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Effectiveness of 5E's Instructional Model on Achievement of Mathematics

Maganlal S. Molia

Associate Professor, Department of Education, Saurashtra University, Rajkot (Gujarat) India, E-mail:msmolia2000@yahoo.com

ABSTRACT

The present study is experimental in nature. The following were the objectives of the study (1) To construct 5e's Instructional Model of Mathematics in Primary School, (2) To study the effectiveness of 5e's Instructional Model on Achievement of Mathematics in Primary School boys and (3) To study the effectiveness of 5e's Instructional Model on Achievement of Mathematics in Primary School girls. The students studying in Gujarati medium primary schools in Gujarat was considered as population of the study. The investigator were selected sixth standard students of two primary schools in Mota-vadala as sample in which one boys and one girls. The two groups of boys were formed for experiment. Twenty students were selected for experimental group as well as control group. Similarly separate two groups of girls will also select for the same treatment. Hence 40 sample students were selected for experimental purpose. Experimental type research method was used. The investigator selected True-experimental design namely "Randomized two group post-test only experimental design". In the present study the investigator constructed standardized Achievement test of Mathematics was used. To find out significant of difference between scores on Achievement test of Mathematics of two groups, statistical technique t-test was used. For that M and SD of Achievement of Mathematics scores on post-test (Achievement test of Mathematics) of both groups were calculated. The study revealed that (1) The boys of FIM-group is more effective than CM-group after 5e's Instructional Model with reference to Achievement of Mathematics and (2) The girls of FIM-group is more effective than CM-group after 5e's Instructional Model with reference to Achievement of Mathematics.

Key words: 5e's Instructional Model

Insights into Math Word Problems: Developing Learning Cycle for Solving Word Problems

Arushi Kapoor

M.Phil (Education), Jamia Miilia Islamia, New Delhi, India, Email: arushikapoor28@gmail.com

Word problem is defined as 'A mathematical problem that is stated in words rather than in symbols or as an equation' (Mathematics Thesaurus). Majority of mathematics topics contain word problems. Aim of the word problems is to connect the mathematical concept with real life situation. Word problems act as linkages between the concept and application. Mathematical word problems are focused to build the aptitude of problem solving in children. School mathematics of the twenty first century is viewed by educators to be that which should engage a learner in problem solving and reasoning. It should also foster deep understanding and develop the learner's critical and analytical thinking. Instruction should not be limited to plain mastery of algorithms or the development of certain mathematical skills. It should involve learners in investigation through "exploring, conjecturing, examining and testing" (National Council of Teachers of Mathematics, 1990, p.95).Successful problem solving involves coordinating previous experiences and knowledge to generate new representations and related patterns. In school, mathematics is the domain which formally addresses problem solving as a skill. Considering that this is an ability of use in all of one's life, techniques and approaches learnt in school have great value. Mathematics also provides an opportunity to make up interesting problems (National Curriculum Framework, 2005). It is experienced particularly in Indian schools that mathematical problem solving is a major issue of concern in a student's school life due to various reasons such as:Lack of comprehension of the problem posed, strategy knowledge, domain specific knowledge or experience in defining problems; Inability to translate the problem into a mathematical form; a tendency to rush toward a solution before the problem has been clearly defined. Therefore word problems have always caught the attention of researchers to blend the problem solving skills in children effectively.

Effectiveness of Constructivist Approach for Teaching Geography Class IX in Terms of Achievement

Anuradha Pal* & Shivpal Singh**

*Research Scholar Shri Venkateshwara University, Gajrola, Amroha, India, Email: anuradhapal1984@gmail.com **Supervisor, Shri Venkateshwara University, Gajrola, Amroha, India

ABSTRACT

'Constructivism believes that students do not come to the class with Tabularasa, clean slate and their previous experiences, believes and ideas affect the interpretations they make of their observation' (driver 1983).

The present study was aim to investigate the effectiveness of Constructivist Approach for teaching Geography class IX in terms of Achievement. Quasi experimental design was employed. Study is delimited to class IX students of LTR public school, an English Medium school, CBSE affiliated at Meerut district. The sample was made up of 67 students. 35 students were in experimental group i.e. IX 'A' out of which 24 was boys and 11 were girls taught through constructivist approach. The other section IX 'B' had 32 students of which 20 were boys and 12 were girls taught through traditional approach. The major findings of the study were that the constructivist approach had a positive effect on achievement in geography.

Key words: Constructivist Approach, Traditional Approach, Achievement Test, Effectiveness

An Empirical Study of Perk Up The Numerical Aptitude

Atul Bamrara* & Poonam Chauhan**

*Department of School Education, Government of Uttarakhand, India, Email:atulbamrara@gmail.com **Department of School Education, Government of Uttarakhand

ABSTRACT

The research paper illustrates the diverse causes of not attaining an appropriate achievement level in identifying and writing of numbers (numerical ability) in primary classes. Action research has been conducted on the students of a School to explore the reasons and a methodology has been adopted to deal with the correlation between identification/ writing of numbers and mathematical ability as well as use of teaching learning material (TLM) and understanding of numerical identity/ writing.

Key words: Action Research, Mathematical Ability, Numerical Ability, Counting, Teaching Learning Materials

A Study of Secondary Level Teachers in Relation to their Stress and Personal Value

Ganga Das Singh* & Harendra Singh**

*Research Scholar, Department of Education, Mewar University, Chittorgarh, Rajasthan, India **Professor & Principal, R.N. (P.G.) Institute of Modern Mgt. Education & Research Centre, C.C.S. University, Meerut (U.P.), Email: harendra_2k@yahoo.com

ABSTRACT

This study related with teachers in relation to their stress and personal value. Objective of this study is A study of secondary level teachers in relation to their stress and personal values and hypothesis is there is no relation between stress and personal value. This study is delimited to teachers of secondary schools situated in Meerut region. In the present study a sample 200 adolescents of 13 to 18 years of age (100 Girls & 100 Boys) of Meerut city were selected, children of the class IX & X standard of working and nonworking mothers. Teacher's Stress Inventory (TSI) Developed by Dr. Harendra Singh and Personal Value Questionnaire developed by Dr. G.P. Sherry & Dr. R.P. Verma was used to collect data for the present study. Researcher has concluded that Out of 10 dimensions of personal value, only two dimension namely, Economic value and Family prestige value is significantly related to stress of the teachers.

Key words: Secondary teachers, stress and personal value

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