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Peer tutoring for vocabulary for students with disabilities

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PEER TUTORING FOR VOCABULARY FOR STUDENTS WITH DISABILITIES

by

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A Thesis

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Abstract

Martin P. Kavanagh, Jr.
PEER TUTORING FOR VOCABULARY FOR STUDENTS WITH DISABILITIES
2017-2018
S. Jay Kuder, Ed. D.
Master of Arts in Special Education

This study examined the effects of peer tutoring on the vocabulary acquisition of students with disabilities in a middle school setting. This study included twelve 8th grade students in co-taught classes. The participants included two Hispanic students, six Caucasian students, and 4 African American students. All participating students are 13 or 14 years of age. The 12 students in this study are classified as learning disabled, multiply disabled, or autistic.

Participating students worked in pairs for twelve weeks. The participants are from three separate classes, each class containing four participating students. Each class also included non-disabled students, who received instruction regularly with no changes to their daily activities.

Following peer tutoring implementation, 9 of the 12 students increased their accuracy on grade-level vocabulary quizzes. For the remaining 3 students, one student's score stayed the same, and the other 2 only saw small decreases while maintaining a passing grade. Results of this study show the effectiveness of peer tutoring strategies for vocabulary acquisition.

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Chapter 1

Introduction

Raising vocabulary levels for students with disabilities is a priority for special education teachers across the country. As a middle school language arts teacher for students with disabilities, this has become an annual mission. Throughout my career, I have tried to differentiate instruction, use various vocabulary sources, and computer-based strategies to increase the vocabulary of special education students. One strategy that has become more popular and has worked in other subject areas such as math, is peer tutoring. As a traditionalist teacher who is trying to be more open to modern teaching strategies, I was intrigued when I saw the effectiveness in a math classroom I worked in previously. I observed that some students, who were mostly reluctant learners, felt more comfortable working with classmates when introduced to new material that they were previously unfamiliar with.

Statement of the Problem

In the past and even today, vocabulary has been taught to classes with grade appropriate words from a book or packet. Students would be introduced to the new words, then be given a test at the end of the week. For students with disabilities, this can be tough, especially if the new words aren't constantly reinforced and used in the class throughout the week. If they are unsuccessful on the vocabulary test, their Individualized Education Program (IEP) might allow for them to make corrections. I feel that this is a strategy that will not increase vocabulary levels. Either the student has good recall ability and memorizes the definitions to receive a high grade, and never use the words again, or

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they have a difficult time with the new words, make some corrections, and still do not have the ability to use the words in conversations or written communication.

Purpose of the Research

I first became interested in implementing peer tutoring into my classrooms after using it for 8th grade mathematics. What I observed was students conversing about problems, using high level math vocabulary in casual conversation. This strategy enabled the students to become more comfortable quickly with new words. Once the students were able to use the math vocabulary, solving problems became easier.

Vocabulary acquisition is imperative to students with learning disabilities and deficits in vocabulary can worsen over time for those children (Wood, Mustian, & Cooke, 2010). For children with learning disabilities, vocabulary words that are grade appropriate can easily escape their grasp, especially is academic language is not used at home. How can teachers bridge those learning gaps and empower students with disabilities to not only define higher level vocabulary words, but also be able to use them in written and oral expression?

In order to raise the vocabulary of students with disabilities, I have chosen to use peer tutoring because of the comfort it gives many students. With students working in pairs, the teams can give immediate feedback and error correction (Hughes & Fredrick, 2006). Students can use the new vocabulary words together in conversation, without the pressure of speaking in front of a whole classroom group, or to a teacher who may judge or grade them. For this study, participants will be paired in an inclusion setting, made up of regular and special education students.

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Research Question

   The question of this research is: What is the effect of peer tutoring on vocabulary acquisition for students with disabilities? To answer this question, I will pair students with disabilities in inclusion language arts classes in the 8th grade. I will also have some students in a control group that will continue to work independently, as they have in the first month of the school year. The participants will complete baseline vocabulary quizzes based on a unit used for the 8th grade language arts team. Based on the results, students will be paired and given peer tutoring training and strategies. What I hope to find is that students become comfortable with higher level vocabulary and raise their comprehension and usage of these words in written and oral communication and assignments. I would also like to find an increase in students' confidence when given new material to use and study. Many students today give up before they even start. I am hoping that peer tutoring motivates and encourages students to try something new in the classroom with excitement and wonder.

