AG EDITOR

Updating Programs for Children with Individual Needs: An Overview of Effective Approaches in the Field of Inclusion

Actualización de programas para niños con necesidades individuales: una visión general de los enfoques eficaces en el campo de la inclusión

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ABSTRACT

Introduction: modern changes in the global education paradigm require the integration of inclusiveness as a fundamental principle of the human right to education. The topic of this study is relevant due to the lack of properly developed modern approaches to the mechanisms of psychological and pedagogical support for people with special educational needs. The main purpose of this study is to identify opportunities to modify educational programs for children with such needs.
Method: the methods of system analysis, synthesis and scientific abstraction, comparative analysis were used.
Results: the analysis includes the study of modern educational innovations developed within inclusive programs. As in other areas, special attention is paid to inclusive processes in the course of systemic digitalization of education. The preparation of multimedia methods, thematic case studies, immersive technologies, gamification elements, etc. was studied. As a result, a different model for the development of inclusive education was developed, which includes new pedagogical tools: specialized online courses, interactive learning components, active learning for parents, problem-based learning, and individualized learning. The importance of didactic support for students' independent work in the system of technological inclusive education is outlined.
Conclusions: the conditions of pedagogical support that contribute to the achievement of the optimal level of independence of students with intellectual disabilities during practical skills and sensory integration lessons are systematized. Inclusive pedagogical technologies in the Ukrainian theories and practice of general education should be activated by the teacher when forming the list of enrolled subjects.

Keywords: Inclusive Education; Innovative Pedagogy; Psychological Support; Educational Strategies; Interactive Technologies; Personalized Learning.

RESUMEN

Introducción: los cambios modernos en el paradigma global de la educación requieren la integración de la

inclusividad como principio fundamental del derecho humano a la educación. El tema de este estudio es relevante debido a la falta de enfoques modernos adecuadamente desarrollados de los mecanismos de apoyo psicológico y pedagógico para las personas con necesidades educativas especiales. El objetivo principal de este estudio es identificar oportunidades para modificar los programas educativos para niños con dichas necesidades.

Método: se utilizaron los métodos de análisis de sistemas, síntesis y abstracción científica, análisis comparativo.

Resultados: el análisis incluye el estudio de las modernas innovaciones educativas desarrolladas dentro de los programas inclusivos. Como en otras áreas, se presta especial atención a los procesos inclusivos en el curso de la digitalización sistémica de la educación. Se estudió la elaboración de métodos multimedia, estudios de casos temáticos, tecnologías inmersivas, elementos de gamificación, etc. Como resultado, se elaboró un modelo diferente para el desarrollo de la educación inclusiva, que incluye nuevas herramientas pedagógicas: cursos en línea especializados, componentes de aprendizaje interactivo, aprendizaje activo para padres, aprendizaje basado en problemas y aprendizaje individualizado. Se destaca la importancia del apoyo didáctico al trabajo autónomo de los alumnos en el sistema de educación inclusiva tecnológica.

Conclusiones: se sistematizan las condiciones de apoyo pedagógico que contribuyen al logro del nivel óptimo de independencia de los alumnos con discapacidad intelectual durante las clases de habilidades prácticas e integración sensorial. Las tecnologías pedagógicas inclusivas en las teorías y prácticas ucranianas de educación general deberían ser activadas por el profesor al formar la lista de asignaturas matriculadas.

Palabras clave: Educación Inclusiva; Pedagogía Innovadora; Apoyo Psicológico; Estrategias Educativas; Tecnologías Interactivas; Aprendizaje Personalizado.

INTRODUCTION

The issue of adaptation of educational content for children with special educational needs remains complex and insufficiently studied in the scientific discourse, despite its relevance and scale. This aspect is highlighted in the works of such researchers as.[1,2,3,4] Instructional approaches in modern inclusive education should develop clearly defined effective educational strategies to promote an accessible learning environment for all students. In European countries, the focus is on the gradual introduction of audiovisual and modern teaching methods, which are replacing traditional or verbal teaching methods and techniques.

Other methods are equally important, including the integration of new forms of learning, such as interactive technologies, immersive environments, the project method, and the case study method. The formation of comprehensive psychological and pedagogical assistance for children studying in inclusive settings stands out as a fundamental factor in their social adaptation and personal development. Against the background of the general individualization of education, which is stimulated during social transformations and crises, learning as part of the inclusive education system is gaining more and more scientific attention.

The theoretical and methodological foundations for studying this problem are formed by the works of researchers who analyze current trends and practical experience in the field of psychological and pedagogical support and correctional and developmental activities in an inclusive learning environment.

For example, the works of Bohdanovych et al.[5] interpret the use of new educational technologies at the level of inclusion.

