

DEVELOPMENT OF INSIGHT OF FUTURE MATH TEACHERS AS A RESULT OF FOLLOW-UP AFTER DEVELOPMENT OF MATHEMATICAL CONCEPTS

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We focus on aspects of interrelations between the stages, levels and modes of percept formation. Mostly we are interested in those related to math teaching and education of math teachers. We assert that the math teachers should be exposed to various aspects of process of development of mathematical knowledge.

In teachers-educating institutions, various sides of this process are being discussed in various courses. The integration of contents of these courses is necessary.

In order to assess the measure of this integration, and to enhance the global aspects of math teaching related to continued structured building-up of mathematical concepts for our students, we planned an experiment in which we induced a number of pre-service students of primary and secondary school programs to follow-up some key concepts in geometry as they develop along the whole school program. In doing this, we meant that a teacher has to survey the perspective of his pupils' former and future learning and to detect correctly his or her place and role in this perspective

The research population included 20 third year in-service and pre-service students who form the primary and the secondary school programs who worked in small heterogeneous groups. The groups were asked to learn a certain geometrical concept; to check how this concept is to be taught according to the school curriculum; to match the Van Hiele level of geometrical thought to the curriculum requirement at each school level; to study 2-3 textbooks in order to appraise all the aspects above as they are (or are not) reflected in them; to draw conclusions.

As we deduced from what the students have written, they come to better understanding of the school curriculum in geometry. As to the contents, the students tended to refer to the textbooks and to compare them, rather than referring to the connections between all the components of the concept teaching. No one mentioned the necessity to teach correctly from the point of view of theoretical mathematical knowledge.

The experiment indicated that the integration of knowledge acquired by the students in different courses is far from granted, and should be worked upon.

References:

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