THE 16TH EDITION OF THE INTERNATIONAL CONFERENCE
EUROPEAN INTEGRATION
REALITIES AND PERSPECTIVES

Curricular Design of the Mathematics Lesson in Kindergarten

Florica Rotaru[1], **Delia-Mioara Popescu**[2]

Abstract: Program of activities in kindergarten offers the freedom of teachers to choose their activities, to teach and to work in the field. The activity with the people must take place in a special atmosphere where the people can express themselves, think and act according to the situation. With the help of the case study, the body enters into the unknown, into the adventure of discovering our knowledge, and it is very active. Acting alongside the others in the group, he tried to solve the problems and felt that he was an important, caring decision-maker in making good decisions. In the group of those who should know how to discover, buy, classify the acquired knowledge. We chose this topic because the time and importance we give to didactic design will bring us closer to a successful lesson, didactic design being understood by anticipating the results of a didactic activity. I chose the mathematical activities because I consider that they have a very important role because they stimulate the intellectual development the most, the children's memory is also intensely trained because they have to retain, preserve and consciously reproduce some acquired knowledge, to memorize the rules of a didactic or logical game. In other words, the child develops work skills, skills to solve certain problem situations in various contexts. These skills become useful in their practical activity and can influence him in attitude and social plan, becoming aware of his own thinking.

Keywords: curriculum; activity design; mathematics; preschool education; contents

1. Literature Review

In the Dictionary of Pedagogical Terms, the lesson is defined by Sorin Cristea as "students' activity carried out under the guidance of the teacher" (Cristea, 1998, p. 258), being a correlation between teachers and students, thus representing the fundamental form of organizing the training process. The term curriculum comes from the Latin language "curriculum" having as meaning the proper practice of running, running, road, and as figurative meaning "course of the Sun", "course of life". It broadly represents objectives, contents, teaching-learning methods, evaluation strategies, and in a narrow sense the content of education. "The concept of pedagogical design defines the complex action of anticipating the results of an activity education process, long-term, medium and short term" (Cristea, 2001, pp. 36-39).

In order to ensure the unity of the educational process and its normal development, it is necessary to organize it properly through the optimal interaction between its components. Having as reference sphere

[1] PhD. Student, Doctoral School of Management, University "Valahia" of Târgoviște, Romania, Addres: 13 Aleea Sinaia Street, Târgoviște 130004, Corresponding author: miu.rotaru.florica@gmail.com
[2] PhD. Professor, Doctoral School of Management, University "Valahia" of Târgoviște, Romania, Addres: 13 Aleea Sinaia Street, Târgoviște 130004, E-mail: depopescu@yahoo.com.

the design of education and training, at the level of pedagogical interdependencies - training requirements-development of the educated general and specific competences, and social - defined as basic contents, the general theory of the curriculum has as epistemological function the construction of a new type of pedagogical project, adapted to the conditions of realization and development of the constantly changing education. Which allow their long-term realization, the sustainability of the basic structure of the pedagogical project is established. However, a flexibility of the basic structure of the pedagogical project is necessary for its adaptation to the changes that appeared in open and demanding effective action.

These actions can be achieved through training methods and evaluation strategies, capitalizing on the resources offered by the forms of organization of the activity and pedagogical styles of teaching, learning, evaluation. education is: the purposes of education; the general contents of education; education and training methods; evaluation of education and training. "The purposes of education define the value guidelines established by the designers of education at all levels of the system and the educational process. " (Cristea, 2016, p. 13) These are divided into macrostructural and microstructural purposes.

The "macrostructural aims of the education system refer to:

- The ideal of education defines the type of personality required by society in the long run. Of the educational process represent:
- The general objectives, valid in the long and medium term, include curricular areas and school subjects. These are expressed in psychological terms - general competences and social terms - basic contents
- Specific objectives, valid in the medium and short term, are distributed over stages and years of education
- Operational objectives (concrete), valid in the short term, are developed for a theme, a chapter, a learning unit. These are achievable by preschoolers through concrete tasks, being observed and evaluated throughout the lesson"[1].

The general contents of education ensure the values of school subjects in relation to the general pedagogical values, which can be integrated in the curriculum and can be achieved in the context of each level of education. Depending on the finalities of the educational process, the basic contents are ordered pedagogically at the level of curricular reform, of ideal models and curriculum. The basic contents, theoretical and applied, are necessary to achieve the concrete objectives, referring to the general purpose of the lesson. They share theoretical knowledge and applied knowledge.

The methods of education and training are involved in the realization of the scientific contents. The basic method is supported by didactic procedures and is established according to the type of lesson the bishop general, being necessary for the fulfillment of the concrete objectives. and the learning process through initial, continuous and final assessment strategies, carried out in the long and medium term, but also within each lesson. These strategies integrate teaching methods and procedures, forms of organizing the activity and pedagogical styles.

[1] Cristea, S. (2020). https://tribunainvatamantului.ro/curriculumul-ca-tip-superior-de-proiect-pedagogic/, date: 07.04.2021

2. Research Methodology

According to the functioning structure, Sorin Cristea presents two types of pedagogical design: classical and curricular: basic (contents-methodology-evaluation) and contextual (forms of organization and implementation of training / education activities)". (Cristea, 2001, pp. 36-39)

So, while the classical lesson is based more on the teacher's teaching, the mixed lesson keeps teaching-learning-assessment interdependent, carrying out a differentiated training through content elements and learning activities adapted to the group of children. The curriculum design focuses on the training and development of preschoolers, on active and interactive teaching approaches, designed to increase learning efficiency by stimulating students to actively participate in educational activities, to cooperate with teachers, placing children at the center the instructive-educational act.

