
CONFERENCE ARTICLE

Scientific And Pedagogical Principles Of Conceptual Modeling Of A Methodology For Developing Educational And Social Activity In Primary School Students With Intellectual Disabilities

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Abstract: This article examines the scientific and pedagogical principles underlying the conceptual modeling of a methodology for developing educational and social activity among primary school students with intellectual disabilities. The principles are systematized with consideration of students' cognitive, perceptual, communicative, and practical capacities. Particular attention is given to cognitive clarity and simplification of content, reliance on visual supports, multimodal perception, step-by-step guidance and variable repetition, individualized pace and workload, positive pedagogical support and encouragement, and the development of independent activity. The content and functional significance of each principle are revealed, while their interrelationship within an integrated methodological system is substantiated. The proposed approach is aimed at creating pedagogical conditions that facilitate students' understanding of educational information, gradual mastery of activity procedures, transfer of acquired skills to new situations, participation in collaborative activities, and progressive development of independence.

Keywords: primary education, students with intellectual disabilities, educational and social activity, conceptual modeling, pedagogical principles, visual support, multimodal perception, individualization, pedagogical support, independent activity.

INTRODUCTION

In contemporary special and inclusive education, an important pedagogical priority is to ensure that students with special educational needs acquire not only academic knowledge and skills but also the capacity to participate actively in the educational process, communicate with peers, cooperate with others, perform tasks independently, and act appropriately in different social situations. This issue is particularly significant at the primary school level, where educational activity and social interaction are closely interconnected and provide an important foundation for subsequent educational and social adaptation.

Students with intellectual disabilities may demonstrate specific characteristics in cognitive processing, information perception, comprehension, and the acquisition of activity procedures. Differences in the pace of information processing and the need for additional pedagogical assistance require educational methods to be adapted to students' individual capacities. Therefore, the development of educational and social activity should not be based on isolated teaching techniques but on an interconnected system of pedagogical principles.

Conceptual modeling of the methodology for developing educational and social activity makes it possible to consider the goals, content, pedagogical conditions, methods, tools, and expected outcomes of the process as an integrated system. Within such an approach, pedagogical interventions are adapted to students' individual capacities, external supports are introduced systematically, and the transition toward independent activity is organized gradually.

Analysis of the Literature

Research in special pedagogy and inclusive education emphasizes the importance of adapting educational content to the individual capacities of students with intellectual disabilities, organizing activities in a clear and structured manner, and

gradually reducing the level of pedagogical assistance. Such an approach requires the alignment of educational material with students' actual abilities, the purposeful use of external supports during task performance, and the gradual development of independent activity.

Visual supports also occupy an important position in special education methodology. Objects, pictures, diagrams, symbols, and activity algorithms can facilitate the perception of abstract content and connect it with practical action. However, visual materials should not replace the learner's own activity; rather, they should function as supportive tools that facilitate independent action.

Pedagogical and psychological studies also indicate the potential value of presenting educational information through different perceptual channels. In particular, the functional integration of visual, verbal, and practical components around a common learning objective can contribute to more effective comprehension and application of educational material.

The principle of individualization is likewise important in special education because students differ in their learning pace, task completion time, need for repetition, and level of assistance required. Consequently, pedagogical workload should not be determined according to a single standard applied equally to all students but should be adapted to their individual capacities and learning dynamics.

Research Methodology

The study employs systemic, activity-oriented, learner-centered, and individualized approaches. The components of the methodology for developing educational and social activity are considered as interconnected elements of a pedagogical system. The functional potential of visual, verbal, and practical teaching tools, the gradual reduction of pedagogical assistance, and the

transfer of educational activity into social situations are conceptually analyzed and generalized.

Results

In conceptual modeling of a methodology for developing educational and social activity among primary school students with intellectual disabilities, pedagogical principles should be regarded not as a collection of separate techniques but as interconnected components of an integrated methodological system. Each principle regulates a particular dimension of the educational process, while their systematic application contributes to the simultaneous development of students' learning, communication, cooperation, and independent activity.

This principle involves presenting educational tasks, instructions, and pedagogical interventions in a clear, concise, consistent, and unambiguous manner appropriate to the learner's cognitive capacities. The essential content of educational material should be separated from unnecessary information, while the purpose and sequence of each task should be clearly defined.

An important aspect of this principle is the division of complex activities into smaller and comprehensible actions. The learner initially masters individual actions and subsequently integrates them into a complete activity. Such organization facilitates comprehension of the task, selection of appropriate actions, and consistent performance.

The principle of visual support involves combining verbal instructions with appropriate visual materials to facilitate students' perception of information and its transformation into practical action. Pictures, pictograms, object-based examples, diagrams, tables, symbols, and activity algorithms can function as external supports that clarify the content of a task.

Visual materials should not provide a ready-made solution for the learner. Instead, they should help the learner identify and select the appropriate action. Therefore, the amount and complexity of visual support should correspond to the student's individual abilities. As the learner's competence develops, external support should gradually be reduced, thereby strengthening independent activity.

