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The Effects of Class Wide Peer Tutoring in the Algebra Classroom

by

Mandy J. Roth

August 2, 2010

A thesis or project submitted to the
Department of Education and Human Development of the
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Master of Science in Education

The Effects of Class Wide Peer Tutoring in the Algebra Classroom

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Abstract

This study examines the effects of class wide peer tutoring (CWPT) on the algebra classroom and the students' attitudes towards the new teaching strategy. Two integrated algebra classrooms and two algebra 1 classrooms were sampled. The study took place over a period of four weeks. Students were assessed through a weekly pre-test and post-test. The CPWT groups also took a Likert scale survey at the end of the four weeks. No significant difference gains were shown in the group using CWPT versus independent practice. The students' feedback showed that they did enjoy using class wide peer tutoring in the classroom to help them learn.

Introduction

Finding successful strategies to use in today's heterogeneous classroom is a major component of teaching. Teaching to reach all the different ability levels that exist in a classroom can be a real challenge, especially with the widespread existence of inclusion classes. Research has shown that when students are provided with work at an appropriate level of difficulty, their task completion, task comprehension and time on task all increase (Burns & Dean 2005).

Keeping students on task provides a challenge in itself. This is especially true of low-income districts. Greenwood, Delquadri & Hall (1989) found that low-income students from chapter 1 schools were significantly less engaged in academic tasks during instruction versus students from non-chapter 1 schools. The amount of time low-income students lose throughout the school year accounted for deficit of 1.6 months (Greenwood, et al., 1989).

Class wide peer tutoring (CWPT) is a strategy that can be used to reach a range of learning styles (Greenwood & Delquadri, 1995). It allows students to cover more material in less time compared to conventional teacher-led instruction (Greenwood & Delquadri, 1995). CWPT was developed by researchers at the Juniper Gardens Children's project in Kansas in the 1980s (Maheady, Harper, Mallette, & Karnes, 2004). Peer tutoring in various forms has been a teaching practice used for centuries (Allsopp, 1997). CWPT differs in that students are paired up with a classmate to practice instructional material for 2-4 days a week (Allsopp, 1997). This eliminates any scheduling difficulties that traditional tutoring may cause. Another

difference is that each student has a turn to be the tutor and the tutee. The students receive multiple chances to respond with immediate feedback (Allsopp, 1997). This system was designed to increase the amount of instructional time students engage in academic behaviors (Greenwood, et al., 1989). CWPT is often used in conjunction with a points program to keep peer groups on task. Pairs are placed on teams and can earn points by getting answers correct or practicing correct tutoring behaviors (Greenwood & Delquadri, 1995).

CWPT is beneficial to use in the inclusive classroom since everyone is tutored in the regular classroom. It is less stigmatizing for students with disabilities since they do not get pulled out of the classroom to receive extra help.

Class wide peer tutoring has been shown to be an effective strategy at the lower grade levels (Kamps, Greenwood, Arreaga-Meyer, Veerkamp, Utley, Tapia, et al., 2008). However, it is unknown whether class wide peer tutoring is an effective strategy to use in the high school algebra classroom. The purpose of this study is to compare the achievement of students that used independent practice with teacher assistance versus class wide peer tutoring. The significance of this study is to see if it is worthwhile to dedicate class time to this strategy since it will take more preparation and work than traditional methods. Teachers do not want to waste time using a strategy in class that is not effective in preparing students for the regents exam. If found effective, teachers will have another strategy to implement in their classroom.

There is currently a lack of research in this area of study. A lot of research has been completed on class wide peer tutoring at the elementary level (Kamps et al.,

2008). Therefore, much of the research has tested only basic level knowledge. Additionally, most of the successful research has focused on areas such as spelling (Delquadri, Greenwood, . & Hall, 1983). Research has shown that CWPT helps students with different learning styles (Greenwood, et al., 1989). The goal of this study was to extend these same ideas to higher order thinking skills in the ninth grade mathematics classroom.

The focus will be on two research questions during this study. First, does class wide peer tutoring raise achievement on exams in the algebra classroom compared to independent practice? Second, what are students' attitudes towards incorporating class wide peer tutoring in algebra? It is hoped these two questions will help teachers by adding to the limited amount of research on this topic.

Literature Review

Class wide peer tutoring was originally developed to improve the basic skills of low performing elementary students by increasing the amount of time students spend engaged in instruction (Maheady, et al., 2004; Greenwood, et al., 1989) Since then, CWPT has been applied to additional content areas and grade levels. Some of these studies have shown significant results, while others remain inconclusive.

