ABSTRACT

Tina Hinson, PERSPECTIVES ON COOPERATIVE LEARNING: A CASE STUDY OF KAGAN COOPERATIVE LEARNING STRUCTURES IN THE CLASSROOM (Under the direction of Dr. Martin Reardon). Department of Educational Leadership, March 2015.

The purpose of this study was to gain insight to the perceptions of teachers and students on learning and engagement due to the implementation of Kagan cooperative learning structures. The study utilized quantitative and qualitative data to answer the guiding research questions.

A mixed methods explanatory research design was implemented, beginning with the collection of quantitative data that was expanded upon by further collection of qualitative data. The sample for this study consisted of 107 students, grades 3-8, and 19 teachers who have been trained by a Kagan cooperative learning professional developer. Surveys created by the researcher were used to gain quantitative data from both the teacher and the student participants. Following the analysis of survey data, eight teachers participated in one-one-one, semi-structured interviews. The final phase of the data collection was the use of two teacher focus groups. The responses from the interviews and focus groups were transcribed, coded, and analyzed in order to assist with answering the research questions. Using the qualitative data gathered from the interviews and surveys to explain and extend the findings created by the analysis of the quantitative data, the research effectively answered the proposed study questions.

Overall, both the teachers and the students agreed that the use of the Kagan cooperative learning structures affect student learning and engagement. Students responded to the survey and agreed that they prefer to work with team mates when completing and assigned task. Teachers agreed that students become engaged and motivated when asked to complete assignments in a team setting. Several themes emerged when data from the teacher interviews and focus groups were analyzed. Positive outcomes of the implementation of Kagan cooperative

learning structures were voiced from all teacher participants interviewed and those participating in the focus groups.

The results of the study provided some insight to issues that are faced by teachers and the daily implementation of Kagan cooperative learning structures in the classroom. For example, new initiatives, at both the district and school level, have been put into place this year and less time is available to plan for the effective implementation of the structures.

PERCEPTIONS ON COOPERATIVE LEARNING: A CASE STUDY OF KAGAN

COOPERATIVE LEARNING STRUCTURES IN THE CLASSROOM

A Dissertation

Presented to

The Faculty of the School of Education

East Carolina University

In Partial Fulfillment

of the Requirements for the Degree

Doctor of Education in Educational Leadership

by

Tina Hinson

March, 2015

PERSPECTIVES ON COOPERATIVE LEARNING: A CASE STUDY OF KAGAN

COOPERATIVE LEARNING STRUCTURES IN THE CLASSROOM

by

Tina Hinson

APPROVED BY:

DIRECTOR OF DISSERTATION:_____

Martin Reardon, PhD

COMMITTEE MEMBER:_____

Dan Boudah, PhD

COMMITTEE MEMBER:_____

Kermit Buckner, EdD

COMMITTEE MEMBER:_____

James McDowelle, EdD

CHAIR OF THE DEPARTMENT OF EDUCATIONAL LEADERSHIP:

_____

William A. Rouse, Jr., EdD

DEAN OF THE GRADUATE SCHOOL:

_____

Paul Gemperline, PhD

DEDICATION

This case study is dedicated to my husband, Mark Hinson. You have been by my side for each of the degrees that I have earned and have been my biggest cheerleader each and every time. Your support, sacrifices, and unconditional love helped me to conquer this dream. You believed in me and supported me throughout this long and sometime stressful process! Your love and support have inspired me to persevere when I thought that I could not go on. You are the reason that I aspire to better myself.

This study is also dedicated to my parents, Malcolm and JoAnn Blackmon. You taught me as just a young girl that I could do anything that I put my mind to as long as I was unwilling to give up, even when the journey had hiccups along the way. You have supported me through each and every stage of my life by being there for me when I needed you, always offered words of encouragement when I was low, taught me by your example a strong work ethic, gave me spiritual guidance, and loved me, even when I seemed unlovable.

Finally, this study is dedicated to my sister, Melodie Blackmon. We have had the opportunity to share lots of our post-secondary experience together. We have shared many laughs and tears through the years and celebrated the successes of many students. Your wisdom and love of learning have inspired me to continue to strive to be the best that I can be.

ACKNOWLEDGEMENTS

The completion of this long journey would not have been possible had it not been for the special people who have supported me through this program. Dr. Martin Reardon, my dissertation chair, provided guidance and support throughout the writing process. He helped this math minded thinker create a study that is scholarly and deserving of this degree. To him, I am eternally grateful!

To Dr. Dan Boudah, it has been my privilege to meet and work with you, not only as a student, but as a professional educator. From our initial conversations, you were always willing to assist with the completion of this process and always gave words of encouragement to keep me on the path to completion. Your assistance with data presentation and willingness to listen are greatly appreciated. Your advice and support have been extremely helpful.

I thank Dr. Kermit Buckner and Dr. James McDowelle for your willingness to serve on my committee and to offer guidance and helpful suggestions for completing this dissertation.

A debt of gratitude is owed to Dr. Ronda Sortino, fellow cohort member. Without your assistance along the way, I am not sure if I would have made it to the end. We talked, for hours at the time, and you offered words of encouragement and gave me many suggestions to help me along the way. You coached me and helped to prepare me for each step of the way by sharing your personal experience in the process. I owe you…A LOT! Thank you for being a true friend and cheering me on each and every step of the way.

I would like to thank all of the teacher and student participants in the study as well. You volunteered your personal time to be part of the study and contributed greatly to the research study.

I would like to thank my parents for teaching me the importance of a good education and for setting great examples for me to follow. I appreciate your love and support more than you will ever know.

Finally, I would like to acknowledge my husband. You have put up with all of the hours that I have sat at the kitchen table working. Many hours over the past few years have been spent at home, rather than doing the fun things out with friends. Your unwavering love and support are much appreciated. I love you to the moon and back!

TABLE OF CONTENTS

Page

LIST OF TABLES

LIST OF FIGURES

CHAPTER 1: INTRODUCTION

For our entire lives, we interact with others within our surroundings in order to acquire knowledge (Agarwal & Nagar, 2011; Johnson & Johnson, 1999a; Lerner & Ciervo, 2004). Lerner and Ciervo (2004) suggested that the ability to talk, think, and to gain both self-confidence and self-control is acquired through this interaction. These daily interactions and contacts with others around us can also be used to teach children simple skills needed to cooperate with others (Lerner & Ciervo, 2004). However, when children begin school, daily interactions with others around them and their advantages are often disregarded in an attempt to help students fully benefit from daily routines established in the classroom (Johnson & Johnson, 1999a). For example, Johnson and Johnson (1975) contended that in many classrooms, children are often seated in rows and expected to sit quietly as if to simply exist as overt learners, taking in content delivered by the teacher. According to Zakaria and Zanagon (2007), this lecture-based, teacher-centered instruction method offers students very few opportunities to ask questions or "exchange thoughts with other students in the class" (p. 35), thereby creating a learning experience where they become mere passive recipients of knowledge.

What students learn depends not only on the content that is taught, but also on the method of classroom structure selected by the teacher (Cole, 2008; Shinn et al., 2003). In fact, Cole (2008) stated that when good teaching, or that which is "engaging, relevant, multicultural, and appealing to a variety of modalities and learning styles" (p. 1) can be built into lesson preparation, the needs of all students can be met. This particular educational belief demands that careful lesson planning and attention be paid to the methods chosen for presenting content in the classroom.

In 21st century classrooms, it is not unusual for teachers to encounter students with a wide variety of personal experiences, learning abilities, and preferred learning styles. In order to optimize learning in this classroom environment, a teacher may implement strategies that accommodate the academic needs of every child in the classroom. As suggested by Johnson and Johnson (1999a, 1975), these learning differences almost guarantee that a student will be given very few opportunities to experience the personal interactions with the teacher that are needed for him or her to truly grasp the concepts and standards being presented. However, teachers can create learning environments that build upon the manner in which students learn from each other by allowing opportunities for students to work together for rich discussion, interaction, collaboration, and peer feedback. In fact, Slavin (1991a) stated that "being on a team, working for a cooperative goal, can be one of the most exciting experiences in life" (p. 8).

Policymakers, who have put into place state-mandated testing, have demanded that students in educators' classrooms show yearly growth in academic achievement (U.S. Department of Education, 2010). Educators have to work to attain growth while meeting the needs of a diverse student population (Hargreaves, 2003; Jackson, 2004). In order to accomplish academic growth for students in today's classrooms, a plethora of research-based teaching strategies have been promoted as effective. Teachers have had to expand their tool box of strategies to meet the various needs of students that they face each and every day. Effective educators act as classroom facilitators. They use appropriate resources and offer learning opportunities in order to create an environment where all children can learn. They are in tune with the needs of each student and know how to pace lessons to provide meaningful work that actively engages students.

The 21st century skills are the synthesis of the crucial abilities students must employ in the rapidly changing world. Today's students must possess a repertoire of knowledge and skills that are more diverse, complex, and integrated than any previous generation. Instructional strategies that were once successfully utilized in classrooms may not be as effective for these learners as they prepare to become the leaders of the future (American Association of Colleges of Teacher Education and the Partnership for 21st Century Skill, 2010). Problem solving and higher-order thinking skills are being promoted in our schools due to the rapidly advancing society in which we live (Common Core State Standards, CCSS, National Governors Association Center for Best Practices & Council of Chief State School Officers, NGA CBP, 2010; National Education Association, 2012). Present and future jobs demand that employees possess higher-order thinking skills and problem-solving abilities like no generation before. According to the National Education Association and Shinn et al. (2003), the world is a continuously transforming, complex entity that is more and more difficult for humankind to comprehend. Shinn et al. asserted that in order to manage change in such a complex environment, students must become literate and proficient lifelong learners, equipped with the knowledge and social skills to collaboratively solve unique and intricate problems presented by a scientifically and technologically advanced world.

Cooperative Learning

One teaching strategy that has been utilized to meet today's demands is cooperative learning (Slavin, 2010). Cooperative learning has numerous benefits to students that have been well-detailed in literature and research-validated for several decades. As stated by Kagan and Kagan (2009), cooperative learning activities offer a foundation for classroom instruction that

has the potential to increase positive interaction among students and permit them to explore and engage in learning.

Cooperative learning activities engage students in tasks where they can effectively teach their peers, and has been shown to result in greater retention of presented content than listening alone (Dat Tran, 2013). It has been claimed (DePorter, Reardon, & Singer-Nourie, 1998; Metcalf, 1997) that students remember 90% of what they teach others but only 20% of what they hear. According to Webb (1982), it has been found consistently that students who learn and retain most of the content presented in the classroom are those who give and receive detailed explanations on the subject matter they are learning and processes that they use in order to learn it. When students work alone, they may not have the opportunity to ask questions of peers or engage in deep conversation about their work. When working cooperatively, Agarwal and Nagar (2011) stated that students are empowered to take responsibility for their own personal learning while achieving and sharing progress toward the attainment of a learning goal with others. Educators have used cooperative learning strategies in classrooms across the nation as they integrate and implement practices involving groups of students working together. Cooperative learning's effectiveness in the classroom to obtain significant educational results is well established (Johnson & Johnson, 1999a, 1999b; Johnson, Johnson, & Stanne, 2000; Marzano, Pickering, & Pollock, 2001).

According to Johnson, Johnson, and Stanne (2000), the research behind cooperative learning suggests that it is an effective teaching strategy, and this is corroborated by an abundance of empirical analyses highlighting its effectiveness in the classroom. As stated in studies conducted by Johnson, Maruyama, Johnson, Nelson, and Skon (1981), Johnson (1981), and Johnson, Johnson, and Smith (1998, 2007), people given the opportunity to work in a

4

cooperative team reach higher achievement levels than those who are only afforded competitive and individualistic learning structures. According to Johnson, Johnson, and Holubec (1994a), research on cooperative, competitive and individualistic learning began in 1898 and since that time, many experimental and correlational studies have taken place. They continued by stating that these studies show that cooperative learning leads to higher student achievement, improved relationships among students, and better overall psychological health. Interpreting these results, Johnson et al. (1994a) suggested that "the powerful effects that cooperation has on so many important outcomes separate cooperative learning from other instructional methods and make it one of the most important tools for ensuring student success" (p. 12).

Sharan (2010) described cooperative learning as flexible and comprehensive; it combines the goals of social integration and academic inquiry. From Sharan's perspective, while it is important for all students to develop a personal sense of belonging in a classroom, for socially isolated students it is crucial. Prior to Sharan's work, according to Johnson (1981), a greater risk factor is noted for children who are socially isolated and withdrawn from peers and are at a higher risk for a variety of adjustment problems as they age. Subsequent to this work, Lew, Mesch, Johnson, and Johnson (1986) proposed that interventions are necessary in classrooms in order to give students the opportunity to gain placement in entry level situations where positive interactions and personal relationships can develop. Conducive situations would actually permit children to be taught and given the opportunity to use interpersonal and small group skills. The primary aims of cooperative learning are to encourage students to engage in activities that are academically more complex than those they can access under traditional lecture methods, thereby gaining motivation to perform at higher levels due to affective and social involvement in the lesson (Sharan, Hertz-Lazarowitz, & Ackerman, 1980). Thus, cooperative learning

supplements the teacher's instruction by giving students the opportunity to work together to solidify their understanding of the objectives that are being taught in a classroom. The expectation is that by participating in cooperative learning activities, both the students' social and intellectual skills are refined.

Theoretical Framework

Unlike other teaching and learning strategies, the focus of cooperative learning is the active engagement of students in the learning process and the collaboration needed to accomplish a given task. According to Johnson and Johnson (1975, 1989), Johnson, Johnson, and Holubec (1991, 1994a, 1994b), Kagan (1994), Kagan and Kagan (2009) and Slavin (1990) cooperative learning is centered around the instructional use of small groups of students working together to maximize their own and each other's learning. Students are assigned to groups by the teacher for the purpose of reaching a common goal. Kagan (1994) and Kagan and Kagan (2009) contended that there are four primary elements needed to effectively achieve true cooperative learning instances:

1. Positive interdependence

2. Individual accountability

3. Equal participation

4. Simultaneous interaction

The goal of each student team is to share information and individual perspectives on the assigned task in order to produce a completed product through the use of information gained from all team members. Johnson, Johnson, and Smith (1998) suggested that prior to 1970, cooperative learning research focused on college students. However, K-12 teachers gained interest in the classroom strategy and began implementing in their classrooms in the early 1970s.

6

The use of cooperative learning strategies in the classroom is grounded in the theories of constructivism, social learning theory, and social interdependence.

Constructivism

According to Dotson (2001), cooperative learning strategies incorporate active learning and enhance social interaction with peers to support students as they construct their content knowledge with each experience. Harris and Graham (1994) and Kivinen and Ristela (2003) suggested that constructivism is rooted in the philosophies of educators and psychologists such as Dewey, Piaget, and Vygostky. As reported by Sewell (2002), the constructivist learning theory claimed that learning is the outcome of what learners actually do with the new information that is presented to them in the classroom. This knowledge is created from either prior knowledge that has been acquired or personal experiences that the student has been offered, as stressed by constructivists, and only occurs when students participate in and give full attention to their own personal learning (Harris & Graham, 1994; Kivinen & Ristela, 2003). Brooks and Brooks' (1999) ideas expressed the significance and necessity of active learning. In order for true learning to take place, a student must be actively constructing knowledge, usually by participating in group activities, not passively absorbing them. Piaget (1954, 1968), Piaget and Inhelder (2000), and Vygotsky (1978, 1986) acknowledged the social aspect of constructivism. Piaget's cognitive theory put the learner at the center of his or her own learning and focused on the building of knowledge within (Agarwal & Nagar, 2011; Piaget & Inhelder, 2000). Piaget believed that intrinsic motivation was at the heart of learning, rather than extrinsic motivation offered by the teacher (Erneling, 2010). Vygotsky stressed that learning is a social undertaking and that collaboration with others in the learning setting is vital to the building of knowledge.

Therefore, it can be deduced that collaboration with peers can lead to new construction of knowledge—knowledge that may have not been constructed without working with peers.

Social Learning Theory

Bandura (1986, 1999) proposed a unidirectional model of causality in which environment events, behavior patterns, and internal factors act as influences on one another. Social learning theory focuses on the learning that takes place within a social environment and asserts that humans obtain knowledge through observing, imitating and modeling the behavior of other humans (Ormrod, 1999). Social learning theory (Bandura, 1986) is grounded on the assertion that children learn by observing the actions of others and the outcomes or consequences that emanate from those actions. Much like Vygotsky (1978, 1986), the work of Bandura placed an emphasis on learning that takes place in a social setting. Kagan and Kagan (2009) stated that humans are prone to repeat those behaviors displayed by peers who are similar in age and gender, as well as those who solved similar problems. The social learning theory illustrates human action as it relates to interaction with others, praise, and rewards.

Social Interdependence

The theory of social interdependence is largely based on the studies of Deutsch (1949; 1962), and Johnson and Johnson (1989, 1999a, 2009). According to Johnson and Johnson (2005), "the basic premise of social interdependence theory is that the structure of the goals of the people in the situation determines how participants interact and the interaction patterns determine the outcomes of the situation" (p. 292). Group goals can and should be planned in such a way that success for one group member promotes success for another group member (Johnson & Johnson, 1999a, 1999b). Success for the group results in increased content knowledge or achievement for fellow students (Michealsen, Fink, & Knight, 1997).

8

Kagan Cooperative Approach

The work of Kagan (1999; 2013), typifies one important cooperative learning approach. According to Kagan (2013), a Kagan cooperative learning structure is an instructional strategy that is content-free and consists of a repeatable sequence of steps organized to structure the "interaction of students with each other, the academic content, and the instructor" (p. 6). At the heart of Kagan cooperative learning structures is an emphasis on positive interdependence, individual accountability, equal participation, and simultaneous interaction, or PIES (Kagan, 1999). By emphasizing these structures in the classroom, Kagan (2003) stated that an educator can replace traditional teaching methods, usually teacher-centered, with the "world's largest array of engaging student-centered instructional strategies" (p. 3).

Implementing Kagan structures in the classroom has been shown to have many benefits for both teachers and students. According to Kagan (2000), these benefits create positive outcomes that are not associated with other approaches. The positive outcomes for students are created because the structures are engaging, brain compatible, and learner centered. In addition, Kagan asserted that they contain an embedded curriculum (including cooperative skills, character development, multiple and emotional intelligences, the curriculum, and higher levels of thinking), make a real-life transfer, promote acquisition of workplace competencies, and distribute practice among all of the students. Many of these aforementioned assertions are found to be critical outcomes that are needed for 21st century learners. Kagan also contended that the benefits for teachers include the content free nature of the structures, the ease in which structures can be implemented, little to no prep time needed for classroom use, and the ability for ongoing, authentic assessment.

Statement of the Problem

To promote the comprehensive educational reform that is needed to meet the demands of the 21st century, the state of North Carolina has adopted the Common Core State Standards (CCSS, National Governors Association Center for Best Practices & Council of Chief State School Officers, NGA CBP, 2010). The adoption of the CCSS has prompted educators in the client district to implement research-based instructional strategies to ensure that the rigor and depth of these standards are acquired by students. Rural School is responsible for fostering academic growth, in addition to being a place where a diverse group of students are expected to interact with each other on a daily basis. However, as evidenced by accountability data, many schools in the client district and the state of North Carolina fail to attain the student learning growth targets established by North Carolina under the directive of No Child Left Behind and The Reauthorization of the Elementary and Secondary Education Act (United States Department of Education, Office of Planning, Evaluation, and Policy Department, 2010). This lack of success is indicative of the complexity of facilitating the high quality and rigorous learning that is demanded of the diverse learners with which teachers are faced on a daily basis.

Purpose of the Study

The purpose of this study was to examine attitudes and perceptions of Kindergarten – eighth grade teachers introduced to Kagan cooperative learning structures, and grades three – eight students, in a small, rural school district in North Carolina (hereafter referred to as the client district), regarding their classroom environment after the implementation of Kagan cooperative learning structures. The findings of this study may deepen the understanding and the impact of the implementation trajectory of the Kagan cooperative learning structures in the client district.

From the perspective of the client district, it is critical to ensure that all students are learning to their fullest potential. The utilization of best practices is key in accomplishing this goal, because best practice implies providing students with useful tools that may facilitate learning throughout their educational lives and future careers.

Significance of the Study

This study investigated student and teacher perceptions regarding student engagement and learning after implementation of Kagan cooperative learning structures, specifically in teaching of the CCSS (NGA BBP, 2010) in English language arts and mathematics. The study provided important information into the implementation of a nontraditional teaching method, cooperative learning, in nineteen classrooms in the Client District. In an effort to help students become and stay successful in the content areas, teachers who use Kagan cooperative learning structures may assist students by providing them with opportunities to learn in an environment that is stimulating and nonthreatening. By focusing on evaluating the implementation of Kagan cooperative learning structures in a particular educational environment, this study offered a different perspective from the existing literature extolling student achievement.

Further, the outcomes of this study may provide evidence as to whether Kagan cooperative learning structures are valuable teaching strategies for daily use in the K-8 classrooms of the client district. Results may also be important to educators who are trying to utilize research-based strategies while implementing the Common Core State Standards (NGA CBP, 2010).

Research Questions

The research questions for this study included the following:

1. What are Kagan cooperative learning structure trained teachers' perceptions of student engagement in their classrooms?

2. What do Kagan cooperative learning structure trained teachers perceive to be the impact of Kagan cooperative learning structures on learning in their classroom?

3. What are the learning and engagement perceptions of students in classes that have implemented Kagan cooperative learning structures?

Overview of Methodology

The purpose of this case study was to examine the impact of cooperative learning on student engagement and learning in the classroom. Specifically, this study explored student and teacher attitudes and perceptions regarding their classroom environment after the implementation of Kagan cooperative learning structures. In this case study, teacher and student surveys, teacher focus groups and teacher interviews were conducted. Likert scale surveys were used to determine teacher and student perception on the impact of Kagan cooperative learning structures in the classroom. This research study was conducted in one school, Rural School in the Client District.

With prior approval of the superintendent of the client district, participants in the study included a purposeful sample of consenting teachers trained by a Kagan cooperative learning professional developer. A random sample of the students in participating teachers' classrooms was invited to participate. Parental permission was undoubtedly not forthcoming from all the invited students. The target student sample was students in participating teacher classrooms. Focus groups, individual interviews, and surveys were used to gather the data for the study. The

focus groups and interviews were conducted in the school building in a room designated by the school administration.

Data collected from the interviews and focus groups were digitally voice-recorded for later transcription. Transcriptions were analyzed for common themes, issues, and positive changes in the classroom with the implementation of the Kagan cooperative learning structures. Data from the surveys was coded and analyzed to provide individual insight into the student and teacher perception into the implementation of Kagan cooperative learning structures and their impact on student engagement in the classroom.

<div align="center">

Definition of Terms

</div>

Active learning: instructional strategies that consist of careful selection of activities for the purpose of involving students doing something and then taking the time to think about what they have done.

Cooperative learning: instructional strategies that involve students working together to complete a given task with elements in place to

Equal participation: the active role that each students takes on when completing a given task with the guarantee that each member is given equal opportunity to gain knowledge from the task and interactions with other team members.

Individual accountability: a position that each student is placed in when working in a team structure to be responsible for his or her own involvement with the group and to his or her individual, personal achievement.

Kagan cooperative learning structure: instructional strategies that are content free, consist of a sequence of repeatable steps, and based upon the concept of PIES.

Positive interdependence: cooperative learning element that can be observed in a group setting when team members depend on each other and benefit from the interaction in a positive manner.

Simultaneous interaction: the percent of students who are overtly active in a group or team setting or during the use of a Kagan structure.

Limitations

This study has the following limitations:

1. The perceptions of this staff and students may not be representative of staff and students in other schools in the client district.

2. The client district has no quality assurances in place to confirm that Kagan trained teachers are able to take the information learned in the staff development back to the classroom and implement the cooperative learning structures with fidelity.

3. The data reported for research questions 1 and 2 will be based upon teacher self-report. There will be no quantified observation data included in the findings of the study.

Delimitations

This study has the following delimitations:

1. Participation was limited to only one school that is located in the school district.

2. This study was limited to student and teacher perceptions of how engagement and learning are affected by implementation of the Kagan cooperative learning structures and does not include observation or academic performance data.

Assumptions

For the purpose of this case study, the following assumptions were made:

1. It was assumed that teachers implementing the Kagan cooperative learning strategies have attended professional development offered by a Kagan trained professional developer.

2. All participants would cooperate fully in the research, and be honest and forthright in their contribution

CHAPTER 2: REVIEW OF LITERATURE

Introduction

This study investigated teacher and student perceptions on the implementation of Kagan cooperative learning structures as a teaching tool in the classroom. Specifically, it addressed its impact on engagement and learning. This literature review addresses the following related topics:

- Historical perspectives

- Changes that educators face in the 21st Century

- What employers say is needed

- Traditional strategies

- Active learning

- Theoretical perspectives

- What is cooperative learning?

- Elements of cooperative learning

- What makes a cooperative team?

- Cooperative learning in the classroom

- Kagan cooperative learning structures

- Basic proficiencies needed to implement Kagan cooperative learning structures

- Empirical analysis of cooperative learning

Historical Perspectives

Student-centered education is not a new concept. Its basic principles can be found as far back as early philosophers and educators of the 4th and 5th centuries BC. Confucius and Socrates emphasized programs of study that placed an emphasis on the learner, rather than a

specific subject (Henson, 2003). These notable philosophers realized the value of authentic

student involvement for the successful education of students. According to Henson, this belief

carried on through the turn of the seventeenth century when John Locke introduced the tutorial

methods as the first formal teaching method. "He introduced the concept, tabula rasa or blank

slate, proposing that at birth the mind is a blank slate, and the only way to fill it is through having

experiences, and reflecting on them" (Henson, 2003, p. 7). Henson further declared that French

educator Rousseau and Swiss educator Pestalozzi supported the concept of authentic experience

and with that came the first learner-centered schools in the late eighteenth century.

Cooperative Student-Centered Learning

American cooperative student-centered learning dates back to the middle of the

nineteenth century and the Common School Movement where it was extensively used to meet

the educational objectives proposed at that time (Henson, 2003; Pulliam & Van Patten, 2003).

Colonel Francis Parker launched his career in education as a principal in the Carrollton, Illinois

schools prior to the beginning of the Civil War. His educational career was interrupted with the

outbreak of war. Following the ending of the war, Parker traveled to Germany to study and learn

more about the educational practices of Pestalozzi and Froebel (Pulliam & Van Patten). Upon

his return to America, he served as administrative leader in several Illinois schools and was later

hired by the Massachusetts Board of Education with the charge of raising standards and public

perceptions of their distraught school system (Pulliam & Van Patten, 2003; Rimmerman, 2004).

Under his leadership, there was an emphasis placed on the distinctive needs of each individual

student and strategies selected for use in the classroom were based upon the differences found in

students. According to Henson, drill and rote memorization activities were replaced with tasks

demanding student inquiry. Parker's belief that students should work together in groups in order

to learn was found to be very successful. As reported by Henson, between 1878 and 1880, nearly 30,000 visitors came to observe the system that Parker created in the Massachusetts school system. Parker later accepted a position as Head of the Chicago Institute, Academic, and Pedagogic, where he had the pleasure of working with John Dewey.

Learning through Experience

Dewey, who is perhaps the most prominent American in the field of education and philosophy, fostered the education of students based upon individual interests and experience (Henson, 2003). Dewey advocated for active, rather than passive learning to meet the needs of all students. Henson and Pulliam and Van Patten (2003) asserted that Dewey, who is often referred to as the founder of Progressive Education, pursued the use of authentic experience for all students. In other words, his belief was that the school experience for all students should mimic adult life as much as possible. Dewey held the belief that education was the portal of preparation for students to become productive and valuable citizens possessing the skills of creative and critical thinking and the ability to collaborate with others in a democratic society (Sharan & Sharan, 1992). He believed that "the only way a child would develop to its fullest potential was in a social setting" (Henson, 2003, p. 9).

However, the work of Dewey and his Progressive Education belief came under strong scrutiny. The criticism that he faced was grounded on the lack of student achievement and concerns that developed as a result of the use of Dewey's life adjustments curriculum (Pulliam & Van Patten, 2003). Dewey adversaries desired a return to a more rigorous method of traditional studies as a means of educating school aged children (Sadker & Saker, 2005). This dispute peaked on October 4, 1957 with the launching of *Sputnik* by the Soviet Union. Consequently, critics blamed the learner centered curriculum for American schools lagging behind in the race to

space (Henson, 2003; Pulliam & Van Patten, 2003). The fear of falling behind in the race to the moon reverted American educational leaders and classroom educators back to traditional, teacher-centered methods of teaching and the passing of the National Defense Education Act (Pulliam & Van Patten, 2003). As a consequence of this reversion, the educational emphasis shifted to technical and scientific offerings gained through teacher-centered approaches, thus stressing the use of sit and get with rote memory (Sadker & Sadker, 2005).

However, student-centered learning strategies continued to be used, to a small degree, in classrooms across the country throughout the end of the twentieth century and increased in use as research was conducted and proved that students were achieving just as much, if not more, using the cooperative learning methods (Pulliam & Patton, 2003). Leading this research were brothers David and Roger Johnson, Robert Slavin, and Spencer Kagan. Each of these three schools of thought contributed to the evolution of the concept of its current version.

Although the thinking of John Dewey was before his time in the history book, it took until the late twentieth century for researchers to realize the benefits that could be noted in classrooms across America with the use of student teams and experiencing working cooperatively to create a common goal.

The Emergence of Cooperative Learning

Johnson and Johnson (1999a) asserted that cooperative learning was derived from and is supported by at least three distinctive theoretical perspectives: cognitive development, behavioral learning, and social interdependence. Rimmerman (2004) characterized Johnson and Johnson's work as the "modern era of cooperative learning" (p. 2). Their model of cooperative learning is known as learning together and can be used at all grade levels and with any content.

Student Team Learning

During the same time frame that the Johnson brothers were researching cooperative learning, Slavin (1990) was working to add a more academic component to the cooperative process. Slavin developed and researched Student Team Learning methods (Sharan & Sharan, 1992). The assertion behind Student Team Learning, as with any cooperative learning method, is "the idea that students work together to learn and are responsible for their teammates' learning as well as their own" (Slavin, 1990, p. 3). Slavin asserted that there were three concepts vital to Student Team Learning methods: team rewards, individual accountability, and equal opportunities for success.

Student Team Learning became engineered through the work of Kagan (1994) and will be explored in a later section.

Changes That Educators Face in the 21st Century

The current century has ushered in a range of expectations of educators that have added to the already heavy burden of legacy expectations. This section will examine the emphasis that is now placed on problem solving and higher order thinking skills that must become part of how students are taught in order to prepare them for success in the job force, as well as being well-informed citizens.

Shift to Problem Solving and Higher Level Thinking Skills

Our nations approach to educating its school aged population was founded on an economy and social order that has changed radically over the past several decades. Our dependency on manufacturing and agriculture for economic gain and stability is almost a thing of the past (Jerald, 2009). In the face of global competition, the National Education Association (NEA, 2012) contended that reliance only on the three R's – reading, writing, and arithmetic –

will no longer sustain our country. Jerald elaborated on this belief by stating that this "does not

mean that schools should no longer ask students to memorize any information or learn how to

follow directions, but rather that such learning will be insufficient for success in the job market

of the 21st century" (p. 6). The NEA contended that in addition to the "Three R's," 21st century

learners must also develop proficient skills in communication, higher critical thinking, creativity,

and collaboration. Although there are still jobs today that have a prerequisite consisting of

physical endurance and fine motor skills, most jobs now necessitate the need for more in-depth

thinking and problem solving skills (Hargreaves, 2003; Partnership for 21st Century Skills,

2008).

Hargreaves (2003) believed that the rapid pace of technological advances and array of

technology accessible to students, both in and out of school, are the drivers for the demand that

students receive instruction that provides them the opportunity to think critically and with higher

order thinking skills. Wells and Langenfeld (n.d.) contend that,

> At the dawn of the twenty-first century, industry in all corners of the world are [*sic*] fully
> embedded in the Knowledge Age. A new class within the workforce has been identified
> as 'knowledge workers', people whose primary function in the business enterprise is the
> application of information and knowledge. (p. 1)

According to Jerald (2009), jobs that are secured in the 21st century job market require

that applicants possess skills that "allow complex interactions with other humans (whether

collaborating, persuading, or selling) or that require solving unexpected problems using expert

thinking" (p. 6).

Careers for today, as well as the future, will require that applicants be proficient in higher

order and critical thinking and performance skills.

21

Twenty-First Century Learning

Twenty-first century learning is based upon a framework (Partnership for 21st Century Skills, 2008) that describes the proficiencies that should be taught in order for students to flourish in the ever-changing, global economy. Schwarz and Kay (2006) believed that there is a lack of focus on the essential components in the American education system even though 21st century learning includes both essential skills and curricula needed in order for young people to become successful citizens and workers. Businesses, their leaders, and communities are relying on schools across our nation to prepare a labor force that is 21st century literate. The Partnership for 21st Century Skills (2008) identified highly developed communication skills as a vital proficiency for applicants to possess in order to find success in both the job market and as a functioning member of society. Moreover, the Partnership for 21st Century Skills stated, "we need to recognize that a 21st century education is the bedrock of competitiveness—the engine, not simply an input, of the economy" (p. 1).

<div align="center">

What Employers Say Is Needed

</div>

As stated by the Partnership for 21st Century Learning (2008), the United States is a global leader when addressing the growth of jobs in the areas of technology, media, and telecommunications. As jobs in these fields continue to develop and advance, the essential qualifications needed for vacancies in these areas will transform drastically. In fact, business leaders and owners have specified areas that need more emphasis in post-secondary training in order to create the 21st century skills necessary to find success in the present and future workforce. In a study conducted by Peter D. Hart Research Associates (2010) involving 302 employers, the following skills were noted as areas for increased emphasis:

- effective oral and written communication (89%),

- critical thinking and analytical reasoning skills (81%),

- analyzing and solving complex problems (75%),

- teamwork skills and the ability to collaborate with others in diverse group settings (71%), and

- innovation and creativity (70%).

The significance of gaining proficiency in the skills mentioned above was noted in earlier data that were collected using 305 employers by the Peter D. Hart Research Associates (2006). These data listed skills that were sought by the employer participants when hiring new staff members. It indicated that 44% of employers believed collaboration and teamwork skills in a diverse group is one of the most essential skills needed by applicants, followed by critical thinking and analytical reasoning skills (33%), and effective communication, both written and oral (30%). The business leaders and owners stated that their greatest frustration and largest task as employers was acquiring potential candidates that possessed "both the specific job/technical skills and the broader skills (communication skills, teamwork skills, problem-solving skills, and work ethic) necessary to promise greater success for both the individual and their employer" (Peter D. Hart Research Associates, 2006, p. 7). In addition, the data also showed that 63% of the business leaders and owners that were part of the interview process agreed that too many recent college graduates did not have the skills that were necessary to be successful in the workforce of today's global economy. Hence, one large challenge that schools face is how to best prepare students to gain these vital 21st century skills that are needed for successful employment.

