THE DEVELOPMENT OF MENTAL STRUCTURES: 
(ISO)MORFISM AS A RESEARCH TOOL

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Abstract: Using the Theory of Generic Models, the development of the mental structure “Family” with the key concept ‘mother’ is decomposed into four stages. Comparison of two or more similar structures (isomorphism, homomorphism or affinity) plays a decisive role in this development. Some of the ideas found within the Family structures are generalized. A set of problems used for educational and diagnostic goals are presented.

Keywords: mental structure, development, concept ‘mother’, structure ‘Family’ isomorphism, homomorphism, affinity, theory of generic model, education, diagnostic.

Introduction


Term mental structure is here understood as a many layers dynamic net. We can understand knots as notions, relationships, schemes, formulas, examples, methods, solving strategies, algorithms, arguments, hypothesis,...The net connects all of the knots together – as thick is, as higher quality it has. The net organize and hierarchies each of the knots.

A goal of our study is investigation of the birth and development of one particular mental structure in a child’s mind. This structure is called FAMILY.

Methodology

The idea to use the structure FAMILY as a non traditional learning environment was in our experimental teaching for the first time used in the fifth