THE EFFECTS OF PALS ON CHILDREN WITH SLD IN TERMS OF READING COMPREHENSION

Mucahit Kocak, PhD
University of South Florida
mucahitkocak@mail.usf.edu

Abstract
The article is a literature review about the effects of Peer Assisted Learning Strategies (PALS) on students with SLD based on their reading comprehensions. The literature has been reviewed based on some criteria. The articles related to effect of PALS on SLD students' reading comprehension have been search by using Scholar Google, Eric, and Epsco data bases. First, "PALS", "Peer Assisted Learning Strategy" are used as key words for searching the related articles. Studies related to students with SLD were selected. Then, the studies, which are not focus on reading comprehension, were excluded. Second, the key words "Specific Learning Disabilities", and "the effect of PALS on Students with SLD" are used for searching the articles and the studies, which related to the topic, were included to the literature review. Implementation of the intervention were explained at the end of the study
Key Words: Reading Comprehension, PALS, Specific Learning Disability (SLD)

Introduction

Education is one of the most integral parts of human life. Their background shapes a person's life but some people are not as fortunate as their peers because they need special education classes. For many years, the needs of children with disabilities were ignored. In last century special education become a more popular field, and new research has been conducted. Moreover, many universities and organizations allocate significant budgets for special education research because special education is vitally significant for students who have special needs and their parents as they strive to lead more independent lives. to live more independently in their lives. Furthermore, it is very important for their families.

Disabilities are divided into 13 different categories based on characteristics of the disabilities by Individuals with Disabilities Education Act (IDEA). These 13 categories are: autism, deaf-blindness, developmental delay, emotional disturbance, hearing impairments including deafness, mental retardation, multiple disabilities, orthopedic impairments, other healthy impairments, specific learning disabilities, speech or language impairments, traumatic brain injury, and visual impairments including blindness (Bromley, 2008).

Specific Learning disability (SLD) is one of the most significant issues affecting students because learning disability is directly related reading, writing, and arithmetic abilities that are so important in daily life. Almost one of two children is identified as learning disability problem among the children who are in special education (Buttner & Hasselhorn, 2011). Also, 25% of the children struggle with reading difficulties (Sofie & Riccio 2002). Therefore, when comparing other special education categories, the largest proportion of the special education is Specific Learning Disabilities.

According to the disabilities by Individuals with Disabilities Education Act (IDEA) specific learning disability (SLD) can be defined as:
> "Specific learning disability is a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, which disorder may manifest itself in an imperfect ability to listen, think, speak, write, spell, or do

mathematical calculations. Such term includes such conditions as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. Such term does not include a learning problem that is primarily the result of visual, hearing, or motor disabilities, of mental retardation, of emotional disturbance, or of environmental, cultural, or economic disadvantage" (IDEA 2004).

According to Sofie and Riccio (2002), a student's reading development can be influenced not only by cognitive abilities but also by cognitive development. Even though it is considered to debatablereading disability is more commonly seen in boys (Antshel, & Joseph, 2006). Children with specific learning disabilities demonstrate difficulties with oral expression, listening comprehension, written expression, basic reading skill, reading comprehension, mathematics calculation, and mathematics reasoning (Greatschools.org). Moreover, The children with SLD can demonstrate some understanding difficulties. Therefore, the children with Specific learning disabilities exhibit academic failure especially in reading, algebra, and geometry. (Steele, 2010)

Reading comprehension is a critical cognitive skill for all children in their education life. Also, increasing their reading ability is one of the most important skills for children with reading disorder (Sporer, & Brunstein, 2009). There are many implementations that can be applied during intervention. Class wide peer tutoring (CWPT), story mapping, and repeated reading instructions may be beneficial for the children with reading disorder to enhance their reading comprehension skills (Stagliano, & Boon, 2009; Fuchs, Fuchs, & Kazdan, 1999; Hawkins, Hale, Sheeley & Ling, 2011). Another important strategy is peer assisted learning strategy (PALS). It is an effective method for children with reading disorder to increase their reading comprehension skills and to enhance reading development (Fuchs et al. 1999).

Class wide peer tutoring is an effective strategy, which can be applied within same age groups. Class wide peer tutoring differs from the other peer tutoring strategies. It can be apply only one particular group of students. While using this strategy, all individual students have "tutor" and "tutee" roles. The role of the children and the role of the teachers are written in the same instructional process (Greenwood, 2001).

Story mapping is another type of graphic organizer. It gives some clues about the text that the students read to help them recognize the reading. There are some components, which consist of setting, character, events, problem solution, and theme. Story mapping can be used in different grade levels and consists of different materials. The mutual purpose is to provide a means for recording, organizing and comprehending data about a general topic. Using story mapping is successful strategy especially for reading comprehension (Stagliano, & Boon, 2009).