At least 25 published studies have reported that CWPT is superior to conventional teacher led instruction in improving student test scores (Greenwood, Arreaga-Mayer, Utley, Gavin, & Terry, 2001). In previous research at the elementary level (Greenfield & McNeil, 1987; Greenwood, et al., 1989; Greenwood, et al., 2001;

Maheady, et al., 2004), gains have been shown using CWPT to teach math, spelling and ELL learners. In a four year study, Greenwood, et al. (1989) placed 416 students in one of two treatment groups for first through fourth grade. The experimental group learning through CWPT had greater gains in academic achievement as tracked through a yearly pretest and posttest (Greenwood, et al., 1989). The same group of students was followed throughout their high school years to see if any long lasting results were noted. By the 6th grade, less of the students that used CWPT in elementary school were in need of special education services and some received less restrictive services (Greenwood, & Delquadri, 1995). By the 11th grade, the dropout rates were lower in the CWPT group compared to the group that received teacher mediated instruction (Greenwood & Delquadri, 1995). These results were most likely due to the increased time on task students accomplished with this strategy. Although all of these cases show the benefits of CWPT, they only studied baseline knowledge at the elementary level.

More recently, research on CWPT has been extended beyond the elementary level. Kamps et al. (2008) researched implementing CWPT in reading, social studies and science at the middle school level. The purpose of the study was to compare the achievement of students being taught with traditional methods versus the students being taught using CWPT. This study involved 975 students in grades 6-8. The students were divided into two groups. The baseline group learned through teacher-led activities, while the CWPT group learned through activities performed with an assigned peer. The results of this study showed large improvements in reading and

social studies for the CWPT group. There were inconclusive results comparing the two groups in science. Because there was no application of CWPT in math, I wonder if the inconclusive results in the science classroom would transfer over to the math classroom.

Another study by Allsopp (1997), researched the effectiveness of CWPT to teach algebra skills to middle school students. This study included 262 eighth grade students that ranged from twelve to fifteen years old. The students were placed in one of two treatment groups. One group practiced new skills independently, while the other completed a peer tutoring activity at the end of each class. Each student's progress was tracked through the administration of a pretest, posttest and maintenance test. The data from this study showed that students from both treatment groups scored the same on the posttest and maintenance test. The CWPT approach showed larger gains for students in the fourteen to fifteen year old range, however, than for the younger students (Allsopp, 1997). Since the results of fourteen to fifteen year olds was not the focus of the study, these results require further research to draw a conclusion.

Many of the studies administered a survey to gather data on teacher and student attitudes towards CWPT. This is important since we can't make valid inferences from the pre-test and post-test scores if the teachers or students disliked the strategy being used.

Most of the feedback received from the teachers was positive. Teachers at the elementary level had reported that it was easy to train students and implement the

strategy (Greenwood, et al., 2001). Some noticed a reduction in time off-task and behavior problems (Greenwood & Delquadri, 1995). They also thought that it was an effective approach to reach students of varying ability levels (Greenwood, et al., 2001). Two dislikes that occurred throughout various studies, were the public display of points each group earned and the time required to successfully implement the program (Maheady et al., 2004; Allsopp, 1997; Greenwood, et al., 2001).

Student feedback was generally positive as well. Students reported liking being part of a team, earning points and helping someone else (Maheady et al., 2004; Heward, Heron & Cooke, 1982). They also felt that participating in CWPT helped them learn the class material (Allsopp, 1997; Greenwood, et al., 2001). The students expressed a dislike in common with that of the teachers. They did not all like the use of the public scoreboard (Greenwood, et al., 2001). Other dislikes from students included: correcting errors when a problem was missed, disliking their partner or the assignment was too difficult or not difficult enough (Maheady et al., 2004; Allsopp, 1997; Greenwood, et al., 2001; Heward, et al., 1982).

From a theoretical standpoint, class wide peer tutoring has many possible benefits. Based on the Sociocultural theory of Vygotsky (1978), peer interactions provide a rich and meaningful context for learning. These interactions help students actively process information. They have the opportunity to elaborate on ideas and make connections with prior knowledge. Giving and receiving explanations has been shown to be positively related with gains in achievement (Veenman, Denessen, van den Akker & van der Rijt, 2005). Students are able to receive help quicker than if

they had to wait for the teacher. Therefore, more time is also spent on task.

CWPT has been proven to be an effective teaching strategy at the elementary level in numerous content areas and in middle school science and social studies. I would like to extend this research to concentrate on the high school mathematics classroom. I would also like to focus on fourteen to fifteen year old students to add to the study by Allsopp (1997). Hopefully, my research will fill in some of the gaps in the existing literature and provide teachers with a beneficial strategy to use in the classroom.

Methods

For this study, I sampled a population of students that attended a rural high school in Western New York. Ninety-five percent of the population in this district is White Non-Hispanic, 2.6 percent is Hispanic, 1.2 percent is Black and the remaining 1.6 percent is classified in other categories (<http://www.city-data.com/city/Holley-New-York.html>). The median household income is \$46,936. This is below the state average, qualifying the school as a low income district (<http://www.city-data.com/city/Holley-New-York.html>).

