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**Title of the Thesis:** Development of Material based on Universal Design for Learning at Primary Level with Reference to Children with Special needs

**Key words:** Universal Design for Learning, Primary level, curriculum, Children with Special needs, Inclusion.

### **Abstract**

The present education system requires such a curriculum that can inspire and challenge all students. We will have to think that how our student will be successful. UDL refers to design lesson to challenge students with variabilities and help them to achieve grade-level standards.

The study was carried out by the objectives as 1.To study the hard spots at primary level mathematics as experienced by the teachers for children with special needs. 2. To develop material based on universal design for learning mathematics for primary school children. 3. To study the effectiveness of UDL based material in learning mathematics among primary school children. 4. To compare the effectiveness of UDL based material in learning mathematics among children with special needs and non disable students

Population of the study was primary school children consist of children with and without disabilities of South Delhi. Researcher used purposive sampling for the present study. Third class was selected (37 students) through purposive sampling. There were thirty seven students in the class consists of children with different disabilities (four children with learning disability, one child with autism spectrum disorder, one child with intellectual disability).

Tools were developed keeping objective of the research in mind. Rating scale was developed to identify the hard spots in mathematics. Grade Level Assessment Device (GLAD) is used to identify the children with learning disabilities.

UDL based teaching aids were developed by the researcher. For each section, separate teaching learning aids were developed which covered audio, visual, tactile means. Researcher developed the UDL based teaching aids utilizing the waste material. Researcher collected data through self developed tools, UDL based lesson plan, and UDL based teaching aids. Data was analyzed in qualitative as well as quantitative manner.

Major Findings of the study include. 1. Significant difference was found between total pre test and post test among children with special needs. 2. Significant difference was found between total pre test and post test among non disable students. 3. High degree of improvement was obtained in all dimensions of mathematics (Number, Shapes, Addition, Subtraction, Multiplication, Division, Money, Calendar, and Time) after intervention. 4. Universal design for learning based Material found very effective to bring improvement in learning mathematics among children with special needs. 5. Universal design for learning based Material found very effective to bring improvement in learning mathematics among non disable students. 6. Universal design for learning based Material enhanced the interest level of primary school children in mathematics. 7. Universal design for learning based Material increased the involvement among primary school children. 8. Universal design for learning based Material increased the confidence level among primary school children

It is concluded that the UDL based material is effective for bringing improvement and make the learners well adjusted in inclusive setup.