

## Identification and development of instructional strategies to accelerate mathematics learning among slow learners

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### ABSTRACT

The study was carried out with the objectives to identify, develop instructional strategies, see the impact of strategies developed and promote the best instructional strategy to teach the slow learners. The study was undertaken in one Government and one private school of Dharwad taluk which were within 10km radius from Dharwad city. First standard students were selected to teach maths subject. Questionnaire was developed to carry out the pre test. Instructional strategies *i.e.* materials, picture book, peer tutoring and individualized instruction were developed and their impact was seen by conducting the post test. The results revealed significant difference between pre-test and post-test scores of control and experimental group students taught using different strategies. The different strategies *i.e.* materials, picture book, peer tutoring and individualized instruction were significantly effective in improving the ability of learning mathematics of slow learners. Students of the experimental groups performed significantly better than the students from the control group after the intervention programme.

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Slow learners are not mentally retarded. They are normal like other children in many aspects. However, they differ from average children in rate of learning. They are unable to cope with the work normally expected of their age group. It is noticed that about 18-20 per cent of school going children are slow learners. It is a considerable figure and not ignorable. No doubt every nation is investing in the education of its young but strategies have not been developed to the fullest extent for the dull students or slow learners. Hence, it is essential to identify the slow learners and strengthen them in order to develop strong nation.

Bhadwal and Sood (1991) reported that the underachiever students can be improved in the subject of arithmetic by making effective use of the teaching skills. Srivastava (1983) reported that number games improved the performance of the studies in arithmetic achievement. The video assisted instruction facilitated male and female underachievers to have better performance and immediate retention than conventional learning group. There are some studies carried out on low-achieving and under achieving children for teaching various subjects using special strategies like computer assisted instruction (Reddy and Kumar, 1996) and video assisted instruction (Soundaraja Rao and Rajaram, 1996). However, the simple practically possible and feasible strategies suitable particularly to Indian situation like using low-cost materials and picturization of the subject matter have not been popularized.

### METHODOLOGY

A preliminary survey was carried out to collect information regarding the total number of Government and private schools prevailing in Dharwad city (Karnataka, India). There were 38 Government and 25 private schools in Dharwad taluk at the time of survey. It was decided to take schools located within 10 km radius from Dharwad city and postal addresses of these schools were taken from the BEO office. Further, an introductory letter along with the self-addressed envelop was sent to all the heads of the schools. The timely reply was received only from four schools. Though there was willing co-operation of the head of the institution, two schools were dropped because the timings of the school overlapped with the other which were selected for the study. First standard students were selected to carry out the study. There were total of 82 students in the two schools. The real slow learners were identified using four screening methods.

### Teachers assessment:

Teacher assessed the overall intelligence and skill of students during question and answer session, playing puzzles, solving simple problems, sports, games and other extra curricular activities. The teacher tested the memory power, attention span, reasoning ability, abstract thinking, leadership qualities etc in day to day activities.

### Academic performance:

Based on the previous formal examinations like