In this high school there were 120 students enrolled in ninth grade algebra. Most of these students were 14 to 15 years old. My sample included 87 of these students. The 87 students that I sampled were enrolled in one of the classes I taught. I did not include the students from classes taught by a different teacher in my sample due to lack of consistency and time restrictions. The 87 students that I sampled were

currently taking either Integrated Algebra or Algebra 1. Integrated Algebra is a one year course with a regent's exam at the end. Algebra 1 is part of a two year course and covers the first half of the material from Integrated Algebra. My sample included two sections of each course. My Integrated Algebra classes were taught first and eighth period. I randomly assigned each class period to either the CWPT or independent practice group by flipping a coin. My Algebra 1 classes were taught fourth and ninth period. I chose to assign my fourth period class to the class wide peer tutoring group since it contained five inclusion students. This assignment would allow me to compare not only the data from the two periods, but also between the general education and special education students within my fourth period class to see if one group benefited more from the study. A special education teacher was in this class to provide support for her students.

This study spanned over a period of four weeks from mid May to early June. During this time, all classes were reviewing to prepare for final exams. The instruction during the first half of class on Monday through Thursday was the same for both the CWPT group and independent practice group. Both groups received direct instruction to review material learned previously that school year. For the remaining twenty minutes, the two groups looked quite different.

The independent practice group worked on a worksheet during for the remainder of the class. The worksheet included various level problems about the material we reviewed that day. The questions on the flash cards ranged from vocabulary definitions to computational problems to word problems. Students

worked on the problems independently at their desks. When they had a question, they raised their hand and I came around to help. When most of the students had completed, I chose students to place their work on the board. I tried to choose different students throughout the week to increase participation. I then went through the answers on the board with the class so they could correct any mistakes and ask questions.

The CWPT classes were assigned partners to work with for the last half of class. These partners were chosen based on my knowledge of who worked well together throughout the year. New partners were assigned each week. To assist the tutoring pairs, I made flash cards that contained the same problems as those on the worksheet for the independent practice group. To begin, the students would evenly divide out the flash cards they received that day. One student would start as the tutor and show the cards one at a time as the tutee worked on an answer. If the tutee finished the problem, the tutor was to check the answer on the back of the flash card and say if it was correct or not. If the tutee got stuck or gave the wrong answer, the tutor was to explain the correct answer or assist the tutor in getting the answer. If the tutor was unable to help, both partners were to raise their hand until I could help them.

The CWPT classes were trained on this procedure during class on the first day of the study. I explained what CWPT was and how it should operate during class time. I then picked two groups to model this scenario and allowed time for questions. I had considered spending more time on training the students on effective CWPT

skills. However, a ten week study showed that the nature of students explanations were still primarily algorithmic rather than conceptual in nature even after intense training (Fuchs, Fuchs, Bentz, Phillips & Hamlett, 1994).

As students tutored each other, I circulated throughout the room to make sure students were on task. Groups that were on task were rewarded with “math money” that could be turned in at the end of each week for prizes. I based this system of off a similar lottery system that has been an effective motivational strategy used in combination with CWPT (Kamps, 2008). I chose not to have teams compete since it had been shown not to have an effect on student learning in older classrooms (Allsopp, 1997). CWPT was implemented four times a week for the selected groups since it has been shown to lower results when used fewer than three times per week (Greenwood, et al., 2001).

Fridays were reserved as test days for all of the classes. Starting the Friday before review started, a pre-test was given to both the experimental group and the control group to assess their recall for the material we would be reviewing the next week. The next Friday, an identical post-test was administered for a fourth quarter grade. The pre-test covering material from the following week’s review was then administered. The questions for the pre-test and post-test were based off of past regents exams. All of the questions were open-ended to eliminate guessing. Each test had a total of 5 questions worth 4 points each (Refer to appendix). This allowed me to see the varying level of answers that were given.

In addition to the quantitative data collected from the test scores, a five-point

Likert scale survey was used to collect data on student opinions of CWPT (refer to appendix). The survey was administered to the two class periods where CWPT was implemented. The survey contained a total of eight statements. Some of the statements were written to positively support my thesis, while others were written to negatively support my thesis. This variation in question style was used to increase reliability. Students were told not to write their name on the survey so they wouldn't feel pressured to answer the questions in a favorable manor.

Results

Two research questions drove this study: Does class wide peer tutoring raise achievement on exams in the algebra classroom compared to independent practice? What are students' attitudes towards incorporating class wide peer tutoring in algebra? To answer the first question, an average was computed for each student using their four pre-test scores (see Figures 1-3). Then, a t-test for independent samples was used to show that there was no statistical difference between the two integrated algebra classes or the two algebra 1 classes using a two-tailed test at the .05 level. A post-test average was then found for each student (see Figures 1-3). A t-test at the .05 level revealed that there was no statistical difference between the post-test groups using CWPT verses the groups using independent practice (see Figure 4). It was noticed that there was a slightly higher gain in achievement for the inclusion students versus the general education students. From observation, this may be because the CWPT activity at the end of class engaged a couple of students in

particular far more than an independent practice activity.