Traditional Strategies

Traditional educational strategies usually consist of uninterrupted teacher-centered

dialogue that relegates students to the position of overt and passive learners (Johnson, Johnson &

Smith, 1991b; Kuzu, 2007). In fact, according to Johnson, Johnson and Smith,

> the lecture came into prominence when it was assumed that John Locke was correct and
> that the untrained mind is like a blank sheet of paper waiting for the instructor to write on
> it, and that students' minds are empty vessels into which instructors pour wisdom. (p. 82)

Scrivener (2005) added that "the teacher spends quite a lot of class time using the board

and explaining things—as if 'transmitting' the knowledge" (p. 16). These legacy strategies rely

heavily on teacher lecture, student note taking, and culminating activities that consist of the

completion of worksheet after worksheet. They also place very little demand on a student's

cognitive processing ability and are inclined to promote strictly recall of facts (Johnson et. al,

1991b). Traditional lecture practices, consisting of sitting in class listening to teachers and

memorizing presented information, essentially do not allow knowledge acquisition (Chickering

& Gamson, 1987; West &Watson, 1996). Research has suggested that the sole reliance on the

teacher lecture strategy in the classroom inhibits student learning (Bonwell & Eison, 1991).

According to McCauley and McClelland (2004), memorized information from teacher lecture

and note taking is saved in short-term memory and makes retrieval later much harder for

students.

As reported by Gatto (1998) traditional methods of instruction in American schools do

not contribute to the problem-solving skills necessary for success in today's society. McCauley

and McClelland (2004) further stated that traditional methods of teaching, which "reinforce

habits of passive and dependent learning" (p. 35), are not effective due to the fact that students

are not given the opportunity to "discuss and debate their answer with peers in an attempt to

work through and improve their understanding" (p. 29). Kuzu (2007) stated, "rapid development of technology and unique characteristics of the creative society require a shift from traditional teaching concepts to student centered learning in education" (p. 34). Both Cole (2008) and Wells and Langenfeld (n.d.) suggested that traditional teaching methods will not properly and adequately prepare students for the labor force and the technological world. Teachers and other education stakeholders continually seek ways to better prepare students for the ever changing work force.

Today's educators are facing a more diverse student body than ever before (Cole, 2008; Cummings, 2000). With the additional demands surfacing due to the wide span of diversity, classroom teachers consistently struggle to utilize and become familiar with improved and research-based strategies in order to prepare each and every student for the future. This is especially true with the recent implementation of the Common Core State Standards (CCSS) (National Governors Association Center for Best Practices & Council of Chief State School Officers NGA CBP, 2010). In fact Sawchuk (2010) suggested that traditional teaching strategies that have been used for years are not effective with the rigorous concepts that must be covered with the recent implementation of the CCSS. Cummings further stated that teachers are now required to cover and students are required to retain more concepts and material than ever before. Therefore, it is important for school and district- based instructional leaders, who make decisions concerning teaching strategies, to put into practice teaching methods that produce self-directed problem solvers in order to facilitate more effective teaching and learning (McCauley & McClelland, 2004).

Active Learning

According to Bonwell and Eison (1991), active learning instructional strategies involve a variety of activities that share the common notion of "involving students in doing things and thinking about the things they are doing" (p. 2). In contrast to passive learning methods where the content presentation consists of gaining information from teacher presentation and overt student participation, active learning is a student-centered learning process. Thus, active learning is not just student engagement in activities. Allen (1995) strongly suggested that "one caution cannot be overstated: incorporating active learning techniques must be purposeful to carry out specific and important objectives and must require students to use the higher order skills of analysis, synthesis, and evaluation" (p. 99).

There are some experts who believe that active learning must be afforded to students in order to promote higher-order thinking skills in students (Allen, 1995; Costa & Callick, 2004). These professionals also maintained that information that is learned should be meaningful to the learner. In fact, Allen (1995) stated that if the information is not meaningful, the "students will consider your classes to be busy work–gimmicky and worthless" (p. 99).

While procedures for active learning activities can vary, they all engage students through investigation, discovery, or application of the curriculum, without complete dependence on the teacher's expertise or presentation of the curriculum (Smith & MacGregor, 1992). According to Taylor (1995), educators must acquire the ability to modify their roles in the classroom and grow into collaborative facilitators for delivery of the curriculum. Taylor also contended that making this shift in the belief of some educators would be vital with respect to the use of new research based teaching strategies. West and Watson (1996) asserted that "professional education programs and courses in the Americas must prepare self-directed, life-long learners who strive to

identify and solve problems and succeed in diverse and evolving environment" (p. 3). Costa and Kallick (2004) supported the notion that the "teacher's role is crucial. . . . many teachers must modify their approaches from a traditional approach where information is dispensed and judged to one of inquirer, questioner, facilitator, and model" (p. 16).

Paez (2003) argued that with the diverse learning needs and styles of students in today's classrooms, effective educators should be cognizant of not only the learning needs of each student, but also, how each student thinks. According to Cummings (2000), research has revealed that one of the prime sources leading to the diversity in learning styles of children today is their significant amount of exposure to multi-media. Students now have immediate, in-the-palm access to almost any information they desire. Cummings continued by stating that this exposure substantially impacts and shapes the learning and listening inclinations of students in the classroom. He further proposed that the increase in cases of students exhibiting symptoms of attention deficit disorder and intensified anger outbursts have been significantly affected by this exposure. Given the weight of evidence from both theory and practice surveyed above, it is reasonable to conclude that one beneficial method for engaging students of the multimedia generation in today's classroom is active, rather than passive learning (Cummings).

Cooperative Learning

Educators can choose to utilize a variety of teaching strategies that are focused on building student teams and the group process, including (but not limited to) cooperative learning. Smith and MacGregor (1992) wrote that through the use of cooperative learning, "the development of social skills in group work learning to cooperate is key to high quality group work. Many cooperative learning tasks are put to students with both academic objectives and social skills objectives" (p. 3).

Cooperative learning is just one example of an instructional strategy that can promote active student learning (Felder & Brent, 1994). Rivera (1996) believed that cooperative learning activities could enrich information presented in textbooks, offer students an opportunity to employ recently presented skills, function as a tool for the review of skills, and most significantly, help students articulate associations between concrete and abstract ideas. By incorporating cooperative learning strategies, teams of students can be assigned a question, analyze it together, answer it as a team, and from this team approach, achieve a deeper understanding of the answer (Kagan & Kagan, 2009).

With this change in classroom methodology, students can have the opportunity to verbalize, explain, and reiterate for their teammates the process that they used to identify and find solutions to given problems.

Theoretical Perspectives

Cooperative learning has been extensively researched and also mentioned as one of social psychology's greatest success stories in education (Slavin, 1996; Johnson, Johnson, & Maruyama, 1983). "The success of cooperative learning is largely based on its having a clear theoretical foundation and hundreds of validating research studies that point the way for operational procedures for practitioners such as teachers" (Johnson & Johnson, 2009, p. 366). The theory behind cooperative learning began with social interdependence (Deutsch, 1949, 1962; Johnson & Johnson, 1989; Lewin, 1935), cognitive development (Piaget, 1950; Vygotsky, 1978, 1986), and behavioral learning (Bandura, 1969) theories. Cooperative learning is unique in that it is derived from such a wide range of social sciences (Johnson, Johnson, & Stanne, 2000).

Social Interdependence Theory

Cooperative learning posits a focus on social interdependence. This theory was originally presented in the early 20th century by researcher Koffka (Johnson, 2003; Johnson & Johnson, 2005, 2009). According to Johnson and Johnson (2005), Koffka suggested that variance is observed in the interdependence that occurs between group members and consequently, this alters the dynamic of the group as a whole. Further research was done on this idea and taken a step further by a second researcher Kurt Lewin in the 1920s. According to Johnson (2003), Lewin stated that "the essence of a group is the interdependence among members which results in the group being a "dynamic whole" so that a change in the state of any member or subgroup changes the state of any other member or subgroup" (p. 935). Johnson continued by stating that, "the premise of this theory is that the way in which goals are structured determines how individuals interact, which in turn creates outcomes" (p. 934). According to Johnson, Lewin further suggested that a group is rendered interdependent by the presence of common goals and that the pressure to achieve these goals is what motivates cooperation among group members. As stated by Johnson and Johnson (2005), social interdependence is present in any social situation where every individual's outcomes are affected by the actions of others. This hearkened back to Johnson and Johnson's (1989) earlier assertion that individual behavior is typically determined by a person's perceptions of the desired purposes and the process by which the desired goals may be reached.

Positive and negative interdependence. During the middle of the twentieth century, Morton Deutsch became the third noted researcher that contributed to the theory of social interdependence. His research led Deutsch (1949) to theorize two categories of social interdependence: positive (cooperative) and negative (competitive).

According to Deutsch (1949, 1962), positive interdependence supports a cooperative link among individuals as they facilitate their own learning and encourage the endeavors of others. "Positive interdependence exists when there is a positive correlation among individuals' goal attainments; individuals perceive that they can attain their goals if and only if, the other individuals with whom they are cooperatively linked attain their goals" (Johnson & Johnson, 2005, p. 288). In other words, if one group member succeeds, then other students in the group can also be successful. Deutsch suggested that positive interdependence produced promotive interaction. This type of engagement increased the probability of all team members achieving success in the attainment of a given goal as a result of the mutual help, exchange of resources, effective communication, and trust that is generated through the efforts of the team (Deutsch). Positive interdependence encourages a learning environment that is conducive to cooperation and caring, where students work together, are supportive of one another, and encourage each other to learn and succeed (Kagan, 2007).

In contrast, negative interdependence generates opposition in the interaction as individuals deter the learning endeavors of other team members with the purpose of encountering their own personal success in acquiring the assigned task (Johnson, Johnson & Smith, 1998). "Negative interdependence exists when there is a negative correlation among individuals' goal achievements; individuals perceive that they can obtain their goals if and only if the other individuals with whom they are competitively linked fail to obtain their goals" (Johnson & Johnson, 2005, p. 288). Consequently, if one student on the team finds success with the assigned task, the other team members cannot be successful. Thus, under situations involving negative interdependence, an individual student can attain the assigned task provided that the other members of the team are not successful in meeting theirs. Deutsch (1949) posited that negative

interdependence resulted in a process of oppositional interaction. According to Deutsch, this type of engagement decreased the likelihood of all team members finding success with a given assignment because of the competitive nature of the work being done by each individual on the team. Negative interdependence creates a learning environment that is sometimes unfriendly, competitive, or even hostile and classmates are at odds with each other (Kagan, 2007).

Deutsch (1949, 1962) also observed a complete absence of interdependence known as individualistic. "No interdependence or individualistic efforts exist when there is no correlation among individuals' goals achievements; individuals perceive that the achievement of their goals is unrelated to the goal achievement of others: (Johnson & Johnson, 2005, p. 289). According to Deutsch, when no interaction can be noted, individuals engage in actions that promote the success of themselves and have no effect on anyone else's achievement of their goals and the focus is solely on increasing ones' own productivity and achievement, while completely ignoring the efforts of others. In this learning situation, there is no interaction with others and individuals work alone (Johnson, Johnson, & Holubec, 1994a).

According to Johnson and Johnson (1989), based upon the research of several researchers including Lewin, Lissner, Mahler, and Lewis, it was concluded that it is the aspiration to achieve a given goal that motivates cooperative, competitive, or individualistic behavior (Johnson & Johnson). As Rimmerman (1996) avowed, "Morton Deutsch's findings on the power of cooperative learning have been corroborated time and time again by empirical and observational studies" (p. 2).

Modern day social interdependence. The work of Deutsch was modified and extended by one of his graduate students, David Johnson and his brother, Roger (Johnson & Johnson,

1989; Johnson; Johnson, & Maruyama, 1983). These brothers researched and developed what is currently known as the Social Interdependence Theory. They stated:

> Social interdependence theory posits that the way social interdependence is structured determines how individuals interact which, in turn, determines outcomes. Positive interdependence (cooperation) results in promotive interaction as individuals encourage and facilitate each other's efforts to learn. Negative interdependence (competition) typically results in oppositional interactions as individuals discourage and obstruct each other's efforts to achieve. (Johnson & Johnson, 1999a, p. 187)

Johnson and Johnson have conducted an extensive amount of research based on the idea of social interdependence and its role on the cooperative learning teaching strategy. As a matter of fact, they consider the idea to be a crucial component for the validity and effectiveness of the implementation of cooperative learning in the classroom (Johnson & Johnson, 1989, 1999a, 1999b, 2009).

Cognitive Development Theory

The chief view of cognitive theorists upholds the belief that "mental growth is the most important element in children's development" (Trawick-Smith, 1997, p. 67). As stated by Greene (2008), all children utilize cognitive abilities in order to understand, interpret, and draw conclusions about their surroundings. Greene also asserted that researchers and educators have gained knowledge concerning the complexities that are involved in the development of human personality based upon information provided by the cognitive development theory. The cognitive developmental perspective is based primarily on the work and theories of Jean Piaget and Lev Vygotsky (Johnson & Johnson, 1999a).

Jean Piaget. Piaget is one of the most renowned and influential researchers in the area of cognitivism, especially the development of children's thinking processes (Boudourides, 1998). His research on child development has been utilized in colleges and universities around the world in helping to prepare future educators for success in the classroom. His research is based

upon his belief that mental and physical growth are inseparable and thus, they occur at the same time (Piaget & Inhelder, 2000). Piaget (1954) believed that cognitive development is based primarily on four factors: maturation, physical experience, social interaction, and a general progression toward equilibrium. He avowed that human achievement and knowledge, from simple to complex, is created by the active participation of the learner rather than by the passive transmittal of an educator (Boudourides, 1998). Thus, the academic achievement gained by a student is greatly influenced by the intrinsic motivation of the learner and the actions that are taken on the environment and others (Piaget, 1954). Schiefele (1999) supported this claim when he asserted that one's interest in an assigned task results in motivation from within and led to deeper levels of learning.

According to Piaget and Inhelder (2000), traditional instruction failed to produce the brain stimulation that was associated with peer based interaction in the classroom. Piaget, as stated by Labinowicz (1980), argued that traditional lectures place students in a position to hear what they perceive and this perception may not actually be the same thing as the content that is actually given by the teacher. Hence, the content taught by the teacher is not always what the student learns. For Piaget, there were four tenets of learning: (a) students should construct their own learning in order for the knowledge to be meaningful; (b) optimal learning takes place when students can be active and interact with concrete materials; (c) learning should be student-centered and individualized; and (d) social interaction and cooperative work should play a significant role in the classroom (Weil & Murphy, 1982).

Johnson and Johnson (1999a) expressed that Piaget endorsed the idea that cooperation with others generated cognitive disequilibrium. Cognitive disequilibrium brings about conflict that accelerates an individual's development in perspective-taking ability and cognitive

33

development (Johnson & Johnson, 1999b). Slavin (1990) wrote that Piaget (1926) also supported the idea that if students are going to learn language, values, rules, morality, and symbol systems (such as reading and math) , interaction with others must take place. According to Johnson and Johnson (1999a), cooperative learning, as understood through the eyes of Piaget, was targeted at increasing the development of a student's intelligence by persuading him or her to reach agreement with team members holding contrasting views. Thus, students grow academically when they are required to generate a consensus based and informed conclusion on a given task.

Piaget (1959, 1966) believed that children could become less egocentric as they interacted and formed formal relationships with peers. Children can experience and accept views that are different than their own when they are given opportunities to deliberate with each other and interact face to face (Tudge & Caruso, 1989). Tudge and Caruso relied on Piaget's (1959, 1966) theory as a foundation for several research studies where children were observed engaging in a task while working in pairs and alone. Several of the researchers, according to Tudge and Caruso, determined that children who were paired with a slightly advanced teammate to complete the task were capable of explaining the outcomes using higher level thinking skills when compared to students who completed the task by themselves. In addition, Piagetian scholars asserted that cognitive conflict, a dialogue that takes place when students are partnered with another student and consists of conversations based on differences of opinion, is vital for human development (Tudge & Caruso, 1989). During these conversations, each child is given the opportunity to share his or her viewpoint and personal opinions with their teammates. Tudge and Caruso maintained that it is this within this dialogue that the less advanced partner is able to comprehend on a higher level of understanding due to the interaction with another student.

Lev Vygotsky. Corresponding to Piaget, Vygotsky (1978) recognized the significant

connection between social interaction and cognitive development. According to Vygotsky

(1978), "human learning presupposes a specific social nature and a process by which children

grow into the intellectual life of those around them" (p. 88). However, Vygotsky took a

difference point of view than Piaget in the separation of learning and social context.

Vygotsky (1978) argued:

> Every function in the child's cultural development appears twice: first, on the social level
> and, later on, on the individual level; first, between people (interpsychological) and then
> inside the child (intrapsychological). This applies equally to voluntary attention, to
> logical memory, and to the formation of concepts. All the higher functions originate as
> actual relationships between individuals. (p. 57)

Vygotsky (1978) did agree with Piaget when addressing the topics of learning and its

enhancement to stimuli. However, he maintained that mental development was comprised of

both actual and potential growth. According to Vygotsky, the actual mental development was

the present level already obtained by the child and was where the child could function

independently in order to solve problems. Vygotsky continued that potential development was

the achievement level that a child was capable of reaching with the assistance of others. This

potential development level awarded a learner the experience to comprehend material and solve

problems on a level that was not possible within the realm of his or her personal or actual

development level (Vygotsky, 1978). This belief was based on the idea that learning stimulated

in children an assortment of internal developmental processes that could only function when they

collaborated with more skilled individuals in their environment and cooperated with their peers

(Vygotsky, 1978).

A second characteristic of Vygotsky's theory was the idea of the "zone of proximal

development" (ZPD; Vygotsky, 1978, 1986). Vygotsky's notion of the ZPD was fundamental to

35

his perspectives on the social creation of one's intelligence and the academic advantages of working with others. This concept of the ZPD posits that human ability is theoretically infinite; however, the judicious limits of human potential are established by the quality of social interactions and one's residential environment (Dahms et al., n.d.) Vygotsky (1986) defined a child's ZPD as "the discrepancy between a child's actual mental age and the level he reaches in solving problems with assistance" (p. 187). Cognitive development is acquired when children are socially interactive with other children. Still, cognitive development is different than potential development because of the contributions and support that is provided by outside sources such as teachers, peers, and other adults. In order for children to fully develop their ZPD, it is essential that they network with others in order to acquire unknown knowledge.

Social Learning Theory

Bandura's social learning theory (1986) ascertained that there is a collaborative model of causation where one's surroundings, actions, and both cognitive and personal influences all function as contributing elements of each other. The social learning theory concentrates on learning that takes place in a social environment. It contended that individuals acquire knowledge as a result of observation, imitation and modeling the behavior of others (Kagan & Kagan, 2009; Ormrod, 1999). The social learning theory was established on the claim that children learn by watching the actions of others and the results or consequences of those actions (Bandura, 1986, 1999). "Bandura believed that humans can learn through observation without the need for imitation; learning could be either direct or indirect (vicarious) in that one could learn through observing others' behaviors and the consequences of those behaviors" (Gibson, 2004, p. 195). Additionally, Ormrod (1999) maintained that cognition played a role in learning. He contended that "over the last 30 years the social learning theory has become increasingly

cognitive in its interpretation of human learning. Awareness and expectations of future

reinforcements or punishments can have a major effect on the behaviors that people exhibit" (p.

4).

Modeling and social influence, according to Bandura (1986), may perhaps persuade,

direct, and modify human opinions and emotions. Bandura continued by asserting that

modeling, which generates awareness, improves motivation, and enables learning, is also

acknowledged as a stimulant to emotions. In order to allow the development of cognitive skills,

verbal modeling of thought processes is essential, according to Bandura. He further stressed that

an individuals' personal, behavioral, and environmental experiences were connected to the

growth of their cognitive abilities.

Parajes (2002) wrote that two of the challenges encountered by educators were improving

the academic abilities and confidence of students. By utilizing the ideas of the social learning

theory when making classroom decisions and preparing lessons, educators can play a role in the

development of the emotional status of their students; assist in the cultivation of their individual

principles and reasoning abilities, increase academic achievement, and improve behavior in the

classroom (Parejas). Thus, educators can transform not only an individual classroom, but also

the culture of an entire building by utilizing the ideas found in the social learning theory. This

implementation can also help educators discourage outside environmental factors that daily

obstruct the achievement of students in their school.

Bandura (1977) stated:

> Learning would be exceedingly laborious, not to mention hazardous, if people had to rely
> solely on the effects of their own actions to inform them what to do. Fortunately, most
> human behavior is learned observationally through modeling: from observing others one
> forms an idea of how new behaviors are performed, and on later occasions this coded
> information serves as a guide for action. (p. 22)

Similar to Vygotsky (1978), the work of Bandura emphasized learning in a social setting. Kagan and Kagan (2009) believed that humans were apt to mimic behaviors exhibited by peers who were comparable in age and gender, as well as those who solved similar problems. The social learning theory exemplifies human behavior as it relates to collaboration with others, praise, and incentives. Trawick-Smith (1997) explained that educators could employ the ideas of the social learning theory by allowing students to network supportively in an expected manner, followed by praise for each child who displayed the expectations. Kagan and Kagan (2009) summarized observational learning and stated that educators who modeled the expectations for students were more apt to observe the expected behaviors than those who merely told the students to finish the given task. Social learning theory proposes that humans are likely to imitate behaviors that bring about success and self-gratification.

According to Eggen and Kauchak (2007), if an anticipated reinforcement is in place, a spectator will exhibit an expected behavior, especially if the reinforcement to be experienced is a positive one. Additionally, Eggen and Kauchak assert:

> The importance of student cognitions has two implications for you as a teacher. First, you should clearly specify the behaviors you will reinforce, so that students can adapt their behavior accordingly, and second, you should provide students with clear feedback so they know what behaviors have been reinforced. For instance, if a student gets full credit for an essay item in attest but does not know why the credit was given, she may not know how to respond correctly next time. (p. 181)

Kagan and Kagan (2009) suggested that Bandura's (1973) work originated from the ideas of the social learning theory suggested by Vygotsky (1978). Consequently, Kagan stressed the significance of student participation in teambuilding activities in the classroom. Therefore, it is important that educators integrate these activities into the lesson planning process in order to support the potential of increasing students' knowledge of collaboration, consequently generating a conducive environment for modeling.

What is Cooperative Learning?

Cooperative learning is a teaching strategy that emphasizes learning that is facilitated by students rather than the teacher. Olsen and Kagan (1992) defined cooperative learning as a group learning activity organized in such a way that learning is dependent on the socially structured exchanges of information between learners in groups, each learner is held accountable for his or her own learning, and is motivated to increase the learning of others (p. 8).

Cooperative learning is a teaching strategy that places students in small groups, thus permitting students the opportunity to complete a task together to increase their own and each other's learning (Johnson, Johnson, & Holubec, 1994a). In fact, when students are placed into these learning situations, they have two essential tasks; learning the assigned material and content being covered for themselves and helping their teammates do the same. Laguador (2014) contended that cooperative learning served several purposes, including: explaining the content, supporting active processing of cognitive capabilities, and offering support for academic achievement.

Kassner (2002) suggested that cooperative learning was a powerful technique that teachers could utilize to differentiate learning for students via small group settings. Kassner further stated that cooperative learning has three significant objectives: (a) improve individual student learning and ability to recall content as a result of participation in a group, (b) nurture an optimistic attitude concerning content and learning, and (c) influence the acquisition of interpersonal and problem solving skill sets. Johnson and Johnson (1989) supported these three purposes when they stated that cooperative learning could strengthen a student's mastery of concepts by encouraging them to work together toward a shared goal.

When cooperative learning is employed as a classroom strategy, students are provided the opportunity to brainstorm, collaborate, and work to arrive at team consensus (Milios, 2000). By working together, students can share their understanding and how they personally arrived at the answer to a given question. As a member of a team in a cooperative learning setting, students must reflect on their prior knowledge and acquire the ability to simplify and impart their personal knowledge to their team peers, thus allowing a beneficial means to enhance their own personal "depth of processing" (Stevens, Slavin, & Farnish, 1991).

Cooperative learning increases student motivation by providing peer support. As part of a learning team, students can achieve success by working well with others. Students are also encouraged to learn material in greater depth than they might otherwise have done, and to consider creative ways to assure the teacher that they have learned the required material (Glasser, 1986, p. 1)

Cooperative learning permits students to be part of an experience where they can extend and strengthen comprehension of objectives and concepts and conceivably, even appreciate teammates more (O'Donnell & O'Kelly, 1994). As affirmed by Bromley and Modlo (1997), cooperative learning supports students as they acquire the skills required to be effective listeners, speakers, readers, and writers while working with teammates to complete assigned tasks. Furthermore, the more students work together in cooperative groups and are provided time to deliberate, probe, and summarize, with peers, they obtain a better understanding and remember more of the presented content (Caposey & Heider, 2003).

As reported by Bromley and Modlo (1997), cooperative learning was one way educators could support students' preparation for life as future citizens and obtaining careers in the real world. This teaching strategy has helped to increase motivation, develop effective

40

communication and social skills and offer students the opportunity to communicate their

metacognitive strategies so that others can understand and learn from them (Bromley & Modlo,

1997). Bromley and Modlo have further stated that schools have been given the task of offering

students an education that is based upon more than basic skills and information. Educators must

also provide students with the knowledge required to prepare for success in the competitive

global environment by supporting them in the development of higher level thinking skills,

communication skills, and social skills. With such requirements in place, cooperative learning

saves time and stress for educators (Bromley & Modlo, 1997).

Cooperative learning depends on groups for its full effectiveness to be noted. In order for

cooperative groups to function successfully, a classroom teacher must create a set of expectations

that are to be adhered to by all groups and each individual group member (Kagan, 1994; Kagan

& Kagan, 2009; Johnson, Johnson, & Smith, 1991a; Slavin, 1991b). In order for all students to

be knowledgeable of the expectations of the teacher, they have to be taught and given practice

time for the essential skills desired in order for cooperative learning to work, with the important

skill of working together being learned. Kagan (1994) stated that the learning curve for

expectation mastery should begin slowly, one lesson at a time, and develop to fidelity as

improvement is noted for the mastery of expected skills. Expectations for cooperative groups

should be extremely specific, easy to enforce, and simple for students to follow (Johnson &

Johnson, 1989).

Rivera (1996) defined cooperative learning activities as:

- a supplement to textbooks,

- scheduled time for students to work in teams to practice recently established skills,

- a means to review skills and concepts that have already been presented,

- a tool that can be implemented in order to assist students with creating links between concrete and abstract concepts, and

- a way to foster classroom dialogue.

Elements of Cooperative Learning

Cooperative learning consists of several necessary elements that must be described in order to thoroughly understand this teaching strategy. Although Kagan and Kagan (2009), Johnson and Johnson (1999a), and Slavin (1995) each designate a different number of these essential elements, they are all similar. As a result of the similarities in the descriptions, a synthesis of their ideas will be given here.

Positive Interdependence

Positive interdependence is an element that must be present if the implementation of cooperative learning is to be successful. In fact, the basic premise of positive interdependence is that no success for a team can exist without the input and success of all team members. Johnson, Johnson & Smith (1991b) quoted Alexandre Dumas's words "*All for one and one for all*" (p. 16) and stated that teams "sink or swim together" (p. 16). Team members must be taught and understand that to successfully complete an assigned team task, it is crucial for the entire team to organize their efforts and work together. This coordination may be established by creating mutual goals, assigning roles for each team member, dividing the labor or resources among group members, and/or giving joint rewards.

Positive interdependence is a way of thinking that results in each student's promotion of the other team members learning and achievement. If positive interdependence is present, each team member plays an equal role in the accomplishments of the team as a whole and other team mate's accomplishment of the delegated task. Kagan and Kagan (2009) defined three categories

of positive interdependence. In its weakest form, each team member's success can influence the success of other team member's success. Additionally, the overall success of the team is apt to be empowered by the success of each individual team member. Intermediate forms of positive interdependence transpire when the success of each team member promotes the success of all team members , despite the fact that success could have been produced without the contribution of each member of the team. In its strongest form, the success of each team member cannot be attained without the contribution and success of the other team members and the success of the group is not possible without contributions from every team member. Thus, the amount of mentoring and support that team mates provide to each other is profoundly affected by the level of positive interdependence that is created amongst the team. "When there is strong interdependence, cooperation follows" (Kagan & Kagan, 2009, p. 4:7).

Planning for positive interdependence is essential to the success of cooperative learning strategies and involves three steps (Johnson & Johnson, 1999a). The first step is to generate an assignment that is student friendly and measurable. All team members must clearly understand precisely what they are expected to accomplish. The second step is to structure positive goal interdependence. In order for this to occur successfully, all, team members must believe that they can complete the assignment with success if and only if their teammates reach their goals. In other words, team members understand that they cannot achieve success unless all members of the group succeed as well. Positive goal interdependence assures that a team is united around a common goal. The third step is to supplement positive goal interdependence with additional forms of positive reward interdependence. There are several ways a teacher can plan to accomplish this step. Following successful completion of an assignment, the teacher may offer the group some type of celebration for the accomplishment. Additionally, bonus points may be

added to each team members grade once the assigned task is accomplished. Teachers may prefer

to offer nonacademic rewards, such as extra recess time, free time in the classroom, stickers or

food.

For Kagan and Kagan (2009), structuring positive interdependence is similar to what

Johnson and Johnson (1999a) portray. Members of a team are assigned a common task with

team rewards based upon involvement of all members. In order to ensure the participation of all

students, roles can be assigned to all students. Also, tasks are planned in such a way that

individual student cannot complete them on their own. In addition, resources are available to all

team members.

Individual Accountability

The second element of cooperative learning is individual accountability. This element

places each student in a position to be responsible for his or her own involvement with the group

and to his or her individual, personal achievement. This element occurs when the success of

each team mate is assessed against an established criterion and each student is held accountable

by team members for delivering his or her reasonable share to the success of the group (Johnson

& Johnson, 1999a; Kagan & Kagan, 2009). This element makes each team member realize that

they cannot merely rely on the work of achievement of other team members and therefore, must

make every effort to achieve team goals (Johnson & Johnson, 1999a). Individual accountability

can be organized and measured in an assortment of ways and may take on different forms. When

speaking to team structure, individual accountability is easier to gauge when groups are small.

Small groups do not give student the opportunity to "free ride" (Kagan & Kagan, 2009) and not

put forth individual effort to accomplish the assigned task. Group accountability can be seen

when the performance of the team is gauged and the outcomes are expressed to all team

44

members in order to compare group achievement against a created standard of performance and

frequently results from the development of individual accountability (Johnson & Johnson,

1999a). When each team members grasps that their own achievement can have a momentous

impact on other members of the team, a greater sense of accountability develops, and teams are

more apt to complete a given task.

Equal Participation

A third element of cooperative learning relates to interpersonal and small group skills or

equal participation of team members. In order for teams of students to work together effectively

in a cooperative setting, teachers must take the time to teach, practice, and encourage the use of

social and teamwork skills that are needed for quality collaboration (Johnson & Johnson, 1999a).

According to Johnson and Johnson (1999a), students must know and learn to trust each other,

communicate ideas and thoughts clearly and effective with each other, support and accept the

difference of one another, and resolve conflicts in a productive manner. Working together to

complete group tasks is vital for student learning and success (Slavin, 1995) and directly

corresponds to social and teamwork skill advancement. Equal participation by students affirms

that each team member takes on an active role in completing the given task and that each

member is given equal opportunity to gain knowledge from the task and interactions with other

team members. Structuring equal participation aids in the development of social skills as well.

In order to ensure the element of equal participation can be found in a lesson, a number of

strategies can be used by classroom teachers during the planning process (Kagan & Kagan,

2009). First, each student may be given turns in speaking during cooperative activities. "Turn

allocation is the simples and perhaps most effective way to equalize participation" (Kagan &

Kagan, 2009, p. 12.16). In addition, tasks can be divided between group members in order for

each team member to have specific duties to complete that will assist in the accomplishment of the assigned team task. Several specific types of cooperative learning strategies depend considerably on a division of labor of tasks (Kagan & Kagan, 2009). Social skills are necessary for progress towards a group accomplishing a given task. Thus, leadership, decision-making, and communication are most effective when they include participation in a group setting.

Promotive Interaction/Simultaneous Interaction

A fourth element of cooperative learning is face to face promotive interaction or simultaneous interaction (Johnson & Johnson, 1999a; Kagan & Kagan, 2009). The classroom should be arranged to facilitate students' ability to work both face to face and together in order to promote each other's success (Johnson & Johnson, 1999a). When given a cooperative task, all teams in the classroom work on the task simultaneously, thus changing the role of the teacher to facilitator as opposed to the single source of information (Kagan & Kagan, 2009). In contrast to traditional, didactic instruction where the teacher does most of the talking and presents curricular content through the lecture process and the only students interacting with the lesson are those asking questions or being called on by the teacher (Johnson, Johnson, & Smith, 1991b; Kuzu, 2007), teachers plan time during the class period so that teams are given time to work on assigned tasks. In teams, every student is given the opportunity to interact with their team mates. The interaction patterns and verbal exchanges among group members as they support each other's learning and success are considered to be vital factors influencing educational outcomes. Teachers can also monitor and observe group interactions and encourage promotive interaction by asking groups how they are progressing in their task and also encouraging the teams to ensure that all members are involved in the interaction (Johnson & Johnson, 1999a; Kagan & Kagan, 2009).

46

It should be mentioned that every single element does not have to be represented each time a teacher chooses to use cooperative learning team strategy. Teachers may select the elements that match the given task or activity. Stahl (1994) however, believed that non-inclusion of these elements would lead to issues within the cooperative learning teams, and therefore, less achievement gains would be noted. Research indicates that the use of cooperative learning strategies, which involve some of the rudimentary elements, increases the achievement of students and develops positive interpersonal relationships between team members (Slavin, 1991a).

What Makes a Cooperative Team?

According to several researchers, one of the most stimulating things a human could experience was being part of cooperative learning team that was working towards a common goal (Johnson & Johnson, 1999a; Johnson, Johnson, & Holubec, 1993a). By being a part of a team, a student is given the opportunity to acquire socialization skills, participate actively with the academic content being presented, and give and receive help from peers (Stein & Hurd, 2000). However, generating such groups is not always an easy task for educators. In fact, the training and knowledge needed for the production of true cooperative learning teams is lacked by many educators (Slavin, 1991a).

Cooperative learning can be defined by the types of groups used for organization and delivery of group tasks (Johnson & Johnson, 1999a). Cooperative learning groups can be broken into three types: formal, informal, and cooperative base groups (Johnson & Johnson, 1999a; Johnson, Johnson, & Holubec, 1993a).

Formal cooperative learning groups usually work together for a minimum of one class period or up to several weeks, depending on how long it takes to complete the task. Johnson and

47

Johnson (1999a) contended that "formal cooperative learning groups ensure that students are actively involved in the intellectual work of organizing material, explaining it, summarizing it, and integrating it into existing conceptual structures" (p. 15).

Informal cooperative learning groups are temporary groups that last from few minutes to an entire class period (Johnson & Johnson, 1999a, Johnson, Johnson, & Holubec, 1991). These types of groups can be utilized to assist direct instruction and to focus students' attention on specific material that is being presented in order to ensure students "cognitively process the material you are teaching" (Johnson & Johnson, 1999a, p. 15), and to bring closure to a presented lesson.

Cooperative base groups are long-term groups, usually lasting the entire school year, with the purpose of providing support, encouragement, and assistance as each team member progresses academically (Johnson & Johnson, 1999a). Johnson and Johnson continued by stating that these groups are heterogeneous in make-up and give students the opportunity to create long-term friendships with classmates.

Not every group that is created represents a cooperative group (Candler, 1995; Johnson, Johnson, & Holubec, 1993a, 1994a, 1994b; Slavin, 1990). Merely placing students together and requesting that they complete an assignment together as a group does not constitute cooperative learning. According to Johnson and Johnson (1999a), many educators often mistake the following group activities as cooperative groups: study groups, project groups, and lab groups. However, unless designed with necessary elements present, these classroom grouping opportunities do not represent cooperative groups (Johnson & Johnson, 1999a).