Repeated reading is very effective and applicable strategy for children with or without special needs. It can be used for the students with specific learning disabilities, speech language disorder, and emotional behavioral disorder (Kostewicz, & Kubina, 2010). It is helpful for increasing reading comprehension but generally it is used for improving reading fluency (Hawkins, et al, 2011)

There are some studies that demonstrate using PALS program is very advantageous and applicable in different areas such as mathematical problem solving, and phonological awareness. Moreover, it is an effective strategy with various groups of student such as high and low

performing primary students, students with SLD, and students with English as a second language (Sporer, & Brunstein, 2009). In this paper, the implication and the effectiveness of the peer assisted learning strategy on children with specific learning disabilities in terms of reading comprehension will be introduced.

Method

The literature has been reviewed based on some criteria. The articles related to effect of PALS on SLD students' reading comprehension have been search by using Scholar Google, Eric, and Epsco data bases. First, "PALS", "Peer Assisted Learning Strategy" are used as key words for searching the related articles. Studies related to students with SLD were selected. Then, the studies, which are not focus on reading comprehension, were excluded. Second, the key words "Specific Learning Disabilities", and "the effect of PALS on Students with SLD" are used for searching the articles and the studies, which related to the topic are included to the literature review.

Literature Review

Peer assisted learning strategy (PALS) is developed based on Class wide peer tutoring (CWPT) and the differences between PALS and CWPT is PALS is a hybrid form of CWPT (Fuchs et al. 1999). The strategy was developed by D. Fuchs and L. Fuchs. PALS can be defined as a method by which students can learn collaboration in pairs and pairs role are given as "tutor" and "tutee" roles. Both students learn and increase their understanding of the topic by using tutorial strategies. While the strategy is being used, three main activities, which are partner reading, paragraph shrinking, and prediction relay, can be used as tools (Sporer, & Brunstein, 2009). The PALS is not only one of the most effective strategies, but also very useful strategies for reading activities. The strategy increases the ability of students various reading activities such as reviewing information, summarizing reading passages, and paraphrasing the main ideas of the context (Mathes, Howard, Allen & Fuchs, 1998).

According to Fuchs et al. (1999), using PALS in reading classes is very beneficial for children with specific learning disabilities in terms of increasing their reading fluency and reading comprehension. In their research they mentioned that the participants of the investigation indicated that they enjoy helping other students during the PALS program. Also, participants reported that they work harder while studying with PALS. Besides improving reading comprehension and reading fluency, PALS is purported to develop phonological awareness and decoding skills. In addition, the authors suggest that the strategy can be used in high school and special education classes as well.

Similar results were found in another study. Sporer and Brunstein (2009) make a comparison between PALS and traditional reading instruction (TI) to examine the development of children in terms of reading comprehension skills. The study indicated that the children who attended the PALS program wrote better summaries and understood better how to make a summary than the students who attended TI programs. In addition, using PALS is more beneficial for developing self-regulation reading than TI. The other important evidence is that children who received PALS and TI take an experimenter-developed comprehension task to measure both groups reading comprehension. The results demonstrated that PALS program receiver children get higher scores on experimenter-developed comprehension task than the children who attend traditional reading

instruction program.

Several different studies can be found about PALS. As it is mentioned before, PALS program can be applied in different population of the students. When it is applied to middle school, it is also concluded that the children who receive PALS program improve their reading comprehension skills as well. Moreover, the children with reading disorder display huge improvement in terms of reading comprehension (Calhoon, 2005).

PALS may be applied in many different environments. Fuchs L., Fuchs D., and Kazdan, S. (1999) made a study about the intervention of PALS and they conducted a comparison between the benefit of using PALS program in reading skills with and without training elaborated help giving lessons. The strategy was utilized in across grade level students and help-giving lessons were given to the participants. Help-giving lessons are designed for collaborative reading. The results indicated that older and younger students who received help-giving lessons act more successful in term of increasing reading comprehension than the children who did not receive help-giving classes.

Fuchs D., Fuchs L., Mathes P., and Simmons, D. (n.d.) compared the effect of PALS program on children with specific learning disabilities, students with low performance (LP), and average achiever (AA) reader. In the research all types of group divided as the group which receive PALS program and the group which receive non-PALS program. The results demonstrated that the children with specific learning disabilities improved their reading achievement, their social skills more than the students who were in the non-PALS class environment.

Fuchs D., Fuchs L., Mathes P., and Martinez E.A. (2002) made a study about the student with learning disabilities in PALS and no-PALS classrooms to investigate the children's social improvement. The authors mentioned that many studies have proved that PALS is an effective strategy to increase children's reading comprehension and fluency, but there is not much known about the development of social skills. 156 students were participated to the research and the participants are chosen among the children with LD, the children with high achievement and the children with low achievement. The study demonstrated that PALS is very beneficial strategy for increasing children's social skills as well.

Saenz L., Fuchs L., and Fuchs D. (2005) carried out an investigation addressing the satisfaction of children and teachers with the Peer Assisted Learning Strategy program. The teachers gave responses to a questionnaire and the teachers had positive opinions about Peer Assisted Learning Strategy. They also showed approval for the use of PALS for the children with specific learning disabilities in terms of reading achievement and they felt that working in pairs were helpful for the children with specific learning disabilities. Moreover, there was marked improvement seen in other skills such as reading self-confidence and social skills. Another important finding revealed by this study was that the Peer Assisted learning Strategy program is not only effective for children with reading difficulties, but is also helpful for children that are successful readers.