Figure 1

Integrated Algebra
Classes

	CWPT	Independent Practice
Number =	26	21
Mean =	56.15	60.23
Standard Deviation =	18.67	15.93
Maximum =	85	95
Minimum =	0	30
Range (Max - Min + 1)	86	66
Median =	57.5	60

Algebra 1 Classes

	CWPT	Independent Practice
Number =	19	21
Mean =	52.37	50.48
Standard Deviation =	18.06	15.08
Maximum =	85	75
Minimum =	15	20
Range (Max - Min + 1)	71	56
Median =	55	50

Figure 2

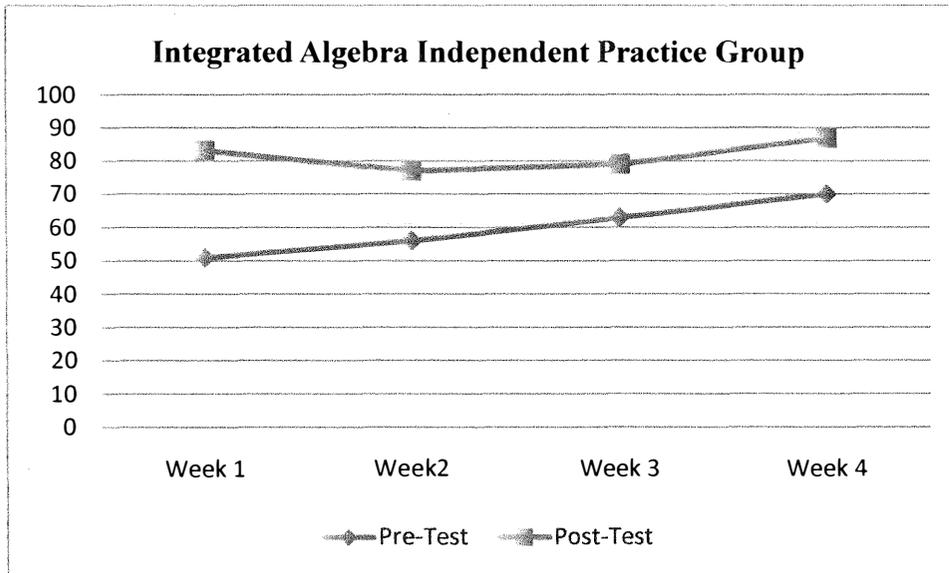
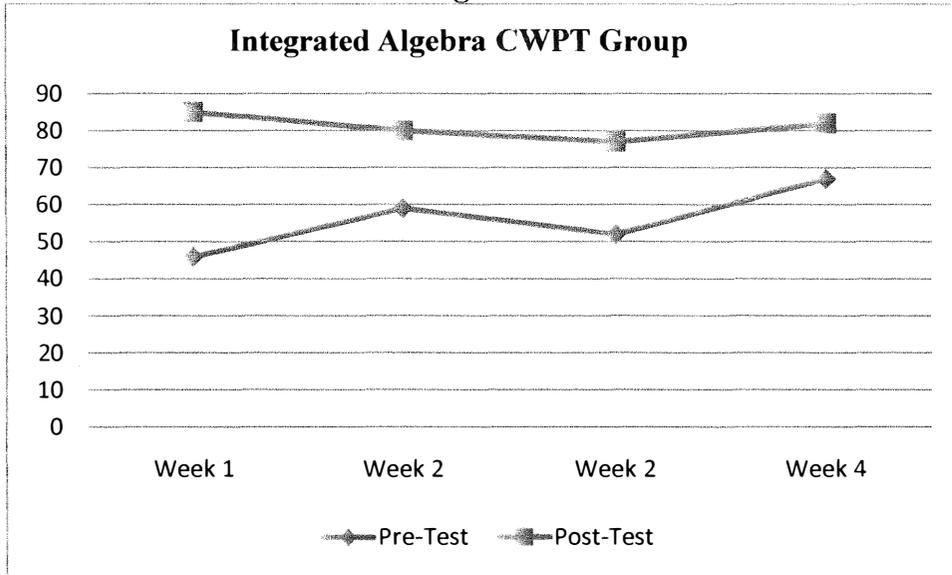


