

EFFICACY OF STUDENT MENTORING AND MOTIVATION IN LEARNING DIVISION OF MATHEMATICS

By

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ABSTRACT

Learners at primary level had learning impediments in divisions of mathematics, which was eliminated by a student mentor's kind approach, conducive motivation, spot guidance, friendly facilitation and guidance to achieve required competency. Hence the student mentor can motivate the learners to achieve the expected learning outcomes in stipulated period. The action research justifies a student mentor motivates the learners to error-free application of fundamentals of division in mathematics.

INTRODUCTION

'Student mentoring' is defined as a one-to-one relationship between a youth and an adult that occurs over a prolonged period of time. The mentor motivates consistent support, guidance and concrete help to a student who is in a need of a positive role model. Student mentoring towards the young is difficult and challenging one. The goal of student mentoring and motivation is to help students to gain the skills and confidence to be responsible for their own future. The most crucial role for a student mentor is to be an adult who has time for a child and dedicated himself to long term relationship with the child. Mentoring is a power free two way mutually benefited relationship. Mentors are facilitators allowing the protégé to discover their own direction.

"They let me struggle so I could learn"

"Never provided solutions-always asking questions to surface my own thinking and let me find my own solutions"

Student mentor can motivate the young learners to achieve their expected learning outcomes. Student mentor encourages the learners' auto learning which paves way to learn and eliminate the problematic competencies. Hence, the present action research

confined to improve the understanding and application of fundamentals of divisions in mathematics among learners at primary level through student mentor.

Need and Justification

Learners of Standard IV at Panchayat Union Primary School, Karikottai, Union of Mannargudi, Thiruvarur district of South India were noticed that most of them failed to attain the competency in divisions using new methodologies taught by the teachers. The followings were probable causes of learners' (IV Standard) learning impediments in learning division.

1. Teacher is the manager of the class room.
2. Learners are afraid to clarify their doubts before teacher.
3. Spot guidance technique is not adopted in the class room.
4. Learners are not allowed to mingle with teachers.

The problematic competency of learning fundamentals of division was found out by the researcher in person. The researcher endeavored to find the solution to the problem through engaging a student mentor in the class room. The student mentor motivated the learners in cordial

approach, friendly coaching, spot rectification, positive reinforcement and turning eye on their future. It is hoped that the research may be useful for the teachers in primary, secondary, college and university level.

Statement of the problem

Learners of Standard IV had learning impediments in fundamentals of division in mathematics.

Objectives of the Action Research

1. To assess the learning impediments in the competency of division (mathematics) of the pupil of Standard IV at Panchayat Union Primary School, Karikkottai.
2. To find out whether there is any significant difference between the Pre-test & Post-test in achievement mean scores of the pupil in learning division.
3. To assess the impact of motivation given by student mentor while learning division.

Hypotheses of the Action Research

1. Pupils of standard IV at Panchayat Union Primary School, Karikkotai have learning impediments in mathematics in the competency of division.
2. There is no significant difference between the Pre-test and Post-test in achievement mean scores of the pupil in learning division.
3. Motivation given by the Student mentor is more effective than the teacher's teaching in division

Method of the Action Research

A single group Experimental design was followed in the present Action Research.

Sample

Forty students studying in standard IV at Panchayat Union Primary School, Karikkottai were taken for the Action Research.

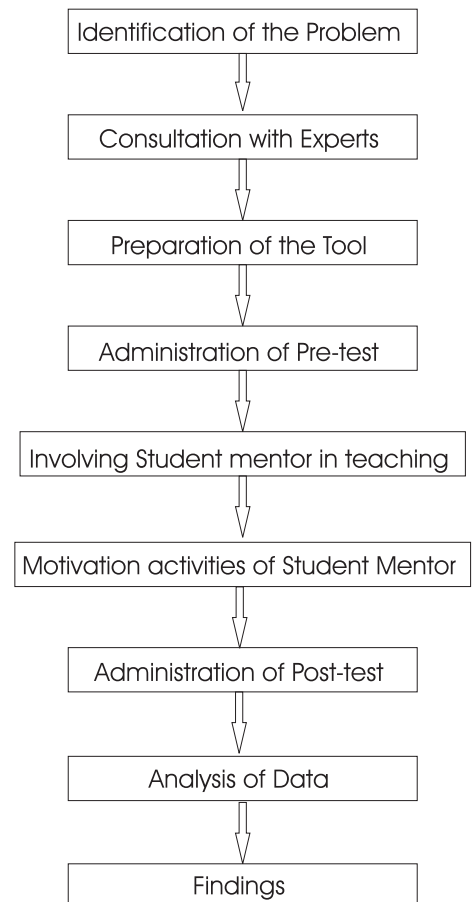
Tools

The Action Research aimed to collect data from the learners by achievement tests. Researcher's self-made question paper was used for the study. Two achievement tests were administered (i) Pre-test (ii) Post-test

Selected tools and their uses

Sl.No	Tools	Purpose
1	Achievement test (Pre-test)	To identify the learning impediments of the learners in division. To find out the efficacy of Student mentor 's motivation in learning division.
2	Achievement test (Post-test)	

Paradigm of the Action Research



Learning impediments of the learners at standard IV were identified by administration of achievement test in division of mathematics. After identifying the learning

impediments, the researcher deputed a student mentor to take the class by using the same activities in which the learners were able to learn and achieve the competency. After ten days tutoring by the student mentor, the post-test was administered and evaluated.

Statistical Technique used

In order to find the significant mean score difference between the Pre & Post test the statistical technique of t-test was used in the present Action Research.

Analysis and Interpretation of data

Hypothesis 1:

Pupils of standard IV at Panchayat Union Primary School, Karikkotai have learning impediments in mathematics in the competency of learning division.

In the pre-test pupil scored 23% of marks and post test they scored 75% of marks. It reveals the learning impediments of the learners in fundamentals of learning division.

Hypothesis 2:

There is no significant difference between the Pre-test and Post-test in achievement mean scores of the pupil in learning division.

Mean score difference between the Pre & Post test

Test	Mean	S.D	N	t-value	df	Significance level
Pre-test	15.37	6.16	40	2.72	78	P < 0.05
Post-test	22.12	14.72	40			

From the table, it is evident that the calculated value is greater than the table value at 0.05 significance level. Hence, the hypothesis no.2 is rejected.

Hence, it can be interpreted that there is a significant mean score difference between the pre-test and the post-test of the pupil in learning division.

Hypothesis 3:

Motivation given by the Student mentor is more effective than the teacher's teaching in learning divisions.

Achievement mean scores of the Post-test (22.12) is higher than that of the Pre-test (15.37). Hence, it was found that newly introduced student mentor's teaching is more effective than teacher's traditional teaching in eliminating learning impediments of the learners in mathematics division at standard IV.

Findings of the Action Research

1. Pupils of Standard IV in Panchayat Union, Karikkottai had learning impediments in mathematics divisions.
2. There is a significant difference between the Pre-test & Post-test in achievement mean score of pupils in learning divisions.
3. Student mentor's motivational teaching is more effective than teacher's teaching.

Educational Implications

1. Student mentor can be facilitated for effective teaching.
2. Student mentor can be encouraged to help the learners twice in a week in schools.
3. Dedicated student mentors may be identified and trained for effective teaching.
4. Student mentor can motivate the learners in kind approach of achieving expected learning outcomes. Hence, it will be helpful to the teachers.
5. Co-operative learning may be bestowed by the student mentor.
6. Student mentor can be advocated to the learners of upper primary, secondary education and higher education.

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