RESEARCH ARTICLE

Adaptation Of The Educational Environment To The Needs Of The Student In Inclusive Education: Theoretical And Methodological Foundations Of Universal Design

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Abstract

The article analyzes the theoretical foundations and mechanisms of practical application of the universal design (UDL) approach in the process of inclusive education and substantiates the relevance of organizing an adaptive, fair, and differentiated learning environment for all students. The article emphasizes the need to redesign the content, methods, and tools of the UDL model, taking into account the individual needs of students, learning methods, and development opportunities. The three main principles of UDL are systematically highlighted - providing information on a multi-channel basis, creating opportunities to demonstrate knowledge and skills in various forms, and supporting student motivation and participation. Also, the professional training of teachers, the sufficiency of technical and infrastructural conditions, and the strengthening of the regulatory framework are indicated as important factors in the effective implementation of the UDL. The research results confirm that the universal design approach is an effective mechanism for creating a quality, equal, and inclusive learning environment for all students.

K E Y W O R D S

Inclusive education, universal design, UDL principles, adaptation of the educational environment, pedagogical differentiation, equal opportunities, flexible learning model, individual learning needs.

INTRODUCTION

In the context of the modern education system, pedagogical approaches, organized taking into account the specific pace of development, individual needs, and methods of assimilation of each student, are of particular importance. Based on this necessity, the concept of inclusive education provides for the creation of a favorable and fair educational environment that creates equal opportunities for all students with disabilities, differing in social, cultural, or linguistic aspects. Within the framework of this approach, the universal design model manifests itself as an effective methodological basis that

allows designing the educational process from the initial stage in a flexible and differentiated manner, corresponding to the needs of all students. This article analyzes the theoretical foundation of the Universal Design for Learning (UDL) concept, its main principles, and the mechanisms for its implementation in inclusive education practice [1].

The educational process today requires the organization of the educational process taking into account the personal needs, the dynamics of individual development, and the socio-cultural conditions of each student. The concept of inclusive education

represents a comprehensive pedagogical approach that encompasses not only working with children with disabilities, but also all students formed in different cultural, linguistic, economic, or social conditions. Inclusion is a complex, multifactorial, and systemic process, the effectiveness of which is ensured on the basis of a stable social environment, democratic principles, and pedagogical flexibility [2-5].

METHODOLOGY

Therefore, the effective establishment of inclusive education is not limited to the adaptation of material and technical infrastructure. It also provides for the revision and alignment of teaching methods, assessment criteria, didactic tools, and teaching methodology with modern requirements [6,7]. Inclusive education is a pedagogical approach aimed at involving students with different characteristics and needs in the system of general education institutions, ensuring their right to education in a harmonious and supportive environment without discrimination. In this process, inclusivity, unlike ordinary integration, means creating equal opportunities and ensuring full participation. In this case, methods, teaching aids, and pedagogical strategies adapted to the individual needs of students are of decisive importance. From this point of view, the "universal design" approach is of particular importance in the modern educational process. The Universal Design for Learning (UDL) model aims to create a comfortable, flexible, and inclusive educational environment for each student, providing for the design of all students from the initial stage of education in accordance with their needs, learning methods, and capabilities [8-11].

RESULT AND DISCUSSION

Universal design implies the principle of creating systems and environments suitable for each user, regardless of their capabilities. In the context of education, this concept is concretized through the "Universal Design for Learning" (UDL) model. The UDL model provides for personalization and adaptation of the educational process for all students, in particular, students with disabilities. This approach suggests developing educational programs not only for the ready user, but also within the framework of needs.

The UDL is built on the following three basic principles [12,13]:

1. Use of various methods in the presentation of information: various formats (audio, visual, text, interactive), adaptation of educational content to different forms of perception, assimilation, and perception by students.

2. Providing various forms and ways of activity for the expression and demonstration of the student's knowledge and skills: creative works, projects, oral presentations, written assignments.

3. Encouraging participation and motivation: opportunities for choice, differentiated tasks based on personal interests, social activity and incentives.

The universal design approach creates wide opportunities in pedagogical practice, the main advantages of which are:

A flexible learning environment for all: with this approach, lessons will be understandable, interesting, and useful for all students.

Simplified planning for teachers: If the lesson is adapted for different abilities in advance, there will be no need for separate adaptation later.

Non-isolation of children with special needs: Universal design is an integral part of inclusive education and prevents discrimination.

Effective use of technology: an individual approach can be achieved through digital technologies (for example, tablet (screen), audiobooks, subtitles).

The successful implementation of universal design in the educational process depends on several important interconnected factors: teacher training, sufficient material and technical infrastructure, legislative framework, and methodological support tools.

It should be especially noted that teachers are the main force that directly implements this system in practice. A teacher's lack of deep understanding of the principles of universal design (UDL) or knowledge of how to apply them in practice leads to the ineffectiveness of this approach. Therefore, it is very important for teachers to improve their professional qualifications, take special courses on UDL, and participate in seminars for mutual exchange of experience. In this case, it is important that teachers develop methodological recommendations, skills in using flexible (adaptive) technologies, an individual approach, and working with multimedia content.

Another important issue is that the implementation of universal design in schools requires the use of technical means (interactive whiteboards, audio-video equipment, screen readers, special Braille printers), adaptation of the educational environment (ramps, tactile markings, lighting, noise

insulation (protection)) and the capabilities of digital platforms. This factor implies the renewal and continuous development of the material and technical base.

Also, the principles of UDL should be supported on a legal basis, that is, inclusion and equal opportunities should be defined as a priority in state policy. For this, the legislative framework, regulatory documents, and educational standards must be developed and implemented, including the principles of universal design. In Uzbekistan, active measures are being taken in this direction.

Another important factor: the creation and delivery of methodological manuals, practice-oriented resources, and scientific and methodological recommendations to teachers by the state and responsible organizations is an important form of systematic support. In this regard, the first stage of important work is being implemented in our country.

The universal design approach in inclusive education provides access to quality education not only for children with disabilities but also for all students from diverse cultural, linguistic, economic, and social environments. This approach provides for the organization of the educational process in accordance with the individual capabilities, interests, and learning styles of students. It is in this aspect that the UDL model is recognized as the most convenient and effective form of inclusive education.

The main advantage of the UDL concept is the creation of a unified, fair, differentiated, and flexible learning environment for students with diverse needs. In this process, students have the opportunity to develop such competencies as self-awareness, independent decision-making, equal participation, and social integration. Through approaches based on universal design, education will become not only a knowledge-providing system, but also a social institution based on equality, respecting the dignity of each child. Therefore, the introduction of the concept of universal design in educational policy is an integral part of building a modern and humane society. In this regard, the professional training of teaching staff, the renewal of educational tools and methods, the adaptation of infrastructure, and the strengthening of the principles of inclusivity in state policy are of decisive importance. In particular, the continuous improvement of teachers' qualifications based on the principles of UDL, providing them with methodological and psychological support, and encouraging the exchange of experience determine the success of inclusive education.

CONCLUSION

In conclusion, the universal design approach in inclusive education implements the right to education for each student into real life. UDL is not only a new method in the education system, but also a philosophy of education that ensures the priority of justice, equality, and human dignity. Through this approach, the widespread introduction of universal design principles will create the opportunity to form a modern, inclusive, and global education system in Uzbekistan.

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