As stated by Candler (1995), "true cooperative learning involves students actively working together in a caring, concerned environment" (p. 6). Rimmerman (1996) continued

with, "a cooperative group is usually three to four students who are tied together by a common purpose – to complete the task and to include every group member" (p. 3). Adding more than four students to any one group decreased the number of students who are engaged with the content and assigned activity at any given time (Kagan & Kagan, 2009).

Cooperative Learning in the Classroom

"Human beings are social creatures by nature and cooperation has been used throughout history in all aspects of our lives. Therefore, it follows that cooperative learning groups in schools would be used as a logical teaching method" (Dotson, 2001, p. 1). Cooperative learning is one of the most extensive areas of research, theory, and practice used in classrooms (Johnson, Johnson, & Stanne, 2000; Kagan, 1994; Kagan & Kagan, 2009; Slavin, 1991b). According to Kagan and Kagan (2009), cooperative learning is not simply a single learning strategy, but rather a collection of classroom strategies where an essential portion of the learning process is comprised of student collaboration that is focused on objectives and curricular material.

Although cooperative learning is utilized as a teaching strategy in 21st century classrooms, it is not a new idea and can be traced as far back as John Dewey (Lambert et al., 2002). At the turn of the 20th century, Dewey urged teachers to have students work together in learning teams in order to investigate and solve problems through the process of collaboration (Ellis & Whalen, 1990). Dewey, as reported by Lambert et al., was an advocate for an education that included opportunities to encounter authentic and meaningful tasks and for classrooms where groups of students worked together to construct their learning experiences. This teaching approach can be observed in 21st century classrooms through models of cooperative learning where students are given the opportunity to work together in order to gain new information and

49

knowledge by sharing their combined and individual perceptions and experiences (Lambert et al., 2002).

As a result of the accountability model and high stakes testing, teachers are expected to use research based and proven teaching techniques in their classrooms on a daily basis. For some educators, this expectation will necessitate the incorporation of teaching strategies they have never used before in the classroom. The constant changes in education and the recent implementation of the CCSS (NGA CBP, 2010) compel teachers to research and rely on research-based teaching methods to instruct twenty first century students (Shanahan, 2012). Twenty-first century students interact with each other on a daily basis not only at school, but through social media, and take in the world and their surroundings though information gained from computing devices. This interaction and use of technology is regularly disregarded during the lesson planning process. Consequently, encouraging interaction between classmates by implementing cooperative learning strategies appeared to be the leading approach to instruction in the classroom (Stahl, 1994). A teacher can promote deeper understanding of the presented objectives by planning lessons that allow time for students to become actively engaged in the learning process (Ravenscroft, Buckless, & Hassall, 1999).

Kagan Cooperative Learning Structures

Kagan (2013) noted that structures are one of the two distinguishing differences between the Kagan cooperative learning method and other cooperative learning strategies and can be used to transform concepts and theory into daily classroom procedure. Kagan continued by stating that these structures express the social organization among individuals working as a team by presenting a series of steps or elements that depict the patterns of interaction. In fact, Kagan and Kagan (2009) defined structures as "content-free, repeatable instruction sequences that organize

50

the interaction of student to implement the basic principles of cooperative learning" (p. 5.3).

Kagan (2013) extended the definition of structures by stating:

> Kagan Cooperative Learning Structures are instructional strategies. They are content free: They facilitate teaching and learning any content. Structures are repeatable: They are used over and over with different content to create fresh activities. All Kagan Structures are carefully designed sequences of steps that organize the interaction of students with each other, the academic content, and the instructor. Cooperative Learning Structures are designed to include the four basic principles that distinguish true cooperative learning. Kagan Structures are easy to learn, and easy to use, so they promote sustained implementation. (p. 6)

Kagan (2013) has created over 200 structures, and each one involves certain steps with intended learning outcomes. For example, one Kagan structure is Inside-Outside Circle. This structure functions nicely with any size group and can be utilized with students of all ages, from kindergarten through adults. Rimmerman (1996) stated that to employ this structure, students form two large concentric circles, with the students in the inside circle facing out and the students in the outside circle facing in—so that each student in the circle is aligned with a partner. Rimmerman continued by stating that the teacher then states a prompt and partners discuss, using an equal amount of time to share, the prompt given by the teacher. Kagan and Kagan (2009) offered that once the students have had time to discuss and share information with the group, one of the circles can then rotate a given number of partners left or right to gain a new partner and the process begins again from the beginning.

In this cooperative learning approach, the emphasis is on the selection of a structure, not on the curriculum- bound activity. According to Davidson (1994) and Kagan (1990), in order to execute Kagan cooperative learning with fidelity, it is necessary for teachers to learn structures and incorporate them into their lessons. Kagan's concept is consistent with some of the elements of cooperative learning proposed by the Johnson and Johnson (1999a) and Slavin (1990), particularly positive interdependence and individual accountability, but, in addition, he proposes

that the steps of the chosen structure be taught prior to the implementation of cooperative learning (Davidson, 1994).

Structure Functions

Using the basic principles and key concepts of cooperative learning as a corner stone, Kagan and Kagan (2009) created ten functions of cooperative structures, categorized into two functions: interpersonal and academic. The cooperative structures are classified according to their principle purpose and are labeled as either classbuilding, teambuilding, social skills, communication skills, decision-making, knowledgebuilding, procedure learning, processing information, thinking skills, and presenting information. Various structures are feasible and advantageous for meeting diverse objectives. In fact, many structures can be placed in more than one category. Kagan and Kagan's description of critical attributes and the advantages to the community of learners is reviewed in Table 1.

PIES

The Kagan approach is not only based on positive interdependence and individual accountability, but also emphasizes equal participation, and simultaneous interaction (PIES; Kagan, 1999, 2000; Kagan & Kagan, 2009). Every structure is based upon these four principles. Most approaches to cooperative learning recognize positive interdependence and individual accountability as basic elements included in the teaching strategy. However, Kagan and Kagan (2009) added equal participation and simultaneous interaction to "help us ensure both equal and maximum engagement" (p. 12.1). Each element of PIES is briefly described in the following.

Positive interdependence. Positive interdependence can be observed in a group setting when team members depend on each other and benefit from the interaction in a positive manner. When this team dynamic occurs, the result is a positive gain for each and every team member

Table 1

Kagan Structure Functions

Functions	Critical Attributes	Advantages
Classbuilding Interpersonal	Students out of seats interacting with all members in the class	Improved class climate with the resultant feeling that this is "our class"
Teambuilding Interpersonal	Students interact with their assigned teammates in a pleasant and productive manner	Enthusiasm, trust, and support which produces more efficient academic work
Social Skills Interpersonal	Students obtain and refine social skills, character virtues, and emotional intelligence	More polite, cooperative, respectful, responsible students who are able to understand different viewpoints
Communication Skills Interpersonal	Equalize communication and encourage positive communication patterns	Improved oral, written, and non-verbal communication among members of the community
Decision Making Interpersonal	All students are given time to verbalize and hear other points of view before making a consensual decision for the team	Creation of more unified teams due to increased skills with conflict resolution, win-win, and consensual decision making
Knowledge building Academic	Students work together to gain knowledge and comprehension	Produces a high level of mastery of academic content and basic skills
Procedure Learning Academic	Students work together to gain and refine skills and procedures	Development of procedural knowledge
Processing Information Academic	Students work together to talk about or review presented information	Allows content to move to long-term memory and clean the working memory
Thinking Skills Academic	Students create and exchange novel, unique, and set-breaking ideas	Fosters an environment in which students questions, reflect, evaluate, and apply information

53

Table 1 (continued)

Functions	Critical Attributes	Advantages
Presenting Information Academic	These structures allow for the sharing of information and ideas among teams or the class as a whole	Engages the community in higher level thinking and understanding multiple points of view

(Kagan, 2000). Positive interdependence occurs through team effort so that when one team member makes a gain, all team members make gains. In this kind of relationship, students respect and care for each other and help each other so that all team members learn. For the structure Inside-Outside Circle positive interdependence can be observed as new information is gained from the interaction that takes place between the pair of students as they address the prompt given by the teacher. If one of the partners is familiar with the material, that knowledge turns into gains for other students as they pair up with each other (Rimmerman, 1996). According to Kagan (2011), "positive interdependence drives cooperation. When our outcomes are linked, we hope for and support the success of others; when we cannot do a task alone, we work with others" (p. 3). Once the teacher and students acquire a true understanding of the importance of positive interdependence, they recognize that each team members' efforts, that are unique due to his or her resources and prior knowledge, are necessary and essential for the success of the entire team.

Individual accountability. Individual accountability emerges when students recognize that although they are a member of a team, they are still personally responsible for acquiring the content that is being presented (Kagan, 2000). Each team member is not only accountable to himself or herself but to the other members of their team. For the Inside-Outside Circle, individual accountability can be observed as each student is required to produce a public performance when given the opportunity to use his or her given amount of time to share (Rimmerman, 1996). The teacher can also skillfully structure the interaction of the students by asking the inside student to share for one minute and later asking the outside student to share.

As stated by Kagan (2011), "individual accountability is present if three conditions are met: (1) a student performs on his/her own; (2) the performance or the product of the

55

performance must be seen by someone else; and (3) the individual performance is required" (p. 2). Although no educator anticipates each team correctly answering every time a question is presented, it is the expectation that each team member participates in finding the right answer, or is willing to receive help from a team member in order to find the right answer. According to Johnson et al. (1981), using the cooperative learning strategy affords students the opportunity to work together on content, thus giving each individual student the ability to complete comparable tasks more easily when working alone.

Equal participation. Each Kagan structure was created to keep participation equal for each team member and to avoid a situation where one person takes charge or another decides not to participate at all. According to Kagan (1999), educators should strive to produce fairly equal participation among students in their classrooms to ensure cooperative learning. This is distinct from just providing an opportunity to participate in a group activity. Equal participation may be generated in the classroom by making use of turn allocation or by the distribution of labor. Turn allocation creates an expectation of participation—all students are provided an opportunity to take part in the activity and are expected to add their knowledge during their turn. The distribution of labor places responsibility on each student for completing a portion of the task and because every member is given a task, equal participation from each team member can be noted.

Each Kagan structure was created to utilize careful activity design, rewards, and accountability processes to promote equal participation. For example, in the structure Inside-Outside Circle, equal participation is noted as students are provided an equal quantity of time to communicate with their partner (Rimmerman, 1996). Learning takes place when students

interact with the content and peers. Therefore, for "equitable educational outcomes, we need for participation to be relatively equal" (Kagan, 2009, p. 12.14).

Simultaneous interaction. Finally, simultaneous interaction addresses the percentage of students who are overtly active at any given time during the use of a structure (Kagan, 2001). With overt participation, observers entering a classroom can easily determine the number of students participating at any given time. For the Inside-Outside Circle structure, at any given time one half of the students are communicating with their partner while the other half are actively listening. Student engagement can take on the form of actual student interaction or individual action, such as all students writing at one time (Kagan, 2005). With the implementation of the principle of simultaneous interaction, a teacher can considerably increase active engagement in the classroom. By considering the principle of simultaneous interaction, an educator can engage more students at a time, and thus get more accomplished more quickly.

Each Kagan structure was designed to apply the four basic principles of PIES (Kagan, 2000). These principles ensure that each structure implements cooperative learning among peers and not just participation in a group assignment. "Kagan structures are bridges, allowing teachers to pass easily from principles to practices, implementing basic principles and visions as part of any lesson, at any grade level, with any curriculum" (Kagan, 2000. p. 3).

Basic Proficiencies Needed to Implement Kagan Cooperative Learning Structures

Although cooperative learning structures have been shown to be powerful tools to use in the classroom, basic knowledge of them and PIES is not enough to find success with implementation. In order to achieve the benefits associated with the implementation of Kagan structures, an educator needs to possess certain competencies. Kagan (1994, 2013) and Kagan and Kagan (2009) asserted that educators should acquire the essence of the "seven keys to

57

success" (Kagan, 2013, p. 32) to effectively utilize the structures as intended. These key concepts include the following: teams, management, classbuilding, teambuilding, social skills, in addition to having an understanding of the structures and the fact that each structure is an embodiment of the PIES principles. Table 2 reviews the seven keys to successful cooperative learning and the teacher competencies associated with each.

According to Kagan and Kagan, "not all of the keys are necessary all of the time for successful use of cooperative learning" (p. 5.2). They maintain that by learning a few and implementing them, a teacher can see great success in the classroom. However, they assert that the seven keys are for the teacher who desires to be a distinguished teacher of cooperative learning and wishes to glean the most benefits that cooperative learning has to offer with maximal success (Kagan & Kagan, 2009). Following is a brief overview of some of the keys that have been chosen to emphasize due to emphasis placed on them during the research phase.

Key 2: Teams

Success of implementation of cooperative learning in the classroom begins with the careful and methodical formation of teams. According to Kagan (1994) and Kagan and Kagan (2009), heterogeneous teams of four are recommended for optimal results. They continue their discussion by supporting the use of teams of four with the following explanations: (a) teams of four allow students to work in pairs, (b) teams of four prevent odd man out, (c) teams of four optimize cognitive and linguistic mismatch, and (d) teams of four increase variation amongst the team. Kagan and Kagan (2009) agreed with Marzano, Pickering, and Pollock (2001) that although cooperative learning may seem to be appropriate for larger groups, in order to achieve maximum results, groups should be kept small. Not only should teams be kept small, they

58

Table 2

The Seven Keys to Successful Implementation of Cooperative Learning

Key Number and Name	Teacher skills needed
Key 1: Structures	Knowledge of cooperative learning instructional strategies
Key 2: Teams	How and when to form and re-form the various types of teams
Key 3: Management	How to manage the cooperative classroom
Key 4: Classbuilding	How to create a caring, cooperative community of learners
Key 5: Teambuilding	How to develop powerful learning teams
Key 6: Social Skills	How to develop students' ability to cooperate
Key 7: Basic Principles (PIES)	How to use the proven principles of cooperative learning

should be heterogeneous. Kagan and Kagan recommend that teams should consist of one high-ability student, one medium-high ability student, one medium-low ability student, and one low-ability student. At no time should students know the classification that is given to them. Only teachers should be aware of the classification given to each student for the purpose of creating teams. When creating teams, teachers should use classroom grades, benchmark assessments, and teacher observation as the criteria to rank students and determine the members of each group. Kagan and Kagan contend that teams should stay together for about six weeks, and then new teams should be formed.

Once teams are formed, the classroom teacher will then need to work with the teams to help students build trust within the teams, and develop the motivation needed for the team members to work together towards common goals. This can be accomplished through class building and team building activities.

Key 3: Management

"Cooperative classroom management differs radically from classroom management in the traditional classroom" (Kagan, 1994, p. 7:1). Management in a cooperative classroom requires maintenance of a learning environment that is engaging, but still under the control of the teacher. This type of supervision, due to the encouragement of student interaction, necessitates a different set of teacher skills. Kagan and Kagan (2009) emphasize that to control a cooperative classroom, a teacher must successfully be capable of managing the noise level in the classroom, capture the attention of students to maintain lesson pace, arrange the room for team success, and manage student energy

The first management recommendation discussed by Kagan (1994) is to establish and implement a quiet signal. The quiet signal is an indicator to the class that all talking and

movement in the classroom is to cease and that complete attention is to be given to the teacher by

each student. When the quiet signal is initially implemented, some clarification may be

advantageous so that students become familiar with the teacher's expectations when the signal is

given. Laura Candler (n.d.) lists the following as qualities of a quiet signal to consider:

1. Students have the ability SEE the signal, regardless of where they are in the
   room.
2. Students are able to HEAR the signal when it is given, even if they are
   completing given tasks in teams.
3. It's not excessively unpleasant because there are days that it will be used
   many times!
4. Three to five second student response time if it is a working signal.

Regardless of the selected signal, it is imperative that students learn the expectations and

rehearse their response to ensure the expected outcome once the signal is conveyed. This is

crucial because in order for teams to work productively, they frequently require instructions and

feedback from the teacher. When the chosen quiet signal is combined with a well-taught

routine—modeled and practiced until perfected—it has clarity, significance, endurance and

strengthens a small but crucial element of effective classroom management.

A second management suggestion reminds the teacher that the cooperative learning

classroom is "arranged to accommodate student teams and frequent cooperative interaction"

(Kagan & Kagan, 2009, p. 8.13). Most classroom furniture can be used to appropriately

implement cooperative learning. Understandably teachers must utilize the furniture that they

have, so it is fortunate that cooperative learning can be implemented using individual desks, long

tables, lab tables or computer tables. The following team seating arrangement guidelines are proposed by Kagan and Kagan:

- Students are seated four per team.
- Students are physically close to all teammates.
- Team tables are far enough apart for easy movement within the class.
- Teams are close enough for team-to-team interaction. (Kagan & Kagan, 2009, p. 8.13)

According to Kagan and Kagan (2009), one of the many assumed expectations of an excellent teacher is to control the energy level of the classroom. "The optimal state for learning is relaxed alertness: calm enough to concentrate, but alert and attentive" (p. 8.20). They maintain that one classroom technique that can be utilized to assist in sustaining this optimal state of learning is physical movement. According to Marzano and Pickering (2011), movement can be integrated into a classroom to initiate energy into an otherwise lethargic environment. As a result of increased blood and oxygen flowing to the brain, moving major muscle groups can help students become alert and prepared to learn (Marzano & Pickering, 2011). Kagan cooperative learning structures can be utilized to achieve this needed movement. Kagan and Kagan suggested energizing music of the use of the following structures to facilitate physical movement in the classroom: StandUp-HandUp-PairUp, Traveling Heads Together, and One Stray.

There are also occasions that students must lose energy in order to be productive. If students are too energized, Kagan and Kagan (2009) suggested that external stimulation must be diminished in order to prepare students to learn. When students seem excitable, overexcited, or distracted, the teacher can merely request a minute of silence. According to Linsin (2009), during this minute, students must sit silently and listen to their breathing. They should sit upright in their seats and breathe in and out slowly. Linsin suggested that this slow breathing works

because it decreases the heart rate and blood pressure, thus relaxing both the body and the mind. When the one minute is up, the teacher can then pick up where they left off, but this time with a restored sense of calm and a more focused state of mind—for both the teacher and the students. The following structures have also been suggested by Kagan and Kagan to assist with calming students: Timed Pair Share, Sustained silent reading, journaling, drawing, solo problem solving or worksheet work, and calming music.

In summary, Kagan (1994, 2013) and Kagan and Kagan (2009) regarded classroom management as a critical element to the success of students. A teacher who can manage his or her classroom has the ability to teach his or her students in an environment that is conducive to learning. "Management, however, is not an end. It is a means. We use management techniques in order to set the proper environment for learning" (Kagan, 1994, p. 7:10).

Key 5: Teambuilding

According to Kagan and Kagan (2009), "teambuilding lays the groundwork for effective teamwork" (p. 10.1). Kagan and Kagan asserted that teambuilding is used to produce excitement, reliance, and mutual support, which, over time, result in more successful work in academics.

Kagan structures can be used for teambuilding in the classroom. According to Kagan and Kagan (2009), "the criteria for a teambuilding structure is that it is team-based, involves the entire team, and furthers one of the five aims of teambuilding" (p. 10.3). Table 3 reviews the five aims of teambuilding and the purpose of each aim. Kagan and Kagan consider teambuilding structures to be good for promoting and creating team spirit regardless of whether the content is social or academic. Students can complete activities that permit them to truly get to know each other, which in turn, will help them to work together on a team.

Table 3

The Five Aims of Teambuilding

Number	Aim	Purpose
1	Getting Acquainted	Getting to know teammates
2	Class Identity Building	Forming a team identity
3	Mutual Support	Feeling supported by teammates
4	Valuing Differences	Clarifying and respecting differing values
5	Developing Synergy	Building on teammates' contributions

By mastering the selected keys, educators can successfully bring the following into their classrooms: Kagan structures that can maximize student interaction with classmates and engagement with the content, teams based on key ideas for optimal success, a learning environment where students desire to work together as a team, management of discipline in such a manner that a collaborative environment is created for all students, and PIES for success of implementation (Kagan & Kagan, 2009).

Empirical Analysis of Cooperative Learning

Advantages of Cooperative Learning

When seeking instructional strategies to use in the classroom for the purpose of increasing student learning, a teacher should focus on the research that can be attained on the chosen instructional strategy. According to Vaughan (2002), "cooperative learning has been widely researched and used in classrooms around the world since the 1970s" (p. 359). The classroom benefits of this teaching strategy are numerous. "Cooperative learning has been suggested as the solution for an astonishing array of educational problems" (Slavin, 1991b, p. 71). A synthesis of research on cooperative learning validated that these strategies have been found to increase the academic achievement of students, support enhancing interpersonal skills among diverse groups, improve psychological health, assist in creating a more positive student attitude towards learning, and help to prepare students for the future work force.

Achievement. One of the most important benefits connected to the implementation of cooperative learning is increased student achievement (Johnson & Johnson, 1983, 1985, 1990, Johnson, Johnson, & Stanne, 2000; Kagan & Kagan, 2009; Lazarowitz & Kersenty, 1990; Mesch, Johnson, & Johnson, 1987; Panitz, 1999; Slavin 1991b). "Academic benefits include promoting critical thinking skills, involving students actively in the learning process, improving

classroom results, modeling appropriate student problem solving techniques, personalizing large lectures and motivating students in specific curricula" (Panitz, 1999, p. 1).

The growth and increase in academic achievement are corroborated through numerous meta-analyses. In the analysis of 122 studies based on group work from 1924 to 1981, students participating in a cooperative learning environment generally had higher academic achievement than their counterparts not working with classroom peers (Johnson & Johnson, 1983). This same result was duplicated by Johnson and Johnson (1990) in their later investigation of 323 studies. Slavin (1991b) also concurred with this outcome on academic achievement. Slavin discovered that in 67 studies focused on the achievement outcomes of implementing cooperative learning strategies in classrooms at the elementary and secondary levels, 61.0% (41) of the studies found substantially higher achievement in cooperatively, student-centered taught control groups than in traditionally, teacher-centered taught control groups. These results were measured by the utilization of identical objectives used in all classes and the outcomes that were produced when students were assessed on these objectives. Positive results were attained in the core subjects of math, English language arts, reading, and social studies, and were noted across all grade levels, in urban, rural and suburban schools and for all achievement levels (low, medium. and high; Slavin, 1981).

In a meta-analysis of 158 studies, Johnson, Johnson, and Stanne (2000) specified that research outcomes suggested verification on the use of cooperative learning methods and their ability to generate positive achievement results. The studies in the meta-analyses included eight methodologies of cooperative learning: Learning Together and Alone, Constructive Controversy, Jigsaw, Student Teams Achievement Divisions (STAD), Team Accelerated Instruction (TAI), Cooperative Integrated Reading and Composition (CIRC), Teams-Games-Tournaments (TGT)

and Group Investigation. In each study, regardless of the method used, the achievement levels were considerably higher when cooperative learning strategies were utilized when compared to individualistic or competitive methods of learning.

Additionally, research by Mesch, Johnson, and Johnson (1987) validated that knowledge acquired cooperatively increased achievement gains. For this study, two groups of tenth grade students were monitored for six months. One group participated in lessons that implemented cooperative learning strategies, while the other group was taught using individualized instruction. The students who participated in cooperative learning teams made much higher scores on the assessments given to both groups. Not only did the researchers note gains in academic achievement, they also found that no negative outcomes were observed with the use of heterogeneous teams in terms of achievement levels, race, and gender. Consequently, the study not only verified the idea that implementation of cooperative learning could enhance achievement; it also supported the use of mixed, heterogeneous grouping of students.

Increased achievement gains due to the implementation of cooperative learning strategies have been investigated and validated across student age levels, ability levels, classroom subjects, and varied tasks (Johnson & Johnson, 1983; Kagan & Kagan, 2009; Lazarowitz & Karsenty, 1990). Students given the opportunity to complete tasks on a cooperative learning team scored higher than their counterparts in biology class (Lazarowitz & Karsenty, 1990). Johnson and Johnson (1985) discovered that in 21 of 26 studies based on students from various grade levels, learning abilities, gender, and race, greater academic success was noted for students working in cooperative learning groups.

Interpersonal relationships among diverse groups. Another positive outcome from the utilization of cooperative learning teaching strategies, is the growth and development of

interpersonal relationships among students with diverse backgrounds. Research (Roseth, Johnson, & Johnson, 2008; Kagan, 1994; Kagan & Kagan, 2009; Slavin, 1991a) suggested that the implementation of cooperative learning strategies can cultivate and promote peer relationships, intergroup relationships, and relationships between students with and without disabilities. Cooperative learning offers students from diverse social and ethnic groups the ability to collaborate and work together in order to meet a common goal (Johnson & Johnson, 1985).

A learning environment that utilizes cooperative learning strategies encourages positive teamwork among peers (Roseth et al., 2008; Slavin, 1991a). These positive results were obtained in a research study of a multi-ethnic classroom where students with and without a disability were enrolled (Johnson & Johnson, 1985; Slavin, 1991b). While reviewing 37 studies, Johnson, Johnson, and Bryant (1973) learned that when addressing the area of interpersonal skills, cooperative learning strategies produced less dictating behavior and more cooperative team spirited behavior. In addition, they found in 35 of the 37 studies, that more interpersonal benefit was noted in control groups of students that were team members in a cooperative learning situation than in their counterpart control groups where no team interaction was given. According to Johnson and Johnson (1983) and Johnson, Johnson, and Bryant (1973), cooperative interaction produces students who are more friendly, content, tolerant, sympathetic, encouraging, and supportive of one another.

Also, it should be noted that the educational setting is not the only environment where students are given the opportunity to take part in cooperative, social exchanges. According to Johnson and Johnson (1983), students engage in relationships outside of the classroom and these

relationships also aid in the development of positive opportunities for future interactions with peers.

Disadvantages of Cooperative Learning

As seen, there are a notable variety of positive outcomes that can occur when cooperative learning strategies are implemented in the classroom. These benefits can often overshadow some of the confirmed weaknesses that can accompany this teaching strategy (Randall, 1999). Difficulties that have been recorded when implementing cooperative learning strategies that could be faced by teachers and students consist of: extra planning time for teachers, teacher uncertainties of covering all the required content and standards attributable to the increased classroom time needed to execute the cooperative learning activities, insufficient professional development required to effectively train the teacher to implement the cooperative strategies as warranted by the research, and lack of student social skills needed to participate as a productive team member. (Zakaria & Zanagon, 2007). In addition, personal preferred teaching styles often influence a teachers' use or lack of use of any teaching strategy (Grasha, 2002). These challenges can hinder the value and success of the implementation of cooperative learning as a teaching strategy. They can also modify the manner in which cooperative learning is used in the classroom, and perhaps produce invalid results with research. As stated by Siegel (2005), "If teachers likely modify cooperative learning as they implement it, the results of quasi-experimental studies of cooperative learning will have limited generalizability to real-life classrooms" (p. 339). Different beliefs exist between teachers and researchers when addressing the modification of cooperative learning models for use in the classroom. While researchers recognize modification of research-based strategies as poor implementation, teachers perceive

the changes as resourceful problem solving that is required to meet the needs of all students in the classroom (Cuban, 1996).

Extra preparation time. In order to implement some cooperative learning strategies, it is necessary for teachers to prepare and create materials needed for classes and cooperative teams (Zakaria & Zanagon, 2007). This timely task often increases planning time for the teacher. As stated by the Alliance for Excellent Education (2005), teachers already believe that there is not enough planning time to meet the demands on a day to day basis. The extra time needed to create these materials to implement a cooperative lesson can create an overwhelming feeling that adds to an already existing concern. Teachers with packed daily schedules may take exception to having to spend additional personal time on the creation of materials needed to implement with fidelity yet another new strategy in the classroom. This resentment could lead teachers to utilize this lack of time issue as a reason for not implementing cooperative learning strategies in their lessons despite the research supporting its use.

Lack of desire to work with others. Some students prefer to work alone or are not content with working as a team member. Because cooperative learning requires that students work in a team, students are frequently apprehensive about the effect that other team members have on their grade for a given task. Some students oppose cooperative learning because of its non-competitive structure while other students simply find satisfaction with the traditional, teacher-centered method of instruction (Robinson, 1990). There are students who prefer to work alone, complete assignments independently, and prefer not to take part in group activities. Students with a competitive spirit may not be challenged by the use of a non-competitive learning strategy such as cooperative learning.

Lack of increased achievement for higher achieving students. Heterogeneous grouping necessitates the pairing of higher ability students with lower achieving students. Robinson (1990) analyzed research on the utilization of cooperative learning strategies with higher achieving students and found the potential for misuse of cooperative learning strategies as a teaching tool for this population of students. She asserted that the drawbacks of cooperative learning strategies for this higher achieving population of students comprised such factors as the use of grade level resources and assessments based fundamentally on proficiencies pursuing the use of simple and basic skills. She stated that these uses are unfair to the higher achieving students.

According to Mills and Durden (1992), the research of several cooperative learning supporters found a scarcity of evidence that verified and demonstrated an increase in academic achievement for gifted students participating in cooperative teams. Instead, Mills and Durden showed that higher achieving students are often in an inferior position and are held back by their lower performing peers in cooperative teams. Thus, these higher achieving students are given a lack of opportunity for curriculum acceleration with this teaching strategy. "Students who are several grade levels apart in their learning of a subject are rarely able to contribute equally or feel engaged in a group endeavor" (Mills & Darden, 1992, p. 14). They further asserted that while certain cooperative learning strategies may be an improvement over traditional methods, there may be other equally advantageous or, in some cases, more effective educational strategies that can be utilized in the classroom.

Fear of not being able to cover the required content. A final weakness is the fear of losing time needed to cover the required curriculum and standards (Zakaria & Zanagon, 2007). Many teachers perceive that time is wasted when cooperative learning strategies are utilized as a

teaching strategy in the classroom; therefore, they lose precious teaching and learning time with its implementation. With the emphasis on accountability and standardized test results created by policymakers, teachers treasure classroom learning time and do not want to waste a single minute. Consequently, many teachers avoid the implementation of cooperative learning strategies in the classroom due to the fear that they will lose the ability to teach the content that will be assessed on the standardized test administered at the end of the school year. Teachers are very aware that their job is to teach the curriculum and are cognizant of the fact that they will be evaluated by the results obtained on the standardized tests. Due to this realization, many teachers perceive that using cooperative learning strategies in the classroom leads to them giving up their right to teach.

By examining the literature, there are many strengths and weaknesses associated with the implementation of cooperative learning strategies in the classroom. Kagan and Kagan (2009) stated, "Don't do cooperative learning lessons; make cooperative learning part of every lesson" (pp. 1.5–1.6). Teachers who choose to accept this challenge must realize a level of flexibility needed in order to implement cooperative learning strategies with fidelity into their daily lessons. It is irrefutable that teachers are given the opportunity, on a daily basis, to make lasting impressions on the lives of their students and are challenged through growth and proficiency mark on high stakes testing to influence academic growth. More than ever, teachers must become committed to gaining the skills needed to implement research-based teaching and learning strategies in order to find success with mandated testing and the implementation of the rigorous standards presented in the classroom (Hightower, Delgado, Lloyd, Wittenstein, Sellers, & Swanson, 2011).

CHAPTER 3: METHODOLOGY

According to Kagan (2008),

> some [cooperative learning structures] are designed to engage and develop specific types of thinking, others to engage and develop specific social skills, others to develop different intelligences, others to align instruction with principles derived from brain science, and yet others to foster mastery of different types of academic content. We have even developed discipline structures to guide teachers as they interact with disruptive students so they can create win-win discipline solutions. (p. 1)

Numerous studies on cooperative learning using qualitative methodology have researched many aspects involving teachers and their implementation of cooperative learning in the classroom (Ames & Ames, 1984; Ross, 1994; Siegel, 2005). These qualitative studies explored the attitudes, motivations, and feelings of teachers with regards to cooperative learning, and documented information from the teacher's perspective. This study, however, was based on both teacher and student perceptions of engagement and learning specific to the implementation of Kagan cooperative learning structures in the classroom.

This mixed methods study utilized an exploratory sequential design in order to ascertain information relevant to student and teacher perceptions on learning and engagement in classrooms in which teachers trained in the use of Kagan cooperative learning structures are implementing those structures.

Setting

The client district is a small, rural school district in North Carolina. The county that contains the client district covers a little over 750 square miles, and is currently home to over 58,000 residents, following a 1.0% decrease in population that was noted from 2010 to 2013 (United States Census Bureau, 2014). The median household income in 2008-2012 was $34,400, and, during that same time frame, 24.9% of the county population was living below the poverty level (United States Census Bureau, 2014). The U.S. Census reported that 91.7% of the

population is either Caucasian or African American, with just over 7% Hispanic. The county economy is supported by a blend of agriculture and manufacturing and consists of three incorporated municipalities. According to the UNC Center for Civil Rights (Gilbert, 2014), one of the three incorporated communities is not only the county seat but also the largest city in the county. The county seat is home to approximately 21,000 residents, the majority of whom are African American. The UNC CCR recorded that northwest part of the county is the second incorporated community that is also majority African American (approximately 55%), and has a population of nearly 3,000 residents. The last incorporated community in the county, according to the UNC CCR, is located in the southwest portion of the county and has a population of almost 600 with a Caucasian majority (approximately 52%).

The county is currently served by one county public school system (the client district) that is the outcome of the merger of two school systems in the early 1990s. The school system serves just over 9,000 students. The client district is fully accredited by the Southern Association of Colleges and Schools, and is comprised of eight elementary schools, one K-8 school, three middle schools, three traditional high schools, one alternative school serving grades 6-12, and one early college program. All of the elementary and middle schools receive Title 1 funding.

The school chosen by the Superintendent of the client district for this study (Rural School; fictitious name) is a public school located in a rural setting in the northern portion of the client district, and is located just northeast of the county seat. An elementary school and a middle school in the client district merged in 2008 to form Rural School. Thus, Rural School currently serves students in grades K-8, and this study will engage teachers and students dispersed throughout the entire school unit.

Participants

Rural School has an enrollment of approximately 840 students, with 55 teachers, a principal, assistant principal, and 26 support staff consisting of a receptionist, 2 guidance counselors, a bookkeeper, a data manage, 15 teacher assistants, and 5 custodians. The students represent various racial and ethnic demographic groups, with approximately 50% African American, 40% Caucasian, 9% Hispanic, and 1% other or mixed-race students. At the beginning of the 2013-2014 school year, approximately 71.2% of the student population was classified as economically disadvantaged and eligible to receive a free or reduced priced meal. The school is also considered a Title 1 School because of the percentage of students who are classified as economically disadvantaged, which allows for extra educational services to be provided to the school.

