

A vak gyermekek számfogalomfejlődésével kapcsolatos vizsgálatok és azok gyógypedagógiai konzekvenciái

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Abstract: Teaching mathematics at the elementary level means first of all helping children to order and use their experiences which they gain from actions and interactions with the world around them. The child's individual way of developing the parts to whole relation in numbers depends on his or her sensory experiences. Some blind children have difficulties at primary level in experiencing countable and uncountable quantities through touch. The author collected data about the touching strategies of blind children concerning number experiences. The Göteborg project provides an opportunity to deepen knowledge about the development of children's mathematical understanding by describing how children with blindness experience numbers and learn arithmetic skills. The results of research about acoustic organisations by blind children supported the findings of the former studies i.e. most of the blind children experience parts to whole relations of numbers through an "interiorized acoustic number line". Structured auditory inputs connected with movement, verbal impulses and haptic experience are very important elements in elementary mathematics for helping children who are blind. The body of natural number is a very useful model for blind persons. Many things are not directly available for them because of factors such as distance or size or danger. In such cases the teachers often use the model of numbers to explain the objects, events for helping them to imagine and develop abstractions. But using the model of numbers is only useful when the structure of the natural numbers has been already developed.

Keywords: children with blindness, (blind children) inclusion/integration, mathematics, concept of number, natural number, counting, touching, hearing.