

**THE IMPACT OF PEER TUTORING STRATEGIES ON STUDENT LEARNING IN
SOCIAL STUDIES**

by

Scott T. Costantini

A Master's Thesis/Project Capstone
Submitted in Partial Fulfillment
of the Requirements for the Degree of
Master of Science in Education
Curriculum and Instruction; Inclusive Education
Department of Curriculum Instruction
State University of New York at Fredonia
Fredonia, New York

May, 2015

State University of New York at Fredonia
Department of Curriculum and Instruction

CERTIFICATION OF THESIS

We, the undersigned, certify that this project entitled THE IMPACT OF PEER TUTORING STRATEGIES ON STUDENTS' LEARNING IN SOCIAL STUDIES by SCOTT T. COSTANTINI, Candidate for the Degree of Master of Science in Education, Curriculum and Instruction; Inclusive Education, is acceptable in form and content and demonstrates a satisfactory knowledge of the field covered by this project.

[Redacted Signature]

Guang Yu Fan, PhD.
Master's Capstone Advisor
EDU 691 Course Instructor
Department of Curriculum and Instruction

5/11/2015
Date

[Redacted Signature]

Robert Dahlgren, PhD.
Department Chair
Department of Curriculum and Instruction

5/12/2015
Date

[Redacted Signature]

Dean Christine Givner, PhD.
College of Education
State University of New York at Fredonia

5/15/2015
Date

THE IMPACT OF PEER TUTORING STRATEGIES ON STUDENT LEARNING IN SOCIAL STUDIES

ABSTRACT

This study investigated how Class Wide Peer tutoring (CWPT) impacted student knowledge and students' ability to better relate course material to historical themes in an 8th grade social studies classroom. Located in an urban school in Western New York, the classroom was composed of 18 students, eight males and ten females. The mixed method study sought to answer the following central research questions: What effect does CWPT have on students' academic performance in social studies measured by weekly vocabulary quizzes? What effect does CWPT have on students' ability to link content to one another using a common theme? Is there a difference in students' test scores when CWPT is combined with a group oriented motivator compared to a team oriented motivator? What are student's perceptions of the effectiveness of CWPT and how do these perceptions relate to the finding of the study? Using a mixed method single baseline design, weekly quizzes were given at the end of each intervention for seven weeks. Findings demonstrated that CWPT had a positive impact on student's content knowledge and on a student's ability to link course content to historical themes. CWPT was also found to be positively correlated with the academic performance of the 8th grade student's social studies measured by the weekly quizzes. Findings concluded that there was no statistically significant difference between the group oriented motivators and the team oriented motivators.. The student's response on a Likert scale-based survey showed that the majority of students believed they were learning more because of CWPT, which is consistent with the data collected during the interventions.

Table of Contents

Introduction.....	1
Literature Review.....	3
Introduction.....	3
Effectiveness of Peer Tutoring on Academic Performance.....	4
Class Wide Peer Tutoring.....	8
Hybrids.....	13
Discussion of Literature.....	18
Methodology.....	20
Overview of Research Method.....	20
Participants and Setting.....	21
Study Design.....	21
Data Collection.....	23
Data Analysis.....	24
Results and Interpretation.....	25
Overall Assessment Data.....	26
Vocabulary Assessment Data.....	28
Themes Assessment Data.....	30
Survey Data Analysis.....	33
Discussion and Conclusion.....	36
Implications for Practice.....	40
Limitations/Future Research.....	41
References	43

The Impact of Class Wide Peer Tutoring Strategies on Student Learning in Social Studies

Introduction

Within the ever growing content area of social studies, students are expected and required to relate historical events to one another through several different overarching themes (New York State Common Core Social Studies Framework, 2013). In fact, high school students in New York State are required to answer a thematic essay question on both the U.S. history regents and the global history regents test. This requirement can make or break students who struggle making connections between content. A disconnect in content and theme can be caused by a variety of different issues, whether it be a lack of vocabulary and/or content knowledge, lack of prior knowledge, learning disabilities, lack of reading comprehension skills, and/or a lack of motivation from the students themselves. The National Assessment of Educational Progress (NAEP) found that in 2010, 20% of fourth graders, 17% of eighth graders, and 12% of 12th graders performed at or above the proficient level in social studies (Institute of Educational Sciences, 2010). That means that at least 88% of the remaining 12th graders scored below where they should score. A large portion of every social studies class is content vocabulary. Students who struggle with understanding certain vocabulary will struggle in relating content that they do not understand to overall themes in history. In this age of increased teacher accountability, teachers are wondering what strategies are proven to be successful in reaching levels of achievement, meeting the needs of a changing student population, and the feasibility of implement in a classroom with limited technology (Harris & Harrington, 2006; Maheady & Gard, 2010).

This research study used explanatory sequential mixed methods to explore the impact of class wide peer tutoring (CWPT) on students' content knowledge and ability to make connections between content in a classroom of 18 middle school social studies students in a urban school in Western New York. CWPT uses the basic student tutor and tutee model, while adding a game component into the intervention. Students are placed into team and compete against the other team to earn more points, which are earned by correctly responding the tutor questions. The questions that this research study sought to answer are: What effect does CWPT have on students' academic performance in social studies measured by weekly vocabulary quizzes? What effects does CWPT have on students' ability to link content to one another using a common theme? Is there a difference in students' test scores when CWPT is combined with a group oriented motivator compared to a team oriented motivator? What are students' perceptions of the effectiveness of CWPT? How do their perceptions relate to the findings of the study?

As a quick overview, a group oriented motivator provides a reward for the whole class when a goal is reached whereas a team oriented motivator provides a reward for the team that reaches the goal first. A group oriented motivator provides everyone with a reward, thus causing the class to work together while the team oriented motivator puts the class against itself to beat the other team. Both have their positives and negatives, although those will vary with each different classroom environment.

Research suggest that students who are enrolled in a CWPT study, in a variety of different subjects (i.e., math, reading, science, social studies, general music), acquired skills faster, retained more information, and made greater advances in academic achievement when compared to traditional instructional strategies (Kamps et. al., 2006; Veerkamp, Kamps, & Cooper, 2007; Lawson and Trapenbury, 2012; Spencer, Scruggs, & Mastropieri, 2003). Based

on the existing research the hypotheses of this current study is that CWPT will have a positive effect on students' academic performance in the area of content knowledge and vocabulary in social studies. There is however, a lack of data to make a definite conclusion on whether CWPT will impact students' ability to make connections within the content in either a positive or negative light.

This research study attempted to fill the gap in the existing literature by implementing a seven week study in an 8th grade middle school classroom. Through the implementation of CWPT and the use of weekly quiz data focused on assessing a student's ability to connect content to overall social studies themes, this study aimed at exploring the impact CWPT would have on students' ability to connect content to themes in social studies. Findings from this study would be significant since most of the data collected on CWPT focuses on vocabulary, reading, and math facts. Very few studies have looked at the effect of CWPT on higher order thinking processes.

Literature Review

This literature review examines the effects of peer tutoring on students' content knowledge, motivation, and participation in different academic subject areas in an effort to discover which tutoring model is best suited to improve students' content knowledge in a Social Studies classroom. While reading through the following studies on peer tutoring, my focus will be on those studies that improve a student's vocabulary, primarily in social studies. This literature review starts by defining what peer tutoring is. It future explains the basic peer tutoring models, including the CWPT and the mixed peer tutoring or what the researcher coined the term "hybrid" peer tutoring strategies. A discussion of research-based recommendations for educators who wish to improve their students' academic performance in Social Studies is also included.

Definition of Peer Tutoring

According to Scruggs, Mastropieri, and Marshak (2012), peer tutoring is the instructional strategy where students are trained on how to work in pairs with their partner to improve their overall knowledge. They learn to use tutoring materials, take turns as the tutor and the tutee, ask the questions appropriately, and deliver feedback in a positive manner. In peer tutoring, students practice content information in tutoring pairs rather than whole class learning. This important structural difference is what allows for considerable flexibility in individual peer instruction (Scruggs, et al., 2012). Peer tutoring allows students to proceed with the content material at their own pace. It also provides separate time for the individual mastery of each student in the tutoring pair. If one student has mastered the topic faster than the other, that individual could stay in the role of tutor for a longer period until the tutee develops a better understanding of the material.

One way that researchers measure the effectiveness of Peer Tutoring on academic achievement is by administering a pre-test before the intervention and post-test after the intervention (Scruggs, et al., 2012). Other data sources used to measure effectiveness include teacher led progress monitoring and the student's own performance rating.

Effects of Peer Tutoring on Academic Performance

Peer tutoring is briefly defined as a system of instruction in which students help one another understand the material and learn by teaching (Goodland and Hurst, 1989). The term "peer" refers to an individual with the same status or near status of the individual being tutored, which in most cases is not the teacher or professor. Its first recorded use came about in the late 1700's in England. The superintendent of a military male asylum, named Andrew Bell, began using it to better educate his male students and to save money for his school whose budget faced

serious problems. Since then, it has been adopted and used for different purposes all throughout the world (Goodland and Hurst, 1989).

Scruggs, Mastropieri, and Marskak (2012) believed that peer tutoring helped students with and without disabilities outperform students in traditional teacher led instruction on both target and non-target items. This study was composed of 133 students from ten inclusive middle school social studies classes who were randomly assigned to either traditional or experimental instruction. After 18 weeks of instruction on seven different U.S. history units, pre and post data revealed that students in the experimental condition gained significantly more than students in the traditional instructional environment. The researchers also suggested that it was more successful due to parental training and involvement in the tutoring process at home as well as in school.

In another peer tutoring study, Calhoon and Fuchs (2003) measured the effects of peer-assisted learning strategies or PALS and curriculum-based measurement on academics in mathematics of secondary students with disabilities. Ten classes with 92 students in grades 9 through 12, who were all significantly below grade level and received math instruction in self-contained resource rooms, participated twice weekly, in this 15 week, mixed method study (Calhoon & Fuchs, 2003). Classrooms were randomly assigned to PALS or the baseline self-contained resource room. The results showed that students who participated in the PALS classrooms improved their computation math skills more than those students in the baseline environment, although no significant difference was found in the understanding of concepts and application of math skills between the two groups (Calhoon & Fuchs, 2003). Students rated PALS highly on a questionnaire. They found PALS helpful, liked using PALS, and would like to use it again in the future.

Fuchs, Fuchs, and Kazdan (1999) in similar study examined the effects of PALS on students' literacy development and beliefs about reading in secondary-level special education classrooms. Nine separate classrooms, grade 2nd through 6th, were assigned to either a PALS treatment or general teacher-led instruction for a 16 week study. When the pre and post treatment quiz data were compared, it was discovered that students who participated in the PALS classrooms grew more on reading comprehension, and had more positive beliefs about working hard to improve reading (Fuchs, Fuchs, & Kazdan, 1999). Surprisingly, they did find that students in both treatment groups grew comparably on reading fluency, and they reported similar beliefs about being and wanting to become better readers. While this study focuses on mainly elementary level students, it is interesting that while students using PALS improved their understanding of what they read, they did not improve their ability to read it more fluently (Fuchs, et al., 1999). It would seem that understanding and knowing more words would coincide with a greater increase in fluency rate as well.

