



---

**THE ROLE OF EXECUTIVE FUNCTIONING IN EARLY NUMERACY ATTAINMENT IN THE SECOND GRADE**

Hellen kalumba chalwe<sup>1</sup>, Godfrey Sichamba<sup>2\*</sup>

<sup>1</sup> Zambia Institute of Special Education Education Department, College  
Chalimbana University<sup>2</sup>  
School of Education  
Lusaka, Zambia

**Abstract**

This study sought to examine the role of executive functioning in numeracy attainment in the second grade in selected government primary schools in Lusaka District. In order to have in-depth understanding of the phenomenon being studied, Quasi-experimental design was used to investigate executive functions in learners in the second-grade. A total sample of 252 respondents were randomly selected with the help of their teachers giving information on their learners using the Behavioural Rating Inventory for Executive Functions (BRIEF) questionnaire. Standard tests (DLE, BRIEF and Mathematics Battery test) were conducted to determine learners' performance in numeracy and executive functioning. The findings of the study established that executive functioning is associated with early numeracy and that executive functioning plays an important role in early numeracy attainment in the second grade. The following recommendation were made: Executive functioning should be stimulated at early primary level. The Ministry of Education through colleges of Education should ensure that executive functions stimulation should be included in the curriculum of teachers in training colleges and universities by the Ministry of Education to achieve quality and effective teachers in Zambia. Teachers in Primary schools should teach activities which stimulates executive functioning skills.

**Key words:** Executive functions, numeracy, attainment, inhibition, shifting and working memory