   As an educator who constantly looks for different ways to reach all learners, this study could have significant implications for my classroom and lesson planning. If my hopes come to fruition, peer tutoring must be used more often than before the study. Pairing students physically in the classroom is a start, but careful planning of lessons that maximize the benefits of peer tutoring is imperative. Careful monitoring of student pairs is also very important. In a middle school setting, teachers need to be active around the classroom, making themselves accessible to every student. This way, teachers can see how the teams are progressing, and be able to help pairs that may have fallen off track.

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Many students with disabilities experience difficulties when acquiring new vocabulary. Added to their learning disabilities are other potential detriments to learning such as a lack of academic language used at home, or English being the second language spoken in the home. In order to assist these students in acquiring new and higher level vocabulary that is grade appropriate, teachers need to look to strategies that empower students. Peer tutoring can potentially be that effective strategy that reinforces the meaning of words and allows students to feel comfortable using the words casually and in written and oral assignments.

Chapter 2

Review of Literature

Peer tutoring strategies have been employed by educators for decades. The traditional practice of teachers planning out a lesson that entails direct instruction to a classroom full of young minds eager to learn, sitting quietly in their seats, has taken a backseat to new and innovative strategies to reach all learners in diverse settings. Teachers are more open to students being out of their seats, discussing what they are learning with classmates, and using more hands on materials than ever before. In my research, I am examining whether peer tutoring strategies can help struggling students acquire new vocabulary. By allowing students to work together, teachers are not only teaching their curricula, but also teaching students how to lead, tutor, give and receive feedback, and distribute responsibilities. Lessons such as these go far beyond just the daily lesson to be learned in class. Students use school as a way to socialize and get to know other kids their age. Educators should take advantage of this desire to interact in order to turn what was a weakness into a strength.

What is Peer Tutoring and how is it Implemented?

Schools are not only a place of learning in the academic sense, but also a place for students to meet other people their age, and perhaps get to know others from different backgrounds as well. Peer tutoring strategies capitalize on the fact that most students enjoy interacting with each other at school. Peer interaction can also be less intimidating than answering questions in a whole group setting and possibly being told that they are incorrect by a teacher (Topping, et al., 2003). For those students who feel intimidated by

teachers or their peers in a whole group setting, they may feel some comfort in working with small groups or pairs. Topping, et al. theorize that peer tutoring can encourage self-disclosure (2003). One difficulty faced by many teachers is a lack of response from students who are falling behind. Many times, these students are quiet and not likely to announce to the class that they are struggling with a concept. Working with another student may enable them to disclose what concepts that they are struggling with, and ask for the help that is needed.

While peer tutoring strategies can have a positive impact on struggling learners who are hesitant to ask for help, they can also promote positive feelings in the classroom toward the subjects being taught, collaboration, and teachers (McDuffie, et al., 2009). In a study conducted by Topping, et al.(2003), games were used to promote active involvement. Games can enhance teamwork and collaboration for students in need of motivation. The instructor must be aware of how the teams are working together during the games to ensure that students are encouraging each other, instead of criticizing. The majority of learners that I have taught in my career enjoy participating in games during class. Some even show abilities that they have hidden during the school year because they do not want to stand out individually. Teaming students together and playing games is a great way to promote involvement and positive feelings toward the subject matter. Rewards can also be important. Many students need a tangible reward to work for in class. In a study by Gut, et al., teachers monitored peer tutoring activities and awarded points to groups that were giving good feedback and collaborating well (2004). Students then used those points for prizes. This type of positive reinforcement teaches students that collaboration and good social skills are vital to success in the real world. The

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researchers in this study enabled each student to be successful and gain rewards by implementing consistent peer tutoring procedures. In this study, peers where given designated roles as tutors or tutees and read a passage together silently, followed by the tutee reading the passage aloud, while the tutor reads silently. The tutor assists their tutee with any mispronounced words, and summarizes the reading passage briefly. This is followed by a short question and answer session, where points are awarded for correct answers. The students changed roles after a 10-15 minute period. The results indicated that students were more enthusiastic about their learning and enjoyed playing the part of the tutor or tutee. Since students were being rewarded, and were able to take more of a leadership role in their learning, they were participating in class more readily than in previous lessons (2004).

For games to be an effective peer tutoring activity, teachers must devise games that are relevant to the subject matter that requires thinking and clearly defined roles. In Topping's study, students in the role of tutor felt more competent in math due to their modeling of the math concepts and providing of feedback (2003).

