World Academy of Science, Engineering and Technology
International Journal of Educational and Pedagogical Sciences
Vol:9, No:08, 2015

Application of Constructivist-Based (5E's) Instructional Approach on Pupils' Retention: A Case Study in Primary Mathematics in Enugu State

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Abstract : This study was designed to investigate the efficacy of 5Es constructivist-based instructional model on students' retention in primary Mathematics. 5Es stands for Engagement, Exploration, Explanation, Elaboration and Evaluation. The study adopted the pre test post test non-equivalent control group quasi-experimental research design. The sample size for the study was one hundred and thirty four pupils (134), seventy six male (76) and fifty eight female (58) from two primary schools in Nsukka education zone. Two intact classes in each of the sampled schools comprising all the primary four pupils were used. Each of the schools was given the opportunity of being assigned randomly to either experimental or control group. The Experimental group was taught using 5Es model while the control group was taught using the conventional method. Two research questions were formulated to guide the study and three hypotheses were tested at $p \leq 0.05$. A Fraction Achievement Test (FAT) of ten (10) questions were used to obtain data on pupils' retention. Research questions were answered using mean and standard deviation while hypotheses were tested using analysis of covariance (ANCOVA). The result revealed that the 5Es model was more effective than the conventional method of teaching in enhancing pupils' performance and retention in mathematics, secondly there is no significant difference in the mean retention scores of male and female students taught using 5Es instructional model. Based on the findings, it was recommended among other things, that the 5Es instructional model should be adopted in the teaching of mathematics in primary level of the educational system. Seminar, workshops and conferences should be mounted by professional bodies, federal and state ministries of education on the use of 5Es model. This will enable the mathematics educator, serving teachers, students and all to benefit from the approach.

Keywords : constructivist, education, mathematics, primary, retention
Conference Title : ICEPMIT 2015 : International Conference on Education, Pedagogy, Management, Innovation and Technology
Conference Location : Barcelona, Spain
Conference Dates : August 17-18, 2015