Participants in this study included only teachers trained by a Kagan professional developer and their students. A Kagan-trained teacher is a teacher who has attended a minimum total of five days of training conducted by a Kagan-trained professional developer on the implementation of Kagan cooperative learning structures in the classroom. These training sessions have been offered by the client district. For the past four years, the client district has offered the two day training in the fall, with the remaining three- day training following in the spring or summer. According to an email from the Coordinator of Professional Development, Rural School brought in a Kagan-trained professional developer to conduct the five-day training session with all of the teaching staff at the end of the 2012-2013 school year (T. Anderson, personal communication, July 25, 2014). Therefore, only new staff to Rural School have not participated in the five-day training session

At the time of the study, there were no measures of fidelity to implementation in place to confirm that teachers are able to take information learned in the staff development back to classroom and implement the cooperative learning structures with fidelity. However, according to T. Anderson (personal communication, July 25, 2014), these measures of fidelity were the focus for the school year in which the study was conducted. She continued by stating that she had personally received training as a Kagan Coach since the client district realized that Kagan cooperative learning structures were not being implemented with any fidelity. In fact, she stated:

> again, as a district we recognize that there is no data to support implementation change or the fidelity. We are starting over with our focus with first training the leadership teams so that they can support our teachers. We had the first day of training on cooperative meetings yesterday (July 24) and modeling this in our principals meeting. Again, at this point we have no data to support the impact of the training we have provided and recognize that coaching is our next step. (T. Anderson, personal communication, July 25, 2014)

This study was conducted under the auspices of the Institutional Review Board of East Carolina University. Permission for the study was obtained from the Superintendent after a conversation with the researcher concerning his level of interest for the study to take place in the client district. Once the Superintendent's permission was granted, further informed consent was obtained from the principal of Rural School, the participating teachers, and the parents of participating students (who also indicated their assent to be involved) (see Appendixes A, B, and C for Student Assent Form, Parent Consent Form, and Teacher Consent Form, respectively).

Design of the Study

Case study research excels at producing an understanding of a complex issue, such as the issue of the utility of cooperative learning. As Soy (2006) asserted, "case studies emphasize detailed contextual analysis of a limited number of events or conditions and their relationships" (p. 1). This study is well-placed to enhance the current knowledge base by delving into a range

76

of classroom contexts to ascertain teacher and student perceptions on the implementation of Kagan cooperative learning structures, and their perceived effect on engagement and learning in the classroom.

When an examination of an element found in the educational process does not easily lend itself to a single method of study, it becomes necessary to utilize several research methods. Such varied study methodology may be simply called a mixed methods research design. Creswell, Plano Clark, Gutmann, and Hanson (2003) defined mixed methods research as "the collection of both quantitative and qualitative data in a single study in which the data are collected concurrently or sequentially, are given a priority, and involve the integration of the data at one or more stages in the process of research" (p. 212).

By using both quantitative and qualitative methods at some point in a study, each methodology can complement the other, thus allowing a mixed methods research study to facilitate a more comprehensive understanding of the problem than either method can provide alone (Creswell, 2012; Creswell & Plano Clark, 2011).

This study employed one of the mixed methods designs in educational research— exploratory sequential mixed methods design—that consists of two distinct phases (Creswell, 2012). Thus, semi-structured teacher interviews, Likert-scale student and teacher surveys, and teacher focus groups were used, and the qualitative data was used to validate, clarify, and further supplement the quantitative data.

Theoretical sampling, a pivotal strategy in grounded theory methodology (Charmaz, 2000), was one of the sampling processes used in this case study. This sampling process refers to intentionally pursing informants to interview who will present the most informative viewpoints or the most extreme opinions on a specific attribute of emerging themes. As Glaser

77

(1978) suggested, theoretical sampling occurs when "the analyst jointly collects, codes, and analyzes his data and decides what data to collect next and where to find them, in order to develop his theory as it emerges" (p. 36). Both teachers and students at Rural School provided accurate and detailed information on their personal perceptions of the effects that Kagan cooperative learning structures have on learning and engagement in the classroom.

As stated by Gall, Gall, and Borg (2010), almost all educational testing involves a convenience or volunteer sample. Adhering to these expressed expectations of educational testing, all participants choosing to participate in this study had the ability to refuse participation at any point of the study. Gall, Gall, and Borg continued by saying that samples are "based on individuals' expression of willingness to participate in a research study" (p. 131).

Procedures

Overview

All Rural School, Kagan-trained teachers and the students enrolled in their homerooms were invited to participate in this study. Each teacher and student choosing to participate received a one-time online survey designed to elicit pertinent information concerning his or her view of Kagan cooperative learning and its effects on learning and engagement in the classroom. Following analysis of the teacher survey, 8 teacher participants were then invited to participate in a one-time, semi-structured, one-on-one interview. Following interview transcription and the analysis of individual teacher interviews, teacher focus groups were conducted to triangulate the information gleaned from teacher surveys and interviews.

Surveys

According to Fink and Kosecoff (1998), there are three reasons to conduct a survey: (a) to establish policy or develop a program, (b) to gather information, or (c) to evaluate the

outcomes of a program. The rationales of the teacher and student surveys in this study align with the second and third reasons; to gather information about the implementation of Kagan cooperative learning structures, and to assess the perceived value added to student engagement and learning in the classroom by the implementation of Kagan cooperative learning structures. Closed-ended questions will elicit data for quantitative analysis in three areas: engagement, learning, and overall views of cooperative learning and Kagan structures in the classroom. See Appendices D and E for the student and teacher survey, respectively.

Student surveys. All students who were scheduled in the homeroom of a teacher trained by a Kagan professional developer and who presented parental informed consent as well as their own assent documentation were invited to respond to an online survey administered by the homeroom teacher. An administration deadline was established, and once the deadline had been met, the parental consent/student assent forms were collected and data were analyzed from all student surveys.

Teacher surveys. All teachers trained by a Kagan professional developer at Rural School were invited to respond to an online survey. An informed consent document will be distributed to all Kagan-trained teachers. The primary investigator (hereafter known as PI) will attend a staff meeting at Rural School in order to give teachers information on the study and collect consent documentation from teachers choosing to participate. All staff members choosing to participate will be sent an email containing a link to the online survey. Individual information sessions will take the form of phone calls for staff members not in attendance on the day of the meeting. I will return to Rural School after the deadline passes to collect any additional consent forms. Once all forms have been collected and all surveys have been taken, I will analyze the data from the teacher survey forms.

Teacher Interviews

The interview is one of the most frequently used methods for data collection in qualitative research. As Seidman (1998) asserted, "I interview because I am interested in other people's stories" (p. 1). According to Seidman, "interviewing is a basic mode of inquiry" (1998, p. 2). To give information concerning experiences, people must reflect on those experiences. Patton (1990) agreed when he added, "the purpose of interviewing is to find out what is in and on someone else's mind" (p. 278). Furthermore, it is the task of the interviewer to gain access to this detailed and personal information from the interviewee during the interview process.

A minimum of 8 theoretically sampled teachers who have been trained by a Kagan professional developer on implementing Kagan cooperative learning structures in the classroom will be interviewed. Interviewing teachers created an opportunity to pose open-ended questions that will lead to other questions, giving more detailed information. This detailed information gave in-depth information and thorough descriptions of teachers' perceptions of Kagan cooperative learning structures and their impact on learning and engagement in their classrooms.

Each interview was voice-recorded for later transcription and analysis. In addition to the voice recording, field notes were written during each interview. These field notes served as a back-up in case a malfunction of the voice recorder occurred during the interview (Creswell, 2012). Such a potential malfunction could have possibly cause important information provided by the teacher participants to be lost.

In order to ensure accurate recorded transcripts, member checking will be utilized. Creswell (2012) suggested that member checking is a process in which the researcher asks one or more participants in the study to check the accuracy of the account. This check involves taking the findings back to participants and asking them (in writing or in an interview) about the accuracy of the report. Electronic copies of transcripts of the one-on-one interviews were

provided to each of the teacher participants for review and approval. Inaccuracies identified by the participants were checked and appropriate corrections were made. Transcripts of the edited and de-identified interviews are included as Appendix F.

Teacher Focus Groups

After the interviews have been analyzed, teacher focus groups will be arranged to triangulate the information gleaned from the teacher surveys and interviews. Focus groups will provide additional insights on the study questions. Focus group questions will focus on the major themes emerging from the grounded theory approach to the analysis of the interview data, as enlightened by the teacher survey data. The intent of this study was to give a voice to as many teachers as possible through the use of the interviews and focus groups. Transcripts of the focus group interviews are provided in Appendix G.

Instrumentation

The Principal Investigator developed the student and teacher surveys to collect the perceptions of participants on the impact of the implementation of Kagan cooperative learning structures on learning and engagement in the classroom. The three-part surveys were designed to collect data regarding learning, engagement, and overall feelings of cooperative learning and working in teams.

Student Survey

The online student survey consisted of twenty-four questions contained in four sections: (a) student demographic information, (b) student perceptions of learning in the classroom with the implementation of Kagan cooperative learning structures, (c) student beliefs regarding engagement in the classroom when he or she participates in Kagan cooperative learning structures, and (d) student perceptions of the overall experience in the classroom with the

implementation of Kagan cooperative learning structures. Responses to the demographic portion

of the survey provided information on the grade level, ethnicity, gender, and age of each

participating student. Each question in this section had answer choices that fit the context. The

survey items in the second through fourth sections were measured on a Likert scale. The six-

point Likert scale response choices were anchored by the descriptors: 1 = *strongly disagree*, 3=

disagree, 4= *agree*, and 6= *strongly agree*.

Students will be asked to respond to the following statements:

Demographic

1. What grade are you in?

2. What is your ethnicity?

3. How old are you?

4. What is your gender?

Learning

5. I learn more when I work in a team

6. I learn more from direct teacher instruction

7. Learning can be fun and enjoyable

8. I learn less when working in groups in my class

9. I can freely voice my opinion during classroom discussions

10. When we work in small groups, we try to make sure that everyone in the group learns the assigned material

Engagement

11. Group work encourages me to participate more in class

12. I do my fair share of work during a group assigned task

13. I do more work than some members of my group

14. I prefer to work alone

15. I ask questions of others when I work in a group

16. Others in the group ask me questions when we work together on an assigned task

17. I have more confidence to try problems when I work in a group

Overall

18. I like school

19. I feel more comfortable asking a team mate in my group for help rather than asking the teacher

20. Working in groups improves my relationships with my classmates

21. When I work in a small group, ideas and opinions are treated with respect

22. When we work in small groups, we have to share materials in order to complete the assignment

23. When we work together in groups, everyone's ideas are needed if we are going to be successful

24. In this class, students learn a lot of important things from each other

Teacher Survey

The online teacher survey consisted of thirty questions, and contains four sections: (a) demographic information, (b) teacher perceptions on learning in the classroom with the implementation of Kagan cooperative learning structures, (c) teacher perceptions concerning engagement in the classroom when he or she implements Kagan cooperative learning structures, and (d) teacher perceptions of the overall experience in the classroom with the implementation of Kagan cooperative learning structures. The demographic information provided basic

information about each teacher such as gender, age, years of teaching experience, current

teaching assignment, ability composition of their classes, number of years implementing Kagan

cooperative learning structures, and support that they have received since attending the Kagan

cooperative learning structure training. Each question in this section had answer choices that fit

the context. Responses to the survey items in the second through fourth sections were invited on

a six-point Likert scale anchored by the descriptors: 1 = *strongly disagree*, 3 = *disagree*, 4 =

agree, and 6 = *strongly agree*.

Teachers were asked to respond to the following questions/statements:

Demographic Information

1.   What is your gender?

2.   What is your age?

3.   How many years of teaching experience do you have?

4.   What is your current teaching assignment?

5.   Typical ability composition of your class(es).

6.   Number of years you have been implementing Kagan cooperative learning

     structures.

7.   Type of follow-up support in implementing Kagan cooperative learning structures

     that you have received.

Learning

8.   My students achieve more working together in a team than working alone.

9.   Cooperative learning leads to more positive outcomes and fosters positive student

     attitudes towards learning than competitive learning situations.

10. Engaging in Kagan cooperative learning structures interferes with students' academic progress.

11. In my class, every team member must learn the material in order for the group to be successful.

12. Peer interaction helps students obtain a deeper understanding of the material.

Engagement

13. My students are more motivated when I structure my class in cooperative groups.

14. If I implement a Kagan cooperative learning structure, too many students expect other group members to do the work.

15. My students are resistant to working in teams.

16. Verbal exchanges between students determine the outcomes of cooperative learning.

17. All of my students give and receive explanations when they work in cooperative teams in order to ensure that all team mates understand the assignment and/or learn the material.

Overall

18. Implementing Kagan cooperative learning structures improves/increases a student's desire to excel.

19. Cooperative learning has helped to develop more positive attitudes towards learning in the classroom.

20. My students are more supportive of each other because I implement Kagan cooperative learning structures.

21. Cooperative learning helps students develop better communication skills.

22. My students know they have a responsibility to make sure that other members of their team have learned the material.

23. Cooperative learning benefits all students, regardless of learning style, multiple intelligence, or ability.

24. My students achieve more when I use Kagan cooperative learning structures.

25. I understand the use of Kagan cooperative learning structures well enough to implement them successfully in the classroom.

26. The use of Kagan cooperative learning structures is consistent with my philosophy of teaching.

27. The support that I receive from my colleagues plays a role in my success in implementing Kagan cooperative learning structures.

28. Kagan cooperative learning structures are a valuable teaching strategy to implement in the classroom.

29. Implementing Kagan cooperative learning structures in the classroom takes a great deal of effort and planning.

Teacher Interviews

The teacher interview protocol was designed to examine the research questions and themes established from the teacher surveys. The one-on-one interviews were voice recorded and transcribed. In general, each interview lasted about 30 minutes. Eight teachers were selected to participate in the interview sessions. The teachers were asked the following questions:

1. When and how often do you use a Kagan cooperative learning structure in your classroom? Why?

2. What do you think are the advantages of implementing Kagan cooperative learning structures in your classroom?

3. What are the disadvantages of implementing Kagan cooperative learning structures in your classroom?

4. In your opinion, what is the main purpose of implementing Kagan cooperative learning structures in the classroom?

5. Describe one successful experience when implementing a Kagan cooperative learning structure.

6. To what extent are student motivation and engagement affected when implementing Kagan cooperative learning structures?

7. In what ways has the implementation of Kagan cooperative learning structures affected student learning in your classroom?

Teacher Focus Groups

The teacher focus group protocol was designed to solidify the themes emerging from the surveys and interviews. Following is the script and questions that were used for each focus group.

Hello, my name is Tina Hinson and I am an EdD student at East Carolina University. Thank you for taking the time to participate in this focus group on the implementation of Kagan cooperative learning structures and their impact on learning and engagement in the classroom. This focus group is one piece of data collection for my dissertation. You are a group of teachers who have received the training on the implementation of Kagan cooperative learning structures and use them as a teaching strategy in your

classroom. I am interested in hearing your perspective on the use of these teaching strategies and their impact on learning and engagement in your classrooms.

During this focus group I will ask questions and facilitate a conversation about the use of Kagan cooperative learning structures in your classroom. Please keep in mind that there are no "right" or "wrong" answers to any of the questions I will ask. The purpose is to stimulate conversation and hear the opinions of everyone in the room. I hope you will be comfortable speaking honestly and sharing your ideas with me today.

Please note that this session will be voice recorded to ensure I adequately capture your ideas during our conversation. However, the comments from the focus group will remain confidential and your name will not be attached to any comments you make. Of course, in common with all focus group situations, I can't guarantee that all participants will maintain the same level of confidentiality, so please take this into account when you respond. Each of you has been assigned a teacher number, so please state your number before adding to the conversation. Do you have any questions before we begin?

The following focus group questions were probed as appropriate:

1. How do students in your classroom benefit from working in cooperative learning groups?

2. Some have claimed that students are rarely interested in participating in group activities. Is this the case in your classes?

3. Do you notice an increase in student performance when they work in groups?

4. How have cooperative learning structure impacted your teaching-learning experience?

5. In what situations do you find cooperative learning structures to be most useful?

6. Talk about the difficulties you have encountered in implementing Kagan cooperative learning structures in your classroom.

7. Talk about your belief in the use of Kagan cooperative learning structures. How do they fit with the mix of other strategies that you use?

Data Analysis

The significance of any study is not found in the questions being researched, but rather in the findings (Patton, 1990). Data analysis allowed for the breaking up, separating, and disassembling of the research materials into smaller pieces. With facts broken down into manageable pieces, the data were sorted and sifted in order to search for types, classes, sequences, processes, patterns, or wholes (Hesse-Biber & Leavy, 2011). The aim of this process was to assemble the data in a logical manner.

Quantitative Analysis

Student and teacher surveys were analyzed to examine the perceived impact of the implementation of Kagan cooperative learning on learning and engagement in the classroom. Descriptive statistics, "information that helps a researcher describe responses to each question in a database as well as determine overall trends and the distribution of the data" (Creswell, 2012, p. 618) were used to analyze both the teacher and student survey data and provide a fuller and more precise description of student and teacher perceptions on the impact of Kagan cooperative learning structures in the classroom. Data were disaggregated by demographic characteristics to reveal any underlying patterns in the responses.

Qualitative Analysis

Field notes and interview and focus group transcripts were imported into NVivo software in order to create a document that placed these data pieces into one document that could then be manually manipulated to see emerging themes. NVivo facilitates the grounded theory research approach suggested by Glaser and Strauss (1967). This process necessitates the comparison of an instance selected for coding with comparable instances in order to develop descriptive and explanatory categories, where descriptive categories refer to events or processes, and explanatory categories refer to partipants' efforts to explain a situation.

CHAPTER 4: RESULTS

The purpose of this study was to examine both teacher and student perceptions of engagement and learning in the classroom as a result of the implementation of Kagan cooperative learning structures as a teaching strategy. To explore these perceptions, data were collected on 107 student participants and 19 teacher participants. The outcomes are presented as they relate to the stated purpose. Descriptive statistics were chosen to summarize the results of the student and teacher surveys. The detailed information from the teacher interviews and focus groups gave access to in-depth information and thorough descriptions of teachers' perceptions of Kagan cooperative learning structures and their impact on learning and engagement, and common themes were expanded upon to enrich the descriptive nature of the earlier results.

Student Data Analysis

A student survey was taken by 107 participants. Rural School was visited prior to the administration of the survey in order to introduce students to the research study and the Likert scale used on the survey. Parent permission forms and student assent forms were left with each Kagan trained teacher. All students in grades 3-8 who were taught by a Kagan trained teacher were invited to participate in the study.

Student Survey Results

The student survey comprised four different sections that were designed to gain information relevant to the research questions. The four sections were: demographics, student learning perceptions, student engagement perceptions, and student overall perception of learning. The student survey consisted of 24 questions on which student participants were invited to provide a response by using a six-point Likert-scale. The scale was anchored at four points. The least favorable preference was labeled "strongly disagree" and was allocated a numerical value

of one, the two central milder responses were labeled 'disagree" (allocated a numerical value of

three) and "agree" (allocated a numerical value of four), and the most favored preference was

labeled "strongly agree" and allocated a numerical value of six. The student survey instrument is

included as Appendix D.

Student demographics. In section one of the survey, data were collected on student

grade level, ethnicity, age and gender. As shown in Table 4, the number of participants varied

significantly across the six grade levels. The procedures intended to maximize the likelihood of

parental approval were carried out, but with remarkably unbalanced results. In the case of Grade

4 and Grade 7, there are so few responses that little reliance can be placed on the individual

grade survey responses. At the other extreme, the Grade 3 response rate (representing 40.74% of

the Grade 3 students enrolled at Rural School) lends good support for conclusions drawn from

the survey data.

It is fortuitous that a notional tripartite breakdown of the survey responses is reasonable

by allowing the Grades 3 and 8 responses to stand on their own, while combining the responses

of the Grade 5 and 6 students into a Grade 5/6 category.

Briefly, the rationale for the study was to focus on the impact of Kagan cooperative

learning structures among a group of Kagan-trained teachers in the client district. The goal was

not to allocate levels of excellent implementation to individual teachers. The intended aim was

to gain information on the extent to which Kagan cooperative learning structures have impacted

the global teaching and learning environment of Rural School—indicating that variability of

implementation across teachers, while it certainly exists, it extraneous to this study.

As shown in Table 4, the survey response distribution across the age range of students in

these grades is even (with the exception of the lone 15 year-old). These ages were those recorded

Table 4

Frequency: Numbers, Percentages, and Groups Involved in Study

		Number of Respondents (% of Grade)	Percent of Respondents
	Total Population	107	100
Grade	3	44 (40.74% of Grade 3)	41.12
	4	6 (6.98% of Grade 4)	5.61
	5	11 (12.64% of Grade 5)	10.28
	6	17 (17.35% of Grade 6)	15.89
	7	5 (4.76% of Grade 7)	4.67
	8	24 (22.86% of Grade 8)	22.43
Ethnicity	American Indian or Alaskan Native	4	3.74
	Black or African American	53	49.53
	Hispanic or Latino	15	14.02
	White/Caucasian	35	32.71
Age	8 (26 Gr 3)	26	24.30
	9 (17 Gr 3, 3 Gr 4)	20	18.69
	10(1 Gr 3, 3 Gr 4, 7 Gr 5)	11	10.28
	11 (4 Gr 5, 12 Gr 6)	16	14.95
	12 (5 Gr 6, 5 Gr 7)	10	9.35
	13 (13 Gr 8)	13	12.15
	14 (10 Gr 8)	10	9.35
	15 (1 Gr 8)	1	.93
Gender	Female	61	57.01
	Male	46	42.99

by the survey respondents, leading to the "reality check" against school records to validate that the age ranges were feasible. Information was obtained from administration at Rural School found in the NC Wise student information system and was used to verify the feasibility of the age ranges selected by students in the demographics section of the survey.

Quantitative data. Section two of the survey consisted of 20 Likert scale items. These items focused on the students' perceptions of three subsections of the survey: student learning perceptions, student engagement perceptions, and student overall learning perceptions. The participants were asked to respond by rating each statement with regards to their beliefs according to the subsection heading for each portion of the survey. As previously noted, the Likert scale was anchored at four points. The least favorable preference was labeled "strongly disagree" and was allotted a numerical value of one, the two central milder responses were labeled "disagree" (allocated a numerical value of three) and "agree" (allocated a numerical value of four), and the most favored preference was labeled "strongly agree" and allotted a numerical value of six. The results of each subsection are discussed below.

Student learning perceptions. The first subsection, student learning perceptions, consisted of survey items five through ten. These items were grouped together and rated together on the survey (see Appendix D). As shown in Table 5, these items assessed students' perceptions of working on a team, working alone, and the effects of the choice on their personal learning. All the six means for the total survey population are towards the positive end of the continuum—conceptualizing "3.5" as the "neutral" point.

Table 6 shows the data for this Student Learning Perceptions subsection on the student survey broken down by grade level. All of the means in the Student Learning Perceptions fall

94

Table 5

Student Perceptions

Item #	Question	N	M	SD
5	I learn more when I work on a team.	107	4.18	1.31
6	I learn more from direct teacher instruction	107	4.53	1.20
7	Learning can be fun and enjoyable	107	4.47	1.22
8[a]	I learn less when working in teams in my class	107	4.11	1.46
9	I can freely voice my opinion during classroom discussions.	107	3.82	1.58
10	When we work in teams, we try to make sure that everyone on the team learns the assigned material.	107	4.52	1.28

Note. [a] This item was reverse coded for student answers in order to keep consistency with the positive wording of the other survey questions

Table 6

Student Learning Perceptions: Survey Responses by Grade

	Strongly Disagree	2	Disagree	Agree	5	Strongly Agree	*M*	*SD*
Q5: More Learning Occurs in Cooperative Teams								
Grade 3	3	0	7	21	0	13	4.23	1.38
Grade 5/6	2	2	6	10	4	4	3.86	1.36
Grade 8	0	1	5	9	3	6	4.33	1.18
Q6: More Learning from Direct Instruction								
Grade 3	1	0	5	19	0	19	4.68	1.26
Grade 5/6	0	1	4	11	5	7	4.46	1.12
Grade 8	1	1	1	13	3	5	4.29	1.21
Q7: Learning Fun and Enjoyable								
Grade 3	1	1	1	21	2	18	4.73	1.21
Grade 5/6	1	2	1	13	3	8	4.39	1.32
Grade 8	1	1	3	14	3	2	3.96	1.06
Q8: Less Learning in Cooperative Teams[b] (reversed)								
Grade 3	14	2	13	13	0	2	4.25	1.40
Grade 5/6	7	3	8	5	0	5	3.89	1.70
Grade 8	5	2	7	8	1	1	3.96	1.34
Q9: Freely Voice Own Opinion								
Grade 3	7	0	9	11	2	15	4.05	1.74
Grade 5/6	4	1	6	9	4	4	3.71	1.54
Grade 8	1	1	5	10	3	4	4.04	1.24
Q10: Focus on Shared Learning in Collaborative Teams								
Grade 3	1	0	3	16	3	21	4.89	1.21
Grade 5/6	1	0	4	11	5	7	4.43	1.21
Grade 8	1	1	8	7	2	5	3.96	1.34

Note. [b] This item was reverse coded for student answers in order to keep consistency with the positive wording of the other survey questions.

above the "neutral" mark on the continuum. Grade 8 has the highest mean for "learning more when working on a team" and the lowest mean for "learning more by direct teacher instruction."

Figure 1 shows a radar plot comparison of the means of the responses on the six Student Learning Perception questions across the lower (Grade 3), middle (Grades 5/6), and upper (Grade 8) grade levels. Lower-grade responses (the solid line) and middle-grade responses (dotted line) exhibit a similar pattern in the distribution of the means across the six questions, with the middle-grades means being consistently less positive. The upper-grade responses exhibit a quite distinct profile of means across the six questions.

Continuing with the breakdown of data for the Student Learning Perceptions subsection of the student survey, Table 7 shows the data broken down by ethnicity. As evidenced by the table, all of the means for the African American student participants fall above the"agree" numerical value of 4. These African American participants most agreed that "learning is fun and enjoyable." Conversely, they showed less agreement with "less learning take place in a cooperative team setting." Similarly, the Caucasian participants had responses above the neutral "3.5" mark on the continuum with strongest agreement with the statement concerning team work and "making sure that everyone on the teams learns the assigned material." These Caucasian participants found least agreement with the "freedom to voice their opinions in the classroom." Figure 2 shows a radar plot comparison of the means of the responses across the African American and Caucasian student participants. African American student participant responses (the solid line) and Caucasian student participant responses (dotted line) exhibit a very comparable pattern in the distribution of the means across the six questions, with the Caucasian student participant means being slightly less positive and almost completely encompassed by the means of the African American participants.
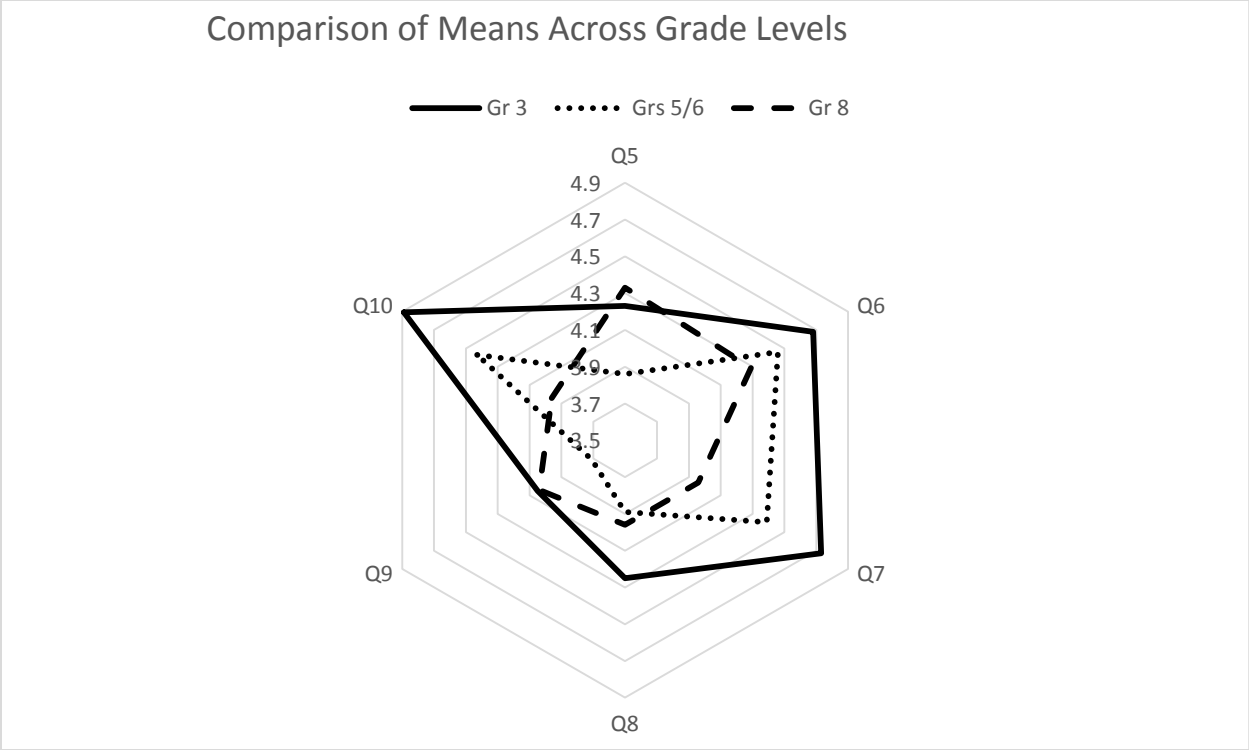
Figure 1. Profile of means across Student Learning Perceptions survey questions exhibit grade-level specific profiles.

Table 7

Student Learning Perceptions: Survey Responses by Ethnicity

	Strongly Disagree	2	Disagree	Agree	5	Strongly Agree	*M*	*SD*
Q5: More Learning Occurs in Cooperative Teams								
African American	0	1	10	24	4	14	4.38	1.12
Caucasian	3	0	10	12	5	5	3.89	1.33
Q6: More Learning from Direct Instruction								
African American	0	2	4	28	1	18	4.55	1.14
Caucasian	0	0	5	14	6	10	4.60	1.05
Q7: Learning Fun and Enjoyable								
African American	0	3	2	26	4	18	4.60	1.15
Caucasian	0	1	2	22	3	7	4.37	0.96
Q8: Less Learning in Cooperative Teams[c] (reversed)								
African American	15	2	15	16	0	5	4.02	1.52
Caucasian	9	4	8	11	1	2	4.09	1.44
Q9: Freely Voice Own Opinion								
African American	4	1	9	23	4	12	4.09	1.38
Caucasian	6	0	9	7	5	8	3.83	1.68
Q10: Focus on Shared Learning in Collaborative Teams								
African American	2	1	5	21	6	18	4.55	1.30
Caucasian	0	0	5	14	5	11	4.63	1.07

Note. [c] This item was reverse coded for student answers in order to keep consistency with the positive wording of the other survey questions
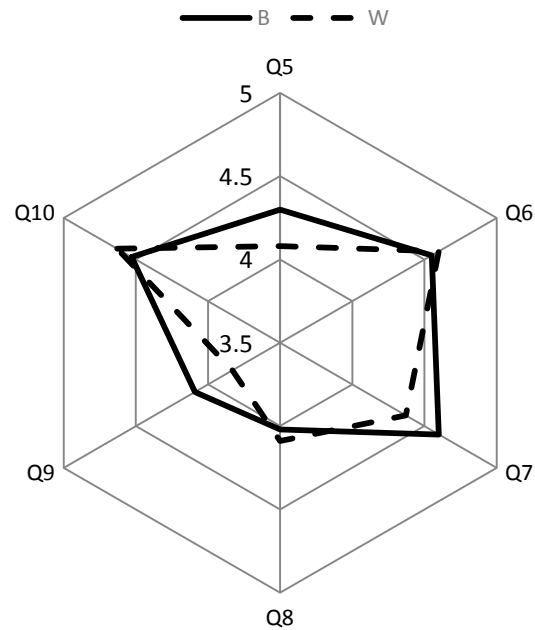
Figure 2. Profile of means across Student Learning Perceptions survey questions exhibit similar

ethnic profiles.

Finally, Table 8 shows the data for this Student Learning Perceptions subsection on the student survey broken down by student participant gender. Although all of the means of the data in the chart are above the "neutral" 3.5 marking for each question, with the exception of Question 6, the male student participant mean is higher than the female participant mean. The most agreed upon statement for the male student participants is that "learning is fun and enjoyable" with the least amount of agreement being noted with the statement about "freedom to voice opinions in the classroom." The female student participants appear be more in agreement with the fact that "more learning takes place in the classroom when direct instruction is delivered by the teacher."

Figure 3 shows a radar plot comparison of the means of the responses across the male and female student participants. Male student participant responses (the solid line) and female student participant responses (dotted line) exhibit a distinct pattern in the distribution of the means across the six questions, with the female student participant means being slightly less positive, with the exception of Question 6 (preference for direct instruction).

Student engagement perceptions. The second subsection, student engagement perceptions, consisted of seven questions which were survey items 11 through 17. Just as in the Student Learning Perceptions subsection, these items were grouped together and rated together on the survey (see Appendix D). As displayed in Table 9, these items assessed students' perceptions of the working of the team and the work accomplished by each team member. Six of the seven means are towards the agreement end of the continuum, with a slight leaning towards disagreement with "I prefer to work alone" (Question 14).

Table 8

Student Learning Perceptions: Survey Responses by Gender

	Strongly Disagree	2	Disagree	Agree	5	Strongly Agree	*M*	*SD*
Q5: More Learning Occurs in Cooperative Teams								
Male	2	3	3	22	3	13	4.30	1.35
Female	3	0	17	22	7	12	4.08	1.27
Q6: More Learning from Direct Instruction								
Male	0	1	8	21	3	13	4.41	1.13
Female	2	1	3	28	5	22	4.62	1.24
Q7: Learning Fun and Enjoyable								
Male	1	1	1	22	4	17	4.70	1.17
Female	2	3	4	32	6	14	4.30	1.22
Q8: Less Learning in Cooperative Teams [d](reversed)								
Male	14	4	17	8	1	2	4.35	1.35
Female	15	4	16	20	0	6	3.93	1.50
Q9: Freely Voice Own Opinion								
Male	6	2	10	11	4	13	3.96	1.67
Female	9	0	15	22	5	10	3.72	1.49
Q10: Focus on Shared Learning in Collaborative Teams								
Male	2	1	5	17	2	19	4.59	1.39
Female	2	0	7	26	10	16	4.48	1.18

Note. [d] This item was reverse coded for student answers in order to keep consistency with the positive wording of the other survey questions
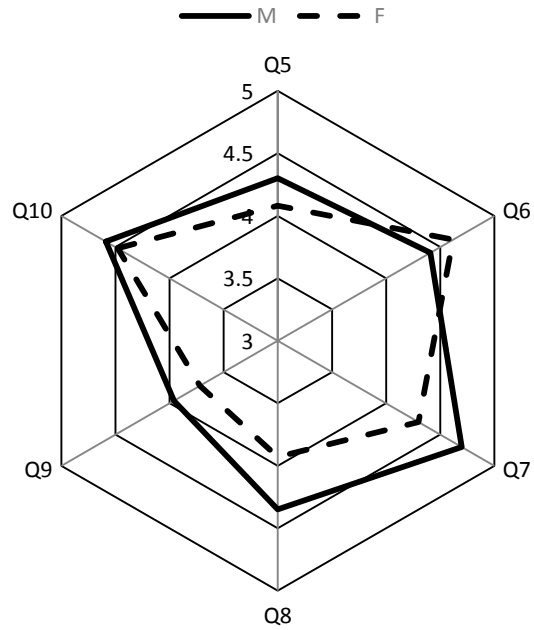
Figure 3. Profile of means across Student Learning Perceptions survey questions exhibit similar

gender profiles.