In some situations peer tutoring has been deemed more effective than other better known instructional interventions, such as guided notes and web quests. Mastropieri, Scruggs, Spencer, and Fontana (2003) performed a study where they compared qualitative and quantitative reading comprehension outcomes associated with peer tutoring versus teacher-directed guided notes in a world history class. The participants were 16 high school students with mild disabilities from a rural school district. Findings showed that students who participated in peer tutoring significantly outperformed those students who participated in teacher-led guided notes on three chapter exams as well as an end of the year exam (Mastropieri, et al., 2003). While there were no significant difference in gains between the two strategies on measures of reading fluency, students in the tutoring condition were able to write better summary sentences and describe the comprehension-

foster strategy steps. In addition, Mastropieri, Scruggs, and Graetz (2003) wrote a review of the current literature in the field discussing research on different reading comprehension instructional strategies in different situations with secondary students. The authors looked at peer tutoring research in remedial reading classes, English class, social studies class, and chemistry finding that in many situations tutoring saved class time, helped to facilitate learning of conceptually challenging content, and was shown to be effective with a wide variety of ages and subjects (Mastropieri, et al., 2003).

Peer tutoring has also been used in correcting unwanted off-task behaviors. Lawson and Trapenbery (2012) developed and implemented a research study on three, 8- to 10- year old students in a self-contained 3rd/4th grade classroom. In this study the tutors were trained to accurately present “learn units”, which are the antecedent, behavior, and consequence. During tutoring sessions students were expected to present an antecedent, then record the correct and incorrect responses, and finally deliver appropriate consequences (Lawson & Traenbery, 2012). Results showed an increase in socially approved behavior and an accurate implementation of learn units by the tutoring dyad. This led to a decrease in social disapprovals after the introduction of rule-governed peer tutoring, not just in those three individuals, but in the entire class. In another study, conducted by Franca, Kern, Reitz, and Deborah (1990), eight behaviorally disordered middle school males, ages 13 to 16, were placed in a peer tutoring model to observe the effects of the relationship between tutor and tutee, as well as its effects on the students' academics. The results of the study found that the students who were tutoring, positively increased their ratings in their self-concept scale more than those students who were being tutored. Both groups saw an increase in academic performance, improvement in attitudes, and significantly increased positive social interactions while decreasing negative social

interactions, just as in Lawson and Trapenbery's (2012) study (Franca, et al., 1990). This study highlights the importance of the distinction between tutor and tutee and different effects that each position can hold for those students placed in those roles.

When looking for different research studies on peer tutoring, most studies focus on the subjects of English and math, but Darrow and Gibbs (2005) wanted to see the effect that peer tutoring had on a general music classroom. The participants included 104 5th graders, ranging from ages 9 to 11 years old, at two elementary schools in a Midwestern college town. The students took pre and post tests before and after the implementation of a peer tutoring model in order to measure the impact of peer tutoring on students' abilities to determine key signatures, bass and treble clef, spaces, and appropriate ledger lines. The data revealed that peer tutoring greatly improve students' knowledge and academic scores in the musical content of flat and sharp key signatures, students are capable of teaching one another musical concepts, and that students are capable of learning themselves as they teach one another (Darrow & Gibbs, 2005). While this study did not compare peer tutoring to teacher-led instruction in general music, it did show how peer tutoring strategies can be fit into multiple subject areas and covers a wide array of content.

Class Wide Peer Tutoring

Class wide peer tutoring uses the basic idea of peer tutoring while also incorporating a group or team contingency motivator. Based off of the Juniper Garden's Children's Project, class wide peer tutoring model students are placed in dyads and use the same tutor/tutee model as in peer tutoring pairs (Arreaga-Mayer, 1998); however, in class wide peer tutoring (CWPT) these pairs are assigned to one of two teams in the class. These teams are kept for a pre-determined

time, which usually resides between two to four weeks (Maheady, et al., 2004; Maheady & Gard, 2010). Once each student has a paring and a team, the students begin the tutoring session and keep score. Points are earned on an individual basis for correct responses, corrections, and proper procedures during the tutoring time. When finished, students then pool their points into the team total. The team with the most points at the end of the allotted time wins a pre-determined prize or bonus of the student's choice (Maheady, Harper, Mallette, & Karns, 2004). Each CWPT model has different specifics which inherently changes some of the general procedures that were discussed above.

Harper, Maheady, and Sacca (1988) studied the effects of CWPT on students weekly social studies quiz scores. Fifty 10th grade students in a large urban school in Western New York were measured using a multi-baseline, ABAB design (Harper, et al., 1988). The results of the study showed that CWPT immediately increased weekly test scores of both mildly handicapped and nondisabled students. When CWPT was removed, the students' academic performance dropped again. The implementation of CWPT did prove to be more effective for students who were classified as mildly handicapped (a gain of 23.15 points) than those students who were nondisabled (a gain an average of 21.66 points). In addition to the positive academic gains, there were also observed social improvements during the implementation of CWPT versus the baseline teacher-led instruction (Harper, et al., 1988). This study brings up concerns with the use of a public scoring system, the use of points, and the modifications that could've been made to the error correction procedure within the research.

Mortwest, et al. (1999) also investigated the academic effects of CWPT on students classified with mild mental retardation (MMR) and their typical peers in an inclusive classroom setting. Unlike the previous study, this study focus on the spelling test scores of four students

with MMR who were integrated into two general education elementary classrooms during spelling instruction (Mortwest et al., 1999). Like Harper, Maheady, and Sacca's (1988) study, Mortwest et al. (1999) found that CWPT increased the four students spelling accuracy and their level of engagement when compared to the traditional teacher-led instruction. Both of these studies show that CWPT can be an effective study for improving students with special needs academics.

In Maheady, Harper, Mallette, and Karns' (2004) study, 10 pre-service teachers were given instructions on how to use the Juniper Gardens CWPT model. These 10 pre-service teachers then implemented CWPT in their cooperating teacher's classrooms with the goal to try and improve students' scores on spelling tests. This study included 207 second through fourth grade students who were given 20 new spelling words each week (Maheady, Harper, Mallette, & Karns, 2004). They had 20 minute CWPT sessions everyday on those weekly spelling lists. All of the pre-services teachers reported that the use of CWPT resulted in higher spelling grades on weekly post-tests for all pupils. Behavioral checklists also confirmed that students had improved on-task behavior as well as increased active engagement during instruction (Maheady, et al., 2004).

Another study that focuses on CWPT is implemented by Mastropieri se. et al.(2006). This study observed the outcomes of CWPT on students with mild disabilities in inclusive 8th grade science classrooms. They looked at 13 classrooms of 213 students in a 12 week randomized field trial design and found that collaborative hands-on activities statistically facilitated learning of middle school science students not only on post-tests, but also on high stake tests as well (Mastropieri et. al., 2006). Students also indicated on surveys that they enjoyed using this style of lesson compared to their previously use of teacher-led instruction (Mastropieri et. al., 2006).

These next couple studies are some exceptions to the rule of CWPT. Allsopp (1997) examined the effectiveness of using class wide peer tutoring (CWPT) in heterogeneous middle school classrooms to teach students in algebra, problem-solving skills. Allsopp (1997), using a classroom comprised of both at-risk and non-risk students, tended to look at whether CWPT could be effective for teaching higher order thinking skills, such as problem solving. By comparing the effectiveness of CWPT with traditional independent student practices, Allsopp (1997) found that both CWPT and independent student practice were effective strategies for helping students to learn beginning algebra problem-solving skills. Neither one of the strategies was proven to be more effective than the other. However, at risk students showed greater growth than students who were not at risk when using both strategies (Allsopp, 1997).

Looking at another study, Ayvazo and Ward (2009) examined the effects of CWPT on the volleyball skills of four 6th grade students. These four students, average to low skilled males and females, were picked deliberately out of a class of 21 middle school students. A multi-baseline design was implemented to measure the impact of CWPT on the number of correct and total trials students performed (Ayvazo & Ward, 2009). The data showed that out of the four students, three of them improved their performance and other one showed no improvement. All of the girls showed increased engagement in the lesson and correct performance in the CWPT sessions. This is another study which provides proof that CWPT can work in non-academic settings, while at the same time showing that not every students will react the same way to the same study. Lessons, activities, and studies must try to be catered to each individual class as best they can.

Another, more recent study conducted by Marshak, Mastropieri, and Scruggs (2011) also compared CWPT with the teacher-led instruction when using materials containing embedded

mnemonic strategies. The participants were 186 students, 42 of which are classified with mild disabilities, who were randomly assigned to the traditional teacher-led instruction or CWPT instruction. Data gathered from in class quizzes and exams showed that classes who used the CWPT intervention statistically outperformed students who were in only basic teacher led instruction classrooms (Marshak, Mastropieri, & Scruggs, 2011).

Spencer, Scruggs, and Mastropieri (2003) investigated the use of integrated explicative strategy instruction in social studies classes using a CWPT format. The study was conducted with 30 middle school students classified as having an emotional and behavioral disorder. After 4 weeks, they found that students scored higher on academic/content tests and demonstrated more on task behaviors while in the tutoring condition (Spencer, et al., 2003). Spencer, Scruggs, and Mastropieri's (2003) was another study which showed positive growth in not just academic performance, but also in helping create a more on task, positive interactive learning environment. Along the same vein, Bowman-Perrott's (2009) study focused directly on how Class Wide Peer Tutoring impacted academics and on-task behavior of students who were struggling with emotional and behavioral disorders in science class. Eleven students ranging from grades 9th - 12th were studied in two separate biology classrooms, both taught by the same teacher. Students participated in CWPT three times a week for 30 minutes a day. After comparing the data from the baseline teacher-led instruction with the CWPT data, Bowman-Perrott (2009) found that students were more on-task and exhibited fewer inappropriate off-task behaviors during CWPT than during the teacher-led instruction. CWPT was also shown to improve academic grades of both low and high-achieving students in biology (Bowman-Perrott, 2009). This study is a great example of how CWPT can be used to improve both classroom behaviors and academic knowledge, whether it was intended to or not.

A slightly different outcome occurred in a study conducted by Lo (2004). In this study, Lo (2004) created a hybrid by combining Total Class Peer tutoring (also referred to as Class Wide Peer tutoring) with an interdependent group oriented contingency to see the effects on student's performance in Social Studies and off-task behavior. The research was completed using eight general education students from a 4th grade classroom (Lo, 2004). The findings concluded that while both strategies improved seven out of the eight students' academic grades and classroom behaviors, there was no clear difference between the effect sizes that either class wide peer tutoring or interdependent group oriented contingency (IGOC) had on the students (Lo, 2004). The author cited that perhaps the students were not all motivated by the chosen activity or prize and that in the future it will require more student input before choosing the IGOC.