This principle involves presenting educational information through the functional integration of visual, auditory, and kinesthetic modes of perception. Learners should have opportunities to process information not only through verbal explanations but also through seeing, listening, and performing practical actions.

Multimodal instruction should not be understood as a simple combination of different teaching tools. All modes should serve a common educational objective. For example, a teacher may explain a task verbally, demonstrate the procedure visually, and subsequently provide the learner with an opportunity to perform the task independently. Such integration supports comprehension, acquisition of action sequences, and practical application of learned procedures.

Complex forms of educational and social activity should be divided into smaller practical tasks that can be gradually mastered by the learner. At each stage, the teacher provides the level of guidance necessary for successful task performance. As the learner becomes more competent, the amount of assistance is progressively reduced.

Variable repetition involves applying an acquired activity procedure with different materials, tasks, situations, and social partners. Its purpose is not mechanical memorization but the stabilization and flexible transfer of the acquired procedure. Thus, learners gradually move from familiar tasks to relatively new ones and from individual activity to pair and small-group collaboration.

Students differ in the speed at which they perform tasks, their

need for repetition, their level of required assistance, and their ability to use visual supports. Therefore, individualization of pedagogical workload is an essential condition for the effective development of educational and social activity.

Under this principle, the time allocated for completing a task, its level of complexity, the number of repetitions, the amount of verbal instruction, and the degree of external support are adjusted according to the learner's actual capacities. The purpose is not to reduce educational expectations but to organize the pathway toward achieving them in accordance with individual capabilities.

Students' active participation, independent actions, questions, requests for assistance, choices, and engagement in collaborative activities should be supported through positive pedagogical interaction. Such an approach treats mistakes not merely as objects of negative evaluation but as opportunities for correction and further learning.

Encouragement does not mean unconditional approval of every learner action. Rather, the teacher purposefully recognizes specific efforts, degrees of independence, positive progress, and constructive participation in joint activities. This contributes to the development of a positive attitude toward learning and readiness to engage in new tasks.

This principle determines the ultimate direction of pedagogical support. The teacher should not perform an action on behalf of the learner but should create conditions in which the learner can understand the task, select an appropriate procedure, and achieve a result independently to the greatest extent possible.

The reduction of external support should be based on the learner's actual progress rather than implemented mechanically. At the initial stage, detailed instructions, demonstrations, or visual supports may be necessary. As competence increases, pedagogical assistance is gradually reduced, allowing the learner greater opportunities to make decisions and organize activities independently. In this way, the educational process gradually moves from external regulation toward self-regulation.

Discussion

The effectiveness of these principles depends not merely on their separate application but on their integration into a coherent methodological system. Cognitive clarity enables learners to understand the task, while visual support and multimodal presentation facilitate the perception of its content and its connection with practical action. Step-by-step guidance ensures the consistency of learning, whereas variable repetition promotes the application of acquired activity procedures in different situations.

Individualized pace and workload ensure that the learning process corresponds to the abilities of each student. Positive pedagogical support strengthens students' engagement and promotes a constructive learning experience. The ultimate orientation of these processes is the development of independent activity. Therefore, the main purpose of pedagogical support is not to provide learners with permanent external guidance but to create conditions for their gradual transition toward independent performance.

An important methodological characteristic of the proposed system is the gradual transition from educational activity to social activity. Initially, the learner masters the procedure for completing a task individually. Subsequently, the same activity procedure is applied in pairs, small groups, and other social situations. In this way, acquired knowledge and skills are transformed from context-bound learning outcomes into functional activity procedures that can be used in practical and social contexts.

The effectiveness of the conceptual model is therefore determined by its systemic sequence: educational content is clarified and simplified, perceptual supports are provided,

activities are divided into manageable stages, individual pace is taken into account, positive support is implemented, and external assistance is gradually reduced to strengthen independent activity. Such organization makes it possible to develop cognitive, communicative, and collaborative activity within an integrated pedagogical process.

Conclusion

The conceptual modeling of a methodology for developing educational and social activity among primary school students with intellectual disabilities should be based on an interconnected system of pedagogical principles. Cognitive clarity and simplification of content ensure the accessibility of educational material, while visual support and multimodal perception facilitate its comprehension and transformation into practical activity. Step-by-step guidance and variable repetition contribute to the stability and transferability of acquired activity procedures to new situations.

Individualized pace and workload make it possible to regulate pedagogical interventions according to learners' actual capabilities. Positive pedagogical support strengthens active participation and creates a constructive educational experience. The ultimate pedagogical orientation of these principles is the gradual reduction of dependence on external assistance and the development of independent activity.

Thus, the proposed system of principles provides an integrated methodological foundation for organizing educational interventions in accordance with students' individual capacities, connecting educational activity with social interaction, transferring acquired activity procedures to different situations, and strengthening independent participation in educational and social contexts.

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