

Peer Assisted Learning Strategies (PALS) for Enhancing the Reading Skills of Students with Disabilities at Inclusive Schools

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ABSTRACT

Background: Students with disabilities in inclusive schools often face significant challenges in developing effective reading skills. Peer Assisted Learning Strategies (PALS) have been proposed as an effective approach to improve reading outcomes through structured peer tutoring techniques. This study evaluates the impact of PALS on reading skills among students with disabilities.

Objectives: To assess the effectiveness of Peer Assisted Learning Strategies (PALS) in enhancing reading achievement among students with disabilities in inclusive classrooms.

Methods: A total of 198 students from Classes I to V were selected using purposive sampling. The intervention included four key PALS techniques: partner reading, paragraph shrinking, quiz activities, and project-based peer collaboration. A pre-test and post-test design was employed. Reading achievement served as the dependent variable, while class levels served as the independent variable. Statistical analysis was conducted, with reading scores compared pre- and post-intervention using t-tests.

Results: The post-test results indicated a marked improvement in reading achievement, with a standard deviation of 3.58 and a t-value of 39.11, confirming a statistically significant enhancement ($p < 0.05$). The PALS intervention demonstrated notable success across all class levels.

Conclusion: Peer Assisted Learning Strategies significantly improved the reading skills of students with disabilities in inclusive settings. PALS is recommended as an effective instructional strategy for promoting literacy development in inclusive education environments.

Keywords: Peer-assisted learning, reading skills, inclusive education, partner reading, paragraph shrinking, disability support.

1. INTRODUCTION

The present study entitled —Peer Assisted Learning Strategies (PALS) for enhancing reading skills of students with disabilities at inclusive school is related to the effective use of Peer Assisted Learning Strategy to enhance English reading among Tamil Medium primary school students. PALS are a structured peer tutoring program. The techniques adopted as Peer Learning Strategy in this study are Partner Reading, Paragraph Shrinking Technique, Quiz Activity and Project work with partner. This study was quasi experimental in nature wherein Peer Assisted Learning Strategy was used to enhance reading which is basic and fundamental for all learning, resulting in overall learning enhancement. In this study, Peer Assisted Learning Strategies were experimented with for reading among primary class Students to foster English Reading among the Tamil-speaking population (Non- native speakers of English).