Figure 3

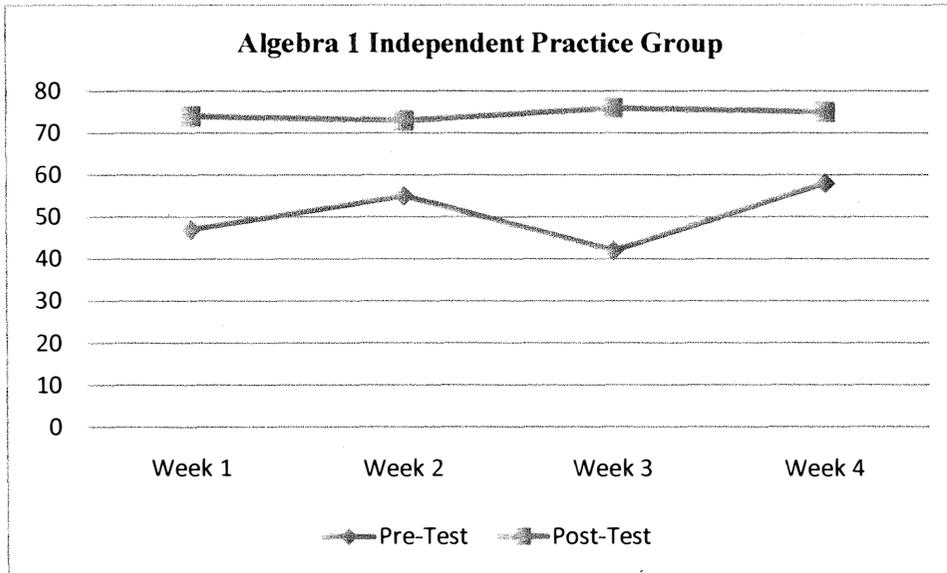
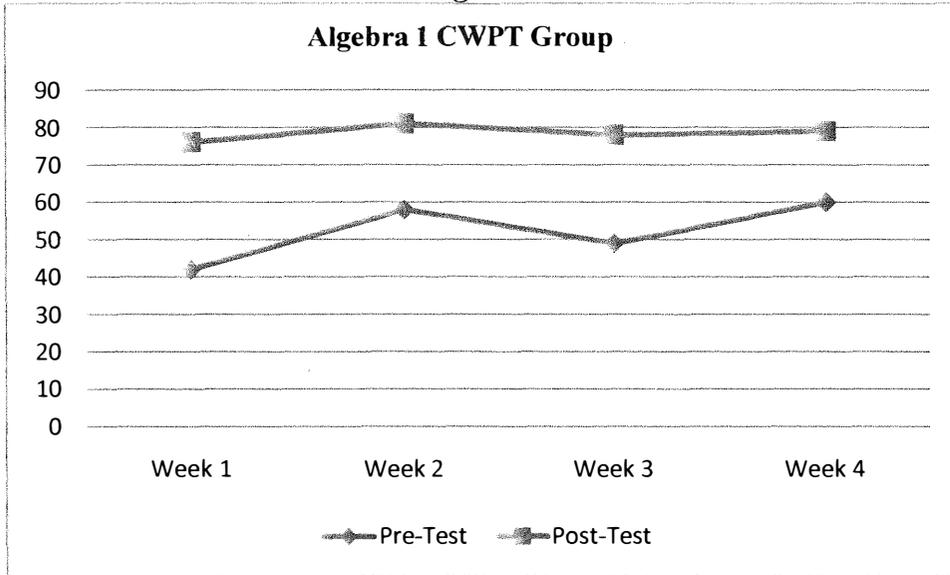
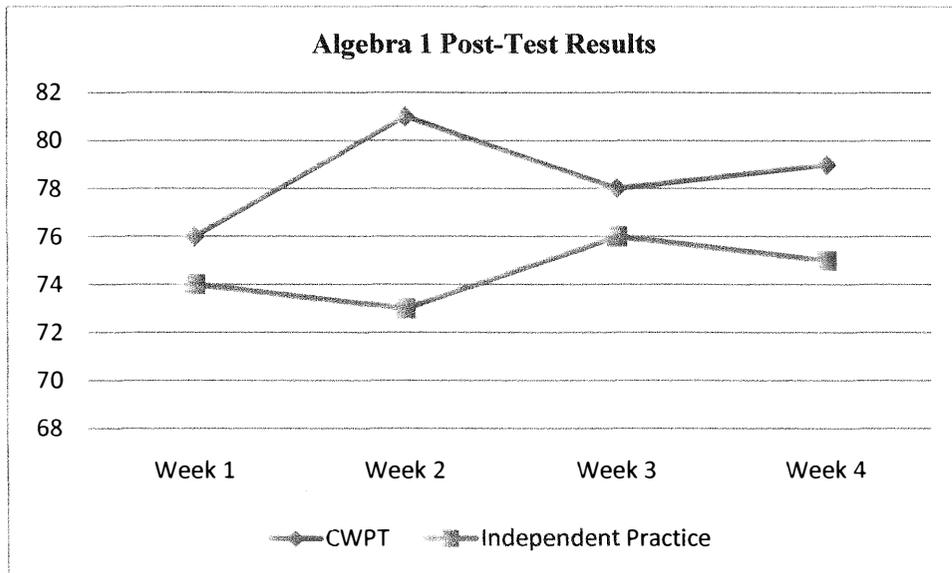
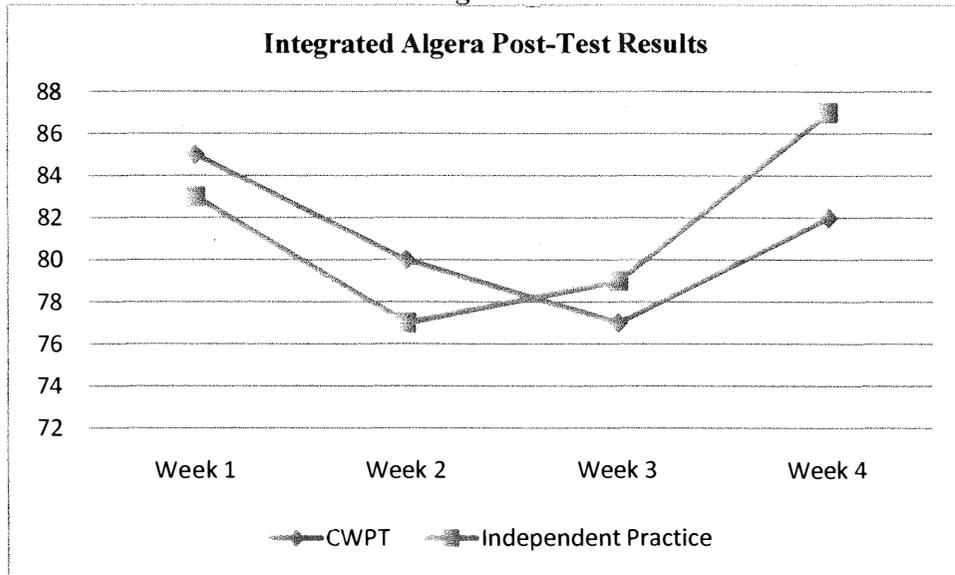