The curricular design of the lesson is based on:

1. The curricular organization of the available pedagogical resources;

2. Curricular planning of the activity;

3. Implement the planned lesson.

1. The curricular organization of pedagogical resources refers to administrative resources represented by data about the school, the group of students, the teacher, the discipline, space and time and the pedagogical resources such as the theme of the lesson, the form of organization, the type of lesson.

2. The curricular planning of the activity involves:

- the general purpose related to the type of lesson and the specific objectives of the topic;
- the concrete objectives elaborated by: operationalizing the general purpose, defining the learning tasks, reporting the performances obtained to the competence defined by the school curriculum. The latter aims at: simple knowledge of a concept, understanding the concept, applying the understood concept in solving a problem, problem analysis, problem synthesis and critical evaluation of the problem - basic contents represented by theoretical knowledge and applicative knowledge;
- basic objective method necessary to fulfill evaluation of the results of the didactic activity - initial, continuous and final.

The implementation of the planned lesson respects psychological, sociological and pedagogical principles. These refer to capturing the attention and optimal motivation of students; equalizing the chances of success; ensuring the teacher-student correlation and the continuous formative evaluation carried out by external feedback - carried out by the teacher and internally - carried out by the student.

The organization of the activity is done at frontal, microgroup, individual level for the optimal distribution of pedagogical resources. Teaching-learning-continuous evaluation is achieved by correlating the frontal training with the pemicrogroup and individual. It aims at updating the previously assimilated knowledge, activating the class, fixing the learning outcomes, appreciating the way of participation of preschoolers.

"Open scenario" pedagogically constructed from a curricular and managerial perspective for a mathematical activity in kindergarten

Group: Middle

Execution form: Didactic game

Area of activity: Field of Sciences: Mathematical activity

Topic: “When is Santa Claus coming?

Subtheme: “Santa’s helpers”

Type of activities: consolidating knowledge and skills.

Duration: 25 minutes

Teaching strategies:

a) Teaching methods: conversation, observation, problematization, explanation, exercise, demonstration, game

b) Teaching aids: Santa’s train, geometric figures, reindeer, bags

c) Forms of organization: frontal

d) Group room Purpose of activities: strengthening knowledge of the names of geometric shapes and their attributes.

Operational objectives:

O1: - to recognize and name geometric shapes

O2: -to compare geometric shapes according to shape, size and color

O3: -to form sets with geometric figures according to the same criteria: shape, color, size

Development of the activity

1. Organization of the class of students: ensuring the necessary order, organization of the class: frontal.

2. Pedagogical communication of the general purpose and concrete (operational) objectives of the lesson

The teacher tells the children that the reindeer went around the world to look for children to help him, because Santa forgot that Christmas is approaching and that he must prepare gifts for people around the world. The teacher suggests to the children that we help the reindeer. The reindeer tells the children that he wants us to help him put the presents on Santa’s train through a toy. These are gifts in the form of geometric figures, and they are divided into 3 bags.

3. The initial assessment, with a diagnostic and predictive function, is to check as many preschoolers as possible in intensive time conditions without formal decisions. The teacher explains to the children that we have to put all the presents in the bags in the wagons, but we have to respect receive the right gift. The teacher takes the geometric figures out of the first bag and asks the children what geometric figures she took out of the bag.

4. Teaching - Learning - Continuous assessment (with formative / self-training / progress function) Explanation and presentation of the rules of the game: The educator notices that the reindeer left her a note stating that the geometric figures in the bag must be placed according to shape, and in the first wagon will have to put the squares, in the second circles and in the next triangles.

Test game: The teacher calls a child to complete the first task to see if the children understood the rules of the game. The game it self

The teacher calls one child to solve a task. In the second bag are discovered other geometric figures and another note in which it is written that the geometric figures must be put into color, and in the next wagon will be placed all the blue figures, in the next all the yellow figures and then all the red figures to solve a task.

Do the same for the third bag, putting the geometric figures according to size. Complication of the game: The teacher tells the children that Santa Claus has another proof for them. When he claps the children will close their eyes and the teacher will take a geometric figure from a wagon. At the second clap, the children will open their eyes and say which figure was chosen, what shape, size and color it has.

5. Final evaluation, with summative / cumulative / balance function at the end of the activity the children will be appreciated and congratulated for the way they participated in the activity. The children will receive dots as rewards.

3. Conclusions

The curricular design of the lesson requires the adoption of a pedagogical model focused on the essential, fundamental components of the teaching activity, viewed in interdependencies. However, the realization of such curricular projects does not depend only on the teacher's initiative. 5)

4. Acknowledgement

First of all, I thank my daughter, Diana, for all her understanding and also the teacher for her support.

References

Cristea, S. (1998). *Dictionary of pedagogical terms*. Bucharest: Didactic and Pedagogical Publishing House.

Cristea, S. (2001). Pedagogical design from a curricular perspective. *Journal Didactica PRO*, Vol. No. 5 (9), pp. 36-39.

Cristea, S. (2016). *Fundamental Concepts in Pedagogy, vol. 3, The aims of education.* Bucharest: Didactica Publishing House.

Cristea, S. (2020). *https://tribunainvatamantului. ro/curriculumul-ca-tip-superior-de-proiect-pedagogic/.*