Lopatynska et al.[6] examines the strategic directions of inclusive education development in the context of globalization and digital transformations.

Syniova's[7] study focused on the implementation of support for preschool children with special educational needs within inclusive resource centers.

Putra et al.[8] emphasize that inclusive education, correctional activities for children are comprehensive. According to the authors, the attitude of educators towards children with special educational needs and the development of logical thinking in them is the most productive.

Chepurna[9] emphasizes the importance of introducing an individualized and differentiated approach to the organization of the educational process. One of the key aspects is to slow down the pace of learning, use visual aids, interactive teaching methods, and verbalize the content.

For their part, Veremchuk and Khomiak (2021) formulate basic principles aimed at promoting inclusive education. Their reasoning focuses on the gradual disclosure of content and functional elements together with the personal aspect of intellectual development in educational activities.

A review of statistical data by Kolupaeva and Taranchenko[10] allows us to formulate requirements for the content of correctional education, focusing on the peculiarities of child development in the context of crisis situations.

The study by Veremchuk and Khomiak[11] focuses on the problems of organizing an inclusive educational

environment in emergencies. Such studies establish requirements for corrective and remedial work, which necessitates demonstrating that at the present stage, every activity should include a discussion on the integration of individual characteristics of a child's development.

Noteworthy is the analysis of Naida and Taranchenko,[12] which in its modern version includes countries that actively address the issue of integrating children with special needs into the general education system at the methodological level based on spatial or constructivist learning paradigms.

Studies conducted by contemporary scholars Williams-Brown and Hodkinson[13] offer a more detailed basis for the implementation of correctional and developmental work that takes place during education with elements of integration. The armed conflict in Ukraine greatly simplifies the idea of forming new strategic guidelines for the development of inclusion, which requires a reassessment of fundamental principles.

The objective of the study is to reveal the directions, principles, and patterns of adapting educational materials for children with special educational needs within contemporary education landscape.

METHOD

The study uses general scientific methodologies, main scientific approaches and research, including:

1. Methods of system analysis, synthesis and scientific abstraction used to determine the essence of the process of forming an inclusive educational environment and relevant adapted curricula, as well as to detail the functions of psychological and pedagogical tools in the system and identify possible risks in this area.

2. Comparative analysis of the study of various modern concepts and approaches aimed at identifying the key components of the development of an inclusive learning environment.

3. Use of graphic methods for illustrative and interpretative presentation of the results.

The basis of this study is the scientific works of Ukrainian and foreign authors published in international scientific journals, classified in the Scopus and Web of Science databases, as well as other easily accessible statistics. The analysis was based mainly on the newest available literature, which allowed us to build a statistically valid sample.

RESULTS

The development and implementation of inclusive education strategies in the national system requires teachers to be willing to actively use innovative and non-standard teaching approaches. Today, there are many different methods that significantly improve the quality of the educational process and form the necessary competencies in the context of inclusion.

A motivating element in the context of updating content for inclusive education is an individualized learning plan that describes in detail conscious differentiation, the use of special equipment, active integration of modern psychological and pedagogical methodologies, and predefined professional support activities.

The following methods are of particular importance:

1. Didactic games and various genres of gamification designed to teach any subject in the form of a narrative game, which increases accessibility in learning.

2. Interactive technologies that facilitate the acquisition of practical and theoretical skills for their application in real life.

3. Audiovisual tools that transmit content through visual materials (presentations, videos) and many others.

4. Project-based approaches that focus on the development of students' communication skills during learning.

5. Reproductive methods that ensure intellectually active and rapid assimilation of information.

6. Individualization of learning dynamics as a motivation, stimulation of participants in the educational process to develop their own learning pace and flexibility.

7. Formalized group interaction using partner classes, pair interviews, the zigzag method, as well as group learning aimed at developing communication skills.

It should be emphasized that the described forms of organizing the educational process are particularly effective within the framework of a concept that combines group and individual work with the use of digital technologies. Innovative information technologies have transformed teaching methods and opened up new opportunities to promote the development of competencies in inclusive education. It is also important to note the positive impact of using pedagogical methods such as mind maps and step-by-step algorithms that support the teaching of these communication skills alongside critical thinking.[14]

The development of educational programs for children with inclusion is based on methodological principles that combine the best ways to promote the development and socialization of students with special needs. In

this regard, it is worth paying attention to other countries when training specialists.

For example, Finland has implemented a new policy that ensures inclusiveness in terms of equality and comfort for students with disabilities. Support is provided both at the macro level and through psychological assistance and specialized resources for specific children. The school is seen as a single entity where children with special educational needs and children from regular classes are integrated into one coherent system.

