

ABSTRACT OF THE THESIS

The topic of this thesis is to investigate the cognitive processes (especially perception, imagination and thinking) of blind pupils through experiments with geometric solids. Tool experiment are four tasks (two for one pupil, two for a pair of pupils) that are recorded on video, transcribed into written protocols and analyzed. As a theoretical basis for analysis was compiled based on the literature review involved, resp. naming deficit cognitive functions.

Other important theoretical bases were also findings from psychology mathematics education. The work of these included those involved in the development of tactile perception (geometrical objects), developmental stages making operations according to Piaget, cognitive mechanisms in mathematics and the importance of communication in teaching mathematics (or geometry).

The analysis includes observation experiments tactile perception, imagination, thinking, cognitive processes, speech and communication, resp. other phenomena relevant for the specific work.

KEY WORDS

blind pupil, cognitive processes, (deficit) cognitive function, communication, geometric solids, attributes of solids, tactile perception