There are a variety of ways to implement peer tutoring strategies in classrooms. However, there are a few practices that are consistent in every study I researched. First, is the need to train teachers and paraprofessional staff on how to correctly implement peer tutoring strategies, and the best ways to monitor students. Teachers must also prepare in advance, prior to implementation (Gut, et al., 2004). According to a study by LaGue and Wilson (2010), teachers can use peer tutoring and team collaboration strategies such as Quick Strategies (Questioning, Understanding new words, Imaging, Connecting, Keeping it all together), prepare flash cards for each lesson and pair students

appropriately by skill level. In their study, 5th and 6th grade tutors and tutees used skills taught to them by instructors and both high level and low level students improved as a result (LaGue & Wilson, 2010). For this practice to be effective, tutors were taught to model strategies the instructors wanted to be employed, provide their thoughts on how they are using the strategies so that the tutors can understand, assist tutees in using the strategies and discussing the purpose of each strategy. I feel that LaGue and Wilson provided an excellent guideline as to how my study should be conducted. The steps may seem basic, but they incorporate effective use of strategies and clearly defined roles for both sets of students.

The second constant that I noticed across the sources I researched, was the need for the students to be trained as tutors, in order to be able to tutor their peers successfully in the classroom (Mackiewicz, et al., 2011). Training sessions for peer tutors could be used as a classroom activity (Hughes & Fredrick, 2006). During this time, tutors must learn how to deliver feedback that is constructive and in a way that does not create animosity. In a study by Kourea, Cartledge, and Musti-Rao, tutors trained with each other on new words and practiced how to deliver the new words to their tutees in group sessions called "tutor huddles (2007)." Once they were comfortable with new words, they could then practice with their partners and test each other to check for comprehension (Kourea, Cartledge, & Musti-Rao, 2007). Student tutors also need to be trained on how to model strategic thinking and subject area vocabulary (Topping, et al., 2003). Teachers must also model effective tutoring through instruction or role play to provide an example to tutors and tutees alike, so that the strategies are effective (Topping, et al., 2003).

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Once teachers and students are trained on how to properly implement peer tutoring strategies into the classroom, then a variety of practices can be employed. Wood, Mustian, and Cooke researched 7th grade students working together to study morphographs using computers (2012). Morphographs are parts of words that aid in determining meaning, such as prefixes and suffixes. For example, the suffix "able" means capable of, and this assists students in understanding a new word that contains that suffix. Also, choosing the amount of time dedicated to peer tutoring is important. Some peer tutoring strategies are used for a short amount of time in the beginning or end of class (McDuffie, Mastropieri, & Scruggs, 2009) or for longer periods of time to read together (Christ, Wang, & Chiu, 2015). Peer tutoring doesn't have to take place on a daily basis either. In the study by Kourea, Cartledge, and Musti-Rao, students worked on ten new sight words three times a week for thirty minutes to help most of their subjects to increase their sight word acquisition (2007).

Teachers who employ peer tutoring strategies should choose activities that best enhance the learner's ability to acquire new vocabulary. One strategy that can be effective is Constant Time Delay (CTD). To use this strategy, student teams use flash cards and give a certain amount of time to answer (Hughes & Fredrick, 2006). A study by Hughes and Fredrick monitored the progress of nineteen students who used words from a novel read in class, and used time delay strategies during peer tutoring sessions. At the conclusion of their study, three students with learning disabilities mastered two sets of words used. Two students mastered all three sets used. On the social validity survey, all participating students agreed that peer tutoring procedures helped them learn more vocabulary words, versus the usual strategies that they were used to in the past.

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How students are paired is important too. Some teachers can pair students based on similar academic and behavioral characteristics (Mackiewicz, et al., 2011), and other teams can involve students of different ages (Topping et al., 2003). These teams work together on vocabulary materials and quiz each other to check for understanding once they are paired and trained (McDuffie, Mastropieri, & Scruggs, 2009).

Peer tutoring for students with disabilities. Raising the self-esteem and interest levels of students, especially children with learning disabilities, can increase the chances of academic success (Wood, Mustian, and Cooke, 2012). Using technology and giving the students the role of "teacher" allows students to enjoy learning new vocabulary (Wood, Mustian, and Cooke, 2012). In Wood's study, students with disabilities were paired and took turns in the roles of tutor and tutee, using computer-assisted technology. Students used prefixes, suffixes, and roots to break down new words in order to define them together. Increasing the vocabulary of students with disabilities is incredibly important for their school success and this can be done with practice opportunities and immediate feedback provided by peer tutoring strategies (Mackiewicz, et al., 2011). In this study, students were paired based on characteristics such as focus strengths and attention difficulties. The students with disabilities participating in the study used peer tutoring to learn new vocabulary words. The students took turns in both roles of the peer tutoring activities and were required to provide positive feedback whenever possible. Not only does the tutee learn during peer tutoring sessions, but the tutor learns by teaching as well, which increases self-esteem of all learners involved (Topping, et al., 2003).