In Canada, all students have equal educational opportunities, and this is guaranteed by the availability of psychologists and social workers who support children in accessing educational resources. Training in specialized centers in Indonesia provides parents and teachers of students with disabilities who are inclusive with specialized counseling services. Individualization of the educational process for such children is widespread in Italy at the primary school level, and they are provided with permanent special support assistants to facilitate their adaptation to the school environment.

In Japan, specialized qualification measures for the integration and emotional support of children with disabilities have been successfully developed and implemented. These programs help improve interaction between students of different categories and help overcome depression.

Figure 1 illustrates the main advantages and challenges of adapting the curriculum for students with special educational needs in an inclusive classroom. The figure shows the main components needed to create an adaptive learning environment, including differentiated learning approaches, flexible content delivery, and alternative forms of assessment. Adapting the curriculum not only ensures equal access, but also promotes academic and social development when it is tailored to individual student profiles.
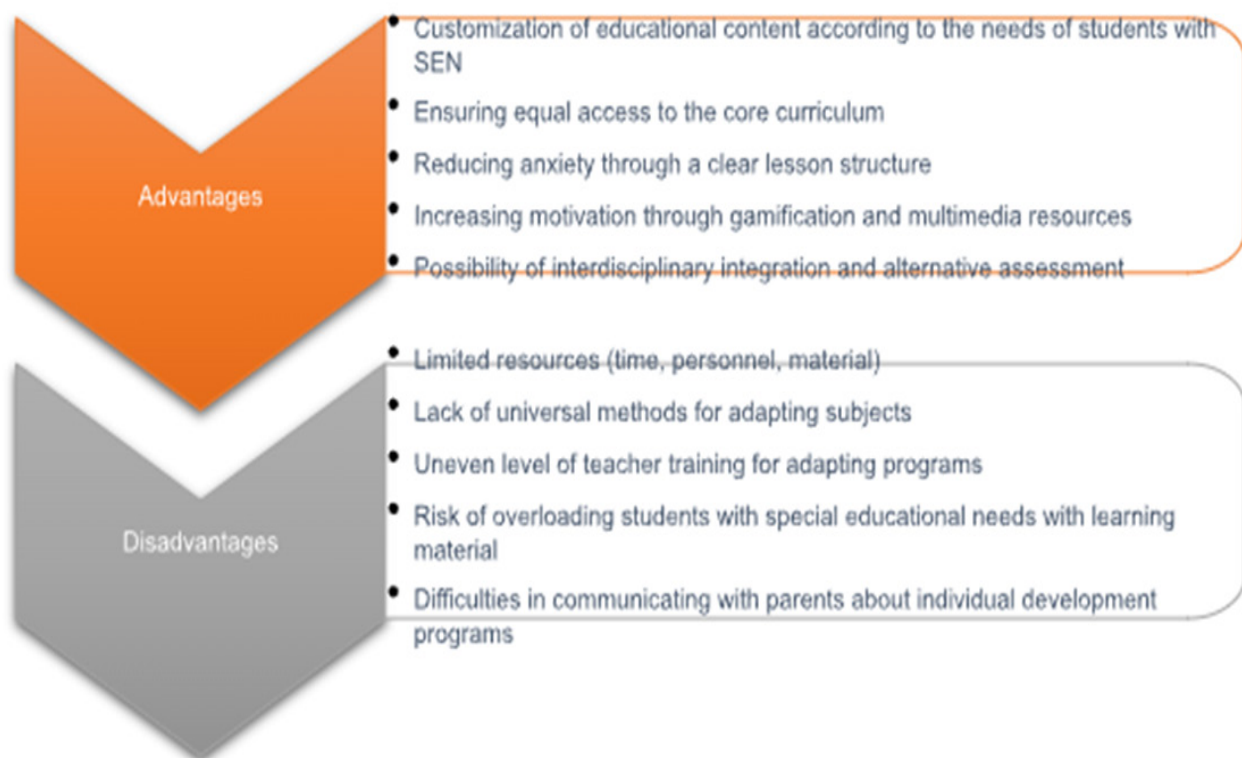

Advantages
- Customization of educational content according to the needs of students with SEN
- Ensuring equal access to the core curriculum
- Reducing anxiety through a clear lesson structure
- Increasing motivation through gamification and multimedia resources
- Possibility of interdisciplinary integration and alternative assessment

Disadvantages
- Limited resources (time, personnel, material)
- Lack of universal methods for adapting subjects
- Uneven level of teacher training for adapting programs
- Risk of overloading students with special educational needs with learning material
- Difficulties in communicating with parents about individual development programs

Figure 1. Key advantages and challenges of adapting the curriculum for inclusive education

Successful implementation of adaptive curricula depends to a large extent on the practical readiness of educators, including their familiarity with inclusive pedagogical tools, coaching strategies, and individualized support systems such as tutoring.