Hybrids

While CWPT is a hybrid of peer tutoring and a group motivator, there are many other research studies that delve into improving and/or customizing CWPT by adding different types of motivational and instructional strategies. The first hybrid study by Hughes and Fredrick (2006) looked at combining CWPT with constant time delay (CTD) to increasing learning of vocabulary by students with learning disabilities in general education. Constant time delay is a response-prompting procedure that provides scaffolding of the correct response until the student can respond independently without using the scaffolding (Hughes & Fredrick, 2006). A multiple probe design was set in place, which used an A, B, and C set, for a classroom of 19 middle school English students. The results of the study showed an increase in the students tests scores from baseline to CWPT (A to B) and an even larger increase from CWPT to the CWPT plus the CTD (B to C) (Hughes & Fredrick, 2006). Students indicated that they thought the strategies were effective and that they enjoyed being on a team and working cooperatively with other

students. Hughes and Fredrick (2006) noted that the success that the students were having with the strategy seemed to provide enough intrinsic reinforcement for the students to continuing using it on their own.

Hawkins, Musti-rao, Hughes, Berry, and Mcguire (2009) conducted a similar study using the same type of CWPT by adding in a randomized interdependent group oriented contingency (IGOC). This study was implemented in a 5th grade general education classroom of 26 students with the intention of improving multiplication fact fluency in mathematics (Hawkins et. al., 2009). The researchers implemented randomized IGOC by having the classroom teacher choose the contingency component that would be watched for every class. There were two options for her to choose from, the first was correct tutoring behavior and procedures and the second option was 100% correct on all of the math facts. At the beginning of each class the teacher also choose a number between 15 and 26 at random, which represented the number of students in the classroom who needed to display one of the two chosen options in other for the whole class to get the prize/motivator on that given day (Hawkins et. al., 2009). Hawkins et. al. (2009) found that CWPT paired with randomized IGOC improved students' academic performance on math facts. While there was no conclusive proof to show that CWPT paired with randomized IGOC was more effective than CWPT and its normal contingency motivator, it did prove to be an effective alternative to the basic CWPT model.

Another study which incorporates a hybrid model of CWPT was performed by Madrid, Canas, and Ortega-Medina (2007). They implemented a single subject design study using 16 Hispanic students to assess the overall effectiveness of three different intervention strategies on students spelling accuracy and test scores (Madrid, Canas, & Ortega-Medina, 2007). Two of the three intervention strategies are based on the Juniper Gardens CWPT model, whereas the third

strategy is simply a teacher-led instruction baseline. The other two strategies are competitive team peer tutoring and cooperative team peer tutoring. Competitive team peer tutoring has students work in pairs to accumulate points for the entire team, similar to CWPT, whereas cooperative team peer tutoring has students working together as a class to accumulate points for all participants (Madrid, Canas, & Ortega-Medina, 2007). The findings proved that the two peer tutoring strategies exceeded the teacher-led condition in every aspect of the study, although between the two peer tutoring strategies, students in the cooperative tutoring achieved the greatest gains in test scores and improved accuracy on spelling tests (Madrid, Canas, & Ortega-Medina, 2007). The study showed that students working together to achieve a common goal was more effective than making students work against one another.

This next research study looks at the effect that CWPT with or without reinforcement has on academic responding, content, achievement, interest, and reported project experience (Cheung & Winter, 1999). Seventy seven ethnic Chinese students attending a Hong Kong secondary school participated in either one of two settings, CWPT plus reinforcement or CWPT without reinforcement, to investigate the impact on spelling performance and intrinsic interest in lower secondary integrated science. Results showed that both CWPT models led to significant gains on spelling tests and to an improved attitude on the program; however, the CWPT plus reinforcement achieved greater gains in learning and responding than the CWPT without reinforcement (Cheung & Winter, 1999). When looking at my own study, I will need to consider the effect that reinforcement has on student achievement in CWPT.

Throughout my research I have come across a couple of studies that incorporate technology with peer tutoring to create a different kind of hybrid. The first of these studies was implemented by Mackiewicz, Wood, Cooke, and Mazzotti (2011). They designed a study that

compared incidental learning of vocabulary words through classroom reading instruction to a combination of incidental learning supplemental with peer tutoring (Mackiewicz, Wood, Cooke, & Mazzotti, 2011). Eight, 8th grade students were trained how to tutor by using a digital recording device with instructional questions that prompted the appropriate response. Findings concluded that while incidental learning in general teacher-led instruction saw some gains, the peer tutoring with audio prompting proved to increase student's vocabulary more than simple classroom instruction alone (Mackiewicz, Wood, Cooke, & Mazzotti, 2011). Another research study that incorporates technology into a peer tutoring model was conducted by Wood, Mustian, and Cooke (2012). In this study the authors compared the effects of whole-word vocabulary instruction and morphograph instruction on students' vocabulary acquisition and generalization through the use of a computer-assisted tutor program. While the study did prove that using a simultaneous treatment design seven out of eight middle school students participants with mild disabilities, acquired higher percentage of vocabulary in the morphograph condition compared to the whole-word condition, the most important aspect of the article for my purposes is to see the use of technology in peer tutoring practices (Mackiewicz, Wood, Cooke, and Mazzotti, 2011).

In this next study Veerkamp, Kamps, and Cooper (2007) investigate the effects of combining CWPT and a lottery system on the reading skills of urban middle school students using novels as the curriculum. Three 6th grade general education reading classes of 71 students under one teacher participated in this multiple probe design study. Students received "raffle tickets" for good tutoring practices and positive on-task behavior, which at the end of every class they were then filled out and placed in a bucket. On Fridays the teacher would draw out five to eight names and they would get to choose a prize out of the prize box (Veerkamp, Kamps, & Cooper, 2007). The authors found that in all of the classrooms CWPT was more effective than

the previous teacher-led instruction for improving both low and high achieving students test score. CWPT combined with the lottery motivator, however, was proved to be more effective than CWPT on its own (Veerkamp, et al., 2007).

The last hybrid CWPT study conducted by Kamps et. al. (2008) also delves into the effectiveness of CWPT combined with a lottery motivator strategy. Kamps et. al. (2008) focused on 975 middle school students in 52 classrooms all between grades 6th through 8th over a three year period. To evaluate the effects of teacher-led instruction vs. CWPT with and without the lottery motivator, the authors implemented a mixed design combining features from both group and single-subject reversal (Kamps et. al., 2008). Subjects included reading, social studies, and science. For each subject the authors incorporated study guides, pre-posttests, fidelity ratings, and observation checklists. The lottery motivator was used in the same general way as it was in the last study (Hawkins et. al., 2007). After three years, the results showed that the use of CWPT combined with lottery procedures resulted in moderate to large effect size for middle school students' improvement in reading and social studies content, whereas in the science classrooms the gain was not as noticeable (Kamps et. al., 2008). The data that they collected analyzed the individual classrooms rather than individual student growth, due to the size of the study. Students who attended urban classrooms improved more than students who went to suburban schools, although both saw a growth of at least 14 points per class (Kamps et. al., 2008). This study provides strong evidence supporting the repeatability and success of the CWPT combined with the lottery motivator over a long period of time.

Discussion

CWPT has proved to be an effective strategy by increasing students' grades, knowledge of content, engagement, and positive behaviors in the classroom. All studies above proved to

increase grades in math, reading, vocabulary, social studies content and English, except for the science classrooms involved in Kamps et. al. (2008)'s study. When thinking about using CWPT for science it makes sense that it wouldn't register as much of a positive impact because there are many different concepts that can effectively be taught and need to be explained through teacher-led instruction in science. Improved engagement and an increase in positive on-task behavior is a common theme in almost all of the above studies, except for in Lo (2004) where a couple students failed to improve their behaviors due to a lack of appropriate motivators.

Some general guidelines have appeared during the overview of this research. The first guideline is to make sure that all students are involved and onboard with the chosen motivator for CWPT before the intervention is implemented. If all of the students aren't motivated by it, such as in Lo's study (2004), then not all students' behaviors will improve. A second guideline is to incorporate parental involvement into the CWPT strategy. Training the students' parents on how to peer tutor, just like in the study of Scruggs, Mastropieri, and Marshak (2012), will increase the likelihood that student will have a partner at home to practice with, thus preparing that child even more for the classroom. The third guideline is the importance and benefit from including some form of technology into the peer tutoring strategy. In Mackiewicz, Wood, Cooke, and Mazzotti's (2011) study and in Wood, Mustian, and Cooke's (2012) study they both used some sort of digital scaffolding to help teach and improve their own students' study habits. The fourth and final guideline for CWPT is that each subject and classroom may need to use a different form/hybrid of peer tutoring. Just like every child is different, so is every classroom. In Kamps et. al. (2008) CWPT combined with the lottery motivator worked well for reading and social studies, but not so well for science. Perhaps a different hybrid would work better for that classroom, such as constant time delay or CTD pairing with CWPT.

After examining a wide variety of studies on peer tutoring and its different variations I have come to a conclusion on what type of peer tutoring would work the best for a Social Studies classroom. Since peer tutoring has been proven to improve student's grades in Social Studies content knowledge and on task behavior this would be the base of the intervention (Scruggs, Mastropieri, & Marshak, 2012). To better motivate students and thus improve student's active engagement the Class wide portion of CWPT should be added to help provide that motivation (Maheady, Haper, Mallette, & Karnes, 2004). In Social Studies, vocabulary is the majority of what students get assessed on, so when Hughes and Fredrick (2006) used Constant time delay (CTD) paired with CWPT and found it to be more effective improving student's vocabulary than with just CWPT alone, it proved to be an important addition to any CWPT intervention. The final addition to a comprehensive intervention plan for a Social Studies classroom would be a lottery motivator. In both studies covered above, the lottery motivator proved to increase students' grade point averages and active engagement in Social Studies (Kamps et. al., 2008; Veerkamps, Kamps, & Cooper, 2007). By adding the lottery motivator, which has been appropriately created with student involvement and motivation in mind, this intervention is complete and now it requires research and testing.

This literature review examined the effects of peer tutoring on students' content knowledge, motivation, and participation in different academic subject areas in an effort to discover which tutoring model is best suited to improve students' content knowledge in a Social Studies classroom. After going through and dissecting over thirty different peer tutoring research studies, it was discovered that class wide peer tutoring combined with the scaffolding used in constant time delay as well as the lottery motivator may be a well suited intervention to help improve students' success in the social studies classroom.

Methods

Overview of Research Design

The research study that was conducted is an explanatory sequential mixed method design, which combines a Quasi-experimental quantitative study using a single-baseline design (ABABAC) with a phenomenology qualitative design in the form of a survey/interview. In this study the quantitative method will come before the qualitative, thus making it an explanatory mixed method design (Johnson & Christenson, 2014). This study is a quasi-experimental quantitative one because this research will not provide for full control of confounding variables due to the fact that it is not use a random assignment of participants.

