Impact of Peer Assisted Learning Strategy (PALS) for Learning Enhancement of Students at Secondary Level

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Abstract

Peer Assisted Learning Strategies (PALS) is a Peer tutoring technique in which it supplements the core curriculum through intervention. This is an evidence based approach and fits with many instructional methods and help the teachers to address all kind of students in the classroom. Moreover, PALS would be beneficial to teachers for teaching science and can target students who need more support.This study attempted to study the effect of PALS on learning Science subject. The result of this experimental study showed improvement in reading and overall learning the concept of science subject.

Key words: PALS, Peer Assisted Learning Strategies, Peer Tutoring, Strategies for Teaching, Teaching of Science

Introduction

The Peer Assisted Learning Strategy (PALs) is a class-wide peer-tutoring program that addresses the different learning needs of every student. PALS is a structured peer tutoring program. The PAL strategies are designed to complement and not replace existing classroom curricula and instructional methods. The pairing of higher- and lower-achieving students is intended so students gain knowledge from each other through practice and reinforcement. The PALS strategy has been researched in experimental and quasi-experimental studies. Research indicates by a wide margin that the PALS students raised their performance levels in comparison to non-PALS students in several reading measures (Fuches et al, 2001Mathes, Howard, Allen & Fuchs 1998; McMaster,K., Fuchs, D., & Fuchs, L. 2007; Morgan et al., 2006). PALS is effective for students with learning disabilities, low-performing students without learning disabilities, average- and high-achieving readers, and English language learners.One of the main reasons for poor learning performance of students is the lack of appropriate pedagogy. PAL strategy is an evidence based learning strategies widely used in the industrial countries. In Indian context, this method of teaching is rarely observed. ASER 2018 data indicates that of all children enrolled in Std VIII in India, about 73% can read at least a Std II level text. Hence an attempt is made to design PAL strategy in Indian context and study its effect on learning Science subject among VII Grade students.

Literature Review

PAL is a collaborative and cooperative learning strategy which offers variety of advantages such as close interaction between tutee and tutor. This close relationship could facilitate group discussion which may not easily happen in the formal teaching atmospheres. The teaching activity by itself can improve tutor's understanding from the syllabus and thereby provide them an opportunity to gradually increase their self confidence (Perry, 2010; Peets, 2009) and enable them to promote their communication skills required for better teaching as

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new educators (Erickson, 1987; Dandavino, Snell, Wiseman, 2007; Ten Cate, Durning, 2007). It has been predominantly reported that both tutees and student-tutors greatly enjoy from PAL programs (Topping, 1998). Peer student trainers are basically more approachable by the trainees. Moreover, they could readily integrate new learning experiences into the curriculum context (Peets, 2009; Topping, 1998). A growing body of evidence show that students enjoy and value learning from other students, reduce their psychological pressure (Erickson, 1987) through group discussion, and thereby improve their learning (Elliott, Higgins, 2005; Parr, 2002), as they work together in groups. The present study has been conducted to better understand the effectiveness of PAL in student's learning and it's comparison with traditional method of teaching in Science.

Objectives

The overall objective of the study

- Compare the test score of students in Science with respect to Control and Experimental Group before and after introduction of PAL strategy

Hypotheses

1. There is no significant difference in Performance Score of Experimental and Control Group Students before introduction of PALS
2. There is no significant difference in Performance Score of Experimental and Control Group Students after introduction of PALS

Methodology

The study was experimental in nature. The sample comprised of 188 students, both boys and girls from the class VII. The sample consisted of two groups of students namely Experimental and Control Group. The study was designed on the basis of Pretest and Posttest Control Group Design.Pretest was administered to both the Groups. Peer Assisted Learning Strategies (PALs) was assigned to only Experimental Group.Peer Assisted Learning Strategy was implemented for a period of three months which excluded pretesting and posttesting time duration.

The techniques adopted as Peer Learning Strategy are:

1. Partner Reading
2. Paragraph Shrinking technique
3. Quiz Activity
4. Project work with partner

Post testing to both Control and Experimental Group administered in a single day, the scores were analyzed and the results were given below.

Results and Discussion

Table 1: Performance Score of Students before introduction of PALS: A Comparison of Control and Experimental Group

Group	Test	N	df	Mean	Std. Deviation	t-Value
Experimental	Pretest score	116	115	7.00	1.83	3.60**
Control		72	71	8.43	3.56	

***Significant at 0.01 level**

From the table 1, it is evident that the *t*-value for Performance Score for assessment of Science subject obtained before introduction of PALSis 0.00 with df = 186 which is significant at 0.01 level. It indicates that the Performance Score ofExperimental and Control Group Students differ significantly. It means that Control Group Students (M = 8.43)secured higher score than the ExperimentalGroup(M= 7.00) in the pretest. In the light of this, the null hypothesis stated that ***"There is no significant difference in Performance Score of Experimental and Control Group Students before introduction of PALS"* is rejected.** It may therefore it is concluded that Experimental Group Students secured higher performance score than Control Group Students**.** Therefore it is concluded that PALS had effect on Learning science subject.

Table 2: Performance Score of Students After introduction of PALS: A Comparison of Control and Experimental Group

Group	Test	N	df	Mean	Std. Deviation	t-Value
Experimental	Post test score	116	115	16.11	3.58	12.84**
Control		72	71	9.02	3.81	

**Significant at 0.01 level

From the table 2, it is evident that the *t*-value for Performance Score for assessment of Science subject obtained before introduction of PALSis 0.00 with df = 186 which is significant at 0.01 level. It indicates that the Performance Score ofExperimental and Control Group Students differ significantly. It means thatExperimentalGroup Students (M =16.11)secured higher score than theControlGroup(M= 9.02) in the post test. In the light of this, the null hypothesis stated that ***"There is no significant difference in Performance Score of Experimental and Control Group Students after introduction of PALS"* is rejected.** It may therefore it is concluded thatExperimentalGroup Students secured higher performance score than Control Group Students**.** Therefore it is concluded that PALS had effect onLearning science subject.

Hence it is concluded that

1. The study proved that Peer Assisted Learning Strategies has effect on the learning enhancement of student in science subject

2. The students in Experimental group secured high score (M = 16.11) than students in Control group.

 3. The study revealed that there is no significant difference in the pre and post scores of student in the control group who are under the conventional method of teaching.

4. The students in the Experimental group secured higher score when involved in PALS comparing with pre score of Experimental group and pre and post scores of student in the control group.

Conclusion

There is little research study in PALs in Indian context and published study using PALS in Science subject in India was rarely noted. This study attempted to study the effect of PALS on learning Science subject. The result of this experimental study showed improvement in reading and overall learning the concept of science subject. Therefore the study recommends that teachers can add PALS as an effective programme to enhance learning of science subject

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