Table 9

Student Engagement Perceptions

Item #	Question	*N*	*M*	*SD*
11	Team work encourages me to participate more in class	107	4.30	1.35
12	I do my fair share of the work during an assigned task.	107	4.66	1.23
13	I do more work than some members of my team.	107	3.59	1.44
14	I prefer to work alone	107	3.12	1.62
15	I ask questions of others when we work as a team	107	4.33	1.33
16	Others on the team ask me questions when we work together on an assigned task.	107	4.31	1.29
17	I have more confidence to try problems when I work on a team.	107	3.98	1.42

Following the pattern established in the Student Learning Perceptions subsection, Table 10 shows the data for this Student Engagement Perceptions subsection on the student survey broken down by grade level. In this subsection, all grade levels voiced the least agreement and most agreement with questions 14 and 12, respectively. The least agreement was observed in Question 14 addressing the preference to "work alone." The most agreement was noted in Question 12 where students acknowledged "doing their fair share of work during a team assigned task."

To graphically display the above table, Figure 4 shows a radar plot comparison of the means of the responses across the grade levels for the Student Engagement Perceptions subsection of the student survey. All three grade level breakdowns have their own personal distinct pattern across the seven questions in this subsection.

Next, Table 11 shows the data for the Student Engagement Perceptions subsection broken down by ethnicity. With the exception of Question 8 suggesting a "preference to work alone," all of the means for this subsection fall above the neutral "3.5" mark on the continuum. For this section, both ethnicities showed most agreement and least agreement for the same questions as addressed in the Grade Level section of the data breakdown. Overall, the question with the most agreement by the African American and Caucasian participants was Question 12 addressing the participant "doing their fair share of the work during the assigned task." The least agreed upon statement, by the African American and Caucasian participants was Question 14 addressing the "preference to work alone."

Using the data above, Figure 5 shows a radar plot comparison of the means of the responses across ethnicity for the for the Student Engagement Perceptions subsection of the student survey. African American student participant responses (the solid line) and Caucasian

105

Table 10

Student Engagement Perceptions: Survey Responses by Grade Level

	Strongly Disagree	2	Disagree	Agree	5	Strongly Agree	*M*	*SD*
Q 11: Participation in Class Due To Team Work								
Grade 3	4	0	6	17	2	15	4.32	1.50
Grade 5/6	2	0	6	6	6	8	4.36	1.44
Grade 8	0	1	6	11	4	2	4.0	0.96
Q 12: Fair Share of Work Done								
Grade 3	2	0	6	15	3	18	4.61	1.37
Grade 5/6	0	0	2	11	4	12	4.86	1.03
Grade 8	1	1	1	12	3	6	4.38	1.25
Q 13: More Work Done By Some								
Grade 3	5	1	19	13	0	6	3.45	1.34
Grade 5/6	3	4	7	5	3	6	3.68	1.63
Grade 8	2	2	6	8	2	4	3.75	1.42
Q 14: I Prefer to Work Alone								
Grade 3	17	1	12	8	0	6	2.80	1.71
Grade 5/6	5	2	9	6	2	4	3.36	1.56
Grade 8	2	1	9	7	0	5	3.71	1.43
Q 15: Question Others in Team Setting								
Grade 3	4	0	7	16	2	15	4.30	1.52
Grade 5/6	1	0	3	9	9	6	4.54	1.49
Grade 8	1	1	1	15	2	2	4.17	1.14
Q 16: Others Ask Me Questions in Team Setting								
Grade 3	3	0	8	17	1	15	4.32	1.44
Grade 5/6	1	0	4	13	2	8	4.39	1.23
Grade 8	1	1	4	13	2	3	3.96	1.14
Q 17: Confidence To Try Problems in Team Setting								
Grade 3	6	2	10	15	3	10	3.80	1.57
Grade 5/6	4	2	5	9	4	4	3.68	1.54
Grade 8	0	1	3	13	2	5	4.29	1.06
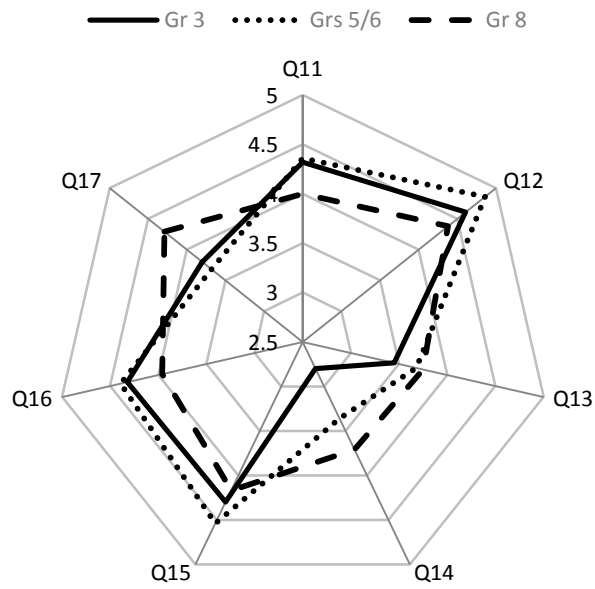
Figure 4. Profile of means across Student Engagement Perceptions survey questions exhibit

specific grade level profiles with similarities noted in Grade 3 and 5/6.

Table 11

Student Engagement Perceptions: Survey Responses by Ethnicity

	Strongly Disagree	2	Disagree	Agree	5	Strongly Agree	*M*	*SD*
Q11: Participation in Class Due To Team Work								
B	2	1	9	17	8	16	4.43	1.32
W	2	0	8	10	5	10	4.31	1.39
Q12: Fair Share of Work Done								
B	1	1	5	19	7	20	4.70	1.22
W	0	0	3	15	4	13	4.77	1.04
Q13: More Work Done By Some								
B	2	6	20	11	4	10	3.74	1.39
W	4	1	9	14	2	5	3.69	1.39
Q14: I Prefer to Work Alone								
B	14	2	20	11	1	5	2.96	1.49
W	9	1	7	13	1	4	3.23	1.59
Q15: Question Others in Team Setting								
B	1	1	7	19	9	6	4.21	1.09
W	1	1	5	16	3	9	4.31	1.24
Q16: Others Ask Me Questions in Team Setting								
B	0	1	9	22	2	19	4.55	1.19
W	2	0	6	15	4	8	4.03	1.29
Q17: Confidence To Try Problems in Team Setting								
B	2	1	11	23	4	12	4.17	1.25
W	4	1	6	11	7	6	3.97	1.48
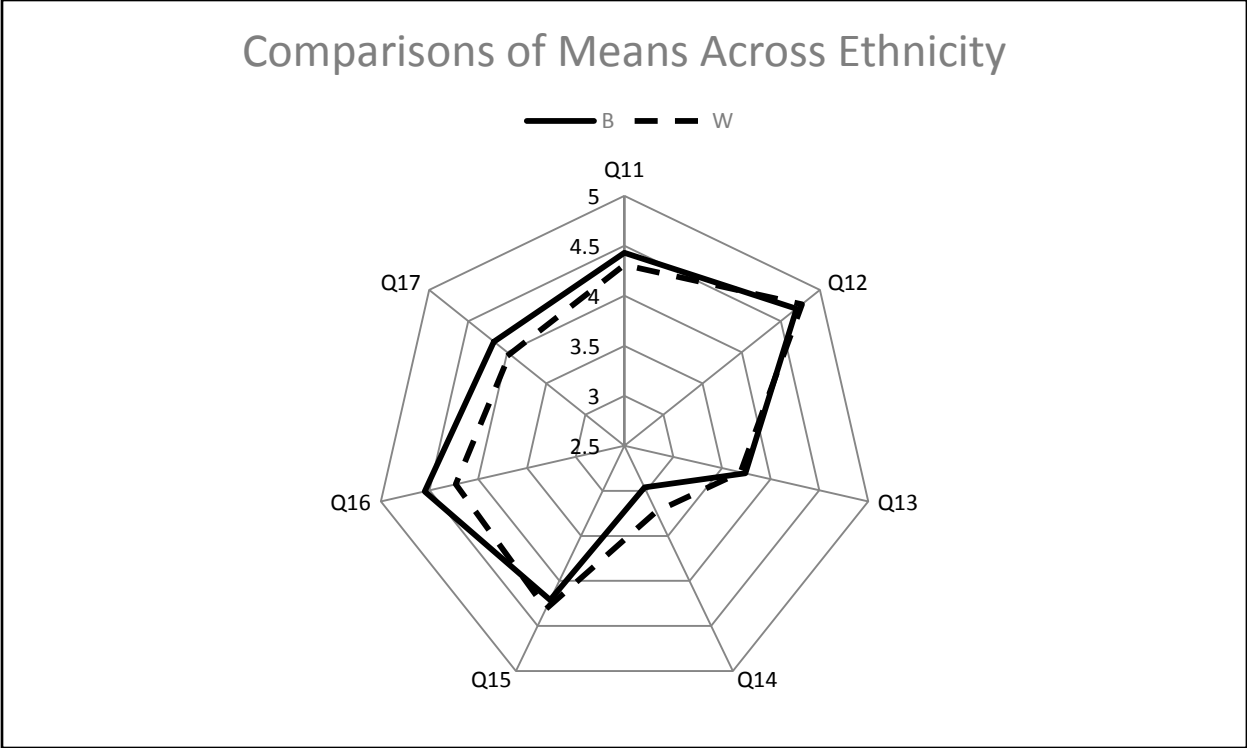
Figure 5. Profile of means across Student Engagement Perceptions survey questions exhibit

similar ethnicity profiles.

student participant responses (dotted line) exhibit a similar pattern in the distribution of the means across the seven questions, with almost equal distribution of more positive responses across the questions in this section.

Finally, Table 12 shows the data for this Student Engagement Perceptions section broken down by gender. As with the grade level breakdown and the ethnicity breakdown, the question least agreed with in this subsection broken down by gender was Question 14 addressing the preference to "work alone." Both the student male and female participants noted least agreement with this question in the Student Engagement Perceptions subsection. Also, both genders most agreed with the same question noted in the grade level and ethnicity breakdown, Question 12. Both the male and female participants most agreed with the statement addressing their "doing a fair share of work during a team assigned task." Once again, with the exception of Question 14, all of the means are above the neutral mark of "3.5."

Figure 6 shows a radar plot comparison of the means of the responses across the genders for subsection two of the student survey. Male student participant responses (the solid line) and Female student participant responses (dotted line) exhibit a similar pattern in the distribution of the means across the seven questions, with almost equal distribution of more agreement responses across the questions in this section. Like all of the figures found in the Student Engagement Perceptions subsection, it is easy to distinguish the common most acknowledged and least acknowledged questions on this plot.

Student overall perceptions of learning. The final subsection, Student Overall Perceptions of Learning, consisted of six survey items which were items 18 through 24. Just as in the Student Learning Perceptions and Student Engagement Perceptions, these items were grouped together and rated together on the student survey (see Appendix D). As shown in

Table 12

Student Engagement Perceptions: Survey Responses by Gender

	Strongly Disagree	2	Disagree	Agree	5	Strongly Agree	*M*	*SD*
Q11: Participation in Class Due To Team Work								
M	3	1	6	16	4	16	4.41	1.45
F	3	0	13	23	9	13	4.25	1.29
Q12: Fair Share of Work Done								
M	1	1	5	20	4	15	4.52	1.23
F	2	0	4	22	9	24	4.77	1.22
Q13: More Work Done By Some								
M	3	4	17	12	2	8	3.65	1.39
F	8	4	18	18	4	8	3.54	1.48
Q14: I Prefer to Work Alone								
M	8	3	18	11	0	6	3.23	1.46
F	20	1	16	13	2	9	3.05	1.73
Q15: Question Others in Team Setting								
M	3	1	6	19	5	12	4.26	1.37
F	3	1	7	25	9	16	4.38	1.30
Q16: Others Ask Me Questions in Team Setting								
M	2	1	7	21	4	11	4.24	1.27
F	3	0	9	28	3	18	4.34	1.30
Q17: Confidence to Try Problems in Team Setting								
M	5	3	7	17	3	11	3.93	1.55
F	5	0	12	26	8	10	4.02	1.31
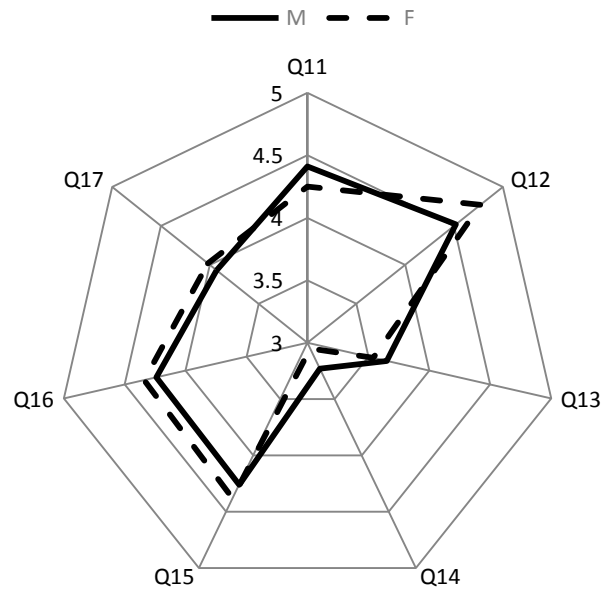
Figure 6. Profile of means across Student Engagement Perceptions survey questions exhibit

similar gender profiles.

Table 13, these items assessed students' perceptions of team dynamics. These dynamics included ideas such as respect for all opinions of all students when working in a team, comfort of asking for help when in a team, and sharing materials and ideas of all for team success. There were also statements that addressed the students' personal view of school and the importance of concepts that are learned when they work in teams in the classroom. All of the means for the total survey population, with the exception of one, are towards the agree end of the continuum.

In the same fashion as the Student Learning and Student Engagement Perception subsections, Table 14 shows the data for the seven questions in the Student Overall Learning Perceptions subsection on the student survey broken down by grade level. All of the means, with the exception of "I feel comfortable asking a team mate in my team for help rather than asking the teacher" for "Grade 5/6," were on the agreement side of the "neutral" 3.5 mark. "Grades 5/6 & 8" appear to have most agreed with the statement that "when we work in teams, everyone's ideas are needed if we are going to be successful." The most agreed upon statement for the "Grade 3" student participants was Question 21 addressing that "when I work on a team, ideas and opinions of everyone on the team are treated with respect." On the contrary, "Grades 3 & 5/6" least agreed with feeling "comfortable asking a team mate in my team for help rather than asking the teacher." "Grades 5/6" showed the least agreement with this question in the entire Student Overall Learning Perceptions subsection. Likewise, the "Grade 8" student participants gave the least agreement to Question 18 and their "liking of school."

Figure 7 shows a radar plot comparison of the means of the responses across the lower (Grade 3), middle (Grades 5/6), and upper (Grade 8) grade levels. Grade 8 has its own unique profile for this subsection of the student survey. Grade 3 had more positive response means to the questions in this subsection with Grade 8 having less positive means.

113

Table 13

Student Overall Learning Perceptions

Item #	Question	*N*	*M*	*SD*
18	I like school	107	4.22	1.62
19	I feel comfortable asking a team mate in my team for help rather than asking the teacher.	107	3.74	1.60
20	Working in teams improves my relationships with my classmates.	107	4.33	1.24
21	When I work on a team, ideas and opinions of everyone on the team are treated with respect.	107	4.60	1.25
22	When we work in teams, we have to share materials in order to complete the assignment.	107	4.64	1.20
23	When we work in teams, everyone's ideas are needed if we are going to be successful.	107	4.79	1.19
24	In this class, students learn a lot of important things from each other.	107	4.53	1.20

Table 14

Student Overall Learning Perceptions: Responses by Grade

	Strongly Disagree	2	Disagree	Agree	5	Strongly Agree	M	SD
Q18: I Like School								
Grade 3	4	0	5	13	1	21	4.59	1.59
Grade 5/6	4	2	3	6	6	7	4.04	1.70
Grade 8	4	2	3	10	1	4	3.58	1.58
Q19: Ask Questions of Team Members Rather Than Teacher								
Grade 3	6	2	11	15	2	8	3.66	1.52
Grade 5/6	7	2	6	7	3	3	3.21	1.63
Grade 8	1	2	3	10	1	7	4.20	1.44
Q20: Team Work Increase Relationships With Classmates								
Grade 3	2	0	5	23	1	13	4.36	1.26
Grade 5/6	1	0	5	11	4	7	4.36	1.23
Grade 8	1	1	4	13	1	4	4.00	1.19
Q21: All Members and Their Opinions are Treated With Respect								
Grade 3	1	0	1	21	2	19	4.82	1.15
Grade 5/6	2	2	3	7	3	11	4.43	1.59
Grade 8	0	1	1	14	4	4	4.38	0.95
Q22: Students Must Share Materials When Working in Teams								
Grade 3	1	0	0	23	3	17	4.77	1.11
Grade 5/6	1	0	2	10	1	14	4.86	1.30
Grade 8	1	1	4	13	1	4	4.00	1.19
Q23: Everyone Must Participate For the Team To Find Success								
Grade 3	1	0	4	19	2	18	4.70	1.22
Grade 5/6	0	2	3	5	3	15	4.93	1.33
Grade 8	0	1	1	12	5	5	4.5	1.00
Q24: Important Things are Learned From Group Work in Class								
Grade 3	1	0	3	18	6	16	4.73	1.16
Grade 5/6	1	0	6	9	4	8	4.39	1.29
Grade 8	1	1	1	14	2	5	4.25	1.20

Comparison of Means Across Grade Levels
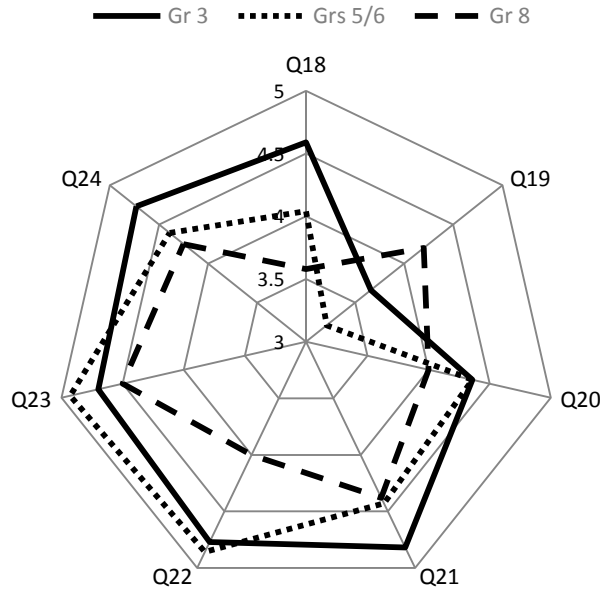
Note. Grade eight appears to respond less favorably to all but one of the questions in the Overall Student Learning Perceptions subsection.

Figure 7. Profile of means across overall student learning perceptions survey questions exhibit

similar grade level profiles for Grades 3 and 5/6.

Continuing with the pattern above, Table 15 shows the data for the Student Overall Learning Perceptions subsection on the student survey broken down by ethnicity. For the majority of the questions in this subsection, the African American student participants have a more positive mean compared to the Caucasian student participants. The most positive mean for African American student participants is noted in Question 23 addressing the participation of all students with the statement "when we work in teams, everyone's ideas are needed if we are going to be successful." This least agreed upon question on this subsection of the survey, Question 19, stated, "I feel comfortable asking a team mate in my team for help rather than asking the teacher." This coincides with the least acknowledged question by "Grades 3 & 5/6" in Table 15.

Figure 8 shows a radar plot comparison of the means of the responses across ethnicity. With the exception of Question 19, "I feel comfortable asking a team mate in my team for help rather than asking the teacher," the African American and Caucasian means follow a similar profile of the means. The African American participants responded more favorable to the majority of the questions in the subsection Student Overall Learning Perceptions.

Following the same pattern, Table 16 shows the data for the Student Overall Learning Perception subsection of the survey. All of the means for this subsection of the student survey, when broken down by gender, fall on the agreement side of the "3.5" neutral mark. The most agreed upon question for both student male and female participants was Question 23 which addressed the statement, "when we work in team, everyone's ideas are need if we are going to be successful." The least agreed upon question for both genders was Question 19 that addressed the statement, "I feel comfortable asking a team mated in my team for help rather than asking the teacher."

Table 15

Student Overall Learning Perceptions: Responses by Ethnicity

	Strongly Disagree	2	Disagree	Agree	5	Strongly Agree	*M*	*SD*
Q18: I Like School								
B	5	3	5	18	5	17	4.25	1.58
W	3	1	6	11	4	10	4.20	1.58
Q19: Ask Questions of Team Members Rather Than Teacher								
B	7	4	10	15	3	14	3.85	1.66
W	4	2	11	11	3	4	3.54	1.38
Q20: Team Work Increase Relationships With Classmates								
B	1	1	8	26	3	14	4.34	1.18
W	0	0	6	16	2	11	4.51	1.15
Q21: All Members and Their Opinions are Treated With Respect								
B	1	1	2	21	7	21	4.79	1.17
W	0	2	2	17	1	13	4.60	1.20
Q22: Students Must Share Materials When Working in Teams								
B	1	1	0	29	3	19	4.68	1.13
W	0	1	2	16	4	12	4.69	1.09
Q23: Everyone Must Participate For the Team To Find Success								
B	0	1	2	20	8	22	4.91	1.05
W	0	1	5	13	3	13	4.63	1.20
Q24: Important Things are Learned From Group Work in Class								
B	0	1	4	24	5	19	4.70	1.09
W	0	0	6	16	4	9	4.46	1.05

Table 16

Student Overall Learning Perceptions: Responses by Gender

	Strongly Disagree	2	Disagree	Agree	5	Strongly Agree	M	SD
Q18: I Like School								
M	6	2	6	15	2	15	4.09	1.68
F	6	2	6	20	7	20	4.31	1.56
Q19: Ask Questions of Team Members Rather Than Teacher								
M	6	2	9	14	4	11	3.89	1.60
F	9	4	14	20	2	12	3.62	1.58
Q20: Team Work Increase Relationships With Classmates								
M	1	1	5	22	1	16	4.50	1.25
F	3	0	10	30	5	13	4.20	1.23
Q21: All Members and Their Opinions are Treated With Respect								
M	1	2	2	20	5	16	4.61	1.24
F	2	1	4	28	4	22	4.59	1.26
Q22: Students Must Share Materials When Working in Teams								
M	2	1	0	18	7	18	4.76	1.27
F	1	1	3	34	2	20	4.56	1.14
Q23: Everyone Must Participate For the Team To Find Success								
M	0	2	4	16	3	21	4.80	1.23
F	1	1	4	26	8	21	4.67	1.16
Q24: Important Things are Learned From Group Work in Class								
M	1	1	4	21	4	15	4.54	1.21
F	2	0	6	27	8	18	4.52	1.20
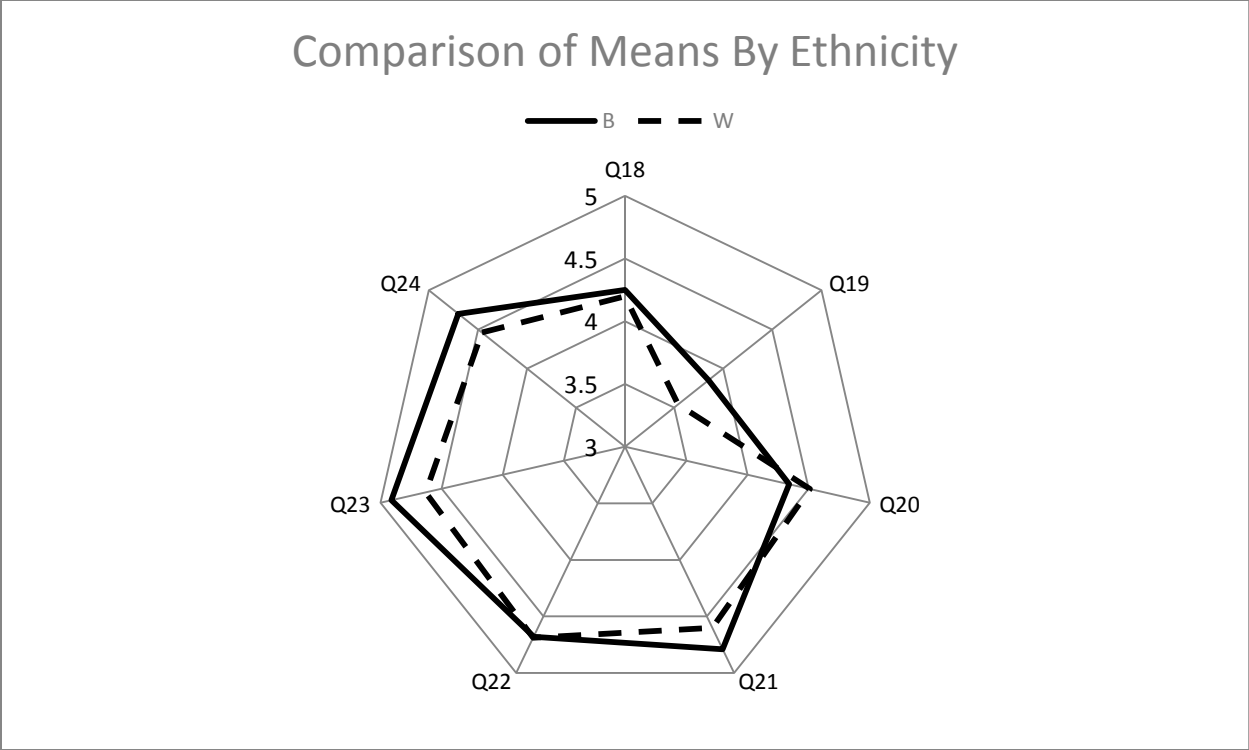
Figure 8. Profile of means across Overall Student Learning Perceptions survey questions exhibit

similar ethnicity profiles with the exception of Question 19 with a much less favorable response

by the Caucasian participants.

Figure 9 shows a radar plot for the Overall Student Learning Perceptions subsection of the student survey across gender. Male participants appeared to respond more favorably in this section of the survey with the exception of the Question 18, "I like school." Female participants responded less favorably to questions in this subsection of the survey.

Teacher Data Analysis

A teacher survey was taken by 19 participants. The school was visited prior to the administration of the survey to introduce teachers to the research study and the Likert scale used of the survey. Permission forms were given to each teacher who had been trained by a Kagan cooperative learning professional developer. The Rural School administrators asked that teachers' permission forms be signed and returned on the afternoon of the visit.

Teacher Survey Results

The teacher survey consisted of four different sections that were created to gain information pertinent to the research questions for the study. The four sections were designed to parallel the student survey (see Appendix E) and consequently addressed demographics, the impact of Kagan cooperative learning structures on student learning in the classroom, the impact of Kagan cooperative learning structures on engagement in the classroom, and overall views of implementing Kagan cooperative learning structures. The teacher survey consisted of 29 questions on which teacher participants were asked to provide a response by using a six-point Likert-scale. In keeping with the student survey, the scale was fixed at four points. The least favorable preference was labeled "*strongly disagree*" and was assigned a numerical value of one. The two central milder responses were labeled "*disagree*" (assigned a numerical value of three) and "*agree*" (assigned a numerical value of four). The most positive preference was labeled
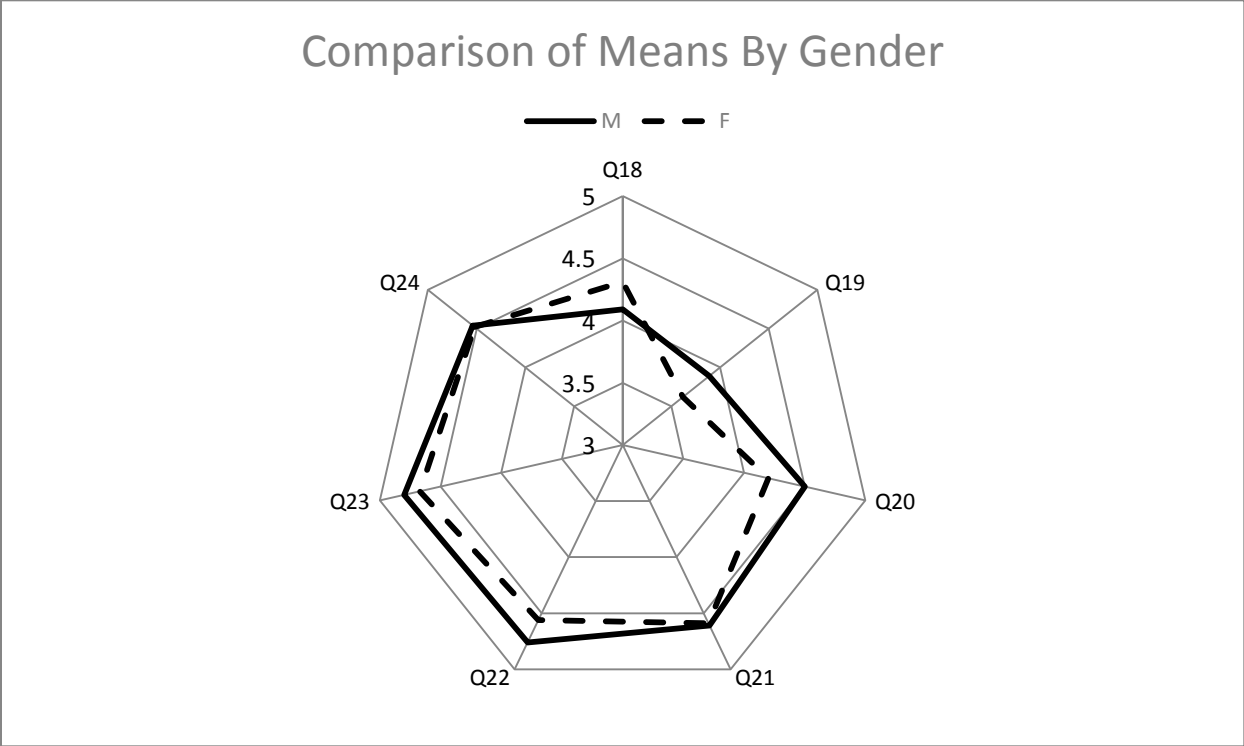
Figure 9. Profile of means across Overall Student Learning Perceptions survey questions exhibit

similar gender profiles.

"*strongly agree*" and assigned a numerical value of six. The teacher survey instrument is included as Appendix E.

Teacher demographics. In section one of the survey, data were collected on teacher gender, age, years of teaching experience, current teaching assignment, typical composition of classes, number of years implementing Kagan structures in the classroom, and follow-up support that has been received since initial Kagan training. As shown in Table 17, the number of participants varied across the grade levels, with the majority of the participants teaching Grades 3 through 8. Overall school teacher demographic data that was available is placed on Table 17.

Quantitative data. Section two of the survey consisted of 22 Likert scale items. These items focused on the teachers' perceptions of the three subsections of the survey: impact of Kagan cooperative learning structures on student learning in my classroom, impact of Kagan cooperative learning structures on engagement in my classroom, and overall views of implementing Kagan cooperative learning structures. The participants were asked to respond by rating each statement with regards to their beliefs according to the subsection heading for each portion of the survey. As described above, the Likert scale was fixed at four points. The least favorable preference was labeled "*strongly disagree*" and was assigned a numerical value of one. The two midway milder responses were labeled "*disagree*" (assigned a numerical value of three) and "*agree*" (assigned a numerical value of four). The most positive preference was labeled "*strongly agree*" and was assigned a numerical value of six. The results of each subsection are discussed below.

Impact of Kagan cooperative learning structures on student learning in the classroom.
The first subsection, Impact of Kagan Cooperative Learning Structures on Student Learning in the Classroom, consisted of survey question items eight through twelve. These items were

123

Table 17

Teacher Participant Demographics

		Number of Respondents	Percent of Respondents
	Total Population	19	100
Gender	Male (42.86% of Male staff)	3	15.79%
	Female (34.78% of Female staff)	16	84.21%
Age	25 and under	2	10.53%
	26 to 35	5	26.32%
	36 to 45	6	31.56%
	46 to 55	3	15.79%
	56 and over	3	15.79%
Years of Teaching Experience	0 to 1	1	5.26%
	2 to 5	2	10.53%
	6 to 15	7	36.84%
	16 to 24	7	36.84%
	25 years or more	2	10.53%
Current Assignment	K-2 teacher (7.69% of K-2 staff)	1	5.25%
	3-5 teacher (66.67% of 3-5 staff)	8	42.11%
	6-8 teacher (53.33% of 6-8 staff)	8	42.11%
	Specialist (12.5% of Specialist staff)	1	5.26%
	Special Education (20% of EC staff)	1	5.26%
Typical composition of classes taught	Mostly above average students	3	15.79%
	Mostly average students	4	21.05%
	Mostly below average students	4	21.05%
	Mixed (all ability levels)	8	42.11%
Number of years spent implementing Kagan	None	2	10.53%
	Less than 2 years	7	36.84%
	Between 2 and 4 years	10	52.63%
Extend of follow-up support	None	7	36.84%
	Kagan trained PD trainer	2	10.53%
	Colleagues at school	10	52.63%
	Administrators	5	26.32%

grouped together and rated together on the survey (see Appendix E). As shown in Table 18, these items assessed teacher perceptions of student learning as related to achievement on a team versus working alone, positive outcomes and attitudes from collaborative work, Kagan structures as an inhibitor of progress, team success based upon all student team members learning material presented in the assigned task, and deeper meanings obtained from cooperative learning. All of the five means for the total survey population were towards the agreement end of the continuum—conceptualizing "3.5" as the "neutral" point. Teacher perceptions in the fostering of "positive outcomes and attitudes" and the use of cooperative learning appears to be the most agreed upon preference in this section. On the other hand, the belief that "every team member must learn the material for the team to be successful" was the least agreed with for this group of teacher participants.

Little variability was noted in the means for subsection 1 of the teacher survey. However, by breaking down the data further into age, years of teaching experience (specifically "6-15 years" and "16-24 years"), and current teaching assignment ("Grades 3-5" and "Grades 6-8"), deeper understandings materialize concerning teachers and their perceptions of student learning and engagement when implementing Kagan cooperative learning structures in the classroom. Due to the lack of participation of teachers with 0 to 5 years of experience and more than 25 years of experience, these years were not be included in the breakdown intended to look at perceptions based upon the years of teaching experience. Also, as a result of the small number of teachers choosing to participate in the research study, those currently teaching Grades K-2, Specialists, and Special Education teachers were not be included in the further breakdown of the data.

Table 18

Teacher Perceptions of Student Learning based upon the Implementation of Kagan Structures

Item #	Question	N	M	SD
8	My students achieve more working together in a team than working alone.	19	3.95	0.76
9	Cooperative learning leads to more positive outcomes and fosters positive student attitudes towards learning than competitive learning situations.	19	4.21	0.95
10[e]	Engaging in Kagan cooperative learning structures interferes with students' academic progress.	19	4.05	0.51
11	In my class, every team member must learn the material for the team to be successful.	19	3.89	0.97
12	Peer interaction helps students obtain a deeper understanding of the material.	19	4.16	0.87

Note. [e] This item was reverse coded for teacher answers in order to keep consistency with the positive wording of the other survey questions.

126

Table 19 shows the data for the Impact of Kagan Cooperative Learning Structures on Student Learning in the Classroom subsection on the teacher survey by age. All of the questions in the Impact of Kagan Cooperative Learning Structures on Student Learning in the Classroom subsection had means that were above the neutral numerical value of "3.5," with the exception of one subgroup ("46 and above") on Question 11 which stated "In my class, every team member must learn the material for the team to be successful."