The purpose of this study was to determine the impact that CWPT may have on student's content knowledge and their ability to make connections among course content in different parts of the course to similar themes. The independent variable for the quantitative portion of the study was CWPT and the dependent variable was the students' content knowledge and ability to make thematic connections between course content measured by weekly quizzes. The classroom where this study was conducted is composed of eighteen 8th grade students, ranging in age from 13 to 14 years old. The school is located in an urban community and the classroom has an ethnic background composed of 17 Caucasian students, and one student of Asian American heritage. Convenient sampling was used for this study, which means that all of the participants in this study were not be chosen at random but rather picked based on the appropriate and required availability of the classroom itself. In this study a single-baseline approach was used, so in this seven week study, the first week or "A" will serve as the baseline by providing data to compare with later data collected by the study. The first intervention or the CWPT plus T.O. motivator was implemented for two weeks. During the third phase or the withdrawal of intervention,

students were taught without CWPT for a week. Next CWPT plus T.O. motivator was reintroduced for another week. The sixth week was a return to the teacher-led baseline instruction. Then the study finished with the implementation of CWPT plus G.O. motivator for one weeks. This type of single-baseline design shows the difference, if any, from regular classroom instruction compared to the intervention of CWPT.

Research Procedures

This study uses the Juniper Garden's model of Class Wide Peer Tutoring to examine the effect of peer tutoring on content knowledge and a student's ability to link content across topics and chapters (Arreaga-Mayer, 1998). While there are several studies that address the topic of CWPT to improve students' knowledge in social studies (Scruggs, Mastropieri, & Marskak, 2012; Lo, 2004), I have yet to find a study that looks at the effect of CWPT on a student's ability to link content to one another, which is what will be required on both their U.S. History Regents and Global History Regents. There are four major components to my interpretation of the Juniper Garden's CWPT Model: (1) weekly competing teams, (2) highly structured tutoring procedures, (3) daily point earning and contingent rewards, and (4) direct practice of functional academic skills. Students were taught to use CWPT during a 40-50 minute training session. Procedures were explained to students and they engaged in a brief role-play. They also received feedback on their use of CWPT procedures. CWPT sessions occurred two times per week for 20 minutes per day, instead of independent seatwork. A typical CWPT session proceeded as follows. On the first day of each week, students took a pretest assessing their prior knowledge of the content. Students were then assigned to two competing teams using a count-off of numbers, 1-4. Partners were then chosen within teams by the students. Teams and partners remained the same throughout that individual tutoring session. For the next 20 minutes, tutor pairs participated in

reciprocal tutoring sessions for equal amounts of time. One began as the tutor and one was the tutee. After 10 minutes, the students swapped roles. Tutors were provided with the content and dictated the questions to their partners. Tutees then said the answer aloud. If the answer was correct, tutors awarded 2 points. If the tutee's answer was incorrect, then tutors provided the correct answer and tutees then said the correct answer to earn one point. When they failed to correct their errors, 0 points were awarded and they moved on to the next question on the list. The goal was to earn as many points as they could in the 10-minute time period. When the time expired, pupils changed roles and followed the same procedures for the next 10-minute interval. While students were tutoring one another, the investigator walked around the room and gave *bonus points* for following tutoring procedures: providing positive and constructive feedback, and other displays of pro-social behavior. At the end of the 20 minutes, students totaled their individual points, including any bonus points, and wrote the total on the top of their papers. Individual points were then totaled into daily team totals that were recorded on the class-tutoring chart. At the end of the week, students took their regularly scheduled assessments with all of their terms for the week, which focused on not only content knowledge, but linking new content to old. Points from the end of the week assessments were added to team totals and a winning team of the one/two week session was identified. Winning team members could choose from a menu of incentives, such as bonus points on their upcoming test, homework passes, snacks, and school supplies. All incentives were created and picked out by the class. For the first two intervention periods the students were playing in teams, but in the third intervention implementation the students were playing as one class, where the students together needed to reach a pre-picked total. Once the students reached that total, they were then awarded the prize as a class. Teams spanned for multiple weeks based on the discretion of the implementing teacher.

During the return to baseline or teacher-led instruction with the absence of the intervention strategy, students were simply given the review sheet at the beginning of the week. Then on Friday, they were asked to take the end of the week assessment piece. This provided the appropriate data to compare the teacher-led instruction with the CWPT intervention. At the end of the intervention, students took a consumer satisfaction survey.

Data Collection

The data for this study was collected in three different situations. After looking at many different studies during my review of the literature that mentioned the problems with student approval of the motivator used (Veerkamp, Kamps, & Cooper, 2007; Lo, 2004), I decided to get the students opinions on what best motivates them to work harder in the classroom. Since a motivator plays a crucial role in the success of this class wide peer tutoring oriented study, I had students fill out a quick interest inventory survey that offers several options for students to choose from and a write in area for additional ideas. Next, weekly data was collected in the form of weekly quizzes at the end of every tutoring week. Each quiz was composed of ten vocabulary/content terms and five thematic answer questions. Every week, including the baseline weeks, data was collected. The final way in which data were being collected in this study was through the use of surveys. After the study was complete, the students were asked to fill out a survey answering several questions based on a 1-5 rating scale. After each question, there was an additional comments section, which allowed students to express themselves on whether or not they enjoyed the intervention, and/or what they would do differently. This feedback was important to the overall study because while the study did not require students to enjoy school and the activities that they were doing, it did make students more likely to participate to their fullest potential.

Data Analysis

The first set of data collected on the study's participants focused on their preference of a group motivator versus the team motivator. Students were provided with a scrap piece of paper to write down what they would like to receive for a prize. Several examples were posted on the board for students to use. These are as follows: Candy, School supplies, Snacks, Homework pass, and free time. This data was used to decide what motivator or motivators would be put in place to best motivate students to participate in the activity. It was important when looking at the data to compare what the students choose with what could be implemented effectively in a classroom setting. The second set of data collected was the heart of the study. The weekly quiz score data was broken down into two categories, baseline (A) vs. intervention (B). To better assess and answer the research questions posed in the beginning of the study, questions #1-10 were separated and assessed differently than questions #11-15. Questions # 1-10 focused on strictly the chapter content that was being covered in the classroom for that particular week/weeks, and it provided data on whether or not Class wide Peer Tutoring had an impact on social studies content knowledge when compared to the same questions in the baseline formats. Questions # 11-15 were used in looking at the impact of Class wide peer tutoring on a student's ability to link currently covered content to content covered in previous chapters. This weekly quiz data was input into a basic Microsoft Excel document. Once all of the data have been acquired, it was then transferred into a MiniTab file where the all of the analyses took place. At the end of the study, students were asked to take a survey that was posted online. With the use of SureveyMonkey.com, students used the classroom set of Ipads to take the survey online.

Results

After a careful and detailed analysis of the quantitative and qualitative data produced by the study, many of the hypotheses were confirmed. The results were gathered in the form of seven weekly assessments in an ABBABAC format with one week per intervention type. The data was then loaded into the MiniTab program, where it was then broken down into the following subsets: Overall average, Vocabulary average, and Theme average. When comparing each one of these subsets to the condition being applied in a general linear model, the p values all proved to be less than 0.05, thus allowing for a more in-depth comparison using the Turkey Method to analyze each condition's grouping information.

The first set of data focused on the Overall score of the weekly assessments, which is the vocabulary portion combined with the thematic portion. As seen in Figure 1.1, the mean score for the overall assessment average improved from the baseline to the CWPT + team oriented motivator intervention by a minimum of 19.30 and at a maximum of 38.82. This highest increase in mean score occurred between the first baseline and the initial introduction of the CWPT + team oriented (T.O.) motivator intervention. The lowest increase occurred between the second baseline and the third CWPT + T.O. motivator intervention. Since the p value was less than 0.05, it showed that the difference in assessment scores between CWPT + T.O. motivator and the baseline teacher-led instruction was significant. This, paired together with the increase in the mean test score from baseline to the intervention, supports the hypothesis that CWPT paired with a Team Oriented motivator has an impact on students' knowledge in 8th grade U.S. history. In addition to this data, it was found that in the overall assessment mean score CWPT + Group Oriented motivator also increased the students mean score by 51.04. This is the highest increase recorded from any baseline to any intervention throughout the research. Using the Turkey Method and comparing the condition to the overall assessment mean scores it was found that the

CWPT + Group Oriented motivator was significantly different than the teacher-led baseline instruction. The CWPT + G.O. motivator was not found to be significantly different from the CWPT + T.O. motivator when compared under the same conditions.

Student's Overall Weekly Assessment Scores

Students	Baseline	CWPT+TO	CWPT+TO	Baseline	CWPT+TO	Baseline	CWPT+GO
1	6	80	87	53	53	20	87
2	27	100	*	47	80	13	93
3	27	93	93	67	*	20	93
4	47	80	87	87	93	67	100
5	40	87	80	53	73	53	100
6	53	100	80	53	100	60	93
7	47	80	93	*	87	47	93
8	33	47	40	33	54	13	93
9	53	93	100	87	93	73	100
10	*	20	13	20	*	27	60
11	73	*	93	*	93	60	100
12	40	60	93	80	74	47	93
13	*	*	73	53	67	20	*
14	67	100	100	80	80	67	100
15	27	*	67	80	80	40	100
16	60	100	100	87	100	73	100
17	47	93	*	33	*	7	87
18	47	100	100	87	100	60	100
Mean Score	43.38	82.20	81.19	62.50	81.80	42.61	93.65