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Using Buddy Reading, emergent readers are able to socially use text with partners and construct meanings of words that are related to the theme or subjects taught in class (Christ, Wang, & Chiu, 2015). Using other peer strategies allows teachers to differentiate instruction to meet the diverse needs of learners. Also, as an advantage, learners using new vocabulary socially in class reinforces comprehension and increases comfort when using new words with peers and teachers (Mackiewicz, et al., 2011).

Studies of Peer Tutoring for Subjects other than Vocabulary

Vocabulary acquisition is typically thought of as a language arts standard, but it is vital across all curricula. One such area is mathematics. In order to successfully acquire new skills in higher order mathematics for middle school children, students must learn and use new vocabulary words. Peer tutoring enables students to work together using new vocabulary to strengthen their understanding of algebraic concepts (Topping, et al., 2003). In the study, participating students worked in pairs, using new mathematical words, provided positive feedback, and discussed how to use math strategies. Vocabulary acquisition is also vital to students learning English as a second language (English Language Learners, or ELL). In a study by Mooney, peer tutoring was shown to have a positive impact on ELL students' acquisition of the English language (2010). Acquiring English sight words leads to more fluent reading in English and can assist in the transition to classes fully taught in English (Mooney, 2010). In Mooney's study, ELL students were paired and tutored each other on sight words in English. Students were then tested on reading fluency after they had learned high frequency sight words. As students began to use the words with each other in conversation, they became more confident in using them and increased their reading fluency.

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Peer Tutoring for Vocabulary

Peer tutoring has shown great benefits for students in a variety of ways. For my research, I have learned how peer tutoring enhances vocabulary acquisition in particular. This learning strategy has an opportunity that most others do not: it requires students to use social skills and collaborate, while achieving personal and team goals. Allowing students to interact with each other increases the opportunity to respond for students, who normally may not be vocal in the classroom. Because of this, the retention rate of students can be increased, which enhances vocabulary acquisition (Malone & McLaughlin, 1997). In Malone and McLaughlin's study (1997), students worked in pairs and were assigned words on vocabulary cards. They split 20 minute sessions by each student taking a turn in each role of tutor and tutee. When shown a word by the tutor, the tutee would define it correctly, or the word would go back into the pile. The students were then given a quiz after each 20 minute session. When the eighth grade students finished their peer tutoring program (one quarter of the school year), those who participated in peer tutoring achieved 90.88% accuracy, more than six percentage points higher than when they were taught in a traditional manner. Seventh grade students saw a greater increase (88.79%-78.32%). When students are working together and focusing on new vocabulary words, they have the opportunity to use the new words in conversation with a peer and ask and answer questions without the pressure of a whole group environment.

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Peer tutoring for vocabulary for students with disabilities. Employing peer tutoring strategies can enhance teachers' abilities to bridge achievement gaps for students with disabilities. For students in middle and high school, bridging learning gaps can be even more difficult than for students in elementary school (Okilwa & Shelby, 2010). When peer tutoring is planned thoroughly and aimed at raising reading comprehension and vocabulary levels, students with disabilities can gain the support needed in the classroom. In a study by Bowman-Perrott (2009), high school students were paired in science classes to learn new content area vocabulary words. A pretest was given on Mondays to obtain baseline data. Peer tutoring was then implemented during the week in an effort to acquire the new words. Students were paired by differing skill level, so that low achieving students worked with high achieving students. A posttest was given at the end of each week to check for comprehension. According to Bowman-Perrott, low achieving students were encouraged by positive feedback given by their peers and felt empowered to participate more. High achieving students were challenged to reach higher scores on weekly quizzes for their teams and felt empowered by providing positive feedback to their peers (Bowman-Perrott, 2009).

Relevance to Current Study

Though peer tutoring strategies can have a positive impact on the acquisition of new vocabulary, there are limitations and barriers to success as well. When relying on students to collaborate using teamwork, teachers must plan for students being absent (Mackiewicz, et al., 2011). This is especially important to student pairs that are put together for specific reasons. If a teacher wants high level students paired with low level students, absenteeism can hurt the dynamic.

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Another barrier to using peer tutoring strategies is small sample sizes in research. Even when over two hundred students were monitored, the number is still too small to generalize the findings of the study (McDuffie, Mastropieri, & Scruggs, 2009). To overcome limitations in research, teachers must know their students and what can work best in their classroom. Delivering high quality instruction, while differentiating activities, can lead to success for any group of learners. As I conduct my study, I must be cognizant of these potential barriers for my students.