In fact, the "46 and above" participants were the least likely to agree with each of the statements in this section of the survey, with the exception of Question 10, where two of the six participants in this age range indicated the only "agree" belief choices recorded for this age group when addressing the statement that Kagan structures inhibit student academic progress and its effect on students. The original statement read, "engaging in Kagan cooperative learning structures interferes with students' academic progress." This statement was reverse coded in order to keep the interpretation of the Likert scores consistent throughout the survey. Thus, overall, the "46 and above" participants disagreed that Kagan structures inhibit student academic progress. The "35 and under" participants were the most likely to agree with each statement on the Impact of Kagan Cooperative Learning Structures on Student Learning in the Classroom subsection of the survey, although just barely with Question 11. This question asked participants to respond to the statement, "in my class, every team member must learn the material for the team to be successful."

Figure 10 shows a radar plot comparison of the means of the responses on the five Impact of Kagan Cooperative Learning Structures on Student Learning in the Classroom questions across participant age. The "35 and under" participants (the solid line) and the "36-45" participants (dotted line) exhibit a similar pattern in the distribution of means across the five

Table 19

Impact of Kagan Cooperative Learning Structures on Student Learning in the Classroom

	Strongly Disagree	2	Disagree	Agree	5	Strongly Agree	M	SD
Q8: My students achieve more working together than working alone								
35 and under	0	0	1	4	1	1	4.29	0.88
36-45	0	0	2	3	1	0	3.83	0.69
46 and above	0	0	2	4	0	0	3.67	0.47
Q9: Kagan structures lead to more positive outcomes and student attitudes towards learning								
35 and under	0	0	1	2	1	3	4.86	1.12
36-45	0	0	1	5	0	0	3.83	0.37
46 and above	0	0	2	3	1	0	3.83	0.57
Q10^f: Participating in Kagan structures inhibits students' academic progress								
35 and under	0	2	5	0	0	0	4.29	0.45
36-45	0	1	4	1	0	0	4.00	0.58
46 and above	0	0	5	1	0	0	4.29	0.45
Q11: Every team member must learn material for group to find success with a given task								
35 and under	0	0	2	3	1	1	4.14	0.99
36-45	0	0	2	2	1	1	4.17	1.07
46 and above	0	0	4	2	0	0	3.33	0.47
Q12: Peer interaction leads to deeper meaning of material								
35 and under	0	0	1	2	3	1	4.57	0.90
36-45	0	0	1	3	2	0	4.17	0.69
46 and above	0	0	3	2	1	0	3.67	0.75

Note. [f]:This item was reverse coded for teacher answers in order to keep consistency with the positive wording of the other survey questions.

Figure 10. Profile of means across impact of Kagan Cooperative Learning Structures on student learning in the classroom survey questions exhibit age specific profiles.

questions, with the "36-45" participants means being consistently less positive, thus showing less

agreement with the questions on the survey. In fact, the "35 and under" participants enclose the

other two age ranges broken down in this data set. The "46 and above" responses (displayed by

the dashed line) exhibit quite a distinct profile with consistently lower levels of support for each

of the five questions.

Continuing with the breakdown of subsection 1 of the teacher participant survey, Table

20 shows the data for the five questions in the Teacher Perceptions of Student Learning Based

upon the Implementation of Kagan Structures subsection broken down by years of teaching

experience. It appears that the teachers with "6-15 years" of teaching experience were more

likely to agree with the statements in this subsection on student engagement that is due to the

implementation of Kagan cooperative learning structures. This group of participants most

agreed with the statement for Question 9, "cooperative learning leads to more positive outcomes

and fosters positive student attitudes towards learning than competitive situations." Contrary to

this acknowledgement, were the teachers with "16-24 years" of teaching experience. Although

the majority means of this group of participants were above the neutral "3.5" mark, they were

less likely to agree with the statements concerning Kagan cooperative learning structures and

learning in the classroom. The question having the most disagreement by this group was

Question 11 that stated, "in my class, every team member must learn the material for the team to

be successful."

Figure 11 shows a radar plot comparison of the means of the responses across the years

of teaching experience of the teacher participants to the Impact of Kagan Cooperative Learning

Structures on Student Learning in the Classroom subsection of the teacher survey. Teachers

having "6 to 15 years" of experience (solid line) and teachers having "16 to 24 years" of

Table 20

Impact of Kagan Cooperative Learning Structures on Learning in the Classroom: Survey

Responses Broken Down by Years of Teaching Experience

	Strongly Disagree	2	Disagree	Agree	5	Strongly Agree	*M*	*SD*
Q8: My students achieve more working together than working alone								
6-15 years	0	0	2	3	2	0	4.00	0.76
16-24 years	0	0	2	5	0	0	3.71	0.45
Q9: Kagan structures lead to more positive outcomes and student attitudes towards learning								
6-15 years	0	0	1	4	0	2	4.43	1.05
16-24 years	0	0	2	5	0	0	3.71	0.45
Q10[g]: Participating in Kagan structures inhibits students' academic progress								
6-15 years	0	2	5	0	0	0	4.29	0.45
16-24 years	0	0	5	2	0	0	3.71	0.45
Q11: Every team member must learn material for group to find success with a given task								
6-15 years	0	0	2	3	1	1	4.14	0.99
16-24 years	0	0	4	3	0	0	3.43	0.49
Q12: Peer interaction leads to deeper meaning of material								
6-15 years	0	0	1	3	3	0	4.29	0.70
16-24 years	0	0	3	2	2	0	3.86	0.83

Note. [g]: This item was reverse coded for teacher answers in order to keep consistency with the positive wording of the other survey questions.

Comparison of Means Across Years of Teaching Experience

— 6-15 years   – – 16-24 years
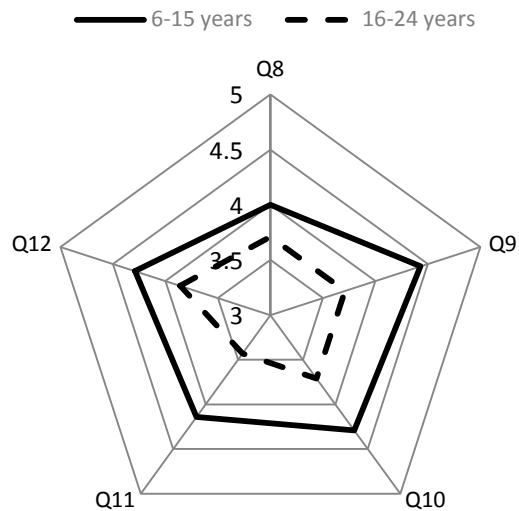
Note. Survey questions exhibit similar patterns for years of teaching experience profiles with the "16-24 years" participants showing less likely to agree with each statement in this subsection of the teacher survey.
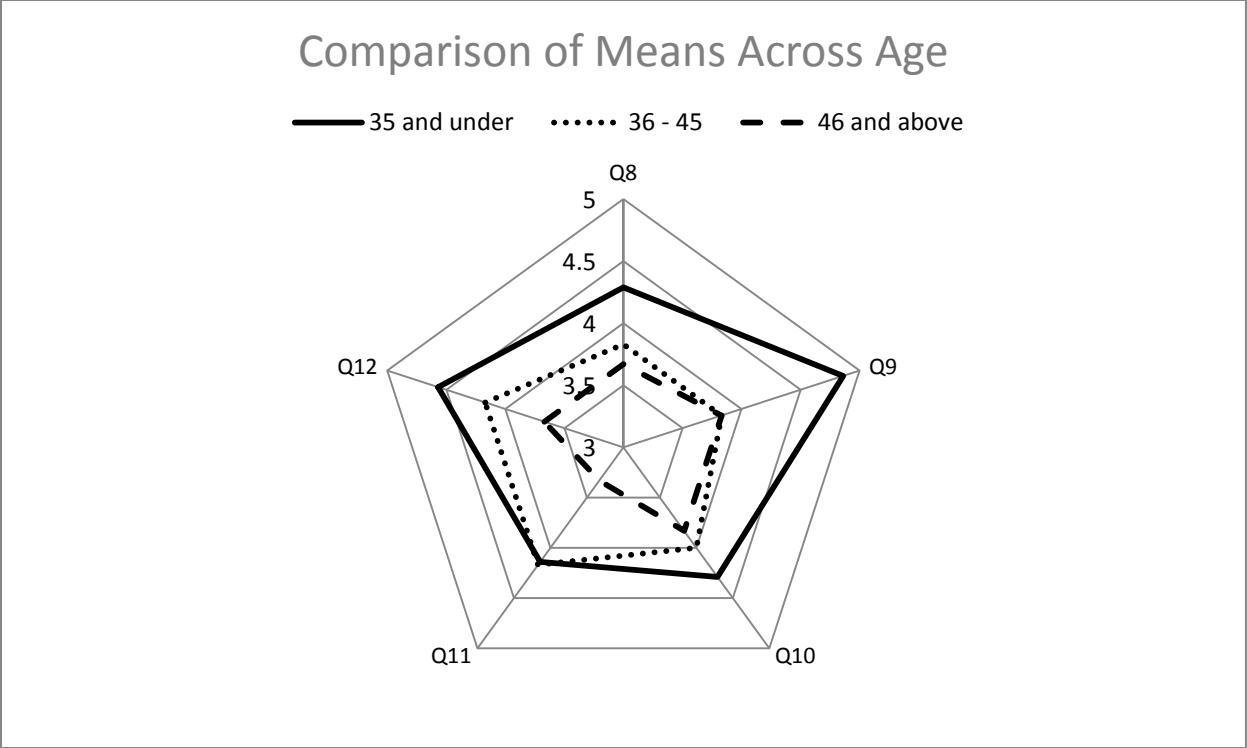
Figure 11. Profile of means across impact of Kagan Cooperative Learning Structures on student

learning in the classroom.

experience (dashed line) exhibit a comparable pattern in the distribution of the means across the five questions. The "6 to 15 years" participant profile completely encloses the "16 to 24 years" participant profile. Thus, as stated with Table 17 above, the "16 to 24 years" of teaching experience participants were less likely to agree with the statements in this section of the teacher survey.

Finally, Table 21 shows the data for this subsection, Impact of Kagan Cooperative Learning Structures on Student Learning in the Classroom, on the teacher survey broken down by current teacher teaching assignment. For each of the five questions in the Impact of Kagan Cooperative Learning Structures on Student Learning in the Classroom subsection, the teachers currently assigned to "Grades 3-5" had a higher mean for each question, therefore they were more likely to agree with the statements found in this subsection of the survey. They were most likely to agree with Question 9 which stated that "cooperative learning leads to more positive outcomes and fosters positive student attitudes towards learning than competitive learning situations." Teachers currently assigned to "Grades 6-8" had means that were above the "neutral" 3.5 mark for each of the questions in this subsection of the teacher survey.

Figure 12 shows a radar plot comparison of the means of the responses across the current teaching assignment for teacher participants. Teachers teaching "Grades 3-5" (solid line) and those teaching "Grades 6-8" (dashed line) have a distinct pattern in the distribution of the means across the five questions, with the teachers teaching "Grades 6-8" always slightly less positive with their responses to the survey questions. From the graph one can note that "Grades 3-5" completely contain the "Grades 6-8" responses on this subsection of the survey.

Impact of Kagan cooperative learning structures on student engagement in the classroom. The second subsection, impact of Kagan cooperative learning structures on student

Table 21

Teacher Learning Perceptions of Students Based upon the Implementation of Kagan Structures

	Strongly Disagree	2	Disagree	Agree	5	Strongly Agree	*M*	*SD*
Q8: My students achieve more working together than working alone								
Grades 3-5	0	0	2	4	2	1	4.22	0.92
Grades 6-8	0	0	2	6	0	0	3.75	0.43
Q9: Kagan structures lead to more positive outcomes and student attitudes towards learning								
Grades 3-5	0	0	0	5	1	3	4.78	0.92
Grades 6-8	0	0	3	4	1	0	3.75	0.66
Q10[h]: Participating in Kagan structures inhibits students' academic progress								
Grades 3-5	0	3	6	0	0	0	4.33	0.47
Grades 6-8	0	0	6	2	0	0	3.75	0.43
Q11: Every team member must learn material for group to find success with a given task								
Grades 3-5	0	0	5	1	2	1	3.89	1.10
Grades 6-8	0	0	3	4	0	1	3.88	0.93
Q12: Peer interaction leads to deeper meaning of material								
Grades 3-5	0	0	1	3	4	1	4.56	0.83
Grades 6-8	0	0	3	3	2	0	3.88	0.78

Note. [h]: This item was reverse coded for teacher answers in order to keep consistency with the positive wording of the other survey questions.
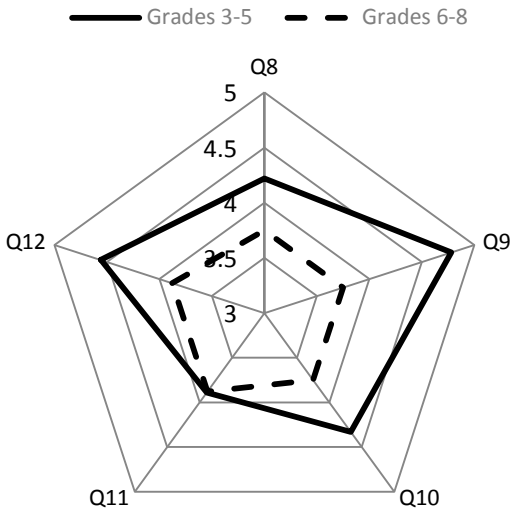
Figure 12. Profile of means across impact of Kagan Cooperative Learning Structures on student

learning in the classroom survey questions exhibit distinct current teaching assignment profiles.

engagement in the classroom, consisted of survey questions thirteen through seventeen. These items were grouped together and rated together (see Appendix E). As shown in Table 22, these items assessed teacher perceptions on student engagement as related to motivation that comes from the use of cooperative learning teams, expectations of roles within the group and responsibility for work completed, resistance or working in teams, verbal exchanges and their impact on cooperative learning, and sharing of explanations during the team process to ensure learning takes place. With the exception of Question 15, all of the means fall on the positive side of the neutral "3.5" mark of the continuum. The highest mean for this subsection is noted with Question 16. This questions asked teacher to respond to the statement, "verbal exchanges between students determine the outcomes of cooperative learning."

Keeping with the breakdown from section one of the teacher survey, Table 23 shows the breakdown of subsection two, Impact of Kagan cooperative learning structures on student engagement in the classroom, by the age of the teacher participants. With the exception of Question 15, "my students are resistant to working in teams," all of the means are above the neutral mark of "3.5." The "35 and under" group of teachers were the most likely to agree with Question 13, "my students are more motivated when I structure my class in cooperative learning teams." The other two groups of teachers, "36-45 & 46 and above" were more likely to agree with Question 16. This question addressed the statement, "verbal exchanges between students determine the outcomes of cooperative learning." All three of the age groups least agreed with Question 15 which asked for teacher participants to reflect upon the statement "my students are resistant to work in teams."

Figure 13 shows a radar plot for the comparison of means across the age of the teacher participants for the Impact of Kagan Cooperative Learning Structures on Student Engagement in

Table 22

Impact of Kagan Cooperative Learning Structures on Student Engagement in the Classroom

Item #	Question	N	M	SD
13	My students are more motivated when I structure my class in cooperative learning teams.	19	4.16	0.76
14	If I implement a Kagan cooperative learning structure, too many students expect other group members to do the work.	19	3.74	0.71
15	My students are resistant to working in teams.	19	3.11	0.97
16	Verbal exchanges between students determine the outcomes of cooperative learning.	19	4.32	0.92
17	All of my students give and receive explanations when they work in cooperative teams in order to ensure that all team mates understand the assignment and/or learn the material.	19	4.05	1.00

Table 23

Impact of Kagan Cooperative Learning Structures on Student Engagement in the Classroom

Broken Down by Teacher Participant Age

|	Strongly Disagree	2	Disagree	Agree	5	Strongly Agree	*M*	*SD*
Q13: Students are more motivated when class is structured in cooperative learning teams								
35 and under	0	0	0	4	2	1	4.57	0.73
36-45	0	0	1	4	1	0	4.00	0.58
46 and above	0	0	2	3	1	0	3.83	0.69
Q14: When structures are used in the classroom, too many students rely on others to do the work								
35 and under	0	1	2	3	1	0	3.57	0.90
36-45	0	0	2	3	1	0	3.83	0.69
46 and above	0	0	1	5	0	0	3.83	0.37
Q15: Students are resistant to work in teams								
35 and under	0	3	2	1	1	0	3.00	1.07
36-45	1	1	1	3	0	0	3.00	1.15
46 and above	0	0	4	3	0	0	3.33	0.47
Q16: Verbal exchanges determine outcomes of cooperative learning								
35 and under	0	0	0	6	0	1	4.29	0.70
36-45	0	0	1	3	0	2	4.50	1.12
46 and above	0	0	1	4	0	1	4.17	0.90
Q17: All students give and receive explanations during team activities to ensure learning and understand assignment								
35 and under	0	0	2	2	2	1	4.29	1.03
36-45	0	0	2	1	2	1	4.33	1.11
46 and above	0	0	3	3	0	0	3.50	

Figure 13. Profile of means across impact of Kagan Cooperative Learning Structures on student learning in the classroom survey questions exhibit distinct teacher participant age profiles.

the Classroom subsection of the teacher survey. The "35 and under" (solid line), "36-45" (dotted line), and "46 and above' (dashed line) have their own distinct pattern exhibited across the questions in this subsection of the teacher participant survey.

Next, Table 24 shows subsection two, Impact of Kagan Cooperative Learning Structures on Student Engagement in the Classroom, broken down by teacher participant years of teaching experience. Just as the previous 2 sections, all of the means are on the agreement side of the neutral "3.5" mark on the continuum, with the exception of Question 15. Both the "6-15 years & 16-24 year" of teaching experience gave the least amount of agreement with Question 15 dealing with the statement "students are resistant to work in teams." When it came to the most positive means, each group had a different question from the survey that agreed with the most. For the "6-15 years" experienced teachers, they found more agreement with the statement "all students give and receive explanations during team activities to ensure learning and understanding of the assignment," while the "16-24 years" of experience most agreed with the statement concerning the implementation of the structures and the fact that "too many students rely on others to do the work."

In order to graphically display Table 24, Figure 14 shows a radar plot for the comparison of means across the questions found in subsection two of the teacher survey dealing with the Impact of Kagan Cooperative Learning on Student Engagement in the Classroom. The "6-15 years" (solid line) and "16-24 years" (dashed line) of teaching experience groups each have their own distinct pattern across the means. It is easy to see from the graph the "dip" in the graph showing the least acknowledged Question 15. For a majority of the questions, the "6-15 years" of experience teachers agreed more with the questions in this section of the teacher survey.

Table 24

Impact of Kagan Cooperative Learning Structures on Student Engagement in the Classroom

Broken Down by Years of Teaching Experience

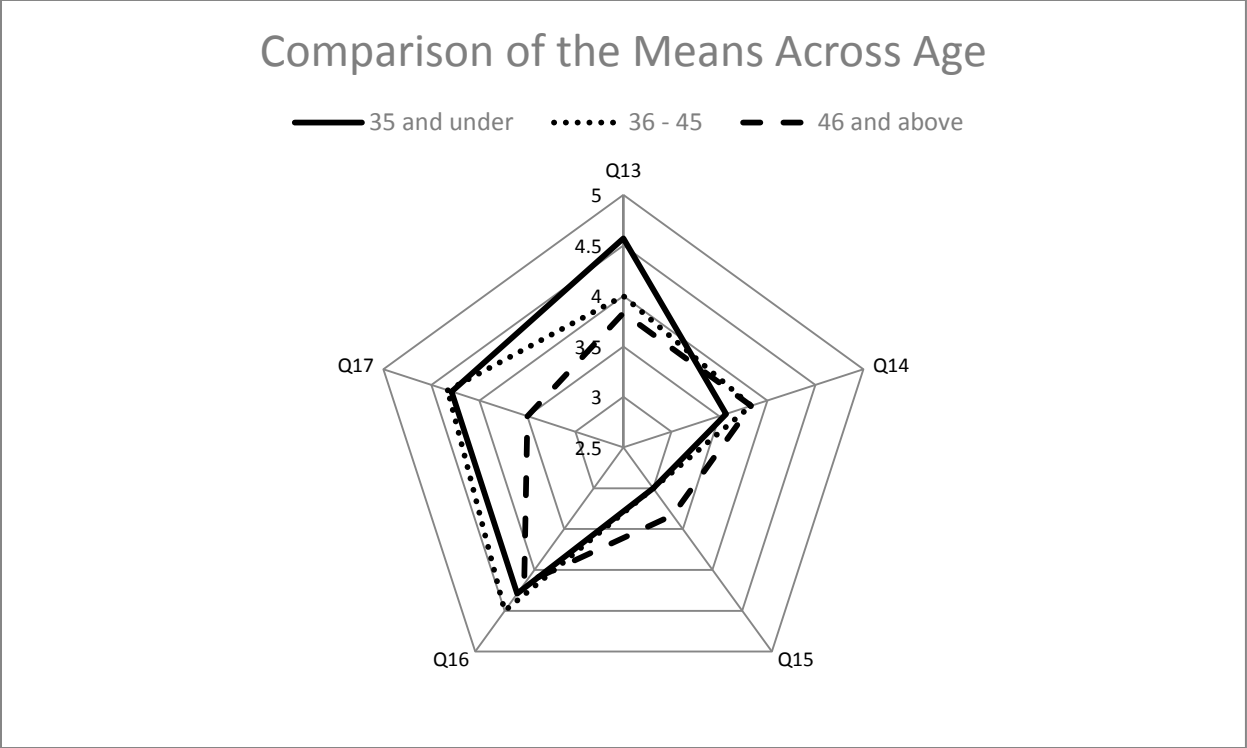|	Strongly Disagree	2	Disagree	Agree	5	Strongly Agree	*M*	*SD*
Q13: Students are more motivated when class is structured in cooperative learning teams								
6-15	0	0	0	4	3	0	4.43	0.49
16-24	0	0	2	5	0	0	3.71	0.45
Q14: When structures are used in the classroom, too many students rely on others to do the work								
6-15	0	1	3	2	1	0	3.43	0.90
16-24	0	0	1	5	1	0	4.00	0.53
Q15: Students are resistant to work in teams								
6-15 years	0	2	2	3	0	0	3.14	0.83
16-24 years	1	0	3	3	0	0	3.14	0.99
Q16: Verbal exchanges determine outcomes of cooperative learning								
6-15 years	0	0	1	4	0	2	4.43	1.05
16-24 years	0	0	1	6	0	0	3.86	0.35
Q17: All students give and receive explanations during team activities to ensure learning and understand assignment								
6-15 years	0	0	1	1	3	2	4.86	0.99
16-24 years	0	0	3	3	1	0	3.71	0.70
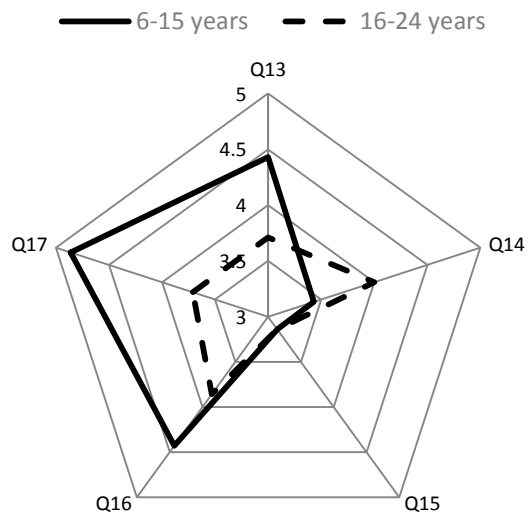
Figure 14. Profile of means across impact of Kagan Cooperative Learning Structures on student

learning in the classroom survey questions exhibit distinct teacher years of experience profiles.

Lastly, the final breakdown for subsection two, Impact of Kagan Cooperative Learning Structures on Student Engagement in the Classroom, was the breakdown by current teaching assignment and is displayed on Table 25. As with the other 2 breakdowns in this subsection, Question 15, is the least agreed with question for both the "Grades 3-5 & Grades 6-8." This questions addresses the "resistance of students" to participate when team work is assigned in the classroom. The questions that was most agreed upon by the teachers in this subsection were Question 13, "students are more motivated when class is structured in cooperative learning teams," for the teacher participants currently teaching "Grades 3-5" and Question 14, "too many students rely on others to do the work" when structures are used in the classroom for those teachers currently teaching "Grades 6-8."

Once again, the data found in Table 25 are displayed graphically in Figure 15. The radar plot presents the data for subsection two, Impact of Kagan Cooperative Learning Structures on Student Engagement in the Classroom, broken down by the current teaching assignment of the teacher participants. The "Grades 3-5 & Grades 6-8" have their own distinct profile across the means.

Overall views of implementing Kagan cooperative learning structures. The final subsection of the teacher survey, overall views of implementing Kagan cooperative learning structures, consisted of questions 18 through 29. These items were grouped together and rated together on the survey (see Appendix E). As shown in Table 26, these items assessed teachers' perceptions of how the implementation of Kagan cooperative learning structures affect student desire to excel, attitudes towards learning, support given during team sessions, increased communication skills, student responsibility to help others learn material, positive benefits for all students and increased student achievement. These questions were also designed to gain

143

Table 25

Impact of Kagan Cooperative Learning Structures on Student Engagement in the Classroom

Broken Down by Current Teaching Assignment

|	Strongly Disagree	2	Disagree	Agree	5	Strongly Agree	M	SD
Q13: Students are more motivated when class is structured in cooperative learning teams								
Grades 3-5	0	0	1	3	4	1	4.56	0.83
Grades 6-8	0	0	1	7	0	0	3.88	0.33
Q14: When structures are used in the classroom, too many students rely on others to do the work								
Grades 3-5	0	1	3	5	0	0	3.44	0.68
Grades 6-8	0	0	1	5	2	0	4.13	0.60
Q15: Students are resistant to work in teams								
Grades 3-5	0	4	3	2	0	0	2.78	0.79
Grades 6-8	1	0	2	4	1	0	3.50	1.12
Q16: Verbal exchanges determine outcomes of cooperative learning								
Grades 3-5	0	0	0	7	0	2	4.44	0.83
Grades 6-8	0	0	2	5	0	1	4.00	0.87
Q17: All students give and receive explanations during team activities to ensure learning and understand assignment								
Grades 3-5	0	0	2	3	3	1	4.33	0.94
Grades 6-8	0	0	4	2	1	1	3.88	1.05
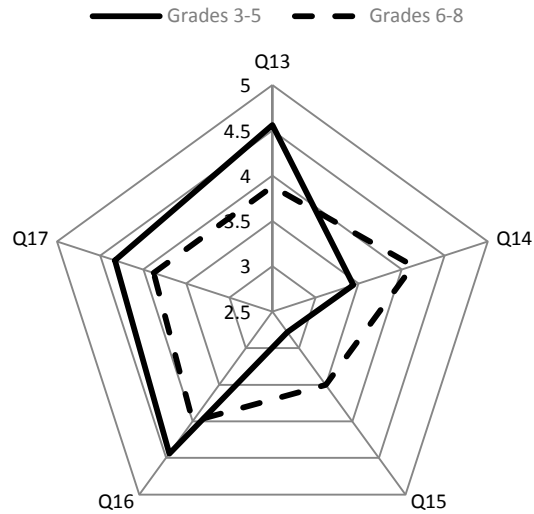
Figure 15. Profile of means across impact of Kagan Cooperative Learning Structures on student

learning in the classroom survey questions exhibit distinct current teaching assignment profiles.

Table 26

Overall Views of Implementing Kagan Cooperative Learning Structures

Item #	Question	N	M	SD
18	Implementing Kagan cooperative learning structures improves/increases a student's desire to excel.	19	3.74	0.85
19	Cooperative learning has helped to develop more positive attitudes towards learning in my classroom,	19	4.05	0.76
20	My students are more supportive of each other because I implement Kagan cooperative learning structures.	19	3.89	0.72
21	Cooperative learning helps students develop better communication skills.	19	4.53	0.88
22	My students know they have a responsibility to make sure that other members of their team have learned the material.	19	4.16	1.04
23	Cooperative learning benefits all students, regardless of learning style, multiple intelligence, or ability.	19	3.79	1.00
24	My students achieve more when I use Kagan cooperative learning structures.	19	3.64	0.67
25	I understand the use of Kagan cooperative learning structures well enough to implement them successfully in the classroom.	19	4.11	0.72
26	The use of Kagan cooperative learning structures is consistent with my philosophy of teaching.	19	3.95	0.69
27	The support that I receive from my colleagues plays a role in my success in implementing Kagan cooperative learning structures.	19	3.53	0.75
28	Kagan cooperative learning structures are a valuable teaching strategy to implement in the classroom.	19	4.05	0.69
29	Implementing Kagan cooperative learning structures in the classroom takes a great deal of effort and planning.	19	4.16	1.42

information on each participant's depth of knowledge for implementing the structures in the classroom, consistency of Kagan cooperative learning structures with each participants personal philosophy of teaching, the success of implementation gained from support from colleagues, the personal value placed upon the use of the structures in the classroom by each participant, and the perception of planning time needed to implement the structures in the classroom.

All of the means in this subsection of the teacher survey fell on the agree side of the neutral "3.5" mark on the distribution of scores. Question 21 gained the most positive responses from teacher participants in this subsection for overall learning views. This question asked teachers to respond to their perceptions concerning the use of cooperative learning its effect on "developing better communication skills." When looking at the actual teacher responses, 18 of the 19 teachers responded with agree to strongly agree for this question. Contrary to this position were the responses gained for Question 27. Teacher participants most disagreed with "the support that they receive from colleagues plays a role in the success of implementation of Kagan structures in the classroom." Once again, looking at the actual responses by teachers to Question 27, 10 of the 19 participants responded on the disagree side of the neutral mark and selected disagree to strongly disagree.

Once again, all of the means show agreement from the teacher participants and further breakdown of the data gave more insight to the perceptions of the teacher participants when addressing the overall effects of implementing Kagan cooperative learning structures. Table 27 exhibits the data in the above table broken down by teacher participant age. For this set of data for subsection three of the teacher participant survey, the majority of the means fell on the agree side of the "3.5" neutral mark on the continuum. Two questions for the "36-45" age group fell below this neutral mark. One of those questions, number 23, was also the least agreed with

147

Table 27

Overall Views of Implementing Kagan Cooperative Learning Structures

	Strongly Disagree	2	Disagree	Agree	5	Strongly Agree	*M*	*SD*
Q 18: Implementing Kagan structures improves/increases a student's desire to excel								
35 and under	0	1	1	3	1	1	4.0	1.20
36 - 45	0	0	4	2	0	0	3.33	0.47
46 and above	0	0	1	5	0	0	3.83	0.37
Q 19: Cooperative learning has helped to develop more positive attitudes toward learning								
35 and under	0	0	2	2	2	1	4.29	1.03
36 - 45	0	0	0	5	1	0	4.17	0.37
46 and above	0	0	2	4	0	0	3.67	0.47
Q 20: Students are more supportive of each other because of the implementation of Kagan structures								
35 and under	0	0	1	4	1	1	4.29	0.88
36 - 45	0	0	1	5	0	0	3.83	0.37
46 and above	0	0	3	3	0	0	3.50	0.50
Q 21: Cooperative learning helps students develop better communication skills.								
35 and under	0	0	0	2	2	3	5.14	0.83
36 - 45	0	0	0	4	1	1	4.50	0.76
46 and above	0	0	1	5	0	0	3.83	0.37
Q 22: Students know they have a responsibility to ensure other team mates have learned material								
35 and under	0	0	3	0	1	3	4.57	1.40
36 - 45	0	0	1	3	2	0	4.17	0.69
46 and above	0	0	2	4	0	0	3.67	0.47
Q 23: Cooperative learning benefits all students								
35 and under	0	0	1	3	2	1	4.43	0.90
36 - 45	1	0	3	2	0	0	3.00	1.00
46 and above	0	0	1	5	0	0	3.83	0.37
Q 24: Student achieve more when Kagan structures are used								
35 and under	0	0	1	5	0	1	4.14	0.83
36 - 45	0	0	2	4	0	0	3.67	0.47
46 and above	0	0	2	4	0	0	3.67	0.47

Table 27 (continued)

	Strongly Disagree	2	Disagree	Agree	5	Strongly Agree	*M*	*SD*
Q 25: I understand Kagan structures well enough to implement them successfully								
35 and under	0	1	0	4	2	0	4.00	0.93
36 - 45	0	0	0	4	2	0	4.33	0.47
46 and above	0	0	1	4	1	0	4.00	0.58
Q 26: The use of Kagan structures is consistent with my philosophy of teaching								
35 and under	0	0	1	3	3	0	4.29	0.70
36 - 45	0	0	2	3	1	0	3.83	0.69
46 and above	0	0	2	4	0	0	3.67	0.47
Q 27: Support from colleagues plays a role in the success of implementing Kagan structures								
35 and under	0	1	4	1	1	0	3.29	0.88
36 - 45	0	0	2	3	1	0	3.83	0.69
46 and above	0	0	3	3	0	0	3.50	0.50
Q 28: Kagan structures are valuable teaching strategies to implement								
35 and under	0	0	1	4	1	1	4.29	0.88
36 - 45	0	0	1	4	1	0	4.00	0.58
46 and above	0	0	1	5	0	0	3.83	0.37
Q 29: Implementing Kagan structures takes a great deal of effort and planning								
35 and under	0	1	2	1	1	2	4.14	1.46
36 - 45	0	1	2	1	0	2	4.00	1.53
46 and above	0	0	2	2	0	2	4.30	1.25

question for the "36-45" age group in this subsection. Question 23 asked teachers to rate the statement that "cooperative learning benefits all students" in the classroom. The overall mean for the "36-45" age group for this question was 3.00. The other question not reaching the neutral mark was Question 18. Only 2 of the 6 respondents in the "36-45" age group responded positively with agreement with this question. Thus, it gained a mean of only 3.33, falling below the neutral mark. On the other hand, the most agreed with questions were numbers 21 and 29. Question 21 had the highest positive mean for both the "35 and under" group of teacher participants and the "36-45" group of participants.

By taking a closer look at the data set, only one teacher participant chose a response on the negative side of the continuum. For the "46 and above" age group, the most positive mean was found with Question 29. This question asked teachers to rate Kagan structures and the "effort and planning" that was needed for successful implementation in the classroom. Four of the six participants responded on the positive end of the spectrum by agreeing that lots of planning time was needed for successful implementation. In fact, 2 of the 6 responded with a strongly agree. In this entire section, there was only one response that was strongly disagree and it was noted in Question 23, "cooperative learning benefits all students," and was placed by a participant in the "36-45" year old subgroup.

In order to gain a graph to display the table above, Figure 16 shows a radar plot for the comparison of means across the questions found in subsection three of the teacher survey dealing with the Overall Views of Implementing Kagan Cooperative Learning Structures. The "35 and under" (solid line), "36-45," (dotted line), and "46 and above" (dashed line) year old groups each have their own distinct pattern across the means. There are very different highs and lows noted in this graph for this age group subgroup. For many of the questions, the "35 and under" age

150
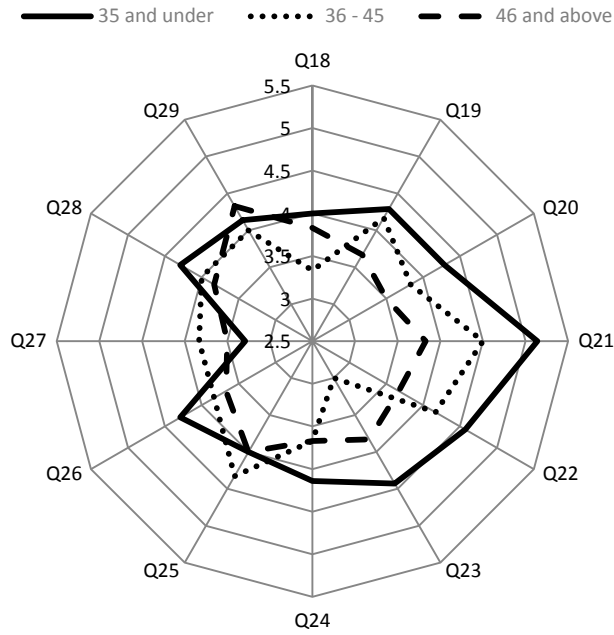
Figure 16. Profile of means across overall views of Implementing Kagan Cooperative Learning

Structures survey questions exhibit very distinct teacher age group profiles.

group have the most positive means across the subsection. On the other hand, the "46 and above" age group appear to have the most least agreement means for most of the questions found in subsection three of the teacher survey.