1.1 The rationale of the Study

Designing effective teaching learning methods for a learner demands a teacher to be aware of what works better for an individual in a classroom. Vygotsky (1978) posited that while biological and social forces play a role in knowledge building, learning is essentially an interactive process involving language use. It highlights the active role of students in obtaining knowledge and the social construction of knowledge that can be achieved through practical work and experiential learning. Another feature of his socio-cultural theory is the proposition that the potential for cognitive development is limited to a 'zone of proximal development'. The person can learn only that which is within their development level. His theory further indicates the 'zone of proximal development' is created only when learning awakens a variety of internal development process that are able to operate only when the child is interacting with people in his environment and in cooperation with his peers. The idea that knowledge is constructed via social discourse is integral to the process of peers learning from each other, reflecting the notion that social interaction facilitates more learning than that which would occur by students learning on their own. By interacting with others, students get the opportunity to share their views and thus generate a shared understanding related to the concept. Prior studies found that Peer Assisted Learning (PALS) as an effective supplementary remedial intervention in classrooms as together they can relate to each other better. Topping K.J. (2005) stated that Peer Assisted Learning (PALS) is defined as the acquisition of knowledge and skill through active helping and supporting among status equals or matched companions. Research conducted by Fuchs D., Fuchs L.S., Mathes P.G. and Simmons D.C. (1997), and McMaster K.L., Fuchs D. and Fuchs L.S. (2007) indicate that by a wide margin that the PALS students raised their performance levels in comparison to non-PALS students. Parkinson M. (2009) reported that PALS had a very strong positive effects of tutoring resulting in student's better performance and progression. PALS is not a much more experienced individual teaching the information, but the spread of this information via the learner's own peers. Topping K.J., Watson G.A., Jarvis R.J. & Hill S. (1996) suggested that though information and assistance are received from peers, there needs a close monitor to see the correctness of what pairs are doing, especially with weaker students, even if their help is not requested by the pair, who may be erroneously convinced that they are already correct. Wessel A. (2015) presented that Peer learning strategies provide ways for the teacher to take a step back and let the students do the teaching and talking for a little while. Wessel A. (2015) believed that PALS is a method that can improve teaching and learning, provides a safe learning environment to promote learning and retention of knowledge. Students feel more comfortable asking questions to another student and in small or large group discussions, the students themselves have to hash out the different points that are brought to them while involved in PALS session. Previous studies have identified many benefits of Peer Assisted Learning Strategy (PALS) in students learning. These benefits include the significantly greater progress (Fuchs D., Fuchs L.S., Mathes P.G. and Simmons D.C., 1997), keeps students actively involved and—on-task. Fulk B.M. and King K.(2001) effective supplement to conventional teaching methods (McMaster K.L., Fuchs D. & Fuchs L.S., 2007) scientific thinking and doing increased dramatically (Diana S., 2017), students are able to learn practical skills in how to teach and give critical feedback (Wessel A., 2015) and PALS makes use of one of the greatest resources in the schools, and for the students themselves (McMaster K.L., Fuchs D. & Fuchs L.S. 2007). Study on PALS in the Indian context is rarely noticed. One of the main reasons for dropping out of students is lack of appropriate teaching methods. Hence an attempt was made to implement PALS in Indian schools. There has been ample research being carried out on the effectiveness of PALS in reading and mathematics in the Industrial countries, research in effectiveness in teaching reading is very limited. However, Greenwood et al. (1990) cited that PALS does consume organizational time in designing and effecting appropriate peer selection and matching, and it may also necessitate some adaptation to curriculum materials and can be designed to apply. Many Indian students in classroom find English Reading difficult and challenging. Therefore, English teachers try to create a conducive environment to help their students meet this challenge. One way to achieve this is by allowing students to learn and study together in pair and this study was attempted in this direction and intended to present the method of implementation of PALS for English Reading. In this present Experimental study, the effect of PALS on Partner Reading, Paragraph Shrinking, Quiz Activity and Partner Project work and ultimately the English Reading was examined.

1.2 Related works

Best (1997) has highlighted the importance of related studies and literature as —practically all human knowledge can found in books and in libraries. These studies help us to avoid the risk of duplication. Every investigator is expected to know what sources are available in his field of enquiry which of them he is likely to use and find them. Related literature is that which is obviously relevant to the problem, such as previous research investigating the same variables or a similar question: references to the theory and study the similar practices. It enables a reader to gain further insights from the purpose of a study. Also the