Researching the implementation of peer tutoring strategies for vocabulary acquisition has provided a variety of findings. Some studies incorporated a large number of students, while some studies observed the progress of just a few students. All studies stressed the importance of teacher preparation and student training in peer tutoring. These studies also featured surveys that asked the opinions of students in regards to their feelings on the subject matter and peer tutoring. Results were positive in every case. These studies have given me direction as to what to look for, and what to be aware of, while working with my study participants.

Chapter 3

Methodology

Setting and Participants

This study took place in three 8th grade language arts inclusion classrooms in a middle school in New Jersey. The study included 12 participants, 4 in each class. The control group had the same number of students. In each inclusion class, there were two teachers delivering instruction. I taught with Co-Teacher A for classes 1 and 3 and class 2 with Co-Teacher B. The physical classroom is arranged by pairing desks together in four rows. Along with students with disabilities, there were also 14 non-classified students in each class. The students in this study are classified as Specific Learning Disability, Other Health Impaired, Multiply Disabled, and Autistic. The control group of students with disabilities continued learning the vocabulary units in the traditional method that the entire class has been receiving prior to intervention.

Students in each group averaged 14 years of age and the majority of the participants were males. Of the 12 students participating, 4 were female and 8 were male. There were 2 Hispanic students, 6 Caucasian students, and 4 African American students in this study. Each participant in the study group is classified as eligible for special education and receives services based on their Individualized Education Plan (IEP). Students 1, 3, 5, 7, 8, 9, 10, 11, and 12 were classified as Specific Learning Disabled (SLD). Student 2 was classified as Other Health Impaired (based on an ADHD diagnosis). Student 4 was classified as Multiply Disabled (MD), and Student 6 was classified as Multiply Disabled and Autistic.

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Group	Role	Mean Age	Gender	Race	Disability Types
A 4 Students	Experimental	14	M= 2 F= 2	3 Caucasian, 1 Hispanic	SLD, OHI, MD
B 4 Students	Experimental	14	M= 3 F= 1	2 Caucasian, 2 African American	SLD, MD, Autistic
C 4 Students	Experimental	14	M= 3 F= 1	1 Hispanic, 1 Caucasian, 2 African American	SLD

Figure 1.Student Demographic Information

Procedure

For 8th grade language arts instruction, students learn twenty new vocabulary words every two weeks from Sadlier Oxford Vocabulary Workshop Level C. The acquisition of these vocabulary words satisfies the requirements of Common Core State Standards for 8th grade students. The purpose of learning these words is for students to

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increase their reading comprehension by understanding the meaning of words from context clues used in a passage.

Prior to pairing students in peer tutoring teams, baseline data was collected to assess current performance on vocabulary knowledge. Students were given classwork packets containing 20 vocabulary words, their definitions, and assessments. The assessments contained in the packets required students to choose the correct vocabulary word in a sentence from a choice of two, provide synonyms and antonyms for the unit words, and complete sentences containing context clues with the correct vocabulary word. The packets were distributed to all students on Monday, and the instructors reviewed each word and their definition. Tuesday's vocabulary activity included a review of the words and their definition, along with an assessment that requires students to choose the correct word when given a definition. On Wednesday, students completed the synonym and antonym activity. On Thursday, students completed the assessment that featured incomplete sentences with context clues and required the students to fill in the blank. On Friday, students were given a quiz to assess comprehension of the unit words. Each quiz contained 20 questions. These baseline activities were conducted for the first 3 units of the vocabulary program.

Once baseline data was collected, students were then paired in peer tutoring teams according to performance. For instance, Student A was paired with Student B because Student A scored very low on baseline assessments and Student B scored very high. Student C was paired with Student D since they were both in the middle range of baseline scores. Students sitting in their peer groups were then introduced to the next unit of vocabulary words in the same fashion as the previous units. They were then required to

complete the first activity of choosing the correct word together as a team. On the second day, student teams were given flash cards of the 20 words of the new unit. During a 10 minute session, students in the tutor role would show their tutee the word and ask for its definition. If the student answered correctly, the tutor would move on to the next word. If he or she answered incorrectly, the tutor would review the correct definition. After 10 minutes, the students switched roles. On the third day, student teams worked together on the next class activity, in which they provided synonyms and antonyms for unit words. The students worked together on the Completing the Sentence activity on the fourth day and repeated the flash card activity on the fifth day. During peer tutoring sessions, a classroom instructor monitors progress of peer tutoring and redirects off task behavior. Teachers will record how each pair uses peer tutoring in order to ensure that students are providing guided instruction and constructive feedback to their tutees.