Figure 4



A five-point Likert scale survey was analyzed to answer the second question. A total of 36 students that practiced CWPT completed the survey. Nine of the students in the CWPT classes did not complete the survey since they were absent on the day it was given in class. Sixty-six percent of students agreed or strongly agreed that they liked using class wide peer tutoring in class, while eleven percent remained undecided. Although many students enjoyed CWPT, only 41 percent of students agreed that CWPT helped them learn the class material, while 28 percent disagreed. The remainder was undecided. Twelve percent of students stated they were not happy with their partner(s) they worked with in class. Many of these were the same students that disliked this strategy. For complete results refer to Figure 5.

Figure 5
Likert Survey Results

	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
1. I enjoyed using class wide peer tutoring in class.	22%	44%	11%	6%	17%
2. I wish we could use class wide peer tutoring in my other classes.	17%	50%	11%	6%	17%
3. I was not happy with the partners I was paired with.	6%	6%	33%	44%	11%
4. I feel that using class wide peer tutoring helped me learn the class material.	11%	30%	33%	22%	6%
5. I would not like to use class wide peer tutoring again in class.	17%	17%	17%	33%	17%
6. I worked well with the partners I was paired with.	11%	50%	11%	17%	17%
7. If I was a teacher, I would use class wide peer tutoring in my classroom.	6%	50%	11%	17%	17%
8. I do not feel like class wide peer tutoring helped me learn the material any better than working on it independently in class.	17%	17%	30%	22%	17%

Conclusions

The observations that I gathered from the classes using CWPT, helped me determine the students' time on task and quality of work. I listened to the groups up close and from afar while they were working in their assigned pairs. Many of the groups did a good job of staying on task. Some of the groups got off task, but continued working as they saw me approaching. There was one student in particular that normally refused to work in class and kept his head down. I noticed the most drastic change in this student as he accomplished a lot more through CWPT. I was surprised by the conversation and questioning that developed from the CWPT pairs. Many times throughout the four weeks, a pair would call me over because they could not decide who was correct on a problem. Each student would provide their mathematical explanation and we would find the correct answer together. This helped the students develop a better understanding of the class material. This process also helped me as a new teacher, to find the misconceptions in my students' thinking.

From the results that I received in study, I will occasionally implement class wide peer tutoring in my algebra classes. The test scores showed about equal gains versus independent practice and the majority of students enjoyed using this learning strategy. I would hope to use this strategy as a way to reach different learning styles in my classroom. The one downfall to using CWPT is the amount of preparation that is needed. It is much more time consuming to make keys, train students and monitor progress than to assign an independent practice assignment.

This study had some major limitations due to time constraints and the

resources I had immediately available to me. The first major limitation was the sample of students that was used. This study was completed with a small sample size. Due to my instructional schedule, I only teach two classes that fit the targeted population for each class. The data that I collected would be more reliable if the control group and the experimental group each contained at least thirty students. Also, this study is specific to the students in the rural district that I teach. This study would be able to be generalized to the greater population of algebra students if it contained samples of students from suburban or urban school districts as well.