Figure 1.1
 *= Indicates Missing Data

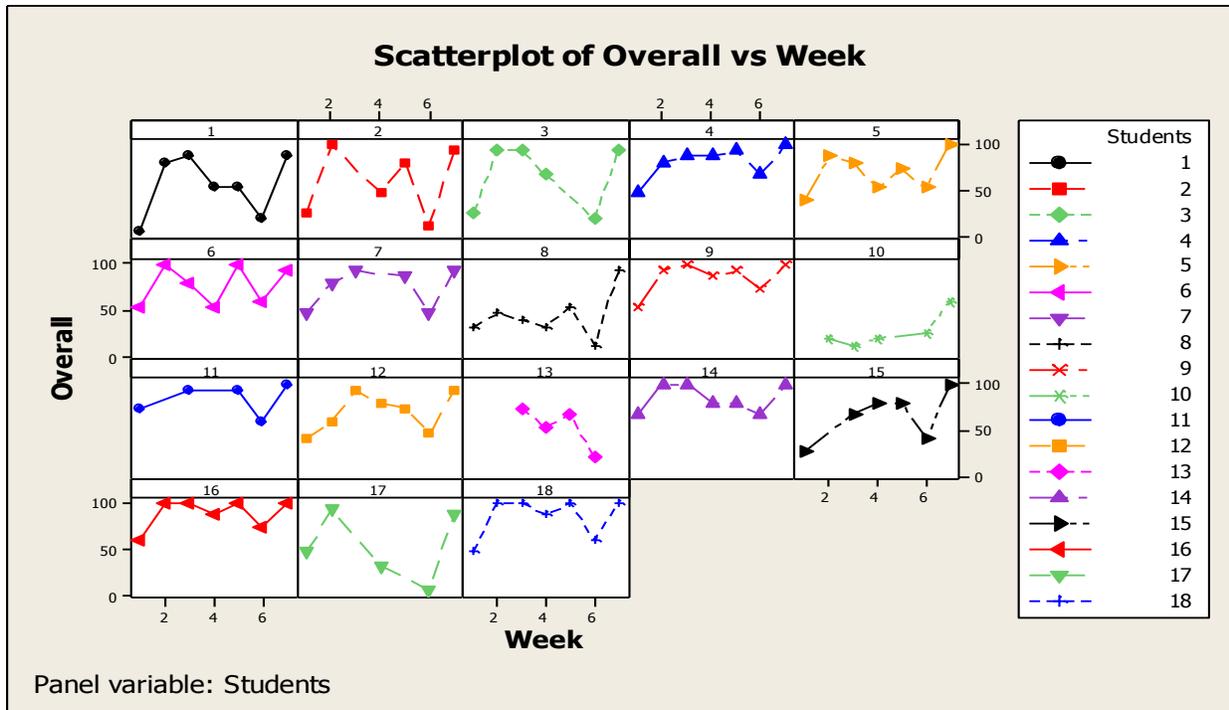


Figure 1.2

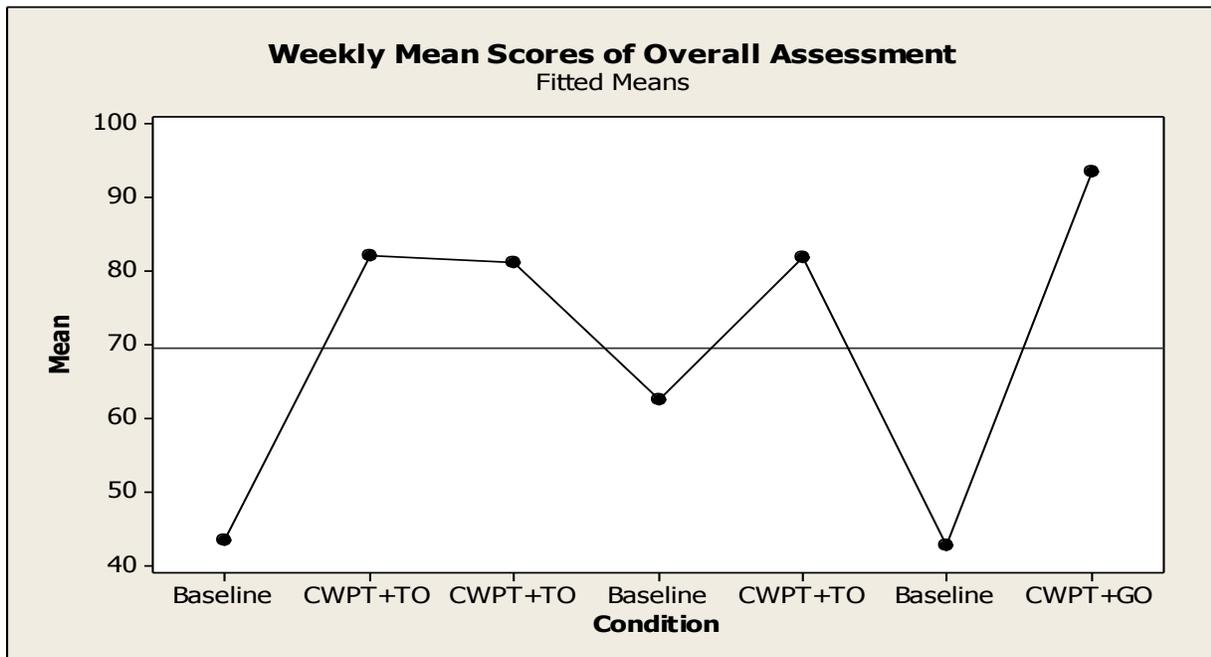


Figure 1.3

When looking at the data in Figure 1.1 and 1.3, it showed a difference with the amount gained from the baseline in the overall mean score with CWPT + G.O. increasing by 51.04, while CWPT + T.O. only improved from baseline at a maximum of 38.82, a difference of at least

12 points. This discrepancy was not enough to be considered significantly different even though there was a minor difference in scores. This might be because of a relation that exists between the type of motivator a class prefers and the one that works most effectively and/or also a lack of data points to compare to the CWPT + T.O. intervention. That being said, the hypothesis that CWPT + T.O. and CWPT + G.O. does improve scores on weekly assessments, does not state that one intervention significantly out performs the other with the overall assessment data.

The data collected for the vocabulary portion of the assessment shows an increase in the mean scores from the teacher-led baseline instruction to CWPT + T.O. motivator. The increase ranges from 23.20 at its lowest, which occurred between the second baseline and the third CWPT + T.O. intervention. 36.29 was its highest, which was between the first baseline and the first CWPT + T.O. motivator. Every transition back into the CWPT + T.O. increased the mean score by at least 23.20. The mean score data for vocabulary when compared to the condition shows there is a significant difference between the mean score of the CWPT + T.O. motivator intervention and the teacher-led baseline instruction. This outcome can also be seen in Figure 2.1

Student’s Vocabulary Weekly Assessment Scores

Students	Baseline	CWPT+TO	CWPT+TO	Baseline	CWPT+TO	Baseline	CWPT+GO
1	10	80	80	50	50	20	90
2	40	100	*	60	100	0	90
3	40	100	90	70	*	10	90
4	40	70	80	80	90	60	100
5	30	80	70	40	60	30	100
6	70	100	70	30	100	40	90
7	50	80	90	*	80	30	90
8	50	70	50	40	60	10	90
9	30	90	100	80	100	60	100
10	*	10	10	10	*	10	50
11	70	*	90	*	90	40	100
12	20	40	90	70	60	30	90
13	*	*	70	50	70	0	*
14	70	100	100	70	90	50	100
15	40	*	50	80	70	30	100
16	50	100	100	80	100	70	100
17	60	90	*	40	*	10	80
18	40	100	100	80	100	40	100
Mean Score	44.38	80.67	77.50	58.13	81.33	30.00	91.76

Figure 2.1
 *= indicates missing data

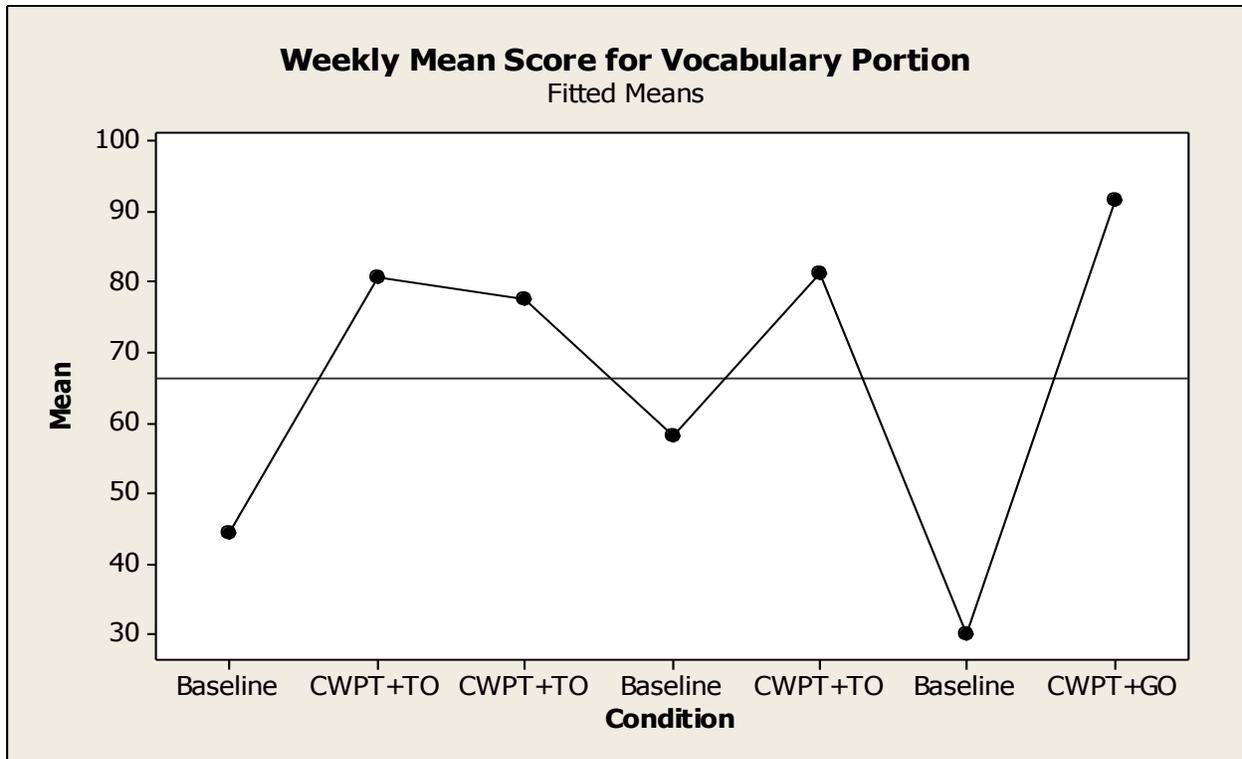


Figure 2.2

In a similar outcome to the overall assessment score, the vocabulary assessment mean score when in the CWPT + G.O. motivator condition also proved to be significantly different than the teacher-led instruction. The CWPT + G.O. also had the greatest growth in