During the first three days of the second week of the new vocabulary unit, students completed the flash card activity. During these sessions, the tutor would record the accuracy of their tutees, giving them a goal for the next day. The day before the unit quiz, student pairs competed in a review game. For this game, one student would sit in a chair facing away from the Smartboard and their teammate would stand facing the Smartboard. When the team was ready, one of the instructors would display a random vocabulary word on the board and the standing student would have 20 seconds to provide their teammate with the definition, and he or she would provide the word displayed behind them. Teams with the most correct answers were rewarded with "Zaps," which is a form of school currency that students can use to purchase school supplies or tickets to social events, such as a Friday movie or ice cream treat in the afternoon. Words that

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were not answered correctly became part of a study list for all students to focus on during the quiz review. The unit quiz was administered on the final day of the two week unit for all students. The quiz contains two parts. The first asked the students to match 10 words to definitions and the second part requires students to complete a sentence with the missing word. Each question was worth five points, for a total of one hundred points. The quiz scores and classroom activity assessments were recorded and used for the results of this study.

During the study, the control groups in each class participated in vocabulary lessons and activities with the students participating in the study. Control group students completed team assignments and activities, and took the quizzes for each vocabulary unit. These students had their results recorded by my Co-Teachers for grading purposes.

Variables

The independent variables for this study were peer tutoring sessions which employed the use of flash cards, collaborative assessments from the vocabulary unit packets, and a team review game prior to each unit quiz. The dependent variables were unit quizzes for each set of new vocabulary words and teacher progress monitoring charts for correct peer tutoring administration. The control group will studied words independently and completed vocabulary assessments on their own.

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Chapter 4

Results

Acquiring grade-level vocabulary can be difficult for students with disabilities. When an exceptional learner is faced with the task of learning a set of new words, using them in sentences, and correctly identifying their definitions during assessments, the student may give up before they even start. Using peer tutoring strategies, along with guidance from teachers, could possibly lead to greater confidence, enthusiasm, and academic results for all students. This study focused on special education students using peer tutoring strategies, and their implications for the classroom.

Results

The four students in each class were given quizzes after each of the first three units. Each quiz was comprised of twenty questions. Using this data, students were paired together for peer tutoring intervention. The student with the top average in each class was paired with the student with the lowest average. The two students in the middle were also paired. The results of the initial quiz can be found in table 1.

Table 1

Pretest and Posttest Scores

Participants	Pretest Score	Posttest Score	Difference
Subject 1	60	86	26
Subject 2	67	72	5
Subject 3	63	73	10
Subject 4	78	78	0
Subject 5	67	81	14
Subject 6	72	70	-2
Subject 7	40	57	17
Subject 8	62	81	19
Subject 9	90	88	-2
Subject 10	43	73	30
Subject 11	62	81	19
Subject 12	63	80	17
Mean (for all subjects)	64	77	13

As shown by the data in table 1, nine of the twelve participating students attained pretest averages below 70/100. The three students with higher averages were paired with students with lower averages so that their good habits could be shared. The middle range students were paired in an effort to provide intervention and study practices to be used by students with similar ability levels.

Following the implementation of peer tutoring strategies, data was collected on the ensuing six vocabulary quizzes. Data shows that there was a significant increase in averages for the participants as a whole. Nine students improved their averages from their pretest performances, eight of whom reached passing status. Only one student's average decreased in each class. The biggest decline was for Student 9. This student's average decreased by 2 percent, but was still achieving a B+ average. The largest

increase was for Student 10, who was paired with Student 9. This student went from a pretest average of 43 to 73, an increase of 30 points. Student 1 also saw a similar increase of 25 points on the next six quizzes.

Table 2

Post Implementation Scores

Class 1	Pretest Avg.	Quiz 4	Quiz 5	Quiz 6	Quiz 7	Quiz 8	Quiz 9	Average
Subject 1	60	70	100	90	80	85	90	86
Subject 2	67	70	90	85	60	50	75	72
Subject 3	63	50	90	90	90	50	65	73
Subject 4	78	50	90	85	70	90	80	78
Subject 5	67	50	85	100	70	80	100	81
Subject 6	72	50	60	50	90	75	95	70
Subject 7	40	50	50	55	60	65	60	57
Subject 8	62	55	100	55	75	100	100	81
Subject 9	90	65	100	100	85	85	90	88
Subject 10	43	55	70	70	60	95	85	73
Subject 11	62	90	70	80	85	85	75	81
Subject 12	63	55	85	90	90	90	70	80
Mean	64	59	83	79	76	79	82	77

In the table above, scores for quizzes 4-9 are shown. The lowest score attained by participating students was 50. The lowest score from baseline quizzes 1-3 was 35. During the baseline quizzes, scores at 90 or above occurred three times, much less than the 24 times during the last 6 quizzes. Even if the amount of baseline quizzes were equal, the scores are still significantly higher after peer tutoring implementation. Following the initial implementation of peer tutoring strategies, there was a decline in scores for quiz 4.