researcher draws maximum benefit from the previous findings, takes hints from the designs and procedures of previous researches, matches his conclusion with conclusions drawn earlier. Peer tutoring is a measure that allows for collaboration and socialization between students. It allows for teachers to have more classroom time and students can learn from teaching other students (Bender, 2002). Peer tutoring programs are designed for students to tutor one another through a tutor /teacher relationship. Often the roles are reversed in a strategy called reverse-role tutoring. Although little research had been found with reverse-role tutoring, students have illustrated benefits: the student's abilities rather than disabilities are highlighted (Tournaki & Criscitiello, 2003). Several models of peer tutoring exist within educational settings such as Cooperative Integrated Reading and Composition (CIRC), Reciprocal Teaching, Class Wide Peer Tutoring (CWPT), and Peer-Assisted Learning Strategies (PALS). Cooperative Integrated Reading and Composition (CIRC) is a reading program developed for 2nd through 6th grade students ("Educational Programs that Work," 1995). It has similar components to other peer tutoring models such as reading strategies involving group reading by ability level, direct instruction, and the integration of reading materials from curriculum used in the classroom (1995). To implement CIRC, training and purchasing of materials are required annually (1995). Several studies have indicated that this program is successful in the elementary grades (1995). Reciprocal teaching is another peer tutoring strategy that uses rehearsal strategies. Students and teachers use rehearsal to increase comprehension using the following components: questioning, clarifying, predicting, and summarizing (Slater & Horstman, 2002). Reciprocal teaching begins by having the teachers model the strategies to their students in which the students then use these strategies and are coached by their teachers for subsequent material (Fuchs & Fuchs, 2001). However, CIRC and Reciprocal teaching have several drawbacks that make it very impractical for the classroom teacher (Fuchs & Fuchs, 2001). First, CIRC requires teachers to invest a lot of extra time into the program, and it requires schools to make and use their own materials (2001). With all of the demands placed on teachers, the strategies should be easy for teachers to use. Secondly, reciprocal teaching is also difficult for teachers to master (2001). Nurkhairiyah (2017), conducted a study on the classroom action research was done to explain to what extent the application of Peer-Assisted Learning Strategy (PALS) to improve the students' reading comprehension and what factors influence the improvement. The research consisted of two cycles with four meetings for each cycle. All of the students had roles as tutor and tutee. Then, the researcher was helped by a collaborator to observe and give advice about the teaching and learning activities in the class. The research findings showed that the application of PALS improved the students' reading comprehension. The improvement was also influenced by some factors, such as: (1) The students' willingness to do all of the procedures in PALS. (2) The tutoring activities in the class. (3) The teacher's roles. In conclusion, the application of PALS better improved the students' reading comprehension in English at grade XI. C of MA Pondok Pesantren Daarun Nahdhah Thawalib Bangkinang. The environmental dimensions of participation- 5 A's can be used, in order to better understand how peer mediated learning strategies affect participation. Availability (Maxwell et al., 2012) is presented in terms of providing to children with special needs a peer to help them personally, and Accessibility (Maxwell et al., 2012) through providing resources in order to make him/her engaged. Affordability (Maxwell et al., 2012) and Adaptability (Maxwell et al., 2012) are realized through the fact that the situation becomes easier to understand according to their own needs and to act in with the help of a peer, within their time and energy capacities. Acceptability (Maxwell et al., 2012) is presented in the form of promoting a more positive perception within the micro systems of peers towards special needs. Peer mediated learning strategies support the environmental dimensions. This constitutes a step towards the participation of all children, regardless of any diversity, and thus a step towards the inclusion of more children within a quality education (UNESCO, 1994). Applying the findings of this research on Bronfenbrenner's (1997) model of the child ecology, peer mediated learning strategies affect directly the micro level.

1.3 Objectives

The Objectives of the Study were to

Assess the effectiveness of Peer Assisted Learning Strategies on English Reading among inclusive primary children.

Compare the Pre and Post test scores of students

Assess the effectiveness of Partner Reading Technique of PALS on Reading Performance of students.

Assess the effectiveness of Paragraph Shrinking Technique of PALS on English Reading.

Rate the performance of the Project activity when students involved in PALS session.

Hypotheses of the Study

There is no significant difference between Pre and post-test scores (before and after introduction of PALS).

There is no effect of Partner Reading of PALS technique on Reading Performance

There is no effect of Paragraph Shrinking of the PALS technique on the Summarization of the idea/concepts of the content in the paragraphs.

There is no effect of Quiz Activity of PALS technique on the comprehension of the content in the paragraph read.

There is no significant difference between Partner students in the performance of Project Activity when Project Activity is considered as PALS technique.

Method

The method adopted in the study is described below:

Site Description

The study was conducted in Primary School in Coimbatore District of Tamil Nadu. The samples were selected from Grade I to V Students. The school was a government-aided school located in Coimbatore city. The school chosen for the study is Sri Avianshilingam Primary School

Selection of the Sample

A purposive sampling technique was adopted in the quasi-experimental study. The investigator wanted to check the efficacy of PALS in English Reading among the Tamil Medium students included in the primary school. Hence she selected a pioneer in inclusion. Though the focus was on the efficacy of the PALS on the students with benchmark disabilities, as the setting was inclusion, the efficacy of PALS for all the children of the school was checked. Hence keeping in mind the nature of the social interaction needed for inclusion and PALS to be successful, the Avinashilingam Primary school was selected.

