

**STUDY ON DEVELOPMENT WAYS OF PRESCHOOL CHILDREN'S
INTELLECTUAL- COGNITIVE ABILITIES BY CAPITALISING THE
MULTIPLE INTELLIGENCES THEORY**

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Abstract: The multiple intelligences theory fits into the paradigm of child centered education. It is known that at this age the motivation is more important than the performance. The diversity of activities, contexts, materials suggested by the theory of multiple intelligences allows differentiation of children, of their learning capacity and their trends. You can shape the optimal education for every child in the chosen activities of daily program from kindergarten. Flexible program and themes choice offer the possibility of introducing several forms of a topic presentation. The initial assessment and ongoing evaluation allow the detection of dominant intelligence, but also the design of its practicing and developing activities, according to the principle of individualization and differentiation. Ever since kindergarten the child can cut his way in life, if he is properly evaluated, if he is helped and supported to practice his dominant type of intelligence. Table games and the recreational ones provide strategies to develop logical-mathematical intelligence by stimulating the desire of children to design their own winning strategy respecting the discipline of the game and the motivation of competition: remember, do association, compare, synthesize, finds. According to multiple intelligences, each child learns in his own way, depending on his dominant intelligences. In most educational systems, special attention is paid to verbal intelligence and logical-mathematical ones. The theory of multiple intelligences challenges parents and educators to work so that every child learns in a way that fits his personality, developing at the same time other types of intelligence.

Keywords: Multiple intelligence, learning, education, motivation, performance.

INTRODUCTION

The theory of multiple intelligences fits into the paradigm of child-centered education. It is known that at this age the performance is more important than motivation. The diversity of

activities, contexts, materials suggested by the theory of multiple intelligences allows differentiation of children, of their learning capacity and of their trends.

An essential element in applying the theory of multiple intelligences in class is knowing the intelligence profile of the students - especially finding of "strong" and "weak" that is essential to establish teaching strategies of differentiation and individualization. Children will focus on those that match the intelligence / intelligences that "promise". On the other hand, observing students when are given various tasks lead it also to the knowledge of intelligence profile. It must remember that intelligence profile is not determined by applying a test. Many observations of children behaviour are required for us to realize which are their most convenient activities, which mainly speech codes use and which ones they avoid.

Preschool is a milestone in the psychosocial development of the child and in his preparing for the school adaptation and integration. It is a step of passing, a point where the child can make progress, can gain new skills or may stagnate or even regress. Educational activities have varied character and aims to achieve several aspects of development: cognitive (intelligence development), affective (developing the capacity to express themselves emotionally, attitudes, feelings, passions, beliefs) skills, communicative (language development) motor (manual and motility). The variety of stimulation areas is found in numerous activities involving child and is useful to the extent that these activities discover and support the child's inclinations, likes him. The desire to reach as many of those sides and to stimulate the child to a harmonious and balanced developments, sometimes lead parents and educators to turn to a busy and undifferentiated schedule, to seek excessive the child participation and to have high expectations. Business success is not measured in obtaining quantitative performance, but in ability to assimilate the information and skills for use it in other similar situations, to adapt.

Individualized pedagogy starts from the idea that each student with his educational needs and expectations, could be equated with a problem whose solution can be sought and found only in him. The free, integral and harmonious development of individual in our society today can be made only by implementing the principle of equal opportunities and equal opportunities can be sustained only through a differentiated education, through a differentiated and personalized educational offer. Differentiated education and instruction means adapting learning, the school curriculum to the real possibilities of students.

The theory of multiple intelligences allow sufficient interactive and differentiated instruction, supporting the development of an adapted education of students, supporting them to capitalize their own resources, to build their capabilities of self-instruction and to develop self-motivation for lifelong learning.

The research purpose: developing intellectual capacities to the preschool child by exploiting the theory of multiple intelligences.

Objectives

- Identify baseline level of cognitive development of preschool child, and the type of dominant intelligence;
- Selecting teaching strategies designed to capitalize the cognitive-intellectual capabilities, the dominant types of preschool child intelligences;
- Adapt identified teaching strategies to individual particularities and to age particularities of preschool children.

Research hypothesis

Regarding all these theoretical considerations and the available data in the specialized literature, psychological and pedagogical, the following hypothesis was proposed: *making a constant and systematic individualized and differentiated training, centered on the prevalent use of teaching strategies, interactive targeted for realising the multiple intelligences, leads to the formation and development of cognitive-intellectual capacities of preschool child and to increase his performance in learning.*

The investigated sample

The research was conducted on a sample of 25 subjects, from preschool into kindergarten middle group. Subjects were tested in three different type points: pre-test, experimental stage and post-test. The sample contains 13 girls and 12 boys their age being between 4-5 years.

Given the fact that the instructional and educational level of family of origin would represent a variable with possible implications for the further development and psychological development of children, in Table 1 is presented the composition of the sample after the instructive-educational level criterion of family membership.

Primary education	Secondary education	Higher education	Total

Table 1. Sample structure according to the educational level of the family

Another variable that can influence psychological development of children is the family environment in which they develop, respectively the type of family affiliation, as this variable sample structure is shown in Table 2.

Type of family affiliation		
Organized	Disorganized	Total
21	4	25

Table 2. Distribution of families by type of ownership

Research Methods and Techniques

Conducted educational research is *formative* because it aims to introduce into the investigated group the factors of progress represented by the use of ways and means of developing cognitive-intellectual capacities from the perspective of multiple intelligences, in order to discover and develop dominant intelligence to preschool children, these being discovered and valued by comparing the initial situation with the final one. Comparing the performance of preschoolers before introducing new teaching methods with those obtained after using them, we will know if the methods used are effective or not.

The research has an *observant* component because it was followed the observing and recording of effects produced in behavioral plan, the implementation of an instructive individualized process, child-centered, related to cognitive-intellectual events in instructive-educational activities.

The research was conducted through the following methods:

Systematic observation method

Observation grid

The research was conducted in three stages: initial (pre-test), formative stage and the final stage (post-test), and was held in the school year.

The initial stage

At this stage, was applied to all subjects the initial test, which aimed to identify the dominant intelligence in preschool and the degree of development of multiple intelligences to them. Considering that they are in the first year in kindergarten, it was focused on developing of vocabulary and on pronunciation of sounds. And over the period of collecting data about children at the beginning of the school year, it was observed differences in training between children that are very large: some come from family environments with a vast culture, others from modest or poor backgrounds.

The initial assessment test consisted of oral and practical tests applied on each category of mandatory activity in kindergarten: language education, math activity, environmental knowledge, society education, practical activities, music education, arts education, physical education. Each of these samples used in the initial assessment phase is designed to identify a particular type of multiple intelligence and its level of development in preschool children. Thus, the initial assessment sample 1 aims verbal intelligence, sample 2 aims mathematics intelligence, sample 3 aims visual-spatial intelligence, sample 4 interpersonal intelligence, sample 5 practical intelligence, sample 6 musical intelligence, sample 7 visual-spatial intelligence, and sample 8 kinesthetic intelligence. Similarly, it was proceed in the final stage.

Following the centralization of results obtained after sample application to the language education activity, it is observed that the highest percentage, 48%, have achieved very good results, 32% have achieved good results, but we can say that a percentage quite significantly, 20% of children obtained sufficient grade, which means that verbal-linguistic intelligence tracked in this activity is not sufficiently developed.

After comparing the results from the initial stage to the final one in this test, it appears that preschoolers have obtained much better results in the final stage, the percentage of those who obtained very good results is 60%, and those who have achieved poor results are in percentage of 12%, as proof that dominant intelligence was developed throughout the formative stage.

Following the centralization of results after sample application to math activity reveals that the highest percentage, 40%, have achieved good results, 36% of them have obtained very good results, but we can say that a percentage quite significantly, 24% of children were evaluated as sufficient, which means that logical / mathematical intelligence prosecuted under this activity is not sufficiently developed.

Comparing the results of the two stages, initial and final, applied in math activity, it appears that the percentage of good results is much higher in the final stage, so 68% of children achieved a very good rating, 24% graded good and 8% - sufficient, the reason being the application of methods designed to develop the specific dominant intelligence to this activity.

The conducted experimental research has addressed the problem of cognitive-intellectual capacities development of preschool children by exploiting multiple intelligences theory and by applying ways of working to develop the dominant intelligence of preschool child.

CONCLUSIONS

This paper reflects concerns into developing the cognitive-intellectual capacity of preschool children by harnessing multiple intelligences theory in the instructive-educational activities in kindergarten. These activities performed systematically and varied contribute to the development of multiple intelligences. It is well known that any positive result is obtained after performing a number of exercises designed to develop cognitive-intellectual ability of preschoolers. As was shown, multiple intelligences, methods of teaching activities development, the activity being created and managed by the teacher. By applying modern methods, children have discovered their dominant intelligence, each having inclined to one of these multiple intelligences:

- verbal-linguistic intelligence, in which some children have the ability to use words effectively, they standing out in particular in the activities of language education, but also of role play;

- logical-mathematical intelligence, in which stood children who have the ability to resolve logical-mathematical issues, especially in science field;

- bodily-kinesthetic intelligence -which allows preschoolers to manipulate objects in another way, a type of intelligence underscoring the link between mental and physical actions;

- intrapersonal intelligence in children who hold the ability to have a concrete representation of themselves. This intelligence allows to preschool the access his own feelings. These preschoolers spend time reflecting, thinking, selves evaluating, they like working alone, are aware of their own beliefs, feelings and motivations.

Kindergarten allows trough the flexible program, and in the activities freely chosen, the development of multiple intelligences of preschool children for a better perspective regarding

their desires and their needs, and the pursuit of a career after which the future adult has to be satisfied by the fruit of his work.

Kindergarten must put the preschool in a position to have the earliest own means of acquiring knowledge, processing and integrating them in new systems and structures and their application in practice, creatively, in the idea that they attain superior performance to the real level of individual possibilities. From the conducted evidences and results emerged that the children's knowledge level is visibly increased in comparison with the samples applied in the initial part.

These results confirm that the teaching strategies used in the experiment have achieved the goal of developing multiple intelligences of preschoolers and to obtain better results in learning activity. Conducted experimental research addressed the problem of preschoolers' cognitive-intellectual development capabilities by harnessing the theory of multiple intelligences and by applying ways which develop dominant intelligence of preschoolers.

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