

**AQLI ZAIF O'QUVCHILARDA MIQDOR VA SON HAQIDAGI
TASAVVURLARNI RIVOJLANTIRISH METODIKASI**

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Annotatsiya: Mazkur tezisda aqli zaif o'quvchilarda miqdor va son haqidagi tasavvurlarni rivojlantirishning metodik asoslari hamda samarali pedagogik yondashuvlari yoritilgan. Shuningdek, ko'rgazmali vositalar, didaktik o'yinlar va amaliy mashg'ulotlardan foydalanish orqali matematik tasavvurlarni shakllantirishning ahamiyati tahlil qilingan.

**МЕТОДИКА ФОРМИРОВАНИЯ ПРЕДСТАВЛЕНИЙ О ЧИСЛЕ И
КОЛИЧЕСТВЕ У ОБУЧАЮЩИХСЯ С ИНТЕЛЛЕКТУАЛЬНЫМИ
НАРУШЕНИЯМИ**

Аннотации: В данной работе рассматриваются методические основы и эффективные педагогические подходы к развитию представлений о числе и количестве у обучающихся с интеллектуальными нарушениями. Также анализируется значение использования наглядных средств, дидактических игр и практических занятий для формирования математических представлений.

**METHODOLOGY FOR DEVELOPING NUMBER AND QUANTITY
CONCEPTS IN STUDENTS WITH INTELLECTUAL DISABILITIES**

Annotatsion: This thesis examines the methodological foundations and effective pedagogical approaches for developing number and quantity concepts in students with intellectual disabilities. It also analyzes the importance of using visual materials, didactic games, and practical activities to improve their mathematical understanding.

Keywords: *intellectual disabilities, number concepts, quantity concepts, mathematics education, special education, teaching methodology, mathematical skills.*

The development of mathematical concepts in students with intellectual disabilities is one of the key areas of special education. In particular, the concepts of number and quantity form the foundation for acquiring further mathematical knowledge. Due to the specific characteristics of their cognitive development, including perception, attention, memory, and thinking, these students usually acquire mathematical concepts more slowly than their typically developing peers. Therefore, the educational process should be organized according to their individual abilities and

learning needs. The development of quantity concepts begins with comparing objects. Students first learn to distinguish concepts such as more and less, bigger and smaller, longer and shorter, heavier and lighter through hands-on activities with real objects. After mastering these concepts, they gradually learn to count objects, understand the relationship between numbers and quantities, and recognize numerical symbols. This sequential approach facilitates meaningful learning and helps students develop a solid understanding of basic mathematical concepts. The principle of visual instruction plays a significant role in this process. The use of colorful cards, counting sticks, geometric shapes, cubes, and other didactic materials makes abstract mathematical concepts more concrete and understandable. In addition, educational games and practical activities related to everyday life increase students' motivation and improve the effectiveness of learning. Teachers should apply an individualized approach by considering each student's developmental level and learning abilities. Learning tasks should be organized from simple to more complex, with regular revision and reinforcement. Applying mathematical knowledge in real-life situations, such as shopping, telling time, counting objects, and comparing quantities, helps students develop functional mathematical literacy and independent living skills. The methodology for developing number and quantity concepts in students with intellectual disabilities contributes not only to the acquisition of mathematical knowledge but also to their social adaptation, independence, and preparation for everyday life. The systematic use of evidence-based teaching methods, visual materials, and practical learning activities significantly enhances the effectiveness of mathematics education in special educational settings. The successful development of number and quantity concepts requires a structured and sequential instructional process. At the initial stage, students should be encouraged to manipulate concrete objects, classify them according to specific attributes, and establish one-to-one correspondence between objects and numbers. As their understanding improves, teachers can gradually introduce symbolic representations and simple mathematical operations.

Continuous assessment of students' progress enables educators to adjust instructional strategies according to individual learning needs. Furthermore, collaboration between teachers and parents supports the reinforcement of mathematical concepts in everyday environments, allowing students to transfer classroom knowledge into practical situations. Such an approach promotes cognitive development, problem-solving abilities, and greater independence in daily life.

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