A total of 193 students from classes I to V were selected for the study. All the students of the school were selected for the study. The school is a pioneer in inclusion and practicing integration of children with disabilities with resource room facilities since early 80s and now has moved towards inclusion for the past 2 decades which makes the school system highly conducive for the students with disabilities and nook and corner of the school is adequately equipped and sensitized to accommodate and well include the students with benchmark disabilities.

Design of the Study

A Quasi Experimental study with pre post tests was designed to find out the efficacy of PALS in fostering English Reading among the Tamil Medium students in an inclusive classroom was implemented. The dependent variable is the reading achievement. Independent variables are classes from I to V and the presence or absence of a disability.

Construction of the tool

Reading activities for each session for each grade with a weekly plan have been developed based on the literature survey and the textbooks of the students. Furthermore, the readability of the passage/material was checked for age-specific and curriculum-specific thresholds using the FLESH formula (Flesch-Kincaid reading ease formula: $206.835 - 1.015 \times (\text{words/sentences}) - 84.6 \times (\text{syllables/words})$). Jury Opinion was sought from the English Language Training teachers, and English teachers of the school, and accordingly, the tool was modified with easy-to-read, grade-specific words and sentences.

Reading Skill Assessment

Reading activity using the reading strategies was a routine activity during the PALS session. For the assessment of reading skills, a passage containing 75 words was selected which was used for both pre- and post-testing.

Summarization of Main concept of the lesson with Key Words using the Paragraph Shrinking Strategy

During Partner reading, the paragraph-shrinking strategy was used. Paragraph shrinking was designed to develop comprehension through the identification of the main idea in the paragraphs. The investigator with the help of the classroom teachers selected five passages in the lesson which consisted of around 360 words for this purpose. Fifteen words were selected for the identification of the main idea from the passages. The Partners were allowed to read the passage and shrink it to get the main idea for 30 minutes. Soon after 30 minutes, the partner who was the tutor would ask to identify the main idea by naming it within 15 words.

Quiz activity

The quiz activity aimed to test the comprehension ability of the students when involved in partner reading. From the paragraph-shrinking passage, a set of ten questions for one word was prepared to test comprehension.

Implementation of Peer-Assisted Learning Strategy

The PALS was implemented for two months with 40 sessions.

Pairing of Students

The first and foremost step involved in PALS is the pairing of students. In this study, students were listed from highest to lowest according to their reading ability and their pretest score. Classroom teachers were also involved in the pairing of students. After listing the students from highest to lowest, the investigator divided the list in half. Placing the top student in the first list with the bottom student in the second list. This list was continued until all the students had been partnered. Four students were found to need intensive attention and were partnered with the average-level ability students who received additional support from the investigator during the PALS session.

Techniques Adopted as PALS in the Study

The Peer assisted Learning Strategy was implemented for three months which excluded pretesting and post-testing time duration. The techniques adopted as Peer Learning Strategy are

Partner Reading

Paragraph Shrinking technique

Quiz Activity

Project work with a partner

Partner Reading

The first activity in PALS is partner reading. All the students in the class were oriented to the partner reading strategy. This includes students should establish a routine for reading and adopt the step-by-step method:

Read aloud

First the tutor reads and then the tutee

Read aloud simultaneously

Take turns with each person reading a paragraph

When a student reads, the other listens

Re-reading misread word

Adjusting reading speed if reading simultaneously so that they stay together

Feedback correct reading

Signal to the teacher (investigator) if any difficulty arises

Paragraph Shrinking Technique

During Partner reading, a Paragraph Shrinking Strategy was used. Paragraph shrinking is a routine students use during PALS sessions, The aim of using this technique was to practice finding the main idea by summarizing a text.

The Main features of the techniques are

Either the tutor reads or the tutee reads and the other listens for 10 minutes without re-reading.

The tutor asks what the main idea in the paragraph is.

He/she summarizes the main idea in the paragraph – what who or how about the paragraph.

Ask to spell/tell the main idea of the text in 10 or fewer words depending on the length of the paragraph.

Receiving feedback from the partner.

Paragraph shrinking was designed to develop comprehension through identification of main idea in the paragraphs.

Paragraph shrinking activity usually takes 30 minutes in a 45-minute class session.