In addition to the breakdown by teacher age, Table 28 shows the data for subsection three, Overall Views of Implementing Kagan Cooperative Learning Structures, by years of teaching experience. With the exception of Question 23, all of the questions and subgroups in this subsection of the teacher survey were on the agree side of the neutral mark on the continuum. Question 23 asked teachers to respond to the question concerning the fact that "cooperative learning benefits all students." For the teachers with "16-24 years" of teaching experience, this question received the lowest agreed with mean of all questions in this subsection when looking at data according to teachers' age. The teachers who have "6-15 years" of experience had two questions with which they most disagreed, according to their mean. Question 27, "support from colleagues plays a role" successful implementation of Kagan structures in my classroom," and Question 29, "implementing Kagan structures take a great deal of effort and planning time," each had means of only 3.57. On the other hand, Question 21 and Question 29 earned the most agreed with status by these subgroups in this subsection of the survey. The "6-15 years" of experience teacher participants had the highest mean for Question 21 and showed more agreement when asked to determine their stand with "better communication skills" are gained by students when they participate in cooperative learning situations. Question 29 appeared to show that the "16-24 years" of teaching experience participants show most agreement with the question addressing the amount of "time and effort" it takes to implement Kagan structures in the classroom.

Table 28

Overall Views of Implementing Kagan Cooperative Learning: Reponses by Years of Teaching Experience

	Strongly Disagree	2	Disagree	Agree	5	Strongly Agree	*M*	*SD*
Q18: Implementing Kagan structures improves/increases a student's desire to excel								
6-15 years	0	0	2	4	1	0	3.86	0.64
16-24 years	0	0	3	4	0	0	3.57	0.49
Q19: Cooperative learning has helped to develop more positive attitudes toward learning								
6-15 years	0	0	2	2	3	0	4.14	0.83
16-24 years	0	0	1	6	0	0	3.86	0.35
Q20: Students are more supportive of each other because of the implementation of Kagan structures								
6-15 years	0	0	1	5	0	0	4.00	0.53
16-24 years	0	0	3	4	0	0	3.57	0.49
Q21: Cooperative learning helps students develop better communication skills.								
6-15 years	0	0	0	3	1	3	5.0	0.93
16-24 years	0	0	1	5	1	0	4.0	0.53
Q22: Students know they have a responsibility to ensure other team mates have learned material								
6-15 years	0	0	2	1	2	2	4.57	1.18
16-24 years	0	0	3	4	0	0	3.57	0.49
Q23: Cooperative learning benefits all students								
6-15 years	0	0	3	3	1	0	3.71	0.70
16-24 years	1	0	2	4	0	0	3.29	1.03
Q24: Student achieve more when Kagan structures are used								
6-15 years	0	0	2	5	0	0	3.71	0.45
16-24 years	0	0	2	5	0	0	3.71	0.45
Q25: I understand Kagan structures well enough to implement them successfully								
6-15 years	0	1	0	3	3	0	4.14	0.99
16-24 years	0	0	1	6	0	0	3.86	0.35
Q26: The use of Kagan structures is consistent with my philosophy of teaching								
6-15 years	0	0	1	3	3	0	4.29	0.57
16-24 years	0	0	4	3	0	0	3.57	0.49

Table 28 (continued)

	Strongly Disagree	2	Disagree	Agree	5	Strongly Agree	M	SD
Q27: Support from colleagues plays a role in the success of implementing Kagan structures								
6-15 years	0	1	2	3	1	0	3.57	0.90
16-24 years	0	0	4	3	0	0	3.43	0.49
Q28: Kagan structures are valuable teaching strategies to implement								
6-15 years	0	0	1	4	2	0	4.14	0.64
16-24 years	0	0	2	5	0	0	3.71	0.45
Q29: Implementing Kagan structures takes a great deal of effort and planning								
6-15 years	0	2	3	0	0	2	3.57	1.59
16-24 years	0	0	2	3	0	2	4.29	1.16

Figure 17 offers a different perspective for the data gained from the years of teaching subgroup. This radar plot displays the comparison of the means by looking at the years of teaching experience and shows unique profiles for each of the age groups. For the majority of the graph, the "6-15 years" of teaching experience group contains the "16-24 years" of teaching experience group. There is only 1 question where the "16-24 years" group has a higher mean than the "6-15 years" group.

Finally, Table 29 displays the perceptions of teacher participants for subsection three, Overall Views of Implementing Kagan Cooperative Learning, broken down by the current teaching assignment. As before, each of the means for this subsection, with the exception of one question for one subgroup, is on the agree side of the neutral mark of the continuum. The teacher participants who currently teach "Grades 6-8" disagreed more with Question 18. This question asked teachers to rate their amount of agreement to the statement a "student's desire to excel" improves/increases with the implementation of Kagan structures in the classroom. The overall mean for the "grades 6-8" teachers was 3.38, the only mean that was not on the agree side of the neutral mark of "3.5." The most non-agreed response for the "Grades 3-5" teachers is noted with Question 29 where these participants gave minimal agreement to the statement that "support from colleagues" is what makes the difference in successful implementation of the Kagan structures in the classroom. However, the teachers of students in "Grades 3-5" agreed more to the "development of better communication skills" for students when Kagan is used in the classroom, coupled with the student "responsibility to ensure the material is learned" by all team mates before the assignment is ready for turning in or being completed. Teachers of students in "Grades 6-8" more agreed with the question ascertaining that a "great deal of effort and planning time" is needed to implement the Kagan structures in the classroom.

Figure 17. Profile of means across overall views of Implementing Kagan Cooperative Learning Structures survey questions exhibit very distinct teacher years of teaching experience group profiles.

Table 29

Overall Views of Implementing Kagan Cooperative Learning: Responses by Current Teaching

Assignment

	Strongly Disagree	2	Disagree	Agree	5	Strongly Agree	*M*	*SD*
Q18: Implementing Kagan structures improves/increases a student's desire to excel								
Grades 3-5	0	0	2	5	1	1	4.29	1.03
Grades 6-8	0	1	3	4	0	0	3.38	0.70
Q19: Cooperative learning has helped to develop more positive attitudes toward learning								
Grades 3-5	0	0	1	4	3	1	4.44	0.83
Grades 6-8	0	0	1	7	0	0	3.88	0.33
Q20: Students are more supportive of each other because of the implementation of Kagan structures								
Grades 3-5	0	0	1	6	1	1	4.22	0.79
Grades 6-8	0	0	2	6	0	0	3.75	0.43
Q21: Cooperative learning helps students develop better communication skills.								
Grades 3-5	0	0	1	4	0	4	4.78	1.33
Grades 6-8	0	0	0	5	3	0	4.38	0.48
Q22: Students know they have a responsibility to ensure other team mates have learned material								
Grades 3-5	0	0	2	2	2	3	4.67	1.15
Grades 6-8	0	0	3	4	1	0	3.75	0.66
Q23: Cooperative learning benefits all students								
Grades 3-5	1	0	2	4	1	1	3.78	1.31
Grades 6-8	0	0	3	4	1	0	3.75	0.66
Q24: Student achieve more when Kagan structures are used								
Grades 3-5	0	0	2	6	0	1	4.00	0.82
Grades 6-8	0	0	2	6	0	0	3.75	0.43
Q25: I understand Kagan structures well enough to implement them successfully								
Grades 3-5	0	1	1	4	3	0	4.00	0.94
Grades 6-8	0	0	0	7	1	0	4.13	0.33
Q26: The use of Kagan structures is consistent with my philosophy of teaching								
Grades 3-5	0	0	1	4	4	0	4.33	0.67
Grades 6-8	0	0	4	4	0	0	3.50	0.50

Table 29 (continued)

	Strongly Disagree	2	Disagree	Agree	5	Strongly Agree	*M*	*SD*
Q27: Support from colleagues plays a role in the success of implementing Kagan structures								
Grades 3-5	0	1	3	3	2	0	3.67	0.94
Grades 6-8	0	0	4	4	0	0	3.50	0.50
Q28: Kagan structures are valuable teaching strategies to implement								
Grades 3-5	0	0	0	6	2	1	4.44	0.68
Grades 6-8	0	0	3	5	0	0	3.63	0.48
Q29: Implementing Kagan structures takes a great deal of effort and planning								
Grades 3-5	0	2	3	1	1	2	3.78	1.47
Grades 6-8	0	0	2	3	0	3	4.50	1.22

Figure 18 is a graph depiction of the data in Table 29. Very distinct profiles for each of the subgroups were created. For the majority of the graph, the "Grades 3-5" teachers contained all of the responses given by the "Grades 6-8" teachers. Thus, more responses finding agreement from this subsection were gained from the "Grades 3-5" teachers.

Teacher Interviews

This section of Chapter 4 reports the data collected by the researcher from interviews with the participating teachers at Rural School. Participants received a copy of the interview questions via email when they were asked to participate in the interview process. In the email, potential participants were given a date, time, and place for the interview. Most of the interviews were scheduled to occur in the teacher's room in order to assist with timing issues for each participant. Using an interview protocol, the teacher participant interviews were recorded on a small RCA digital voice recorder. All interview data were transcribed into individual teacher documents in order for further analysis to take place. The interviews took place after the disaggregation of the data from the teacher surveys. Probing questions were created to gain further information about the implementation of the Kagan cooperative learning structures in the classroom. Once all of the interviews were complete and transcribed, participants received a copy of the transcription and were allowed to make corrections to the interview as transcribed by the researcher. Data reduction began with reading and re-reading the transcribed data from the teacher interviews. A manual, color-coded system was applied to the interview transcriptions, as well as, their placement into the NVivo software in order to separate the interviews per question. In order to ensure quality control (Creswell, 2012), teacher participants are to stay anonymous thus permitting them to reply to interview questions with candor, honesty, and accuracy.
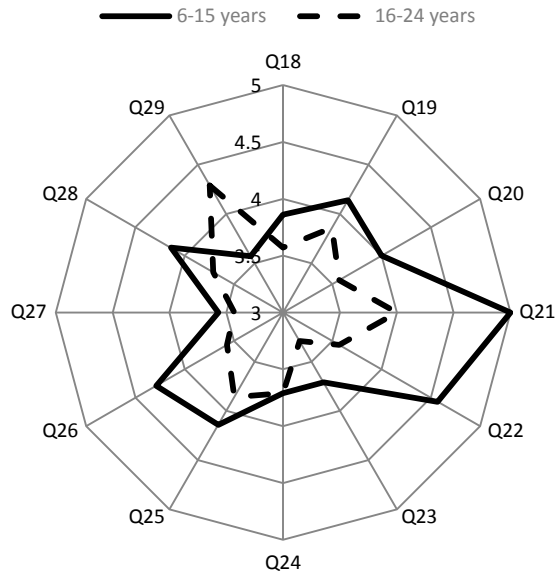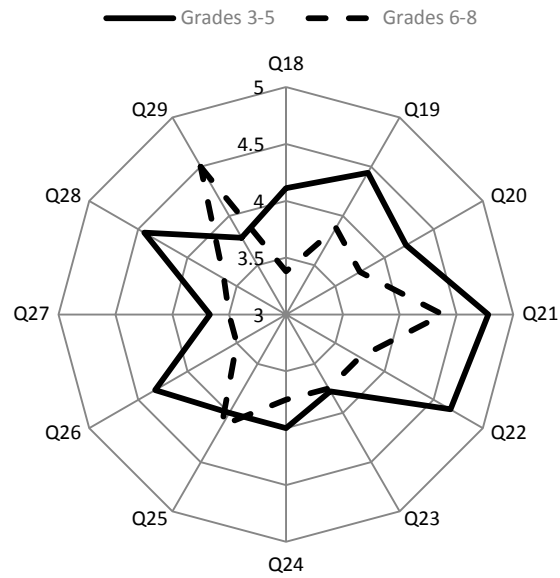
Figure 18. Profile of means across overall views of Implementing Kagan Cooperative Learning

Structures survey questions exhibit distinct current teaching assignment group profiles.

Emerging interview themes. All of the answers submitted by the teacher participants were reviewed, question by question. For each of the seven questions, the following themes developed: (a) Socialization and Communication in the Classroom, (b) Ability for Student Movement in the Classroom, (c) Student Engagement, (d) Student Motivation, (e) Student Achievement, and (f) Teacher Work Overload. These themes, both positive and negative, were consistently heard from the majority (from 50% to 100%) of the participants during the interview process. The purpose of this case study was to understand the perceptions of teachers in regards to student learning and motivation with the implementation of Kagan cooperative learning structures.

Socialization and communication in the classroom. Teacher participants all addressed the positive addition of student communication and socialization in the classroom that accompanied the implementation of Kagan cooperative learning structures. Table 30 displays the results of information gained from the teacher interviews for this socialization theme. From the remarks made during the interview process, this "student talk" can be defined as working together and sharing information in order to complete an assigned task. All of the teacher participants had some positive comment on the social aspect of the implementation of the Kagan cooperative learning structures in their classrooms. In fact, most addressed the fact that talking with their classmates is what they want to do, so the implementation just gave them the opportunity address this need in class.

Ability for student movement in the classroom. Several (75%) of the teacher participants designated student movement in the classroom as a positive attribute of the implementation of Kagan cooperative learning structures in the classroom. In terms of information gained during the interview process, student movement is the planned, strategic

161

Table 30

Socialization and Communication in the Classroom

Teacher	Interview Responses
Teacher 3	They . . . umm . . . also allow them some time to talk about what they are learning . . . they must be able to explain specific things or topics . . . It gives ones who would not normally engage in discussion a safe way to do that . . . I see it as a safe way for them to share what they are learning
Teacher 5	I think it gives students the opportunity to talk to each other . . . umm . . . and students at this age . . . well, that is what they love to do . . . they are discussing and explaining it to each other or one is explaining it to the other . . . but when I walk around, I realize that I can hear conversation where one student says, "well this is exactly what it is," and the other one says, "well I didn't see it that way" or when they are discussing and explaining it to each other or one is explaining it to the other, and they are like "oh . . . okay . . . I didn't understand that but now I do"
Teacher 6	the use of the structures allows my students to work and collaborate together . . . after all, socialization is exactly what students love to do . . . these structures give my students the opportunity . . . they are much more vocal and ready to share their ideas and thoughts
Teacher 7	well it's got them talking to each other more about their content . . . because like I said, it forces them to talk about it and communicate about it . . . they want to talk all the time, so it gives them a chance to talk . . . there is more conversation going on . . . they are all actively listening and speaking and talking at the same time . . . communication is good
Teacher 8	they buy into it because they are doing what they want to do . . . they want to talk . . . it allows them some time to talk about what they are learning
Teacher 11	. . . and they talk but they talking about academics . . . many of the students stop to think about their answer or have to thoroughly explain their answer to a team mate that is struggling to understand the concept or task
Teacher 13	Kagan gives students opportunities to talk productively . . . It improved student communication with each other. It provided examples of how to have positive and productive conversations with peers . . .
Teacher 14	. . . easy facts for students to go back and forth or around the group

opportunity of students to be out of their seats for the purpose of creating an active role for students as they learn and interact with presented content in the classroom. Table 31 lists excerpts that reveal how teacher participants address student movement in the classroom.

   Student engagement. Comparatively, most (75%) of the teacher participants addressed student engagement during the course of the interview process. Defining student engagement involves looking and assessing the willingness of students to actively participate in routine class activities, including, but not limited to, taking an interest in and bringing to life the content presented. Teacher participants see this engagement as a way for students to become excited and energized about what is happening in the classroom. From statements that were made concerning student engagement, teachers saw this as a positive impact created by the implementation of Kagan cooperative learning structures. In Table 32, portions of interview conversations are displayed to present teacher participant comments regarding student engagement in the classroom.

   Student motivation. Another theme that arose as the interview process was embarked upon, was the idea of student motivation and its increase that comes with the implementation of Kagan cooperative learning structures. Table 33 demonstrates the data gained for the statements made by the teacher participants concerning student motivation in the classroom. Although student engagement and student motivation appeared to have very similar characteristics as the teacher interviews took place, taking a deeper look into the transcriptions led to a different definition for student motivation.

   Engagement deals with the active participation of the students, while motivation is based upon the amount of ambition and effort that is exerted by a student into a given task, one being

Table 31

Ability for Student Movement in the Classroom

Teacher	Interview Responses
Teacher 3	. . . just get them up and moving around the room . . . get my students up and moving . . . that they need to get up and moving . . . they say that they enjoy it because they get to move around
Teacher 5	. . . they can get up . . . they like to be able to get up and move around the room at certain times
Teacher 6	. . . a manner where they are able to get up and move around . . . movement is exciting for students
Teacher 8	. . . it gives them a chance to move . . . they want to move
Teacher 11	. . . I like the way the children are able to get out of their seats
Teacher 13	. . . students enjoyed getting up and moving around

Table 32

Student Engagement

Teacher	Interview Responses
Teacher 3	What I have seen is . . . student engagement is increased with implementation (of Kagan structures)
Teacher 5	. . . that it engages them . . . they are really more engaged and focused . . . it's my opinion, and I feel that student engagement is affected tremendously . . .
Teacher 6	. . . they are engaged and energetic . . . not just a part, but a celebrated member of a group truly affects engagement . . .
Teacher 7	. . . they highly affect engagement in my classroom . . . it sure helps engagement . . . Is there a measure that says it increases achievement . . . I don't know . . . but it sure helps the engagement . . . and so, of course, engagement will ultimately lead to learning . . .
Teacher 13	. . . they (students) are more engaged in a structure than a plain book . . .
Teacher 14	. . . it gets kids engaged . . . I would say student engagement . . . it's more for engagement because it gets the students involved in the lesson which makes the outcomes higher.

Table 33

Student Motivation

Teacher	Interview Response
Teacher 3	. . . What I have seen . . . is . . . student motivation has greatly increased when implementing Kagan structures . . . I have . . . umm . . . noticed . . . that my students ask to do it again and again
Teacher 5	As far as motivation . . . oh they are always motivated to work in groups . . . actually . . . I think initially when we began implementing Kagan, the first year that we did, they were really motivated . . . but for some students, it is a motivation because they tend to struggle so them having input from others helps them . . .
Teacher 6	One thing I have really noticed since I began my implementation . . . my implementation of the Kagan structures is that making students feel like they are a part . . . not just a part, but a celebrated member of a group truly affect motivation . . . not just every so often . . . but daily . . . enforcement of this is needed daily . . . the cheers has positively affected the motivation of my students . . . it is my opinion . . . and I feel that students' motivation is affected tremendously
Teacher 8	When addressing Question 5, Teacher 8 responded with a successful experience as . . . student motivation . . . by working together they are showing what they learned in a different way . . . It (Kagan structures) is very useful . . . It (Kagan structures) is a great thing to add to your lessons because it motivates them (students)
Teacher 11	Anytime that I say today we are going to do a Kagan strategy . . . they are motivated to it because I feel like . . . especially with first grade, they do not feel alone . . . they are going to have support from one of their peers that they sit with

learning the presented content, in the interest of achieving successful outcomes from the effort that is given.

       Student achievement. Table 34 displays the variety of personal definitions of student achievement and, at the same time, gives insight to beliefs and perceptions of Kagan cooperative learning structures on student achievement.

       Teacher work overload. Many of the teacher participants at Rural School are feeling the effects of the new technology initiative this school year (currently elementary only) or the first experience of teaching a span of grade levels (middle school). Although these are not in isolation, all of the interviewees are feeling the pinch of time and are stressed over the current work load. Table 35 shares the responses of the teacher participants as they relate to the theme of teacher workload.

Teacher Focus Groups

       This section of Chapter 4 reveals the analysis of the data collected by the researcher from meeting with focus groups with the selected participating teachers at Rural School. Participants received a copy of the focus group questions via email when they were asked to participate in the focus group process. In the email, potential participants were given a date, time, and place for the focus group to convene. Most of the focus group sessions were scheduled to take place in one of the teacher's room in close proximity to all participants in order to have little inconvenience felt by each of the selected teacher participants. One thing to note here is that only two focus groups could be formed from the 19 teacher participants. These groups were originally created with 4 teachers in each group. On the day that the focus groups were scheduled, one group had two teachers in the building that day, with the other group having 3 of the members in attendance. Furthermore, with the second group, 1 of the teachers had to assist a

Table 34

Student Achievement

Teacher	Interview Responses
Teacher 3	My students seem to . . . umm . . . learn more from each other than they would just listening to me in the same amount of time . . . my students better retain information when they are given the opportunity to talk to someone else about it or to teach it to another person . . . and I believe that many of these Kagan structures allow this processing to happen for each and every student in the classroom . . . my students are learning without even thinking that they are learning . . . what more could a teacher ask for?...It has made my students much better thinkers . . . on a critical level and basic level . . . it gives the students . . . regardless of their ability . . . a more equal learning experience
Teacher 5	. . . things that they are all hopefully successfully learning the content material . . . I suppose it's successful for student too . . . you know that the majority of them seem to understand and they're learning . . . .I feel it does affect achievement . . . achievement is affected because that other student in the long run will have understood that and be able to . . . progress will be shown in their understanding . . . I think it is positive on learning because I could see that my students were understanding and retaining the content and the material a little bit better . . . I don't feel like I have to do as much remediation and reassessment . . .
Teacher 6	. . . It has truly made a difference for the students in my classroom . . .
Teacher 8	. . . and I think people learn working together . . . I think it affects learning . . . its good academically . . .
Teacher 11	. . . they are actually learning from each other . . . by working together they are showing me what they learning in a different way . . . more than just seeing it written on a piece of paper . . . children love it and they are getting something out of it . . . especially on an assessment . . . I see it on my assessments; my test scores show . . . you know . . .
Teacher 14	. . . I would say it helps on testing . . . it gets students involved in the lesson which make the outcomes higher . . . it actually helps . . . last year in eighth grade, my students learned the US map and beforehand they couldn't tell you where North Carolina was . . .

Table 35

Teacher Workload

Teacher	Interview Responses
Teacher 3	I try to use a Kagan cooperative learning structure in my classroom at least . . . at least two to three times per week . . . Yes . . . umm . . . I would love to do it more but . . . umm . . . with all that is taking place in our building, that is hard to do . . . But, lots of time I do not choose some of the other . . . umm . . . structures because of the preparation that is needed.
Teacher 5	I just have so many different . . . and this year our whole school . . . our whole middle grades teach across grade levels . . . so it's hard to make an activity where I have to sit down . . . and I have to make the individual group . . . umm . . . whatever it might be . . . the cards, or the sentence strips, or whatever they are going to use; and I have to do it maybe for this group or for the sixth grade and it just so happens that same week I've got to do something . . . two or three things for seventh grade or eighth grade, I just don't have the time to do all of that . . .
Teacher 6	They really do well with Quiz Trade . . . lots of planning time for me, but . . . umm . . . my students really enjoy this one . . . if it were not for the amount of planning time that was needed for this particular structure . . . umm . . . this would be used quite a bit more often in my classroom
Teacher 7	It does take a lot of planning because you have to plan the activities that go with the structures . . . yeah it does; in the beginning it is a lot of planning.
Teacher 8	I use it just a little bit less this year because I'm . . . umm . . . into something else right now . . . something else is new and on the front burner right now . . . The only disadvantage that I see is that I don't always have time to plan . . . if we had more planning time we could do way more with it . . .
Teacher 11	We just got new technology this year so we want to push that rather than coming up with a great idea to implement a strategy for the week . . . so just kind of a lot going on and picking and choosing what you do and what you...what can wait . . . we have so many other things on our plate . . . I feel like as an educator, and you can relate to this, is every year it is something new . . . you know...Kagan for us was two years ago . . . there was this huge push for Kagan . . . you cannot polish and make everything great; you have got to pick and choose it. You do not have enough time . . . you cannot spend all night here . . . but it seems that they want us too . . .

Table 35 (continued)

Teacher	Interview Responses
Teacher 13	Not that I don't believe in them. I think we have just been overrun with initiatives and common core and this year with iPads in classes, so we mesh these ideas together and make them work . . . Now we are learning to implement iPads daily, so technology is taking over . . . This year iPads have taken over as another way to engage students and as a new teaching style. We will have to get to a point where we can use both methods and have time to plan both.
Teacher 14	Planning time has affected my use . . . or let me say . . . umm . . . my lack of use . . . I just had eighth grade last year . . . now I'm using it less because three grades with the same amount of planning time and it is just harder to do.

student at the beginning of the scheduled session and was not able to get participate until we were nearly done with the question and answers. The focus groups took place after the disaggregation of the data from the teacher surveys and interviews. Using a focus group protocol, the teacher participants' discussions were recorded on a small RCA digital voice recorder. All data were transcribed into separate documents for each focus group in order for further analysis to take place. Once all of the focus group meetings were complete and transcribed, participants received a copy of the transcription and were allowed to make corrections to the discussion as transcribed by the researcher. A color-coded system was applied to the transcriptions, as well as, their placement into the NVivo software to gain access to word counts and combination of questions into one document for ease of reading and re-reading. Once again probing questions were created to gain deeper information about the implementation of Kagan cooperative learning structures and to assist in the answering of the two teacher-related research questions.

Emerging focus group themes. All of the answers submitted by the teacher participants and transcribed for data disaggregation, were reviewed question by question. The themes for the focus groups were not as apparent as those noted from the teacher interviews. Several readings and coding of data had to be completed in order to see the themes that finally began to emerge. For each of the seven questions, the following emerging themes developed: (a) Positive Outcomes of Implementation, (b) Willingness of Students to Participate, (c) Effect of Implementation on Student Learning, and (d) Difficulties With Implementation. These themes, with some positive and others negative, were consistently heard from the majority (80%-100%) of the participants during the focus group process. The purpose of this case study was to

171

understand the perceptions of teachers in regards to student learning and engagement with the implementation of Kagan cooperative learning structures.

Positive outcomes of implementation. Both set of focus group participants stated during the focus group sessions that the use of Kagan cooperative learning structures had positive outcomes that are evident in their classrooms. Table 36 presents comments that supported this emerging theme concerning the use of the Kagan structures. These positive outcomes address the following:

- Students being given the opportunity to teach each other and picking up ideas to help their learning from the cooperative talk
- Teacher taking the time to group students according to strengths and weaknesses of each student, thus paying off "dividends in the long run"
- Cementing a taught concept prior to formal assessments
- Students truly learning how to ask a question when working with their peers
- Stress reduction for students since they have a partner that can assist with the learning
- Known expectations by all students, thus saving valuable class time
- Helping all students learn by placing struggling students with those who understand
- Students receiving a new "platform" to assist their learning
- Students learning how to communicate with one another and how to give positive comments
- New activities that can be used with the students

All of the participating teachers had some positive comments and outcomes due to the implementation of Kagan cooperative learning structures in the classroom. In fact, the positive outcomes affect both the teachers and their students.

172

Table 36

Positive Outcomes of Implementation

Teacher	Interview Responses
Teacher 1	I . . . I think that they learn more by being able to teach each other . . . if I have the opportunity to talk with someone and bounce some ideas off of them, I may pick up something that they don't and the may pick up on something that I don't . . . so I think it is the same thing with children . . . . . . It has allowed me to really start looking at . . . umm . . . I am not just throwing kids into a group . . . particularly with Kagan . . . but I'm really looking at where my kids strengths and weaknesses are and trying to figure out . . . it has kind of focused me to be more aware of individual strengths and weaknesses within kids . . . I think that that pays off dividends in the long run . . . . . . being able to assign the different jobs...assign the different strengths within the group I just go in with one to cement that idea before we are . . . umm . . . going to be formally assessed on it . . . you know give them something fun . . . you know . . . because they love it . . . and I with middle school kids, you have to keep it fresh . . . you have to change up . . . you have got to be diverse, especially with middle school kids . . . that attention span is like that (snaps fingers) . . . so you have got to keep it fresh and you gotta mix it up . . .
Teacher 2	. . . I think when . . . when they are working with each other and having to ask and work within their group . . . I think it allows . . . it helps kids learn how to ask a question . . . so it's not just . . . umm . . . I don't get it . . . But for them to tell another student, they have to be a little more specific with their question other than I don't get it . . . I'm really looking at where my kids strengths and weaknesses are and trying to figure out . . . okay . . . well this child does really well with understanding operations with integers . . . this child doesn't . . . we are going to focus on integers this week so we are going to put these kids together so that they can help each other out . . . and kinda has forced me to be more aware of individual strengths and weaknesses within kids . . . it helps kids learn how to ask a question

Teacher 9	. . . it takes the stress off of some of them that don't know how to do something . . . they learn better from each other than from me
	  . . . they know the expectations . . . If I am number 1 . . . if you're number ones, you know do this and there is not griping about . . . I didn't get to do this . . . there is little argument over who does what
	 It gives me something else to do with them . . . another means of getting information . . . it has taken away the old guided practice . . . the I do, we do, you do . . .
	  . . . it saves time too . . . you pair up and read your paragraph over and over again, but you read it to your friends and you can hear them and it saves time . . .

Table 36 (continued)

Teacher	Interview Responses
Teacher 10	typically when we use it is after the concept has been introduced and I reinforce the idea . . . we try to . . . I try to pair the ones who are struggling with those showing a little strength with the concept in order for all students to get a sense of what is being presented . . . and usually it works
Teacher 12	. . . that sometimes they will have an idea but when they hear someone else's idea of answer, the it kind of helps them lead to something else . . . so it almost gives them also another platform . . . they might think a little further than what they started thing off of . . . . . . but I also like it for just learning to talk to each other . . . that they communicate with each other . . . speak nicely to each other . . . learn to . . . umm . . . give positive comment towards each other and not know each other down so much . . . I see it as new activities that I can do with them . . . because I feel like they need these

Willingness of students to participate. As mentioned above, one of the teacher

participants was unable to join the focus group session due to a student needing his assistance.

With the exception of this participant, all of the other participants addressed the willingness of

students to participate in the grouping of students that is needed when implementing Kagan

cooperative learning structures. Table 37 shares the statements of teacher participants made

concerning their students and their willingness to participate in a cooperative learning activity.

According to one participant, the students that she sees less willing to participate in the process

are the AG students in her classroom. Two of the teachers (middle grades teachers) spoke to the

fact that their students love to work together, but would prefer to choose the people in their

group.

Effect of implementation on student learning. In order to gain insight for one of the

research questions created for this study, it is essential to learn more about the perceptions of

teachers on student achievement with the implementation of Kagan cooperative learning

structures. Teacher comments and statements concerning student learning and performance in

the classroom that are evidenced by the implementation of Kagan cooperative learning structures

are shown in Table 38. During the course of the focus group sessions, every participant

addressed student learning and the role that Kagan structures play on the learning. Once again,

the definition of student learning has yet to be defined by the PI in order to gain true insight to

the perceived view of learning for each teacher participant. Of the 5 participants, 3 of the

teachers spoke of positive gains in performance of students with the implementation of Kagan

structures. However, 2 of the 5 teachers stated that they have yet to proof of academic

achievement by their students when they participate in cooperative learning activities.

Table 37

Willingness of Students to Participate

Teacher	Interview Responses
Teacher 1	. . . anytime they have the opportunity to work in a group, they are all over it . . . they don't want to work in just any group though, . . . they want to work with who they want to work with . . .
Teacher 2	. . . mine love to work together . . . and sometimes they might get angry when I make them . . . you know . . . when I pull the Kagan groups and I make them work because I know that I cannot have a whole group over here of kids that have no clue what is going on . . .
Teacher 9	I recognize a lot of this with the AG kids that don't have the patience to work in a group and so sometimes . . . sometimes they don't want to work together and other times they are more willing to . . .
Teacher 12	I usually see . . . maybe one student in the class who does not like to work in a group . . . Usually I have one a year who has a hard time working in a group . . .

Table 38

Effect of Implementation on Student Learning

Teacher	Interview Responses
Teacher 1	. . . with some things . . . umm . . . some particular strands . . . but with most things yes . . . but for the most part I think that the activities do help . . .
Teacher 2	I think so too . . . they do increase student performance in my classroom . . .
Teacher 9	Sometimes if they don't know it, they just don' know it . . . Whether you are in a group or not. I haven't seen the benefits . . . you know . . . of achieving more . . .
Teacher 10	I try to pair . . . in order for all students to get a sense of what is being presented . . . and usually it works
Teacher 12	I agree that I don't really see a lot of academic improvement . . . the ones who struggle, even in their group, even if they had a job that they are doing . . . it doesn't necessarily prepare them better to work independently

In order to depict the relationships that could be found amongst the themes that emerged from the interviews and focus groups, Figure 19 displays the common words that could be found in both of these areas of research. This triangulation of the data showed that student engagement and student learning are perceived to be affected by the implementation of Kagan cooperative learning structures in the classroom.

Summary

This chapter included a detailed accounting of the results of the data analyses conducted for this study. The data revealed that the teachers and students at Rural School have an overall perception that both engagement and learning are affected with the implementation of Kagan cooperative learning structures. The research further revealed the inability of teachers to implement the structures as needed for continual growth of students die to the workload and demands of new initiatives in the client district and policymakers.

Significant findings with student participants showed that they have a preference for working with team mates in the classroom. It appears that students perceive that they learn important things from each other, respect all opinions of members of the group, and that they are more engaged and motivated when given the opportunity to share ideas with a partner or team. This will be discussed in Chapter 5.

