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METHODOLOGICAL FOUNDATIONS FOR DEVELOPING INDIVIDUAL EDUCATIONAL PROGRAMS FOR CHILDREN WITH SPECIAL NEEDS

Annotation: This article explores the methodological foundations for developing Individualized Education Programs (IEPs) for children with special needs. It highlights the critical steps in the process, including comprehensive assessment, collaborative planning, setting SMART goals, designing tailored instructional strategies, and continuous monitoring and evaluation. Additionally, the article emphasizes the importance of adhering to legal and ethical principles to create inclusive and effective educational environments. By following these approaches, educators can ensure that children with special needs receive personalized support, enabling them to achieve their full potential academically, socially, and emotionally.

Keywords: Individualized Education Programs (IEPs), special needs education, inclusive education, comprehensive assessment, collaborative planning, SMART goals, tailored instructional strategies, continuous monitoring and evaluation, legal and ethical considerations, Free Appropriate Public Education (FAPE).

Teaching students with Special Educational Needs (SEN) is a multifaceted task that requires adapting the teaching process and providing materials tailored to each student's abilities. This process depends on the unique educational needs of every individual. For each student, it involves creating a personalized program of competencies, carefully selected from the standard curriculum, a practice referred to as curriculum modification. Alongside this, students must be provided with tools and resources that cater specifically to their requirements.

Curriculum modification extends beyond just adjusting learning goals and content. It also encompasses changes that enhance access to the curriculum, including environmental, material, and personal factors that facilitate the teaching process. These adjustments, referred to as "accessibility measures", include elements like improving the physical environment, customizing materials, applying suitable methodologies, and revising assessment practices. Such measures must be integrated into the teaching and learning process to make it more effective.

It is important to note that the modified curriculum may significantly differ from the standard one. It outlines the essential skills and abilities that a student can achieve, with appropriate support, to lead an independent life.

Modifying the curriculum for individuals with Special Educational Needs (SEN) requires consideration of numerous factors within their physical and social environment. Incorporating this contextual information offers valuable guidance for educators in designing curriculum modifications. Additionally, it serves as a basis for intelligent systems to reason, explain, and make informed decisions when creating curriculum plans. These concepts have inspired partial advancements in this area, as highlighted in [1, 2].

The creation of Individualized Education Programs (IEPs) is a cornerstone in ensuring equitable and effective education for children with special needs. This approach focuses on tailoring educational experiences to meet the unique requirements of each child. By leveraging comprehensive assessments,

collaborative planning, and ongoing evaluation, educators can develop programs that address both the psychological and academic needs of students.

In recent years, both foreign and Uzbek researchers have made significant contributions to the field of inclusive education, particularly in developing effective strategies for children with special needs. These efforts aim to create more inclusive educational environments in Uzbekistan.

A notable initiative is the collaboration between the University of Notre Dame's Pulte Institute for Global Development and the Ministry of Public Education of Uzbekistan. This partnership focuses on integrating children with disabilities into mainstream schools. Traditionally, Uzbekistan employed a segregation approach, educating disabled children in separate institutions. However, in September 2022, 225 public schools nationwide began including children with disabilities. Despite this progress, challenges remain, as many students still face exclusion due to systemic barriers.

Additionally, the School of Education at Syracuse University has joined a \$25 million USAID-funded project to support inclusive education in Uzbekistan. This consortium aims to revise educational materials, update the national curriculum, and enhance access for all students, including those with disabilities. Professors Christy Ashby and Beth Myers are leading efforts to improve teacher and paraprofessional training, focusing on inclusive educator preparation.

Within Uzbekistan, researchers are also addressing the unique aspects of inclusive higher professional education. A study published in the "Proceeding of International Conference on Special Education in South East Asia" in June 2024 examines the specific challenges and strategies pertinent to Uzbekistan's context.

Furthermore, a scoping review published in the "Autism" journal analyzed autism research conducted in Central Asia, including Uzbekistan. The review highlighted the limited but growing body of work in this area, emphasizing the need for more comprehensive studies to inform policy and practice.

These collaborative efforts between foreign and Uzbek researchers are instrumental in advancing inclusive education practices, ensuring that children with special needs receive equitable and effective educational opportunities.

The foundation of an effective IEP lies in understanding the child's abilities and challenges through a thorough assessment. This evaluation must include input from multiple disciplines such as special educators, psychologists, speech and occupational therapists, and medical professionals if necessary. The assessment covers cognitive abilities, behavioral patterns, emotional stability, and physical health.

For instance, a student with dyslexia may require tests assessing phonological processing, while a child with autism might need a focus on communication and social interaction skills. This data forms the bedrock for identifying strengths and challenges, enabling educators to set realistic and measurable goals.

An effective IEP is developed through a collaborative process involving educators, parents, and other specialists. Parents provide invaluable insights into the child's behavior at home, their preferences, and their challenges, making them key stakeholders in the planning process. Schools must foster a partnership with families, ensuring that their voices are heard and respected.

Teachers and specialists work together to design a plan that integrates instructional methods and therapies aligned with the child's needs. For example, a speech therapist might collaborate with a classroom teacher to reinforce language development during lessons. This team-based approach ensures a holistic educational experience.

IEPs are most effective when built around specific, measurable, achievable, relevant, and time-bound (SMART) goals. These objectives help track progress and provide clarity to both educators and parents. For example, instead of setting a vague goal like "improve math skills," a SMART goal would specify: "The student will solve two-digit addition problems with 80% accuracy by the end of the semester."

These goals are tailored to the child's current level and aim to gradually build their abilities without overwhelming them.

Effective IEPs incorporate customized instructional strategies to address each child's unique needs. Differentiated instruction, assistive technologies, and specialized teaching materials are some methods educators can use.

For example, a student with visual impairments might use Braille materials or screen readers, while a child with ADHD might benefit from shorter tasks and clear, structured routines. Evidence-based strategies such as Applied Behavior Analysis (ABA) for children with autism or Orton-Gillingham methods for dyslexia can further enhance learning outcomes.

An IEP is not static; it evolves as the child grows and their needs change. Regular monitoring through assessments, observations, and teacher feedback ensures the program remains effective. Periodic IEP review meetings allow for adjustments based on progress or new challenges. For example, if a goal is achieved ahead of schedule, the team might decide to set more advanced objectives. Conversely, if a goal proves too difficult, it can be modified to better suit the child's abilities.

Digital media are an incredibly valuable resource for teachers to utilize in educating students with Special Educational Needs (SEN). These tools provide diverse ways to represent and interact with content, which can significantly enhance learning experiences. However, there are currently limited tools that comprehensively address all aspects of curriculum modification. As a result, many educators have resorted to modifying their own materials, while others continue teaching without access to suitable resources. This outdated and inefficient approach leads to educational practices that rely heavily on individual expertise rather than fostering collective and collaborative growth within the educational community [3].

To address the challenges in SEN education, it is essential to consider all factors that influence the educational process and the interactions between these elements. Based on practical experience [1, 2, 4, 5, 6], two primary challenges emerge:

1. Supporting educators: Teachers need tools to guide them through curriculum modification, assist in selecting appropriate materials, help identify suitable assistive technologies (both hardware and software), and provide strategies tailored to the pupil's specific characteristics, skills, and learning objectives.

2. Guiding software developers: Developers require a clear methodology for designing materials, tools, and multimedia applications that enhance the skills and knowledge of the SEN community.

The first challenge focuses on providing educators with a knowledge-based system that offers recommendations and guidance to support successful learning outcomes for students. The second involves creating a specialized methodology that leverages Information and Communication Technologies (ICT) to improve the entire educational process for SEN pupils. This methodology must encompass all aspects of curriculum modification and lead to the development of ICT tools that enhance classroom curriculum implementation.

In many countries, the development of IEPs is governed by laws such as the Individuals with Disabilities Education Act (IDEA) in the United States. These regulations ensure that children with disabilities receive a Free Appropriate Public Education (FAPE) in the least restrictive environment. Ethically, educators must prioritize the dignity and autonomy of the child, creating an inclusive learning environment. Respecting confidentiality and promoting the child's independence are essential components of ethical IEP development.

Developing an effective IEP requires a structured, collaborative, and flexible approach. By basing the program on comprehensive assessments, setting achievable goals, and continuously monitoring progress, educators can provide meaningful support to children with special needs. This not only enhances their academic achievements but also promotes their social and emotional development, fostering a more inclusive and supportive educational system.

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