Quiz Activity

Questions were formulated from each paragraph to read. The investigator would assist the tutor in framing the questions

The tutor will ask the questions to the tutee.

The tutor will score the answer.

This activity is considered a quiz activity.

This activity can be done after each paragraph shrinking and also after students involved in a three or four-paragraph shrinking activity.

Project with Partner

A Partner project was given

Partners collected various types of resources and explained each type.

Rating was given as Outstanding, Above Average, Average, Below Average, and Poor.

STATISTICAL ANALYSIS

Assessment of PALS Techniques such as Partner Reading, Paragraph Shrinking, Quiz Activity, and Project Activity before and after the introduction of Peer Assisted Learning Strategies

Table1:

ip				n		ue
5 grades	est					
	test			1		78**

**Significant at 0.01level

From the table(1), it is evident that the t -value for the Test Performance Score for reading performance obtained before and after introduction of PALS intervention is

31.478 with $df = 192$ which is significant at 0.01 level. It indicates that the Performance Score of the pretest and posttest of the Experimental Group differs significantly. It means that the posttest score ($M = 16.11$) is higher than the pretest score ($M = 7$) of students in the Experimental Group. In light of this, the null hypothesis stating that “*there is no significant difference in Test Performance Score before and after the introduction of PALS*” is rejected. It may therefore be concluded that the students secured higher performance scores in the post-test. Hence it is concluded that PALS affected reading.

It is evident from the table that the students from grades I through V had benefitted from PALS. The pre and post test scores have statistically significant differences. The PALS was effective because of the caution taken in the grade-specific activities. The students traveled from very low reading scores to very high scores through the introduction and intervention of PALS. Reading is the most fundamental activity which has to be practiced through appropriate guidance. The spelling, meaning, comprehension, and reading speed of the students were observed to be improving through loud reading. Hence it is concluded that the PALS had a statistically significant effect irrespective of the grades of the primary school students.

Effectiveness of Partner Reading before and after Introduction of PALS Table3: Testing-wise
Mean, SD, and t -value for Partner Reading

Test	N	df	Mean	SD	t-value
Pretest	93	92	8.66	3.35	17.856*
Posttest			29.91	16.19	

**Significant at 0.01 level

From Table 3, it is evident that the *t*-value for Partner Reading is 17.856 with *df* = 192 which is significant at the 0.00 level. It indicates that the Partner Reading score of the pretest and posttest differs significantly. It means that the post-test score (*M* = 29.91) is higher than the Pre-test score (*M* = 8.66). In light of this, the null hypothesis stating that “*There is no significant difference in the Partner Reading score before and after the introduction of PALS*” is rejected. It may therefore be concluded that Students secured higher scores in Partner Reading after the introduction of PALS. Therefore it is concluded that PALS had an effect on Reading Skills among Partners.

Table 4: Grade-wise analysis of the effect of PALS through Partner Reading

Grade	Test	N	df	Mean	SD	t-value
					1	34**
	Posttest					
					6	45**
	Posttest			7		
					2	17**
	Posttest			15	55	
					7	04**
	Posttest				4	
					5	959**
	Posttest			7	95	

**Significant at 0.00 level

It is evident from the above table(4) that the students have grown up multi folded in the post-test as the effect of the partner reading activity can be seen from grades I through V. The students demonstrated a good impact from the scores of the partner reading activity. The students have enthusiastically taken roles and the shifting of the roles sounded more effective as it kindled the interest among the students and a competitive spirit expressed. The mean and standard deviation values portray a huge sum of difference which is the right evidence for the effect of PALS.

Effectiveness of Paragraph Shrinking before and after introduction of PALS Table5:Testing- wiseMean,SD,and t-value for Paragraph Shrinking

Test	N	df	Mean	SD	t-value
Pretest	93	92	3.95	2.32	17.252**
Posttest			9.50	3.82	

**Significantat0.01level

From Table (5), it is evident that the *t*-value for Paragraph Shrinking compared is 17.252 with *df* = 192 which is significant at 0.00 level. It indicates that the Paragraph Shrinking score of the pretest and posttest differs significantly. It means that the post-test score (*M* = 9.50) is higher than the Pretest score (*M* = 3.95). In light of this, the null hypothesis stated that “*There is no significant difference in the Paragraph Shrinking score before and after the introduction of PALS*” is rejected. It may therefore be concluded that students secured higher scores in Paragraph Shrinking after the introduction of PALS. Therefore it is concluded that PALS affected Paragraph Shrinking.

Effectiveness of Quiz Technique Before and after the introduction of PALS Table 6: Testing- wise Mean, SD, and t-value for Quiz

Test	N	df	Mean	SD	t-value
Pretest			2.95	1.52	

Pretest	2.93	2.92	4.71	2.17	6.397**
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** Significant at 0.00 level

From the table6, it is evident that the t -value for Quiz is 6.397 with $df = 192$ which is significant at 0.00 level. It indicates that the Quiz scores of the pretest and posttest differ significantly. It means that the post-test score ($M = 4.71$) is higher than the Pretest score ($M = 2.95$). In light of this, the null hypothesis stated that “*There is no significant difference in the Quiz before and after the introduction of PALS*” is rejected. It may therefore be concluded that students secured higher scores in Quiz after the introduction of PALS. Therefore it is concluded that PALS affected quizzes. The quiz activity made the students enact the adults as they were happy to question their brethren. The quiz activity fostered the student's creativity in understanding the passage and analyzing it to ask and answer. The students happily carried out the quiz activity and scored high. We can see that as and when the intervention progresses, the utility of the intervention is well reaped. The students had a great time getting accustomed to PALS. The changing of pairs helped in better socialization as the students were ready to adjust and accommodate their partners. Considering the student performance in the project activity, it was observed that 43.1% of the students were in the category of Above Average, the Average category consisted of 43.1%, Below Average students were 8.6 %, and students in the category of Poor comprised of 5.2 %. The students with benchmark disabilities had been equally doing well in the pre-test which shows the sensibility of the school system and the impact of long-term inclusion leaving behind the equal development of the students despite limitations. The system is so flexible to accommodate the varied needs of the students enrolled. All the students had the same kind of treatment by the teachers and by the peers leaving behind no disparity. The students were given equal educational opportunities to excel in their education. The PALS had a great effect on improving the English Reading among all the students of the inclusive school. The students with benchmark disabilities have demonstrated an equal hike in the performance

of reading skills. The PALS fostered the social ambiance of the academic climate as it paired the top and bottom rows of the academic ladder. The students could understand the limitations and delimitations of learning a particular concept despite the limitations they possess themselves. The PALS posed an opportunity for the high-performing students to understand the contemplations of the low-performing students and the low-performing students to imitate, copy, and try out with the high-performing students. Being the primary school children all of them enjoyed the role of the tutor and when they became the tutee they obeyed, responded, and reciprocated their understanding as they experienced the role of the tutor.

1.6 Results

The major results that emerged from the study are:

The study revealed that the PAL Strategy enhanced the reading of primary children

The Reading Performance score of students increased after the introduction of PALS (Pre- reading *Mean*:8.66 and Post reading *Mean*:29).

Students' performance in Summarization of the concept through the Paragraph Shrinking technique enhanced learning of the main idea of the concept (Pre score *Mean*:4. and Post score *Mean*:9.5)

The score in the Quiz Activity was increased after the introduction of PALS (Pre score *Mean*:2.95. and Post score *Mean*:4.7)

In Partner Project activity, 43 % were at above average level 43% were at Average, 8.6 % were at below average and 5.2 % were at Poor performance level.

1.7 Discussion

The results of this experimental study show that Peer Assisted Learning Strategies have positive impact on learning. The classrooms were composed of all English language learners and within the classroom at least 2 learning disabled students for comparison data of achievement. Eleven students from each class were tested including: two students with LD, three low-achieving (LA), three average-achieving (AA), and three high-achieving (HA).