Quiz grades begin to rise after quiz 4 for most students. Quiz 5 shows the sharpest increase in quiz averages, increasing 24 points from the previous quiz. From quiz 6 to quiz 9, the quiz averages are steady, but significantly higher than the pretest averages. From the time the subjects began the first quiz, through the implementation stage, and to the last quiz of the study, the average for all participants rises to 77, an increase of 13 points.

After students used peer tutoring strategies to acquire new vocabulary, they were given a survey. The purpose of this survey was to find out if the students were comfortable using peer strategies and what they may have enjoyed in particular. Table 3 shows the results of the student survey.

Table 3

Survey Results

Survey Results	Question 1	Question 2	Question 3	Question 4
Student 1	2	2	10	10
Student 2	7	6	8	5
Student 3	2	4	5	8
Student 4	9	7	4	1
Student 5	7	9	8	10
Student 6	5	3	10	10
Student 7	1	1	6	7
Student 8	5	3	5	10
Student 9	6	6	10	9
Student 10	4	6	6	7
Student 11	3	3	6	8
Student 12	2	1	8	5
Average	4.4	4.3	7.2	7.5

The questions in this survey were:

Question 1: How helpful was acting as a tutor during flashcard matching activity?

Question 2: What was your comfort level when working with a peer tutor during flashcard matching activity and vocabulary packet assessments? Question 3: How much did playing card games help you in memorizing and using the vocabulary words?

Question 4: How much did playing the "Hot Seat" game help you in memorizing the vocabulary words? For each question, the students provided a rating from 1-10. A score of 1 is least helpful or comfortable, ranging to a rating of 10 as most helpful or comfortable. The data shows a significant difference between performing flash card activities and assessments versus playing games. Most of the participating students were more comfortable and experienced more enjoyment when playing card games, such as "Go Fish" and the "Hot Seat" game, where one student sat in a chair with their back to the vocabulary word shown on the board, and their partner had to provide them with the definition of the word. Some students shared that they enjoyed being in the role of tutor, but for the majority of students, playing the games with their partner was better for them.

Chapter 5

Discussion

This study examined the effectiveness of peer tutoring strategies for vocabulary acquisition by students with disabilities. The twelve 8th grade students participating in this study are enrolled in inclusion language arts settings with nondisabled peers and were paired based on data acquired by the instructor. The language arts classes that the participants are enrolled in study literature, writing, historical text, and current events. The focus for this study was vocabulary acquisition and how effective peer tutoring strategies are for students with disabilities.

The results of this study show that most of the students increased their vocabulary acquisition after peer tutoring strategies were implemented into the classroom instruction. Prior to implementation, 9 of the 12 students scored below 70% for pretest averages. This pretest average was calculated based on three quizzes given after each of the first three units of vocabulary for 8th grade classes. Peer tutoring strategies were then implemented for the next six units. Out of the 12 participants, 9 students' averages increased, 1 student's average stayed the same, and 2 students' averages decreased. Every student with one exception scored above 70% for their posttest average, and the one student who was still below 70% increased their score by 17 points. The overall averages increased from 64% on pretest scores to 77% posttest scores. This 13% increase indicates that the peer tutoring strategies utilized by the students were very effective when learning new vocabulary.

The participating students also took part in a survey that asked about their comfort level using peer tutoring strategies and what they liked in particular. The survey data shows that the participants, on average, enjoyed playing games involving the new vocabulary words for each unit, but were not as comfortable using flash cards to help each other memorize the words. Card games and a game called "Hot Seat" were considered fun, while using flashcards for conventional study methods were either boring or uncomfortable.

The participants in this study benefitted from using peer tutoring strategies when learning new vocabulary words. Even the students who achieved no difference or a decrease in their posttest average maintained an average above 70%. The students were able to take leadership roles and by doing so, focused more than they usually would. When working together, the students taking the tutor role tried to stay a step ahead of their tutee. When switching roles, that same focus occurred again. Participants seemed to have an innate sense of wanting to help and not let their partners down. This teamwork elevated the level of focus and depth of learning the new words. This was especially helpful when learning new words that have multiple meanings, such as "attribute." Students not participating in the study focused on the first definition of the word, which was the noun version, meaning a quality or characteristic. Most of the participating students focused on both the noun and the verb definitions (to assign credit). By having two students working together, time was more affordable, and both definitions were explored in depth, and the students were better prepared for a quiz that could ask for either definition.