Calhoon, M., AL Otaiba, S., Cihak, D., King., Avalos, A., (2007) extended the implication of PALS. In their study they applied the PALS program to first grade bilingual children with reading difficulties. During the process, they used PALS as supplementary instruction to increase the participants reading skills. The results demonstrated that the children displayed very satisfactory

improvement in their reading skills. In addition, the children and the teachers were satisfied with being participants in the PALS program based on the answers of the questionnaire. Therefore, it can be determined that Peer Assisted Learning Strategy is an applicable and advantageous program for bilingual children with specific learning disabilities as well.

Mastropieri (2001) made an investigation on the effects of PALS on children with LD and children with intellectual disabilities (ID) when they studied together. The main reason of the investigation was to analyze students reading comprehension. Participants were chosen from diverse cultural groups. The participants were selected from six different ethnicities and these ethnicities are Caucasians (82%), African-Americans (5.4%), Hispanics (10.1%), Asian Americans (0.3), Native Americans (0.1%), and multi-racial (2.1%). The average age of the group was 12 years old for the children with LD and 13 years old for the children with ID. At the end of the study, results demonstrated that there was a small improvement in the children's reading comprehension skills but the improvement of the reading comprehensions is not as much as the other studies.

Implementation of the intervention

Intervention preparation:
a.   Lesson objective: the aim of the lesson objective is to improve reading comprehension of children with specific learning disabilities by using peer-assisted learning strategy, and with result of least 80% correct answers to asked questions
b.   Materials needed: reading passages, score cards, correction card, question card, and point sheet.
c.   Time allotted for implementation: 4 consecutive weeks with the length of each class being around 60 minutes.
d.   A description of participation: third grade pupils with LD will participate in the implementation of the intervention.

Intervention implication procedure:
a.   After explaining what students will do in the class, all students will be matched. While choosing the pairs a high-performing student matches with low performing student. First high-performing students take the role of "tutor" role and the others take the "tutee" role. Then they switch their roles. The first 10 minutes of the lesson is designated for reading. First, the tutor reads the text after that tutee reads it. While they are reading, "tutor" corrects his/her friend if he/she makes an error and they give 1 point for each correct sentence. The points are written down by the tutor on the score sheet. This activity is called partner reading activity.

In second activity is paragraph shrinking. This time, pairs try to summarize a paragraph which they just read by using 10 or less words. While they are summarizing, they try to identify what/who the paragraph is about and what/who the most important thing is in the paragraph. If the "tutee" misses some information, he is reminded by the "tutor" and if he/she uses more than 10 words, "tutor" asks him/her to shorten the summary. At the end of the week, the teacher sums the points and awards to the winning team. Also, their teacher matches new pairs for the next week of the class study.

The last activity is called prediction relay. Basically, in this activity pairs, make a prediction about what they are going to learn in the next paragraph. Reader of the groups makes this prediction and read the next paragraph. While he/she is reading the passage, the tutor makes correction if it is needed. After that the reader summaries the paragraph and the tutor might not agree with the tutee's prediction and suggest him to make a better prediction. If the tutor agreeswith the tutee, tutee earns 1 point. Tutor can also give 1 point for applicable guess and 1 point for summarizing the main idea in 10 sentences or fewer.

b.   For the data analyses, the AB design will be used. The data will be collected each day of the intervention. A graph will be prepared for displaying the improvement of the children with LD.

Conclusion

Special education is a relatively new discipline in the field of education. Out of the 13 different categories used to describe disabilities, Specific Learning Disability (SLD) takes the biggest percentage among the other disability categories. In the United States, Almost 50% of the children with special education needs are categorized as the children with Specific Learning Disability. The students with SLD demonstrate some difficulties such as reading skills or mathematical skills. To increase their reading skills many different types of intervention provided. Peer assisted learning strategy is one of most well known and effective interventions for children with specific learning disabilities to increase their reading comprehension.

Peer assisted learning strategy is one of the new educational strategy which is developed by L. Fuchs and D. Fuchs. The strategy has some similarities with peer tutoring strategy and class wide peer tutoring strategies but biggest differences between PALS and the other strategies is, PALS program is kind of hybrid form of the class wide peer tutoring. Peer assisted learning strategy is very effective and applicable program for many types of students and many different populations.

PALS can be applied to general classes as well as special education classes. Many studies have demonstrated that PALS is very effective and beneficial strategy for the children with SLD, children with English as a second language, and children who are from different cultures. Also, PALS can be applied to students from kindergarten through high school with different subjects. One of the most effective and beneficial usage of PALS is to increase reading abilities. It can be used to improve the children's decoding skills, reading fluency, and reading comprehension. Especially, it is very effective strategy on the children with learning disabilities. Different class activities can be introduced to improve children's reading skills such as partner reading, paragraph shrinking, and prediction relay.

Using peer assisted learning strategy has many positive side effects. Many investigations demonstrated that applying PALS is an effective strategy for increasing social abilities. Most of the students satisfied Peer Assisted Learning Strategy and they stressed that it is fun to learn with PALS. It can be concluded that, PALS not only improves the children's academic abilities, but also their social skills.

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