Personalized guidance through tutor-led support plays a crucial role in creating a learner-centered environment. In this context, coaching and tutoring become important tools to support students with diverse learning needs, ensuring meaningful participation and achievement within inclusive education systems.

Table 1 presents an adapted list of approaches to curriculum modification for inclusive education of children with special educational needs (SEN). The table includes differentiation of tasks, flexible thematic planning, visual support, participation of an interdisciplinary team of specialists, and the use of alternative means of communication. The data is based on a comparative analysis of inclusive practices in several educational systems in Europe and North America in 2021–2023. The approaches demonstrate effectiveness in implementing

individualized educational programs.

Table 1. The main approaches to adapting the curriculum for children with SEN	
Differentiation of tasks	62
Flexible planning of topics	48
Integration of visual support	73
Involvement of specialists (speech therapist, defectologist)	57
Use of alternative communication	39
Source: OECD,[15] European Agency for Special Needs and Inclusive Education[16]	

In general, the adaptation of the curriculum in an inclusive environment involves not only changing the content of education, but also a motivational and reflective transformation of the interaction between the student and the teacher.

1. Motivation is formed through personality-oriented methods that take into account the strengths of the student.

2. Learning activities are made practical through the adaptation of tasks, visual support, and teamwork.

3. Reflection stimulates students to self-knowledge, self-esteem, and a constructive attitude to difficulties.

This approach ensures sustainable results in the educational development of a child with SEN and contributes to the construction of an open educational space.

DISCUSSION

Our results demonstrate the need for adaptive curriculum. At the same time, before implementing an effective adaptive curriculum, it is important to compile a comprehensive student' profile. This should include the following:

- Learning obstacles faced by students, such as poor fine motor skills or challenging behaviors.
- Student' group interaction skills.
- Focus and attention span.
- Environmental factors contributing to student' learning.
- Previous learning history.

Before implementing adaptive teaching, all of this information should be collected. This necessity is confirmed also in other scholars' studies, and thus our research is in line with them. In particular, Prajalani et al.[17] claim that when developing an individual plan of psychological and pedagogical work with children with special educational needs, it is necessary to take into account the maximum possible consideration of typological and individual capabilities and needs. At the same time, the correctional and developmental process should be characterized by a complex nature and include language abilities, cognitive activity, and behavioral reactions.[18,19,20]

Masefield et al.[21] noted that modern approaches in pedagogy and psychology should include multidimensional and multifaceted technological methodologies and forms of assistance. In particular, the use of ICT, game-based methods, interactive methods, modeling, art and other pedagogical methods for teaching children with disabilities is very appropriate. We suggest to further improve these vectors, in particular by introduction of gamification approaches.

In addition, Duda and Petryk[22] emphasize the integration of children into the environment with maximum care. Psycho-pedagogical support aimed at developing stable emotional self-regulation skills requires clear sequential steps, such as:

1. Improving social interaction with peers.
2. Social and psychological acclimatization.
3. Providing a subject-spatial environment adapted to the individual needs of the child.
4. Individual educational and correctional programs.
5. Planning of perspective personal growth.
6. Regular assessment of the child's psychosocial development.[23,24,25]

Gorski et al.[26] emphasized the need to promote a comfortable psychological and developmental climate in pedagogy that supports children's emotional self-regulation and social integration. This can be achieved by introducing innovative approaches to psychological and pedagogical work.

With proper and sufficiently intensive correctional and developmental support, children with developmental disabilities can achieve a high level of communicative and socially active behavior, which indicates a more advanced level of mental development. Further research should focus on the formulation and application of many practical adaptive strategies for such medical, psychological, and pedagogical interventions.

CONCLUSIONS

In line with our objective, we attempted to reveal the directions, principles, and patterns of adapting educational materials for children with SEN. Research showed that, within contemporary education landscape, pedagogical approaches form the basis for the development of a flexible model of inclusive education that is remotely based on innovative pedagogical innovations. This includes specialized online courses, various multimedia didactic materials, interactive learning practices and stimulating tasks, as well as problem-based and personalized learning approaches. In inclusive pedagogy, modern technologies significantly improve these skills and social behavior, as well as the overall educational level of students. Analyzing the best practices of countries around the world, authors can note that, based on our observations, individualized curricula and pathways are undoubtedly a popular element of an inclusive modern educational environment. These approaches place a special emphasis on differentiation, allocation of special resources, modern psychological and pedagogical methods and practices of co-creation within adaptive curricula, as well as the availability of other forms of occupational health and safety.

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