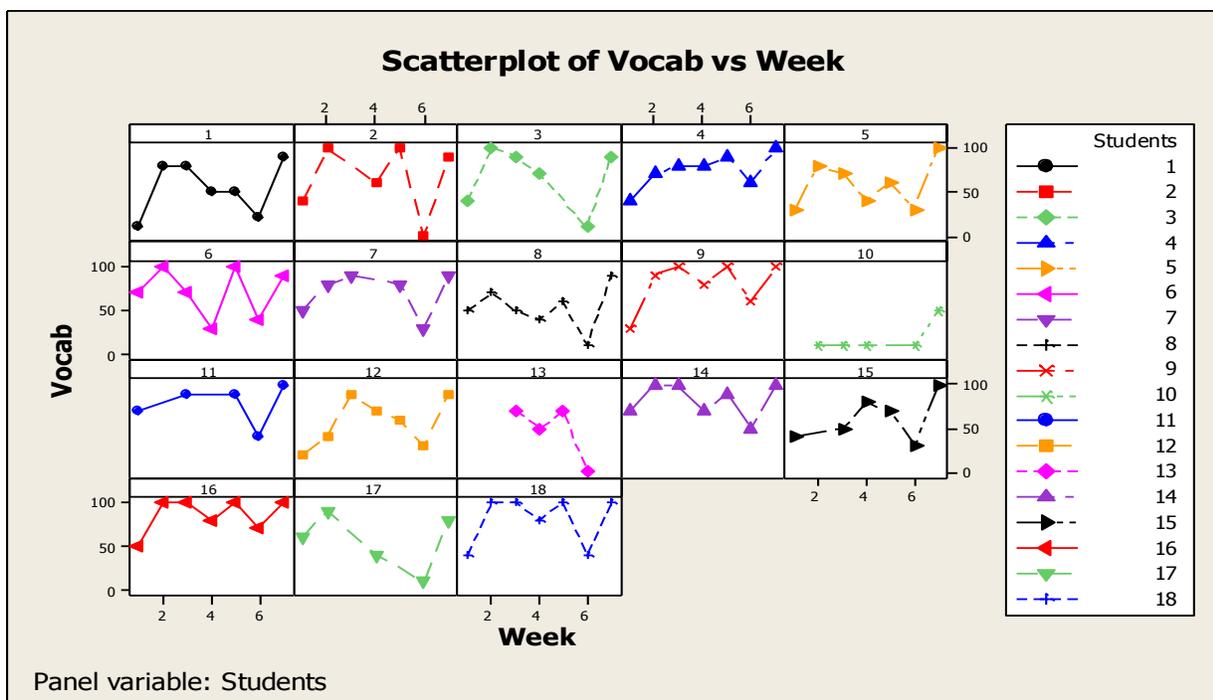


Figure 2.3

mean average in comparison to the baseline and to the CWPT + T.O. motivator intervention, as seen on figure 2. The differences between the mean scores for vocabulary under the CWPT + T.O. intervention and CWPT + G.O. were not proven to be significantly different.

The assessment data for the theme portion of the intervention can be seen on the chart in Figure 3.1 and visually in Figure 3.3. The data collected shows an increase in students mean scores when using CWPT + T.O. motivator by a minimum of 13.42 between the second baseline and the third CWTP + T.O. and a maximum of 45.29 in between the first teacher-led baseline and the first implementation of CWPT + T.O.

Student’s Theme Weekly Assessment Scores

Students	Baseline	CWPT+TO	CWPT+TO	Baseline	CWPT+TO	Baseline	CWPT+GO
1	0	80	100	60	60	10	80
2	0	100	*	20	70	10	100
3	0	90	100	60	*	40	100
4	60	100	100	100	100	80	100
5	60	100	100	80	100	100	100
6	10	100	100	100	100	100	100
7	40	80	100	*	100	80	100
8	0	0	0	20	40	20	100
9	80	100	100	100	80	100	100
10	*	40	20	40	*	60	80
11	80	*	100	*	100	100	100
12	80	80	100	100	100	80	100
13	*	*	80	60	60	60	*
14	60	100	100	100	60	100	100
15	0	*	100	80	100	60	100
16	80	100	100	100	100	80	100
17	20	100	*	20	*	0	100
18	60	100	100	100	100	100	100
Mean Score	39.38	84.67	87.50	71.25	84.67	65.56	97.65

Figure 3.1

*= indicates missing data

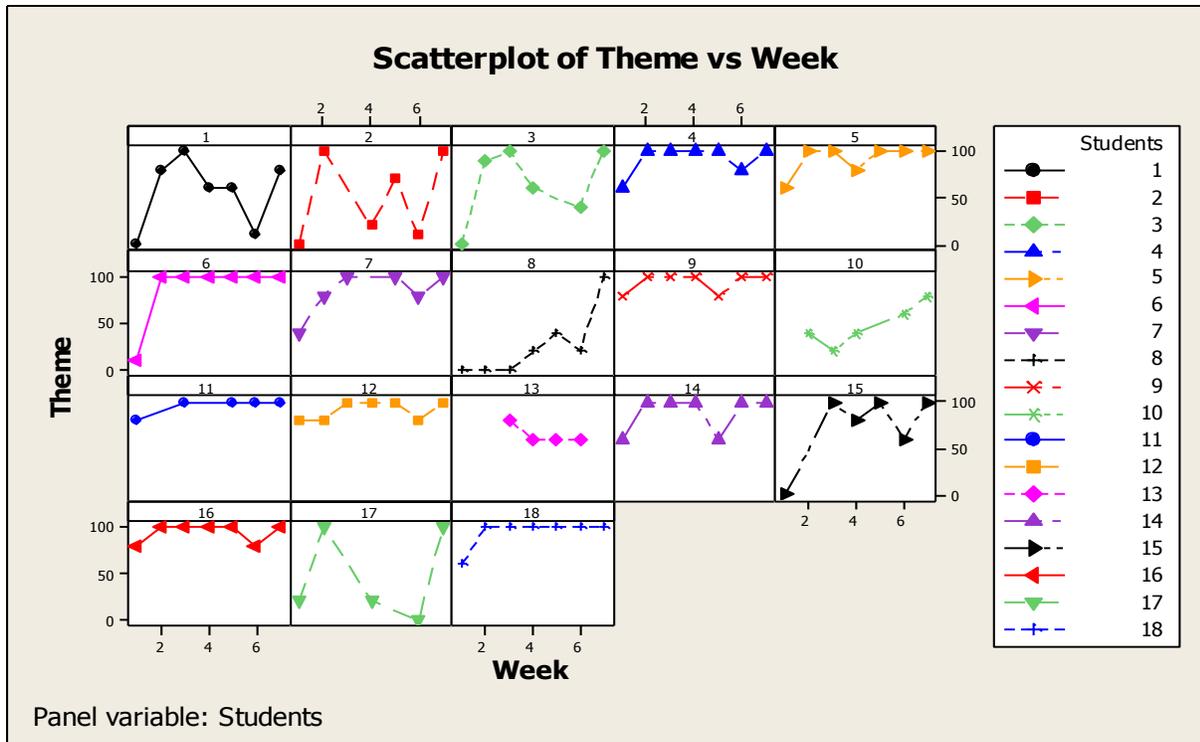


Figure 3.2

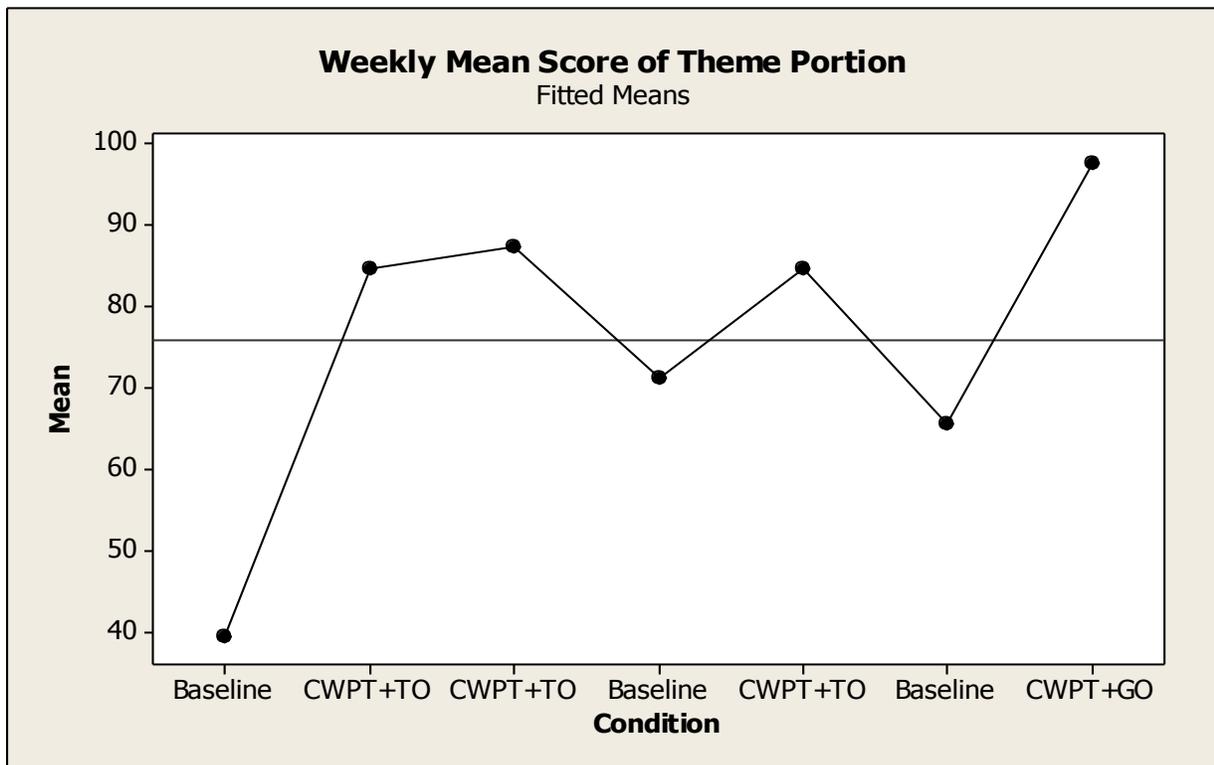


Figure 3.3

The growth of the data when comparing the mean theme assessment scores to the conditions, using the Turkey Method, shows a significance difference between the baseline and the CWPT + T.O. motivator intervention. Using the same method, the CWPT + G.O. intervention was not proven to be significantly different than CWPT + T.O. Once again, this might be because of a relation that exists between the type of motivator a class prefers, the one that works most effectively, and/or a lack of data points to compare to the CWTP + T.O. intervention. While the mean score for CWPT + G.O. increased by 32.09 from the baseline teacher-led instruction and was proven significantly different than the baseline mean score, its increase did not prove greater than CWPT + T.O. motivator. CWPT did have an impact on the mean score of the thematic portion of the assessment. This confirmed the hypothesis that CWPT would have a positive impact on students' knowledge of themes. This conclusion is consistent throughout all of the data. CWPT + T.O. proved to be effective in improving students mean scores on the overall assessment, the vocabulary portion, and the thematic portion of the assessment.

Since this study was held in an unpredictable school setting, there were some data points missing due to student absences. As you can see on Figure 1.1, 2.1, and 3.1, two students were missing from the first, third, and fourth weeks. Week two and week five had three students with missing data. Week six surprisingly did not have anyone missing and week seven was missing one student. Those students' scores were not taken into account for the mean assessment average.

At the end of the study, the students were asked to take a quick ten question survey about their experiences during the CWPT sessions. Fifteen out of 18 students were present and took

part in the survey. The first seven questions were based on a Likert scale (1-5), 5 being the greatest. The results are as follows.