A second limitation was the lack of time to effectively implement the CWPT strategy. I devoted about 10 minutes to explain and model the CWPT procedures in class. Due to the minimal training, some students were unsure what to do. Greenfield and McNeil (1987) noted that “clear expectations and training of the tutors was necessary for success.” In a future study, at least a whole class should have been devoted to effectively train students on CWPT before implementing it as an activity.

A final limitation was the reliability of the pretest and posttest. I have no data to see if I receive consistent results year to year. Additionally, I was the only person that graded the exams. Reliability would have been increased if I had the time to have a coworker re-grade all the exams.

A future study could look more in depth at the benefits of CWPT for inclusion students in the algebra classroom. Since this was not the focus of my study, I am unable to make any conclusions from my observations. It may also be helpful to redo this study, but let students pick their own partners. It would be helpful to see if the

students' attitudes towards using CWPT became more favorable. Also, if they felt they worked as well with a partner that they picked, rather than was assigned.

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Appendix

Name: _____
Test 1

Date _____
Integrated Algebra

- 1.) Given: Set A = {a, b, e, j, m}
Set B = {b, c, d, e, f}

- a) List the union of sets A and B.
b) List the intersection of sets A and B.

- 2.) a) Solve the following inequality: $17x - 2x > 5(x - 4)$

- b) Graph the solution from part a on a number line.

- 3.) The sum of three consecutive odd integers is -75. What are the integers?

- 4.) Simplify:

a. $\frac{3x^2 + 6x}{3x}$

b. $(2x^4)^3$

- 5.) Factor the following expressions completely.

a) $4x^2 - 48x$

b) $3x^2 + 18x + 24$

Name: _____
Test 2

Date _____
Integrated Algebra

Answer the following questions showing all necessary formulas, diagrams and work. Each question is worth 4 points.

1.) a) What is the product of $\frac{x^2-4}{21}$ and $\frac{14}{2x+4}$ expressed in simplest form?

b) What is the sum of $\frac{y}{6}$ and $\frac{4}{2y}$ expressed in simplest form?

c) Solve for x: $\frac{5}{x} = \frac{x+13}{6x}$

2.) a) Express $5\sqrt{72}$ in simplest radical form.

b) Express $\frac{6\sqrt{32}}{2}$ in simplest radical form.

c) Find the sum of $\sqrt{27} + 6\sqrt{3}$.

3.) A 25 ft ladder is leaning against a building so it makes a 65 degree angle with the ground. How high on the building does the ladder reach?

4.) Find the length of side CE in the triangle below.

Name: _____
Test 3

Date _____
Integrated Algebra

Answer the following questions showing all necessary formulas, diagrams and work. Each question is worth 4 points.

1.) Write an equation for the line that passes through the points (2, -3) and (6, 4).

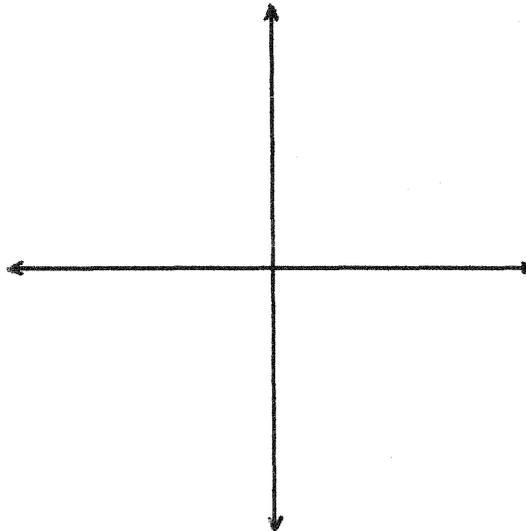
2.) Solve the following system of equations algebraically:

$$5x + 2y = 48$$

$$3x + 2y = 32$$

3.) Draw and label a sketch for a line with each of the following slopes: positive, negative, undefined, zero.

4.) Graph the equation $y = x^2 + 3x + 2$ on the axis below and determine the roots.



5.) The table below shows a frequency distribution of runner's ages in the Rochester marathon.

Age Group	Total
0-19	2
20-39	22
40-59	13
60-79	9
80-99	1

a) Complete the accompanying **cumulative** frequency table using this data.

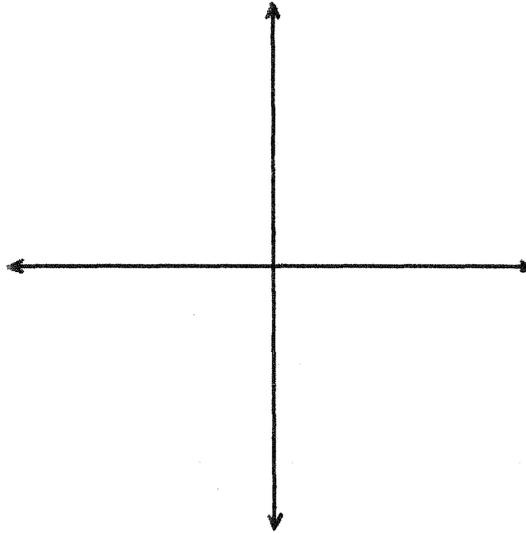
Age Group	Total
0-19	
20-39	
40-59	
60-79	
80-99	

Name: _____
Test 4

Date _____
Integrated Algebra

Answer the following questions showing all necessary formulas, diagrams and work. Each question is worth 4 points.

