

ABSTRACT

Contemporary life with its many challenges, cause often and radical changes in the areas of pedagogic and education. Those changes reflect directly on the process of teaching, as theirs most organized form. Because of that, pedagogical sciences should be in process of constant changes, investigation and re-evaluation.

Today more than ever, we are confront with the need of re-evaluation of many things in the process of teaching: the choice and structure of the teaching programs, the domination of certain aims and tasks, the choice of teaching strategic, the choice and frequency of using specific teaching methods, the still existent traditional role of the teacher, the limited initiative and independence of the pupils which results in a stifling of their creativity, the low efficacy in teaching etc...

Critical re-investigation of the numerous problems of the contemporary education becomes even more important confront with the challenge posed by scientific and technological revolution and the changes in society relationships.

The problem we are investigating, introduction of development strategies in the mathematics education (grade I-IV) based on the contemporary opinions and possibilities of their application, is regional by its meaning but it belongs to a wider and more actual topics currently being investigated around the world.

Efficacy of the teaching and studying by using different strategies of mathematical education in a classroom teaching as a didactic category in our country hasn't been investigated so far. That's why a need has emerged of studying organization of education and teaching according to different strategies of mathematical education in a classroom teaching from scientific and practical aspect. Those countries, which already introduced new strategies in a mathematical education, have started to increase the quality and

quantity of the knowledge of their pupils and as a corollary of that they have also increased pupils abilities in gaining further, more complicated mathematical knowledge.

Helped by the investigations in the other countries it has been decided by relevant instances that within our education system certain teaching strategies should be implemented. That should be done in cooperation with existent traditional teaching and also in cooperation with active teaching strategy and with so called step-by-step strategy. These teaching strategies have been accepted as test projects in a certain number of schools throughout the country and have been experimentally checked.

This work is based on a results of a corresponding investigation project named "Development strategies in the mathematics teaching from grade I to grade IV", and is a modest contribution to the attempts to improve the mathematics teaching in our education system.

The main aim posed in this work is, on the base of so far used strategies, to make possible for the teacher to choose the most adequate, the most available, the most interesting strategy of mathematical education in primary school, which will be the best foundation and the best preparation for further mathematical education of the pupils.

Our opinion is that with this investigation we will contribute in the consideration of the subject and its growing accentuation within our education system. We are convicted that with this investigation we have considered questions which are of importance for mathematical education and as such they are also of wider society importance. We hope that we have lightened up some topics important for the teaching in mathematics and also for the improvement of the teaching strategies in mathematics in the classroom teaching investigated in this work.

This work which has improvement of the teaching in mathematics as is primary aim, is most of all designated to the teachers who, using the reforms of the education system, sincerely want to introduce some new, contemporary and modern approaches to mathematics as science. As the corollary of that is the aim to help the present and will-be teachers in mathematics to become capable of teaching on the level which will be necessary for real mathematical education for generation to come.

In this work, with the realization of stated aims and tasks, are presented:

Наконец

- New elements of mathematical elaboration of the subjects of teaching in mathematics in the primary schools, which correspond to the teaching strategies, considered in this work;
- Models for estimation of the capacity of the pupils for solving textual test-lessons; during the solving of the textual test-lesson and modeling the possibilities of estimation of the capacity of the pupils to solve test lessons;
- Elaborating a model for estimation of mind capacities of the pupils to solve test-lessons.