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Though the survey results show that students did not like the flashcard study sessions as much as games, those activities help sharpen their focus. During games, the students had to provide only one definition for each word. The flashcards required the students to learn multiple meanings, with an emphasis on parts of speech. Using part of speech for clues on quizzes helped students achieve higher scores. This was a new testing strategy not previously employed by the vast majority of students in this study.

The survey did indicate that the students enjoyed playing games in pairs with each new vocabulary unit. The games were perceived as a break from the "boring instruction" and a time for fun. The students were competitive while still learning. When the students were prompted with a word, they used definitions that they rehearsed together, allowing them to score points during the game. The words became a part of their everyday language, which is the goal for every instructor when teaching new vocabulary. As the students incorporated the new words into their daily vernacular, the quizzes became easier.

Other factors played a part in the students' success beyond having fun while playing games that used new vocabulary words. Participants in this study felt comfortable making mistakes with each other and finding solutions together. According to Topping, et al. (2003), peer interaction is less intimidating than answering questions in a solitary fashion in front of a whole group and teacher (2003). After the first unit, students became accustomed to working with each other, which allowed making errors more bearable.

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While students were assisting each other, instructors also monitored peer tutoring activity. It was important to make sure that each team stayed on task, and to ensure proper techniques were utilized. Planning effective instruction for the team activities was also important to ensure that students would make the best use of their time (Gut, et al., 2004). In the study conducted by Gut, et. al., teachers planned out activities and goals for their students prior to implementing instruction (Gut, et al, 2004). In this study, my co-teachers and I also planned out our activities and the time management used for our class periods. We also wanted to implement instruction with the highest degree of efficiency possible. The goal for the teachers was to allow the student teams to collaborate once proper peer tutoring strategies for both tutor and tutee were established. It was essential for tutoring pairs to train together in order to learn effective ways to assist each other and provide feedback (Mackiewicz, et al., 2011). Teachers modeling proper peer tutoring practices was also important, which agrees with the research done by Topping, et al. (2003). In their study, teachers were models first, allowing their students to observe effective techniques and proper interaction during peer tutoring sessions. In this study, my co-teachers and I demonstrated techniques and interaction that are effective and beneficial for the students. The students were then able to ask questions and voice concerns prior to taking roles as tutors and tutees. If the students did not observe good models for the activities, some teams may have developed bad habits, and not seen progress in acquiring the new vocabulary words.

Limitations and Future Studies

The results of this study indicate that peer tutoring strategies can be effective for students with disabilities when acquiring new vocabulary in an inclusion setting. The

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study took place in a middle school for approximately 12 weeks. The results of implementing peer tutoring strategies indicate success, but there are limitations. As the school year progresses, new incentives arise. Middle school students sometimes do not realize consequences of negative behaviors in the early part of the school year. After the first report card, parents are alerted to grades that they feel are less than their child's potential. Also, new activities afforded to 8th grade students become incentives for the students who participated in the study, such as the semi-formal dance, the 8th grade field trip, and the Step-Up Program, which is essentially the graduation for 8th graders in this middle school. Incentives such as these are likely to entice students to work harder and sharpen their focus. While peer tutoring strategies have a positive impact on vocabulary acquisition, it is also important to relate other positive behavior rewards to higher achievement in learning.

In future studies, peer tutoring strategies should be implemented in resource room and self-contained settings. This study was conducted with participants in an inclusion setting. Typically, students in this setting are at the higher level of special education, and are nearing general education settings for high school. As a teacher who has instructed at all three levels mentioned, I would like to see peer tutoring strategies studied at all levels of special education. Also based on the effectiveness of peer tutoring strategies in this study, regular education students should be able to utilize the activities and games used in this study to further their vocabulary for high school and college readiness.

Practical Implications

Peer tutoring strategies are shown to be effective for vocabulary acquisition for students with disabilities in language arts inclusion classes. These strategies can be utilized across all grade levels and subjects. They also can be implemented in regular education classes and various special education classes. The practices themselves can be modified to fit any population of students, as long as instructors put in the time to effectively plan for instruction that allows students to work together and critique each other's work. Getting to know students is one of the best strategies teachers can use, and it can lead to great collaboration for student groups.

Conclusion

Based on the results, peer tutoring strategies are effective in helping students with disabilities acquire new vocabulary. In 8th grade language arts, students are preparing for high school, as well as all subjects. In language arts, however, students are being challenged to find a deeper meaning in literature, be persuasive in their writing, and expand beyond what is being taught. Students with disabilities are not excluded from higher expectations. Conventional study methods will always be important, but implementing peer tutoring strategies could infuse traditional study with teamwork to produce great results for all students.

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