- 1.) Graph the equation $f(x) = 2^x$ on the graph below.



- 2.) State the domain and range of the graph $y = 13x - 21$.
- 3.) Sarah rolls 2 dice. What is the probability she will roll a six on her first roll and a 4 on her second roll?
- 4.) Sports boosters is determining if they should spend money on a new football field or soccer field.
- Give an example a group they could survey that would have bias.
 - Give an example of a group that would not have bias.

5.) A kid's meal at a fast food restaurant has a choice of a hamburger, cheeseburger or chicken nuggets as a main course. The choices for sides are French fries or fruit. The choices for drinks are soda, juice or milk.

a) Draw a tree diagram showing all possibilities.

b) How many different kid's meals can a person order?

Name: _____
Test 1

Date _____
Algebra 1

1.) Given: Set A = {a, b, e, j, m}
Set B = {b, c, d, e, f}

- c) List the union of sets A and B.
- d) List the intersection of sets A and B.

2.) Given the set of whole numbers greater than 8 and less than 15.

- a) List the subset of odd numbers.
- b) List the complement of this subset.

3.) a) Solve the following inequality: $17x - 2x > 5(x - 4)$

- b) Graph the solution from part on a number line.

4.) Solve for x: $5p - 1 = 2p + 20$

5.) The sum of three consecutive odd integers is -75. What are the integers?

Name: _____
Test 2

Date _____
Algebra 1

Answer the following questions showing all necessary formulas, diagrams and work. Each question is worth 4 points.

- 1.) Factor the following expression completely:

$$3y^2 + 6y - 24$$

- 2.) Find the solutions of the following equation.

$$4x^2 - 25 = 0$$

- 3.) What is the product of $\frac{x^2-4}{21}$ and $\frac{14}{2x+4}$ expressed in simplest form?

- 4.) Solve for x: $\frac{n}{2} - 3 = \frac{n}{5}$

- 5.) Sarah bought a 16oz bottle of shampoo for \$3.99. Julie bought a 20oz bottle of the same shampoo for \$5.29. Who got the better deal? (Show your work!)

Name: _____
Test 3

Date _____
Algebra 1

Answer the following questions showing all necessary formulas, diagrams and work. Each question is worth 4 points.

1.) What is the product of $\frac{x^2-4}{21}$ and $\frac{14}{2x+4}$ expressed in simplest form?

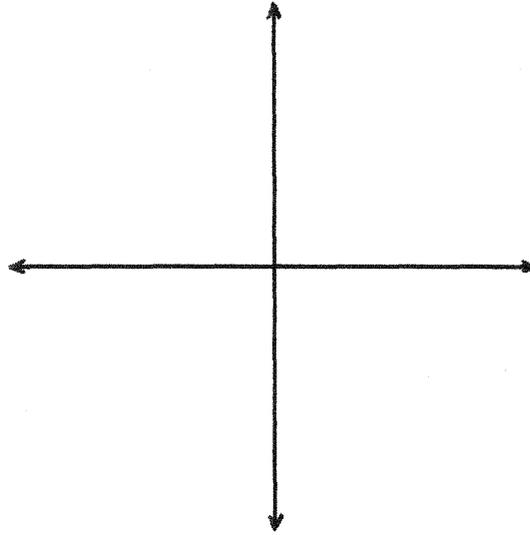
2.) Express the following in simplest form: $\frac{3x+9}{x^2+3x+3} \div \frac{x+3}{x^2-1}$

3.) What is the sum of $\frac{y}{6}$ and $\frac{4}{2y}$ expressed in simplest form?

4.) Solve for x: $\frac{n}{2} - 3 = \frac{n}{5}$

5.) Sarah bought a 16oz bottle of shampoo for \$3.99. Julie bought a 20oz bottle of the same shampoo for \$5.29. Who got the better deal?

5.) Graph the equation $y = -2x + 6$ on the graph below.



This is a survey to find out your perceptions of class wide peer tutoring. Read each statement below and circle the one that best fits your views. You do not need to put your name on this survey.

1. I enjoyed using class wide peer tutoring in class.	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
2. I wish we could use class wide peer tutoring in my other classes.	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
3. I was not happy with the partners I was paired with.	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
4. I feel that using class wide peer tutoring helped me learn the class material.	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
5. I would not like to use class wide peer tutoring again in class.	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
6. I worked well with the partners I was paired with.	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
7. If I was a teacher, I would use class wide peer tutoring in my classroom.	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
8. I do not feel like class wide peer tutoring helped me learn the material any better than working on it independently in class.	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree