

Mental Mathematics strategy: a necessary tool for enhancing upper basic education students achievement, and retention in numbers and numerations in Nigeria
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This study examined the use of mental mathematics strategy as a necessary tool in enhancing students achievement and retention in upper basic education number and numeration in Oju and Otukpo local government areas of Zone C Education areas of Benue state, Nigeria. The study adopted quasi-experimental design of nonrandomized pre-test/post-test and control group. The sample consisted of 198 upper basic education students made up of 102 male and 96 female drawn from four Universal Basic Education (UBE) schools in Oju and Otukpo local government areas of Benue state using multistage sampling technique. One research instrument number and numeration achievement test (NNAT) was designed by the researcher and used for the study. The reliability coefficient was determined using Kuder-Richardson formula 20 to be 0.94 for NNAT. Data collected were analyzed using descriptive statistics of analysis of covariance to test hypotheses. Finding of the study reveals that students that were taught number and numeration using mental mathematics strategy exhibited higher achievement and retention in number and numeration than those who were taught using conventional method. In addition the use of mental mathematics strategy did not significantly differentiate between genders (male and female) students scores in number and numeration. These findings have implications for mathematics teachers and stakeholders in mathematics education. Based on the finding, it was recommended among others that mental mathematics strategy be adopted and used in teaching mathematics in upper basic education.

Keywords: mental mathematics; upper basic education; students achievement and retention; numbers and numerations.