CWPT: Likert Scale Survey Data

Survey Questions (n=15)	1 (Poor)	2	3 (Neutral)	4	5 (Excellent)
Did you find CWPT to be fun?	0%	0%	13.33%	66.67%	20%
How well did CWPT improve your understanding of class material	0%	0%	6.67%	26.67%	66.67%
How Well did you understand themes before Peer Tutoring?	6.67%	0%	46.67%	33.33%	13.33%
Did your understanding of themes improve because of CWPT?	0%	0%	0%	40%	60%
Did you feel motivated by the prizes offered for the winning team?	0%	6.67%	26.67%	13.33%	53.33%
Do you agree or disagree with this statement: I learned more using CWPT than I would have without it.	0%	0%	6.67%	66.67%	26.67%

Figure 4.1

Looking at Figure 4.1, the first questions asked students “did you find CWPT to be fun?” Two students or 13.33% choose 3 (*Neutral*), ten students or 66.67% found CWPT to be a 4 (*fun*) and three students or 20% picked that CWPT was 5 (*very fun*). The second question, students were asked “how well did CWPT improve your understanding of class material?” Students responded with the many answers. Ten students or 66.67% chose 5 (*a lot*), four students or 26.67% picked 4 (*a little*), and one student or 6.67% picked 3 (*Neutral*). The next question provided students with a scale of 1 to 3. Students were asked which style of CWPT you would rather do if you had to choose, and the responses are as follows. Eight students or 53.33% chose 1 (*CWPT + Team Oriented motivator*), six students or 40% of the class picked 2 (*CWPT +*

Group Oriented motivator), and one student or 6.67% picked 3 (*tutoring with no game at all*).

The fourth question asked students “how well did you understand themes before CWPT?” Seven of the students or 46.67% choose 3 (*Neutral*), five students or 33.33% choose a 4 (*a little*), two students or 13.33% choose 5 (*well*), and one student or 6.67% choose 1 (*not at all*). Question five focused on student improvement of themes. Students were asked, on a scale of 1 to 5, 3 being neutral, “did your understanding of themes improve because of CWPT?” Nine students or 60.00% choose 5 (*a lot*) and the other 6 or 40.00% choose 4 (*a little*). The sixth question dealt with the motivation that was or was not created by the prizes offered for the winning team. Student’s responses were measured using the same Likert scale model. Eight students or 53.33% of students choose 5 (*yes*), two students or 13.33% choose 1 (*no*), four students or 26.67% stayed on 3 (*neutral*), and 6.67% or one student said 2 (*not really*). The seventh question asked students to agree or disagree with this statement: “I learned more using CWPT than I would have without it”. Four students or 26.67% choose 5 (*strongly agree*), ten students or 66.67% choose 4 (agreed), and one student or 6.67% choose 3 (*neutral*).

On questions eight, nine, and ten, students were asked and encouraged to write a response for each prompt. Figure 4.2 outlines their responses. Out of the 15 students who took the survey, 14 students responded to question eight and nine, and 13 responded to question ten. Question eight asked the students “what was your least favorite part about CWPT?” Students responded with a couple different answers. Three of the students had concerns and problems with the way that teams were picked and assigned, two students didn’t like the game portion because “it was disappointing when I was always on the losing team,” three students didn’t like the tutoring portion of CWPT, three students didn’t like who they had to work with, one student would change nothing and said that “I didn’t really have a part in the process that I didn’t like”, and one

student didn’t like the tests at the end of each week. The ninth question asked students “what was your favorite part of CWPT”.

CWPT: Free Response Survey Data

Survey Questions: 8, 9, 10 Question 8 and 9, n=14 Question 10, n=13	Categories (Codes) (code # = code = 3 of student responses)	Example of Responses (#=code number)
What was your least favorite part about CWPT?	1=Partners/Friends=3 2=Groups/Teams=3 3=Tests=1 4=Tutoring Portion=3 5=Game Portion=2 6=Nothing=2	1= “Not being on your friends team” 2= “we couldn’t make our own teams” 3= “The Tests” 4=“The little amount of time spent on reviewing” 5=“Working in two teams... disappointing when...on losing team” 6=“I liked all of it”
What was your favorite part of CWPT?	1=Prizes=4 2=Team oriented=2 3=Group Oriented=3 4=Tutoring=4 5=None=1	1=“The prize” 2=“...two teams and compete...” 3=“When the class was one big team” 4=“It was a fun way to learn definitions” 5=“idk” (I don’t know)
What would you change and/or add to CWPT to make it better	1=Prizes=3 2=Partners/Groups=2 3=Tutoring Procedures=2 4=Game Motivator=3 5=None=3	1=“Better prizes” 2=“Make own groups” 3=“...more time on practicing material” 4=“”Add a whole new game to the tutoring” 5=“Nothing”

Figure 4.2

Students responses varied, four students said that the tutoring process itself was their favorite; two students said that the CWPT + T.O. was their favorite, four student said it was the tutoring was their favorite part because it made learning fun, three students said that “working together” to achieve a class goal was their favorite part of CWPT, and one students said that he or she didn’t know. Question ten asked students what they would change/add to CWPT to make it better. Three students said use better prizes, three students said that they wouldn’t change anything, two students said they would change tutoring procedures (e.g.. would be adding more tutoring time), three students said they would add and or change the game aspects of CWPT, and two students said they would allow students to pick their tutoring partner.

Conclusion

After compiling all of the data together, it became clear that the results support many of the hypotheses proposed. The first hypothesis stated that CWPT would have a positive impact on weekly vocabulary test scores. After looking through the mean weekly assessment score data for CWPT and comparing it to the teacher-led baseline instruction, CWPT was shown to improve student understanding greater than that of teacher-led instruction. The growth of vocabulary mean scores from the baseline to the intervention of CWPT improved during each transition from direct teacher-led instruction to the intervention. When the intervention was removed, the scores on the weekly assessments dropped back to the previous baseline levels and in one instance, below previous baseline levels. The student's responses during the survey also confirmed this hypothesis. When asked "do you agree or disagree with this statement: I learned more using CWPT than I would have without it", 14 out of 15 students responded with at least "agree", four of which were in the "strongly agreed" category. Also when asked "how well did CWPT improve your understanding of class material." 14 out of 15 students responded with at least "a little", 10 of which said "a lot." While the students didn't know the results of the study at the time of the survey, the student's responses showed that CWPT had an impact on student's belief that they were doing better. Like previous studies (Harper, Maheady, & Sacca, 1988; Lo, 2004; Mastropieri, Scruggs, & Graetz, 2003; Mastropieri, Scruggs, Spencer, & Fontana, 2003), this study confirmed that the use of CWPT combined with a classroom motivator was an effective way of improving student's content knowledge in an 8th grade social studies classroom.

The second hypothesis stated that CWPT would have a positive impact on student's ability to link content to overall social studies themes. This hypothesis was confirmed by the data. When comparing the growth of student's mean assessment scores on the theme portion of

the quizzes from the teacher-led baseline instruction to the CWPT intervention, there was a minimum increase of 13.42 points and a maximum increase of 45.29 points. When the intervention was pulled away and the instruction returned to the teacher-led baseline, the scores then dropped again although at a substantially reduced percentage. Since there was no other change of instruction on themes, it can be concluded that this increase in students mean scores resulted from the use of CWPT. CWPT provided students with an increased understanding of the content and the repetition of relating it to generally used social studies themes, which served to increase student accuracy throughout the study. The results did produce an interesting development in terms of student mean scores when returning from the intervention to the baseline teacher-led instruction. The assumption was that the scores would look similar to the graph in Figure 1.3 and 2.3, but when the data was plugged into it, this was not the case. The gains from the first baseline to the first intervention were great. The score jumped from 39.38 to 84.67, an increase of 45.29 points. This was expected after looking over the vocabulary and overall assessment results, but what wasn't expected was the lack of decline in student's baseline scores when shifting back from CWPT into the baseline instruction. The lowest drop in assessment scores was only 19.11 points, less than half of the initial gain, so while the data shows a clear increase in mean scores from baseline to CWPT, the comparison between conditions only proves the increase in themes to be significantly different between the first baseline to intervention implementation and the last baseline to intervention implementation. One possible explanation for this is that the students had little knowledge of themes prior to CWPT instruction, so when they were first introduced students were unsure of what to do. After a week of CWPT, students started to understand the process of placing content into broader themes. This understanding of themes remained even when the CWPT was removed. Even as

their understanding of the material decreased, their ability to place these content terms into broader categories remained. Another term for this is the “carry over effect”, where students will retain some of the skills of what they have learned for an extended time, even after the intervention is removed (Creswell, 2014). This path of thinking leads to the conclusion that while CWPT does improve vocabulary and understand of linking content to themes individually, it shows that a student’s ability to relate content to themes is not necessarily related to the student’s understanding of the vocabulary and content itself. Another possible explanation of this anomaly is the limitation of the study. While students were required to use the vocabulary/content terms and place them into the corresponding theme categories, students were not required to explain the connection from the content to the theme. This meant that the students may not have been able to properly define the term, but they were still able to recognize the possible themes that it related to. If students would’ve been required to define the term and say why it related to the theme, they might have scored differently on their assessments.

The third hypothesis stated that by changing the type of motivator from team oriented to group oriented, a difference would be seen between the data for the weekly test scores during those different conditions. While the overall themes and vocabulary assessment data showed growth for each of the two interventions, CWPT plus T.O. motivator and CWPT plus G.O., the mean scores showed higher improvement for the CWPT plus G.O. motivator than for the CWPT plus T.O. motivator. This can also be seen on Figures 1 through 3. CWPT plus G.O. motivator showed a greater increase for the vocabulary assessment and for the theme portion of the assessment than the CWPT plus T.O. motivator. However, the difference between the two motivators did not prove to be statistically significant. This may be because of a lack of data points. To get a better understanding of the differences between the two motivators and their

effects on student motivation in the classroom, a longer, more in depth study, would need to be implemented. This study would need to focus on the multiple classrooms in multiple districts, using random sampling, to ensure that a wider range of the population is assessed. When the student's responses for which CWPT motivator design they liked best are added to the existing data, there was no clear winner as eight students choose teams, six students choose the group motivator, and two had no preference. From these results, it can be concluded that no one motivation is more effective than the other. The only difference it may have is based solely on the preference of the students in the class, as mentioned in the results.

The next question addressed by the research was "what are student's perceptions of the effectiveness of CWPT?" and "how did those perceptions relate to the weekly assessment data?" When students were asked how well CWPT improved their understanding of class material, 14 out of 15 students responded with at least "a little", 10 of which were "a lot" or the top of the scale, one student choose neutral. These answers line up with the weekly assessment data for vocabulary section as well. With CWPT, the students mean score didn't drop below a 77 out of 100, and it reached as high as 91.76 out of 100. Students were able to see that their increase in content knowledge came from the CWPT interventions. Students also found CWPT fun. When students were asked if they found CWPT fun, 13 students out of 15 said it was at least "fun", two students said "very fun", and the other two students said "neutral". 86.67% of students surveyed agreed that CWPT was fun and 93.33% of students said it improved their understanding of the content. After examining the research, it is possible to say that these students found CWPT to be effective in improving their content knowledge and the data from the assessments showed that this was exactly what happened.

Limitations

One limitation of this study was the amount of time used to conduct the study. Due to the fluctuating time constraints, the study could only be conducted for seven weeks. There were changes and occurrences in my personal life that led to unscheduled changes. Ideally the study would be conducted over a ten week period, with a return to baseline in week eight. Week nine would restart the CWPT plus G.O. motivator, and week ten would return to CWPT plus T.O. motivator. This would provide more data points to allow more in-depth comparisons of the CWPT + T.O. and CWPT + G.O. and perhaps more accurate conclusions. Another limitation of this study was the missing data that was present for almost every week of assessments given. While it is difficult to control student absences, this creates an adverse effect on a full and complete data set. A third limitation of this study was the number of students who participated in this study. The data would have more strength if the study was conducted in multiple classrooms, over multiple schools, and in different types of school districts, such as urban and rural. This would provide for more well-rounded data, which would lead to more accurate conclusions. This study, while the sample size was small and the results may not be able to be generalized in other classroom settings, contributed to the students' ability to link content to historical themes using CWPT. A third limitation of this study is that it was conducted by using convenient sampling, instead of random sampling. Random sampling would have provided a more rounded sample of the population, which could have led to the study's findings applying to different types of classroom and thus more students.

Implications

Despite the limitations, this study still produced implications for future studies. This study provided evidence that CWPT does have an impact on a student's ability to link social

studies course content to overall historical themes. The concept of using CWPT for this purpose had not been fully explored before. Future studies can use what was found in this study as a starting line in developing more comprehensive studies focusing on using CWPT to improve students' ability to link content to themes. Another implication of this research is that there is no conclusive evidence to claim that CWPT using a team oriented motivator is any more effective than using CWPT with a group oriented motivator or vice versa. This study found that the different type of motivator is primarily based on the individual classroom's personality and the student's partnership in that classroom. Preference plays a larger role in determining which motivator to use more than the data produced by either condition in this study. Students found CWPT to be fun, and it was enjoyed by the majority of students as well. It was motivating as long as students had a say in what prizes they would receive. In future studies, it will be important for the individual implementing the study to be aware of the classroom environment and what motivator will best suit the needs of those students.

For future research, it would be interesting to see if there is any correlation between content knowledge and a student's ability to relate content to themes throughout the social studies curriculum. This research would need to focus less on the content itself, and more on the ability that the student can relate that content to an overall theme. It would be interesting to use the current format of this study and complete a ten week study using similar CWPT practices, except for one change. In place of having students simply place a vocabulary term into the correct and corresponding theme category, it would be enlightening to examine the impact of having students explain the connection of the content to the theme rather than simply pairing it with its thematic counterpart. It would also be interesting if CWPT could be implemented using

technology, such as iPads or tablets, and if this implementation of CWPT would be more effective than the more widely used tradition CWPT methods.

References

- (2013). *New York State Common Core Social Studies Framework*. Albany: The State Education Department The University of the State of New York.
- Allsopp, D. H. (1997). Using classwide peer tutoring to teach beginning algebra problem-solving skills in heterogeneous classrooms. *Remedial and Special Education, 18*(6), 367.
- Arreaga-Mayer, C. (1998). Increasing active student responding and improving academic performance through classwide peer tutoring. *Intervention in School and Clinic, 34*(2), 89.
- Ayvazo, S., & Ward, P. (2009). Effects of classwide peer tutoring on the performance of sixth grade students during a volleyball unit. *Physical Educator, 66*(1), 12+.
- Bowman-Perrott, L. (2009). ClassWide peer tutoring. *Intervention in School and Clinic, 44*(5), 259-267. doi:<http://dx.doi.org/10.1177/1053451208330898>
- Calhoon, M. B., & Fuchs, L. S. (2003). The effects of peer-assisted learning strategies and curriculum-based measurement on the mathematics performance of secondary students with disabilities. *Remedial and Special Education, 24*(4), 235.
- Cheung, C. C., & Winter, S. (1999). Classwide peer tutoring with or without reinforcement: Effects on academic responding, content coverage, achievement, intrinsic interest and reported project experiences. *Educational Psychology, 19*(2), 191-205. Retrieved from <http://search.proquest.com/docview/208801908?accountid=28748>
- Creswell, J. W. (2014). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. Thousand Oaks: SAGE Publications, Inc.

- Darrow, A.-A., Gibbs, P., & Wedel, S. (2005, Fall-Winter). Use of classwide peer tutoring in the general music classroom. *Update: Applications of Research in Music Education*, 24(1).
- Franca, V., & And, O. (1990). Peer tutoring among behaviorally disordered students: Academic and social benefits to tutor and tutee. *Education And Treatment Of Children*, 13(2), 109-28.
- Fuchs, L. S., Fuchs, D., & Kazdan, S. (1999). Effects of peer-assisted learning strategies on high school students with serious reading problems. *Remedial and Special Education*, 20(5), 309.
- Goodlad, S., & Hirst, B. (1989). *Peer tutoring: A guide to learning by teaching*. London : New York: Kogan Page.
- Harper, G. F., Maheady, L., & Sacca, M. K. (1988). Classwide peer tutoring with mildly handicapped high school students. *Exceptional Children*, 55(1), 52+. Retrieved from <http://dbsearch.fredonia.edu:2048http://go.galegroup.com/ps/i.do?id=GALE%7CA6707908&v=2.1&u=sunfredonia&it=r&p=AONE&sw=w>
- Hawkins, R. O., Musti-rao, S., Hughes, C., Berry, L., & Mcguire, S. (2009). Applying a randomized interdependent group contingency component to classwide peer tutoring for multiplication fact fluency. *Journal of Behavioral Education*, 18(4), 300-318.
doi:<http://dx.doi.org/10.1007/s10864-009-9093-6>
- Hughes, T. A., & Fredrick, L. D. (2006). Teaching vocabulary with students with learning disabilities using classwide peer tutoring and constant time delay. *Journal Of Behavioral Education*, 15(1), 1-23. doi:10.1007/s10864-005-9003-5

Institute of Educational Sciences, Department of Education. (2010). *U.S. History: Summary of Findings*. Retrieved from The Nation's Report Card:

http://www.nationsreportcard.gov/ushistory_2010/summary.asp

Johnson, R.B., & Christenson, L.B. (2014). *Educational research: Quantitative, qualitative and mixed approaches* (5th ed.). Thousand Oaks, CA.: Sage Publications.

Kamps, D. M., Greenwood, C., Arreaga-Mayer, C., Veerkamp, M. B., Utley, C., Tapia, Y., . . .

Bannister, H. (2008). The efficacy of classwide peer tutoring in middle schools.

Education & Treatment of Children, 31(2), 119-152. Retrieved from

<http://search.proquest.com/docview/202669959?accountid=28748>

Lawson, T., & Trapenberg, G. (2007). The effects of implementing a classwide peer tutoring model on social approvals and disapprovals emitted during unstructured free time.

Journal Of Early & Intensive Behavior Intervention, 4(2), 471-482.

Mackiewicz, S., Wood, C. L., Cooke, N. L., & Mazzotti, V. L. (2011). Effects of peer tutoring with audio prompting on vocabulary acquisition for struggling readers. *Remedial And Special Education*, 32(4), 345-354.

Madrid, L., Canas, M., & Ortega-Medina, M. (2007). Effects of team competition versus team cooperation in classwide peer tutoring. *Journal Of Educational Research*, 100(3), 155-160.

Maheady, L., & Gard, J. (2010). Classwide peer tutoring: Practice, theory, research, and personal narrative. *Intervention in School and Clinic*, 46(2), 71-78.

doi:10.1177/1053451210376359

- Maheady, L., Harper, G., Mallette, B., & Karnes, M. (2004). Preparing preservice teachers to implement class wide peer tutoring. *Teacher Education & Special Education, 27*(4), 408-418.
- Marshak, L., Mastropieri, M. A., & Scruggs, T. E. (2011). Curriculum enhancements in inclusive secondary social studies classrooms. *Exceptionality, 19*(2), 61-74.
- Mary, B. V., Debra, M. K., & Cooper, L. (2007). The effects of classwide peer tutoring on the reading achievement of urban middle school students. *Education & Treatment of Children, 30*(2), 21-51.
- Mastropieri, M. A., Scruggs, T. E., & Graetz, J. E. (2003). Reading comprehension instruction for secondary students: Challenges for struggling students and teachers. *Learning Disability Quarterly, 26*(2), 103-116. doi:10.2307/1593593
- Mastropieri, M. A., Scruggs, T. E., Norland, J. J., Berkeley, S., McDuffie, K., Tornquist, E., & Connors, N. (2006). Differentiated curriculum enhancement in inclusive middle school science: Effects on classroom and high-stakes tests. *Journal Of Special Education, 40*(3), 130-137.
- Mastropieri, M. A., Scruggs, T. E., Spencer, V. V., & Fontana, J. J. (2003). Promoting success in high school world history: Peer tutoring versus guided notes. *Learning Disabilities Research & Practice (Wiley-Blackwell), 18*(1), 52-65.
- Mortweet, S. L., Utley, C. A., Walker, D., Dawson, H. L., & al, e. (1999). Classwide peer tutoring: Teaching students with mild mental retardation in inclusive classrooms. *Exceptional Children, 65*(4), 524-536.
- Scruggs, T., Mastropieri, M., & Marshak, L. (2012). Peer-mediated instruction in inclusive secondary social studies learning: Direct and indirect learning effects. *Learning*

Disabilities Research & Practice (Wiley-Blackwell), 27(1), 12-20. doi:10.1111/j.1540-5826.2011.00346.x

Spencer, V. G., Scruggs, T. E., & Mastropieri, M. A. (2003). Content area learning in middle school social studies classrooms and students with emotional or behavioral disorders: A comparison of strategies. *Behavioral Disorders*, 28(2), 77-93.

Veerkamp, M., Kamps, D. M., Cooper, L., & Juniper Gardens Children's Project, K. O. (2007). The effects of classwide peer tutoring on the reading achievement of urban middle school students. *Education And Treatment Of Children*, 30(2), 21-51.

Wood, C. L., Mustian, A. L., & Cooke, N. L. (2012). Comparing whole-word and morphograph instruction during computer-assisted peer tutoring on students' acquisition and generalization of vocabulary. *Remedial And Special Education*, 33(1), 39-47.

Ya-yu Lo, & Cartledge, G. (2004). Total class peer tutoring and interdependent group oriented contingency: Improving the academic and task related behaviors of fourth-grade urban students. *Education & Treatment of Children*, 27(3), 235-262. Retrieved from <http://search.proquest.com/docview/202666544?accountid=28748>