The present study is in congruence with the study conducted by Ugyen Wangmo, et.al. (2019) highlighted the effect of PALS on students' performance and learning satisfaction in seventh grade science. The Pre-test/ post-test test devised for both the experiment and control group to measure their performance level in science before and after PALS and No- PALS. The results indicated effectiveness of PALS, suggesting that PALS can have positive impact students' performance and learning satisfaction.

Doughlas, et.al. (2017), conducted the study to determine the effectiveness of a class wide peer tutoring program in reading for three learner types: low achievers with and without disabilities and average achievers. Findings indicated that, irrespective of type of measure and type of learner, students in peer tutoring classrooms demonstrated greater reading progress.

Similar findings have been reported by the study conducted by Lynn (1999) who examined the effects of peer-assisted learning strategies (PALS) on students' literacy development and beliefs about reading, when PALS is implemented with secondary-level students in remedial and special education classes. Analyses of variance indicated that, compared to contrast counterparts, PALS students grew more on reading comprehension and reported more positive beliefs about working hard to improve reading.

Sulistami, P. et al. (2018) conducted a study on improving students' reading comprehension by using peer assisted learning strategies (PALS) in EFL contexts among class X students. The results indicated that in implementing PALS, the students not only improve their reading comprehension on text paragraph, but it increased their skill of pronunciation, understanding, summarization of the text, and the question appeared in reading test.

Overall, the majority of the research studies have a positive impact with gains for student learning at all levels. The current study though aligns with many studies, there are certain studies which are not accepting the results of this study. According to the study conducted by Saenz.(2005) which states that the main curricula area that has problems is found in reading fluency. PALS does not provide significant gains for all learners and actually no gains for some learners in reading

of reading skills. The PALS fostered the social ambiance of the academic climate as it paired the top and bottom rows of the academic ladder. The students could understand the limitations and delimitations of learning a particular concept despite the limitations they possess themselves. The PALS posed an opportunity for the high-performing students to understand the contemplations of the low-performing students and the low-performing students to imitate, copy, and try out with the high-performing students. Being the primary school children all of them enjoyed the role of the tutor and when they became the tutee they obeyed, responded, and reciprocated their understanding as they experienced the role of the tutor.

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fluency in some reading situations within certain demographic areas and grades. The main type of learner affected is poor or struggling reader. Similarly reading gains among disabilities are not strong in fluency of reading.

There were some points made by Richardson and Anders (1998) felt that there was not an opportunity for learning from errors, as students perceive learning as less important when learning is not teacher led. Besides, the teacher may not feel as responsible for learning in this situation and may miss instructional opportunities. Lastly, the hidden curriculum may work to ignore students' authority and limit their subsequent risk-taking behavior in relation to their tutoring.

In a review of literature in the present study included 74 studies and almost all studies indicate that PAL strategies have found beneficial effects on student's learning outcomes as found in the current study.

Suggestion for Further Research

- The present study suggests researchers investigate on
2. Development of PALS in other subjects like Mathematics, Social Science, and Languages.
 3. Development of PALS at various levels like Primary, Higher Secondary, and Higher Education in Indian Context.
 4. Different strategies for forming reciprocal pairs and methods.
 5. A longer period of intervention can be studied for more reliability and effectiveness.
 6. Influence of PALS for Children with Special Needs in Special Schools.

Recommendation

Peer Assisted Learning Strategy is a system of student-student support and it is not much experimented in the Indian context as it has been widely studied with its different variants in the industrial countries. The current study revealed PALS' effectiveness on learning. Based on the results, certain recommendations have been made

- [1] The PALS programme is cost effective, requires minimum number of resources and minimum direct teaching and hence it can be easily implemented in elementary schools to higher education program.
- [2] PALS has been proven to increase the reading score of students with low achieving ability and hence can be given importance to build reading skills which is the foundation for all learning.
- [3] The training institutes can incorporate the PALS component in the curriculum so that teacher trainees may introduce the program during their practice teaching and hence widely popularize the learning model.

Conclusion

There is little research study on PALS in the Indian context and published studies using PALS in reading in India were rarely noted. This study attempted to study the effect of PALS on English Reading. The result of this experimental study showed improvement in reading and overall reading. Therefore the study recommends that teachers can add PALS as an effective program to enhance reading.

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