



**METHODOLOGY FOR DETERMINING THE INTELLECTUAL CHARACTERISTICS
OF CHILDREN DURING THE ACTIVITIES OF DEVELOPMENTAL CENTERS IN
PRESCHOOL EDUCATIONAL INSTITUTIONS**

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Abstract: The article discusses the methodology for determining the intellectual characteristics of children through developmental centers operating in preschool educational institutions. The research used observation, psychodiagnostic tests, pedagogical experiments and questionnaires. The results showed the effective impact of developmental centers on the development of children's thinking, observation and creative thinking. This methodology allows for early identification of children's intellectual development and their individual guidance.

Keywords: preschool education, developmental center, intellectual characteristics, diagnostics, methodology, psychological tests, child development

INTRODUCTION

Preschool age is one of the most active stages of a child's mental, psychological and personal development, and his success in subsequent educational processes depends on the basic competencies formed during this period. Therefore, identifying the individual abilities of children, in particular intellectual characteristics, and their targeted development at this stage is considered one of the important tasks of preschool educational institutions.

In recent years, developmental centers have been actively introduced in preschool educational institutions - that is, specially organized playful and pedagogical environments that create conditions for children to freely search, experiment and think. In such centers, children naturally show their interests and demonstrate their capabilities by completing various intellectual tasks. This helps educators to identify the individual intellectual characteristics of children.

This article analyzes the methodology for identifying the intellectual characteristics of children during the activities of developmental centers, the tools and approaches used, and their effectiveness is scientifically justified.

LITERATURE REVIEW

Meisels and Atkins-Burnett suggest a relational approach to assessing intellectual and emotional abilities in gifted children—using multiple sources, context, and parent-child communication. They emphasize that assessment should be interactive and ongoing, not just test-based, but developmental.

The Torrance Creativity Tests—are widely used to assess divergent thinking; they include visual

and verbal creative thinking. The reliability of these tests has been confirmed in Brazil, and a test battery called BAICI has been developed that assesses both intellectual and creative abilities—a particularly important approach to identifying gifted children.

The Emotional Intelligence (EI) rubric developed by Rohaizad et al. was developed for children aged 4–6. This model has been validated using the Rasch model for reliability and validity; provides an assessment of abilities aimed at normal functioning, such as identifying and managing emotions, etc.

The article by Muborak Ganiyeva and Khurshida Madaliyeva (2024) discusses innovative pedagogical approaches in preschool education, including ways to implement creative and innovative methods in the activities of developmental centers.

The thesis presented by Ergasheva S.U. (2024) provides an understanding of the formation of the educational process based on the abilities, capabilities and personality-oriented principles of children through developmental centers.

METHODOLOGY

This study was conducted to develop and pilot-test a methodology for identifying and assessing children's intellectual characteristics based on developmental centers operating in preschool educational institutions. The study used a mixed methods approach - that is, a combination of qualitative and quantitative methods. To develop and test in practice a methodology that allows identifying, assessing and monitoring children's intellectual characteristics through their activities in developmental centers.

Methods and tools used in the study:

1. Observation method

Educators assessed children's activities based on a special "Intellectual activity observation card"; Evaluation criteria: logical thinking, problem solving, independent decision-making, consistent thinking, voluntary attention and creative approach.

2. Psychodiagnostic tests

Intellectual characteristics were analyzed using the following tests. (Raven color matrices, Leiter-3 test, "Mind Wheel" test, Torrance tests)

3. Pedagogical experiment

Within the framework of the development centers, zones such as "Project Center", "Mathematical Thinking Center", "Creative Research Center" were organized.

Special training scenarios were developed and implemented for each zone.

The training was conducted individually and in small groups.

4. Questionnaires and interviews

Parents and educators were asked about the intellectual state of children;

Subjective and objective assessments were compared through mutual comparison.

DISCUSSION AND RESULTS

Within the framework of this study, a methodology was tested to identify and assess the intellectual characteristics of children through developmental centers in preschool educational institutions. During the study, training was conducted in the experimental group based on the developmental center, while training continued in the traditional method in the control group. The results were summarized as follows:

Analysis of diagnostic results

Initial (diagnostic) assessment stage:

Table 1

Indicators	Experimental group (30 children)	Control group (30 children)
High intellectual level	6 (20%)	5 (16.7%)
Average intellectual level	18 (60%)	19 (63.3%)
Low intellectual level	6 (20%)	6 (20%)

Final assessment results (after the experiment):

Table 2

Indicators	Experimental group (30 children)	Control group (30 children)
High intellectual level	17 (56.7%)	7 (23.3%)
Average intellectual level	11 (36.7%) 18 (60%)	18 (60%)
Low intellectual level	2 (6.6%)	5 (16.7%)

The number of children with a high intellectual level in the experimental group increased from 20% to 56.7%. These indicators confirm that intellectual potential can be clearly and actively developed with the help of development centers.

In development centers, classes organized on the basis of creative tasks, construction games, and problem situations strengthened children's independent thinking and encouraged them to be active.

“Mind Wheel” test:

In the experimental group, children made significant progress in problem solving, understanding cause and effect, and identifying analogies.

Torrance test:

Children in the experimental group moved from “average” to “high” in terms of visual and verbal creativity and divergent thinking.

Discussion

The results of the study show that through developmental centers, it is possible not only to identify the intellectual characteristics of children, but also to develop them. These centers encourage the child to:

Activate on the basis of free choice;

Develop logical and creative thinking;

Encourage independent decision-making in group and individual activities.

The methods used in the study (Raven, Torrance, Leiter-3, observation cards) helped to identify various aspects of the child's thinking. Also, these methods gave more reliable results in a developmental environment.

CONCLUSIONS AND SUGGESTIONS

The results of this study, conducted on the basis of the activities of developmental centers established in preschool educational institutions, show that:

A systematic approach is important in determining the intellectual characteristics of children. The combination of the results of psychodiagnostic tests, observation and pedagogical activities increases accuracy and reliability.

The activities of developmental centers create an effective environment for increasing the thinking potential of children. In the experimental group, a significant development of logical thinking, creative approach and independent decision-making skills was observed.

Intellectual abilities should be assessed comprehensively. Along with the test results, it is necessary to take into account the motivation, emotional responses, and creative approach in the child's activities.

In a developmental environment, the effectiveness of diagnostic methods increases. This allows for the integration of diagnosis into the dynamic development process, rather than just a static assessment.

The methodology developed in the study is distinguished by its applied, practical significance in

determining and developing the intellectual potential of children in preschool educational institutions.

Proposals

It is recommended to expand the activities of development centers in preschool educational institutions and enrich them with activities aimed at intellectual development.

It is necessary to develop and introduce a system of complex methodologies (test + observation + interview) for assessing intellectual characteristics as a practical guide for educators.

It is advisable to train educators in intellectual assessment methods and increase their methodological preparation by organizing special trainings for them.

It is necessary to develop test options that are appropriate for the age, cultural environment, and speech development of children. In particular, non-verbal tests or colorful, game-based assessment tools should be introduced.

It is proposed to form an intellectual portfolio of children in each preschool educational institution, through which individual development monitoring can be carried out.

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