medical condition of the adolescent [8]. This approach prevents intellectual stagnation that causes illness in the student.

Thirdly, I.Yu. Doluyev and A.F. Loskutov proved to be the most effective mechanism for effectively eliminating the social isolation of adolescents in hospital conditions [6]. The use of virtual communication, project activities, and methods of remote collaboration within the framework of computer science lessons restores the cognitive functions of adolescents and awakens in them a sense of social utility.

Fourthly, the teaching of computer science is not only a means of communication for adolescents today, but also a foundation for their professional life after treatment. Skills in the field of information technology, in particular, programming and digital design, will allow students with disabilities to fully reintegrate into society in the future and engage in independent work.

In conclusion, it can be said that in hospital pedagogy, computer science is not just a technology, but the most modern and humane means of confidence in the future, social activity, and return to life for a teenager struggling with a serious illness. The improvement of this system in the experience of Uzbekistan will undoubtedly serve not only the acquisition of knowledge by sick children, but also a radical improvement in their quality of life.

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