Chapter 5 includes a summary of the data and results. The chapter will also present conclusions gained from the results. Additionally, recommendations of applications will be proposed, as will recommendations for future research.
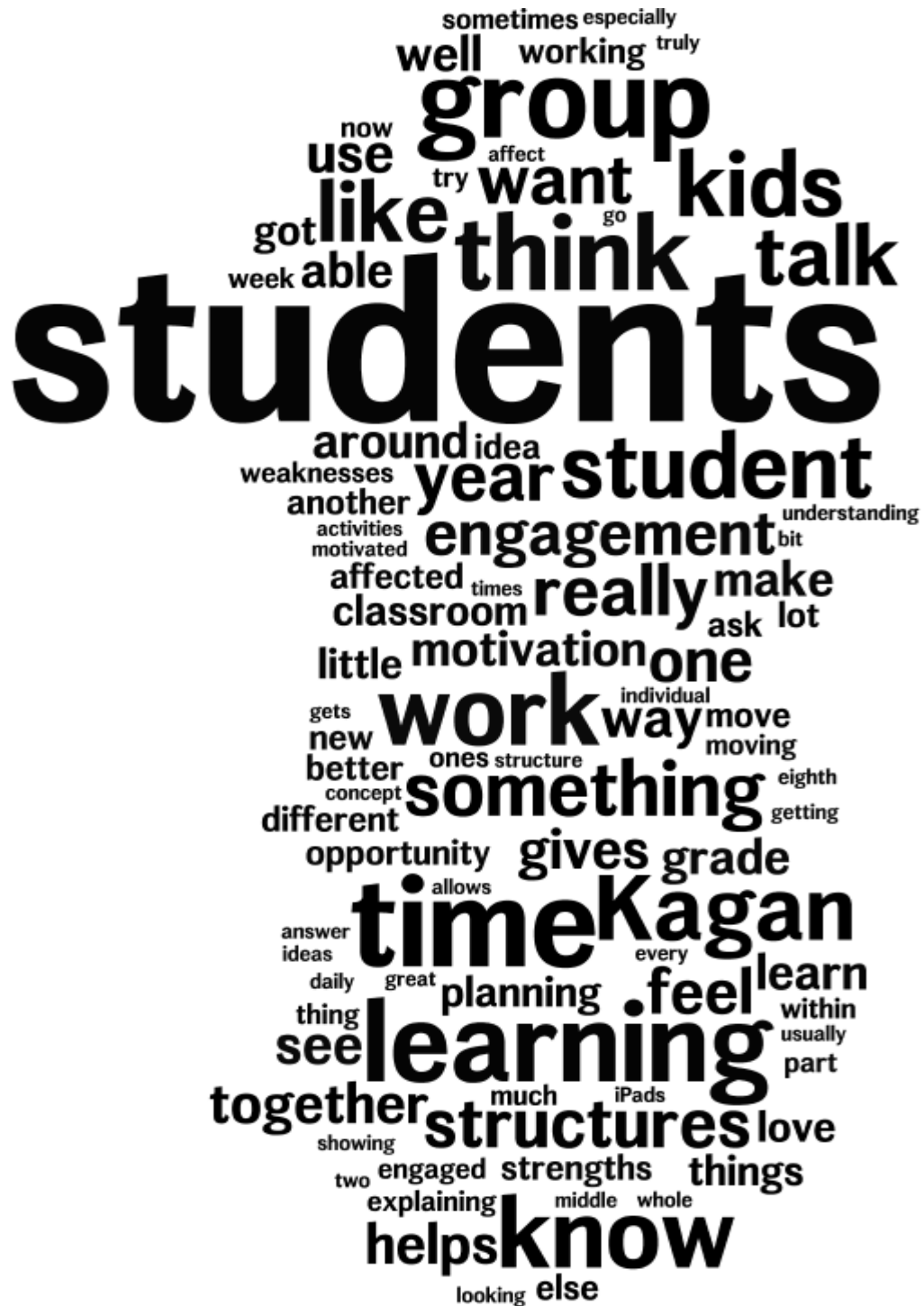
Figure 19. Triangulation of data gained from teacher interviews and focus groups.

179

CHAPTER 5: DISCUSSION

This mixed methods case study analyzed the perceptions of students and teachers at Rural School concerning the impact of the implementation of Kagan cooperative learning structures on student learning and engagement in the classroom. A Kagan cooperative learning structure is an instructional strategy that is content-free, and consists of a repeatable sequence of steps organized to structure the "interaction of students with each other, the academic content, and the instructor" (Kagan, 2013, p. 6). Cooperative learning research has "proliferated in the last three decades" (Peterson & Miller, 2004, p. 123). "The success of cooperative learning is largely based on its having a clear theoretical foundation and hundreds of validating research studies that point the way for operational procedures for practitioners such as teachers" (Johnson & Johnson, 2009, p. 366). As educators continue to be challenged with implementing effective strategies that can address the needs of their entire student population, they need to be able to believe that the implementation can be successful. It is also important that educators provide a learning environment that is enjoyable and engaging for students in order to keep them involved and learning.

Nineteen Kagan-trained Rural School elementary and middle school teachers and 107 Rural School students, Grades 3-8, voluntarily participated in this study. The students and teachers were asked to complete an online survey (see Appendices D and E, respectively) relating to their perceptions of Kagan cooperative learning structures and their effect on engagement and learning. Each survey was broken into four sections designed to gather demographic data, engagement perceptions with implementation of Kagan structures, learning perceptions with the implementation of Kagan structures, and overall learning perceptions. Basic descriptive statistics were calculated on data gathered from each of the survey results. In

addition, selected teachers were also asked to participate in individual teacher surveys and focus

groups (see Appendices F and G, respectively). All interviews and focus groups were recorded

and the recordings were transcribed verbatim. The information collected was analyzed using

appropriate open, in vivo coding to form "initial categories or information about the phenomenon

being studied" (Creswell, 2012, p. 424) based upon the words of the study participants. For this

study, these initial categories were then further analyzed and placed into themes in order to assist

with the answering of the research questions.

This chapter is organized into five sections, commencing with the conclusions related to

the research questions. The limitations of the study are provided in the second section of the

chapter. The third section offers a list of implications related to the findings. The fourth section

offers recommendations for further research, and the final section summarized the chapter.

Conclusions Related to Research Questions

In order to understand the implications of the findings of this study, one must start with

the questions used to direct the study:

1. What are Kagan cooperative learning structure-trained teachers' perceptions of
    student engagement in their classrooms?

2. What do Kagan cooperative learning structure trained teachers perceive to be the
    impact of Kagan cooperative learning structures on student learning in their
    classroom?

3. What are the learning and engagement perceptions of students in classes that have
    implemented Kagan cooperative learning structures?

The first research question addressed the perceptions of Kagan trained teachers and the

effect of the implementation of Kagan cooperative learning structures on student engagement in

181

the classroom. Based on the data analysis findings, teachers at Rural School perceive that engagement is highly affected by the implementation of Kagan cooperative learning structures. As evidenced on the teacher survey, 17 of the 19 teacher participants (89%) agreed that when students work together, it is the verbal exchanges between them that determine the outcomes of the group for the assigned task. Therefore, students need "cooperative talking time" to see the desired outcomes of implementing the structures (Johnson & Johnson, 1989; Kagan 2013; Kagan & Kagan, 2009; Slavin, 1991b). Even when the data were broken down into smaller subgroups, the agreement with increased student engagement in the classroom was noted.

It was quite interesting to note that when the data from the survey were broken down to gain deeper insights into the findings, the teachers with more years of experience tend not to believe that students sometimes rely too heavily on others in order to accomplish a given task. In addition, when the data were broken down by years of experience, the least experienced teachers had much higher and more positive means for each of the statements concerning student engagement. The final breakdown of data by current teaching assignment, gave some interesting insights to perceptions of elementary teachers (Grades 3-5) versus middle school teachers (Grades 6-8). The elementary teachers recognized that it is the classroom setup, one that is physically set for cooperative learning teams, that is the motivational spark that is needed in the classroom. On the other hand, the middle school teachers agreed that "too many students rely on others to do the work." However, both subgroups, agreed that there is little resistance from students when asked to perform a task as a group.

More compelling evidence supporting the increase in student engagement with the implementation of Kagan cooperative learning structures was gained from individual teacher interviews. During the interview process, one of the teacher participants stated that "it engages

182

them . . . they are really more engaged and focused . . . it's my opinion, and I feel that student engagement is affected tremendously." A second participant echoed these sentiments by stating, "what I have seen is . . . student engagement is increased with implementation." In total, 75% of the teacher interview participants remarked positively on the effects that the implementation of Kagan cooperative learning structures play in their classrooms on engagement of their students.

The second research question asked about Kagan-trained teachers' perceptions of effects of Kagan cooperative learning structures on student learning in the classroom. Once again, the data supported positive perceptions of student learning. In order to answer this research question, it was important to learn more about teacher perceptions of student achievement with the implementation of Kagan cooperative learning structures. From the onset of the study, a definition for student achievement was never created. This was a specific chosen action due to the in learning more about each teacher participant's personal definition of student achievement based upon teaching philosophies, experience in the classroom, and personal participant insight to their personal beliefs of what truly occurs when student achievement occurs in the classroom. Throughout the entire research process, it became evident that teachers at Rural School define student learning based upon retention of material, increased test scores, and creation and sustaining of higher levels of thinking such as working together to analyze, assess evidence and support personal opinions for a given task during the cooperative learning structure process.

It is quite surprising to note that the teacher survey results showed that the age of the teacher participants, years of experience teaching, and grade level currently assigned played a great role in how teachers answered the questions on the teacher survey. The older, more experienced teachers and those teaching Grades 6-8 responded less positively to almost every one of the questions on the survey dealing with student learning. However, as an entire group of

183

participants, the survey gave insights into the fact that this group of teacher participants believes that with the implementation of these structures, they do see more positive outcomes in the classroom, and that students have a more positive attitude towards learning.

Not only was agreement regarding learning increases noted in the survey, but also in statements made by the teachers during the interview and focus group process. One teacher stated that, "my students better retain information when they are given the opportunity to talk to someone else about it." Actually, nine of the 13 teachers involved in the interview and focus group processes stated very similar beliefs about student learning and their implementation of Kagan cooperative learning structures.

However, two of the participants in the focus group process, took a completely different view on student learning. They both believed that working in a group does not necessarily mean that the student will be able to replicate the learning on their own and that they have not noted any increase in student performance academically. One of the two stated, " if they don't know it, they just don't know it, whether they are in a group or not," with the second participant adding to this statement that "the ones who struggle, even in their group, even when they have a job that they are doing, it doesn't necessarily prepare them better to work independently."

Although many of the teachers stated that increases in students' learning occur when they are given the opportunity to work together, it became very obvious that new initiatives in the building are leading to less time to implement the strategies in the classroom. Elementary teachers, in Rural School, are implementing a 1-to-1 iPad initiative, and they are feeling the time crunch in the classroom with all of demands of this new district wide initiative. As a result, many of the teachers addressed that this new initiative did not come with increased planning time and thus, there is less time to prepare for lessons and the integration of Kagan structures. This

was evidenced as a teacher participant stated, " I try to use a Kagan cooperative learning structures in my classroom at least…at least two to three times per week…Yes…umm…I would love to do it more but…umm…with all that is taking place in our building, that is hard to do." A second teacher participant echoed the sentiments by stating, "if it were not for the amount of planning time that was needed for this particular structure…umm…this would be used quite a bit more often in my classroom." As evidenced by comments from teachers in the teacher interviews, teachers at Rural School are beginning to use the Kagan structures less frequently in the classroom in order to meet the requirements of the iPad initiative in the building. This decrease in use was voiced even though they acknowledged the great things that happen in the classroom due to implementation of the Kagan cooperative learning structures. One teacher stated, " We just got new technology this year so we want to push that rather than coming up with a great idea to implement a strategy for the week…we have so many other things on our plate…Kagan for us was two years ago…you cannot polish everything great." The provision of professional development to teachers by district staff may give them support in making all of the district initiatives work together so that they do not feel that some have assign a lesser degree of importance to implementation and effectiveness in the classroom on a daily basis.

Not only are the elementary teachers facing a new initiative, the middle school teachers are, for the first time, teaching the span of grades 6-8 this year. Up until this year, most of them have taught one or two subjects to only one grade level. Planning for a Kagan structure was pretty simple because the materials could be used from class to class. However, with the change in the grades that are being taught, each grade level must be planned for, and teachers are finding that with no increase in planning time, they are struggling to integrate the Kagan structures. This was demonstrated as a teacher acknowledged, " I just have so many different…and this year our

185

whole school…our whole middle grades teacher across grade levels…so it's hard to make an activity where I have to sit down…and I have to make the individual group…I just don't have the time to do that." Once again, although many of them realize the great things that come with the implementation of the Kagan cooperative learning structures, they are struggling to find the resources—chiefly planning time—to implement them with success. Here again, with this new school initiative, the provision of appropriate levels of support from school administrators to support the teachers may assist in implementing the school strategies designed to meet the needs of all students.

Although this may be true for both elementary and middle school teachers, they are still looking for ways to implement the Kagan cooperative learning structures. One teacher stated, "not that I don't believe in them, I think we have just be overrun with initiatives and common core and this year with iPads in classes, so we mesh these ideas together and make them work." A second teacher participant resonated this thought by stating that, "I see it as new activities that I can do with them…because I feel like they need these." In fact, they are doing so because Kagan cooperative learning structures are a part of their School Improvement Plan. The effective implementation is one of the action steps that they are taking to increase their Students with Disabilities subgroup proficiency measure on the End of Grade Test by 10 percentage points. Therefore, it is important that teachers continue to implement these structures in the classroom in order to assist in meeting this established goal of Rural School.

The final research question addresses students and their perceptions of working together in the classroom with the implementation of Kagan cooperative learning structures. Given the grade range involved in the study and the related potential for variability in one grade countering variability in another grade, it is not surprising that, at the overall level, the mean and the

186

standard deviation were so close for each of these survey questions. However, by breaking down the data further into the lower, middle, and upper grade levels (only Grades 3, 5/6, & 8 respectively), gender, and ethnicity (specifically African American and Caucasian), deeper insights emerged concerning students and their learning perceptions using the Kagan cooperative learning structures.

It became obvious from the responses on the student survey, that many of the student participants enjoy working together in a team in the classroom. Furthermore, from the subgroup breakdown by grade, the data showed that as student participants increase in age and grade, the agreement with a preference to work alone increased.

Additionally, it was interesting to see the results when students were asked to respond to questions concerning their enjoyment of and liking for school. For both of these questions, the most positive support came from the students in Grade 3 with the least positive support coming from the students in Grade 8.

Even though the Grade 8 students reported the lowest support for questions into the extent to which they enjoyed and liked school, they do agree with learning more by working with their peers in cooperative learning situations. It is also in this team setting, that the Grade 8 students find ease in asking questions of team mates. In fact, they prefer to ask questions of their peers, rather than their teacher.

Limitations of the Findings

The goal of this study was to broaden the information and data available on the use of Kagan cooperative learning structures as pedagogical tools. This study provided preliminary data on student and teacher perceptions on engagement and learning in the classroom with the implementation of Kagan cooperative learning structures. From this study, we can conclude that

the participants, both students and teachers, perceive that the use of Kagan cooperative learning structures do positively affect engagement and learning.

One limitation of the research study was the lack of teacher participation rates. Although Rural School has pledged to maximize the effective use of Kagan cooperative learning structures across the school as one of the action steps in their School Improvement Plan as a means of increasing student engagement in the classroom to ultimately increase student proficiency on the Reading Comprehension and Mathematics End-of-Grade tests, only 19 of the 53 Kagan trained teachers chose to participate in this study. It should be noted here that it was the plan of the researcher to interview 10 teachers at Rural School. Due to the lack of teacher participation in the study, only 8 teachers were willing to complete the interview process. Also, it was also the original plan to complete a minimum of 3 focus groups. Once again, due to the lack of teacher participation in the study, only two focus groups could be formed.

A second limitation was the low student participation in certain grades. Due to the low number of responses on the online student survey, there were particular grade levels where no validity could be given to the results gained from the student survey. To gather the needed data, two grade levels, fifth and sixth grades, were combined to gain data for the study. Furthermore, the data from grades 4 and 7 were only included in the overall disaggregation of the student data.

<div align="center">**Implications of the Findings**</div>

The findings from this research study revealed that Rural School tackled the initial challenge of school wide implementation of Kagan cooperative learning structures. However, implementation is not enough to sustain the continual use that may have the potential to see the best results of implementation. Embedding the implementation of Kagan cooperative learning

<div align="center">188</div>

structures into the school culture has been all the more difficult because of the number of initiatives that are present in Rural School.

Even though the 19 teachers represented in this study have implemented the Kagan cooperative learning structures, there is more to the Kagan structures than simple implementation (Kagan, 2013; Kagan & Kagan, 2009). Classroom teachers have the creative ability to make changes in their personal instructional practices. They can find ways to use Kagan structures on a daily or ritualistic manner.

School administrators are the needed catalyst for encouragement for the use of research based strategies in the classrooms in their buildings. This correlates with the beliefs of Johnson, Johnson, and Holubec (1994b), who stated that in order for good instruction to occur, school administration must be out of their office and in the classrooms where the action is taking place. The consistent implementation of Kagan cooperative learning structures may require teachers to reorganize and alter their daily instructional methods in order to provide the needed time for students to work in groups. Some veteran teachers may find it difficult to alter their lesson plans to include these structures, but with the appropriate encouragement and commitment from the school administrative staff, they could learn to recognize the value of their roles as facilitators rather than instructors.

In schools today, an emphasis has been placed upon all students finding success, despite the implementation of the much more rigorous standards set forth by the recent adoption of the CCSS (NGA CBP, 2010). Educators are given the challenging task of reaching the learning needs of all students. This study revealed that teachers believe the implementation of Kagan cooperative learning structures has a positive effect on student engagement and learning. The study offers support for the use of Kagan cooperative learning structures because they offer the

189

opportunity to make a difference with content that is learned by students. The implementation of Kagan cooperative learning structures could offer an effective teaching strategy to affect both student engagement and learning in the classroom.

Social change will come about when all students are equipped with the essential tools to become productive citizens. Cooperative learning could play a major part in student success in the acquisition of these needed tools (Johnson & Johnson, 1989; Kagan, 2013; Kagan & Kagan, 2009; Slavin, 1991b).

There are facets and influences that control chosen teaching strategies used by a teacher. These factors may include the individual's personality, socio-demographic characteristics, networks, prior knowledge, and the degree of difficulty of understanding and implementing the practice from the perspective of the teacher (Hubbard & Sandmann, 2007). Providing teachers with the appropriate professional development necessary to implement cooperative learning, along with other school and district initiatives may promote change in instructional methods. It may also provide educators the opportunity to create learning experiences for students to encounter and learn life skills needed to be productive outside the school environment.

Recommendations for Further Research

The purpose of this study was to share the student and teacher perceptions on engagement and learning in the classroom as a result of implementing Kagan cooperative learning structures. The study's findings and conclusions provided a basis for the following research recommendations:

1. This study should be replicated on a wider scale examining teacher and student perceptions in all schools choosing to implement Kagan cooperative learning structures in the district in which Rural School is located. This study was designed as

a case study that focused on one school in the district. This would also allow further

investigation of a more diverse population. Also, due to the small number of teacher

participants in this study, several grade levels, years of experience, and non-regular

classroom teacher data could not be extracted from what was presented in the data

analysis. By adding more schools from the district, data from these areas could

possibly be extracted, thus strengthening the findings.

2. This study delved into the perceptions of students and teachers concerning the

   implementation of Kagan cooperative learning structures. The study should be

   replicated examining the perceptions of school and district level administration. This

   would give a more solid base of data to support the implementation of these structures

   across a building or district.

3. Data collected for this case study were gathered through surveys, teacher interviews,

   and teacher focus groups. Classroom observations, student focus groups, and

   individual student interviews would be additional components strengthening the study

   data. Given the current global educational context described in Chapters 1 and 2 that

   demand improvement in student career preparedness, additional research is needed to

   examine the effects, if any, of classroom management of cooperative learning on

   student achievement and preparedness for the work force.

Summary

With the recent implementation of the Common Core State Standards (NGA CBP, 2010),

schools are focusing on implementing teaching strategies to assist in teaching the rigorous

standards that have been set forth for each grade level. With this increase in rigor and testing

expectations, the need for schools and districts to use research-based strategies is of utmost

191

importance. Kagan cooperative learning structures (Kagan, 2013; Kagan & Kagan, 2009) are research-based teaching strategies that can be implemented. This mixed-methods case study had three overarching research questions. Through a student and teacher survey, semi-structured teacher interviews, and teacher focus groups, I found that the implementation of Kagan cooperative learning structures have a positive impact on engagement and learning as perceived by the student and teacher participants of this study.

Perhaps, society requires that as humans we interact, collaborate, and work together to solve problems. According to the National Education Association (NEA, 2012), the necessity for the education field to prepare students for a society in which they can truly prosper. To do this, NEA asserted that teachers must incorporate the 4 C's: critical thinking and problem solving, communication, collaboration, and creativity and innovation. The adherence to NEA's assertion suggests that educators and researchers need to learn a great deal more about the approaches and elements of cooperative learning in order for it to work meet the needs of all students.

Our society is full of people who will continue to work together for a variety of reasons in the careers that they choose. Therefore, the educational community must find ways to allow its school-aged children opportunities to enhance skills that are necessary for cooperation and collaboration. If the proper implementation of cooperative learning also has a positive impact on student learning and engagement in the classroom, then educators around our nation might be well served to continue to find ways to utilize this teaching strategy as one way in which they can meet the needs of all students.

REFERENCES

Agarwal, R., & Nagar, N. (2011). *Cooperative learning.* Delhi, India: Kalpaz.

Allen, E. E. (1995). Active learning and teaching: Improving postsecondary library instruction. *The Reference Librarian, 24*(51-52), 89–103. doi: 10.1300/J120v24n51_10

Ames, A., & Ames, R. (1984). Systems of student and teacher motivation: Toward a qualitative definition. *Journal of Educational Psychology, 76*(4), 535–556.

American Association of Colleges of Teacher Education and the Partnership for 21st Century Skills. (2010). *21st century knowledge and skill in education preparation* [White paper]. Retrieved from: http://www.p21.org/storage/documents/aacte_p21_whitepaper2010.pdf.

Alliance for Excellent Education (2005). *Teacher attrition: A costly loss to the nation and to the states* (Issue Brief). Washington, DC: Author.

Alliance for Excellent Education. (2008, February). *What keeps good teachers in the classroom? Understanding and reducing teacher turnover* (Issue Brief). Washington, DC: Author.

Bandura, A. (1969). *Principles of behavior modification*. New York, NY: Holt, Rinehart & Winston.

Bandura, A. (1973). *Aggression: A social learning analysis.* Englewood, CA. Corwin Press.

Bandura, A. (1977). *Social learning theory.* New York, NY: General Learning Press.

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory.* Englewood Cliffs, NJ: Prentice-Hall.

Bandura, A. (1999). Social cognitive theory: An agentic perspective. *Asian Journal of Social Psychology, 2,* 21–41.

Bonwell, C. C., & Eison, J. A. (1991). *Active learning: Creating excitement in the classroom.* ASHE-ERIC Higher Education Report No. 1. Washington, DC: The George Washington University, School of Education and Human Development.

Boudourides, M. A. (1998, July). *Constructivism and education: A shopper's guide.* Paper presented at the International Conference on the Teaching of Mathematics, Samos, Greece.

Bromley, K. & Modlo, M. (1997). Using cooperative learning to improve reading and writing in language arts. *Reading and Writing Quarterly, 13*(1), 21–35.

Brooks, J. G., & Brooks, M. G. (1999). *In search of understanding: The case for constructivist classrooms.* Alexandria, VA: Association for Supervision and Curriculum Development.

Candler, L, (1995). *Cooperative learning and wee science.* San Juan Capistrano, CA: Kagan Cooperative Learning.

Candler, L. (n.d). Quiet signals and timers. Retrieved from http://www.lauracandler.com/strategies/quiet.php

Caposey. T. & Heider, B. (2003). *Improving reading comprehension through cooperative learning* (Master's thesis). Retrieved from ERIC. (ED 478 463).

Charmaz, K. (2000). Constructivist and objectivist grounded theory. In N.K. Denzin & Y. Lincoln (Eds), *Handbook of qualitative research* (2nd ed., pp. 509–535). Thousand Oaks, CA: Sage.

Chickering, A. W., & Gamson, Z. F. (1987, March). Seven principles for good practice in undergraduate education. *AAHE Bulletin, 39*(7), 3–7.

Cole, R. W. (2008, June). *Educating everybody's children: Diverse teaching strategies for diverse learners* (revised and expanded 2nd ed.). Alexandria, VA: Association for Supervision and Curriculum Development.

Costa, A. L., & Kallick, B. (2004). *Assessment strategies for self-directed learning.* Thousand Oaks, CA: Corwin.

Creswell, J. W. (2012). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (4th ed.). Boston, MA: Pearson.

Creswell, J. W., & Plano Clark, V. L. (2011). *Designing and conducting mixed methods research* (2nd ed.). Thousand Oaks, CA: Sage.

Creswell, J. W., Plano Clark, V. L., Gutmann, M. L., & Hanson, W. E. (2003). Advanced mixed methods research design. In A. Tashakkon & C. C. Teddlie (Eds.), *Handbook of mixed methods in social and behavioral research.* (pp. 209–240). Thousand Oaks, CA: Sage.

Cuban, L. (1996, March). Myths about changing schools and the case of special education. *Remedial and Special Education,* 17(2), 75–82.

Cummings, C. (2000). *Winning strategies for classroom management.* Alexandria, VA: Association for Supervision and Curriculum Development.

Dahms, M., Geonnotti, D., Passalacqua, D., Schilk, J., Wetzel, A., & Zulkowsky, M. (n.d). *The educational theory of Lev Vygotsky: An analysis.* Retrieved from www.aiz.vic.edu.au

Dat Tran, V. (2013). Theoretical perspectives underlying the application of cooperative learning in the classroom. *International Journal of Higher Education, 2*(4), 101–115. doi: 10.5430/ijhe.v2n4p101

Davidson, N. (1994). Cooperative and collaborative learning: An integrative perspective. In J. S. Thousand, R. A. Villa, & A. I. Nevin (Eds.), *Creativity and collaborative*

learning: A practical guide to empowering students and teachers* (pp. 13–30).

Baltimore, MD: Paul H Brookes.

DePorter, B., Reardon, M., & Singer-Nourie, S. (1998). *Quantum teaching: Orchestrating student success.* Needham Heights, MA: Allyn & Bacon.

Deutsch, M. (1949). A theory of co-operation and competition. *Human Relations, 2,* 129–152. doi: 10.1177/001872674900200204

Deutsch, M. (1962). Cooperation and trust: Some theoretical notes. In M. Jones (Ed.). *Nebraska symposium on motivation* (pp. 275–319). Lincoln, NE: University of Nebraska Press.

Dewey, J. (1897). My pedagogic creed. *School Journal, 54,* 77–80.

Dewey, J. (1955). *Democracy and education. An introduction to the philosophy of education.* New York, NY: The Macmillan Company.

Dotson, J. (2001, Winter). Cooperative learning structures can increase student achievement. *Kagan Online Magazine.* Retrieved from http://www.kaganonline.com/free_articles/ research_and_rationale/311/Cooperative-Learning-Structures-Can-Increase-Student-Achievement

Eggen, P., & Kauchak, D. (2007). *Educational psychology: Windows on classrooms.* Upper Saddle River, NJ: Pearson/Merrill/Prentice Hall.

Ellis, S. S., & Whalen, S. F. (1990). *Cooperative learning: Getting started.* Jefferson City, MO: Scholastic.

Erneling, C. E. (2010). *Towards discursive education: Philosophy, technology, and modern education.* Cambridge, NY: Cambridge University Press.

Felder, R. M., & Brent, R. (1994, October). *Cooperative learning in technical courses: Procedures, pitfalls, and payoffs.* Retrieved from ERIC database (ED 377038).

Fink, A., & Kosecoff, J. B. (1998). *How to conduct surveys: A step by step guide*. Thousand

    Oaks, CA: Sage.

Gall, M. D., Gall, J. P., & Borg, W. R. (2010). *Applying educational research: How to read, do,*

    and use research to solve problems of practice (6th ed.). Boston: MA: Pearson

    Education.

Gatto, J. T. (1998). Universal education. *Yes! A Journal of Positive Futures, 8,* 1–10.

Gibson, S. K. (2004). Social learning (cognitive) theory and implication for human resource

    development. *Advances in Developing Human Resources, 6*(2), 193–210.

    doi:10.1177/1523422304263429

Gilbert, P. (2014). *The state of exclusion: Lenoir County, NC. An in depth analysis of the legacy*

    of segregated communities. Chapel Hill, NC: Retrieved from UNC Center for Civil

    Rights website: http://www.uncinclusionproject.org/documents/lenoircountyreport.pdf

Glasser B. G. (1978). *Theoretical sensitivity: Advances in the methodology of grounded theory.*

    Mill Valley, CA: Sociology.

Glasser, W. (1986). *Control theory in the classroom.* New York, NY: Harper & Row.

Glasser, B. G., & Strauss, A. L. (1967). *The discovery of grounded theory: Strategies for*

    qualitative research. Chicago, IL: Aldine.

Graham, D. C. (2005). *Cooperative learning methods and middle school students* (Doctoral

    dissertation). Retrieved from Proquest. (3196733).

Grasha, A. (2002). *Teaching with style: A practical guide to enhancing learning by*

    understanding teaching and learning styles. San Bernadino, CA: Alliance Publishers.

Greene, R. (Ed.). (2008). *Human behavior theory & social work practice* (3rd ed.). New

    Brunswick, NJ: Transaction Publishers.

Hargreaves, A. (2003). *Teaching in the knowledge society: Education in the age of insecurity.* New York, NY: Teachers College Press.

Harris, K. R., & Graham, S. (1994). Constructivism: Principles, paradigms, and integration. *The Journal of Special Education, 28*(10), 233–247.

Hendrix, J. C. (1996). Cooperative learning: Building a democratic community. *The Clearing House: A Journal of Educational Strategies, Issue and Ideas, 69*(6), 333–336.

Henson, K. T. (2003). Foundations for learner-centered education: A knowledge base. *Education, 124*(1), 5–16.

Hesse-Biber, S. N., & Leavy, P. (2011). *The practice of qualitative research* (2nd ed.). Thousand Oaks, CA: Sage.

Hightower, A. M., Delgado, R. C., Lloyd, S. C., Wittenstein, R., Sellers, K., & Swanson, C. B. (2011, December). *Improving student learning by supporting quality teachers: Key issues, effective strategies.* Bethesda, MD: Editorial Projects in Education, Inc. Retrieved from http://www.edweek.org

Jackson, A. (2004). Preparing urban youths to succeed in the interconnected world of the 21st century. *Phi Delta Kappan, 86*(3), 210–213.

Jackson, A., & Davis, G. (2000). *Turning points 2000: Educating adolescents in the 21st century*. New York, NY: Teachers College Press.

Jacob, G. M., Lee, C., & Ng, M. (1997, June). *Cooperative learning in the thinking classroom: Research and theoretical perspectives.* Paper presented at the International Conference on Thinking, Singapore.

Jerald, C. (2009). *Defining a 21st century education*. Alexandria, VA: Center for Public Education.

Johnson, D. W. (1981). Student-student interaction: The neglected variable of education. *Educational Researcher, 10*(1), 5–10.

Johnson, D. W. (2003). Social interdependence: Interrelationships among theory, research, and practice. *American Psychologist, 58,* 934–945.

Johnson, D. W., & Johnson, R. T. (1975). *Learning together and alone: Cooperation, competition, and individualization.* Englewood Cliffs, NJ: Prentice Hall.

Johnson, D. W., & Johnson, R. T. (1983). The socialization and achievement crisis: Are cooperative learning situations the solution? *Applied Social Psychology Annual, 4,* 119–164.

Johnson, D. W., & Johnson, R. T. (1985). Relationships between black and white students in intergroup cooperation and competition. *Journal of Social Psychology, 125*(4), 421–428.

Johnson, D. W., & Johnston, R. T. (1989). *Cooperation and completion: Theory and research.* Edina, MN: Interaction Book Company.

Johnson, D. W., & Johnson, R. T. (1990). Cooperative learning and achievement. In S. Sharan (Ed.), *Cooperative learning: Theory and research* (pp. 23–47). New York, NY: Praeger.

Johnson, D. W., & Johnson, R.T. (1999a). *Learning together and alone: Cooperative, competitive, and individualistic learning* (5th ed.). Needham Heights, MA: Allyn and Bacon.

Johnson, D. W., & Johnson, R. T. (1999b). Making cooperative learning work. *Theory Into Practice, 38*(2), 67–73.

Johnson, D. W., & Johnson, R. T. (2005). New developments in social interdependence theory. *Genetic, Social, and General Psychology Monographs, 131*(4), 285–358.

Johnson, D. W., & Johnson, R. T. (2009). An educational psychology success story: Social interdependence theory and cooperative learning. *Educational Researcher, 38,* 365–379. doi: 10.3102/0013189X09339057

Johnson, D. W., Johnson, R. T., & Bryant, B. (1973). Cooperation and competition in the classroom. *The Elementary School Journal, 74*(3), 172–181.

Johnson, D. W., Johnson, R. T., & Holubec E. J. (1991). *Cooperation in the classroom.* Edina, MN: Interaction Book Company.

Johnson, D. W., Johnson, R. T., & Holubec, E. J. (1993a). *Circles of learning: Cooperation in the classroom* (4th ed.). Edina, MN: Interaction Book Company.

Johnson, D. W., Johnson, R. T., & Holubec, E. J. (1993b). *Cooperative learning in the classroom.* Alexandria, VA: Association for Supervision and Curriculum Development.

Johnson, D. W., Johnson, R. T., & Holubec, E. J. (1994a). *Cooperative learning in the classroom.* Alexandria, VA: Association for Supervision and Curriculum Development.

Johnson, D. W., Johnson, R. T., & Holubec, E. J. (1994b). *The new circles of learning. Cooperation in the classroom and school.* Alexandria, VA: Association for Supervision and Curriculum Development.

Johnson, D. W., Johnson, R. T., & Maruyama, G. (1983). Interdependence and interpersonal attraction among heterogeneous and homogeneous individuals: A theoretical formulation and a meta-analysis of the research, *Review of Educational Research, 53*(1), 5–54.

Johnson, D. W., Maruyama, G., Johnston, R., Nelson, D., & Skon, L. (1981). Effects of cooperative, competitive, and individualistic goal structures on achievement: A meta-analysis. *Psychological Bulletin, 89*(1), 47–62.

Johnson, D. W., Johnson, R. T., & Smith, K. A. (1991a). *Active learning; Cooperation in the college classroom.* Edina, MN: Interaction Book Company.

Johnson, D. W., Johnson, R. T., & Smith, K. A. (1991b). *Cooperative learning: Increasing college faculty instructional productivity.* ASHE-ERIC Higher Education Report No. 4. Washington, DC: The George Washington University, School of Education and Human Development.

Johnson, D. W., Johnson, R. T., & Smith, K. A. (1998, July). Cooperative learning returns to college: What evidence is there that it works? *The Magazine of Higher Learning, 30*(4) 27–35.

Johnson, D. W., Johnston, R. T., & Smith, K. (2007). The state of cooperative learning in postsecondary and professional settings. *Educational Psychology Review, 19,* 15–29. doi: 10.1007/s10648-006-9038-8

Johnson, D. W., Johnson, R. T., & Stanne, M. B. (2000). *Cooperative learning methods: A meta-analysis*. Minneapolis, MN: University of Minnesota Press.

Kagan, S. (1990). The structural approach to cooperative learning. *Educational Leadership, 47*(4), 12–15.

Kagan, S. (1994). *Cooperative learning*. San Clemente, CA: Kagan Publishing.

Kagan, S. (1999, Summer). The "e" of pies. *Kagan Online Magazine.* Retrieved from http://www.kaganonline.com/free_articles/dr_spencer_kagan/264/The-quot-E-quot-of-PIES

Kagan, S. (2000, Fall). Kagan structures—Not one more program, a better way to teach any

    program. *Kagan Online Magazine.* Retrieved from http://www.kaganonline.com/

    free_articles/dr_spencer_kagan/274/Kagan-Structures-Not-One-More-Program-a-Better-

    Way-to-Teach-Any-Program

Kagan, S. (2001, Summer). Kagan structures and learning together: What is the difference?

    Kagan Online Magazine. Retrieved from http://www.kaganonline.com/free_articles/

    dr_spencer_kagan/275/Kagan-Structures-and-Learning-Together-What-is-the-

    Difference?

Kagan, S. (2003, Winter). Kagan structures: Research and rationale in a nutshell. *Kagan Online*

    Magazine. Retrieved from http://www.kaganonline.com/free_articles/research_and_

    rationale/283/Kagan-Structures-Research-and-Rationale-in-a-Nutshell

Kagan, S. (2005, Spring/Summer). Structures optimize engagement. *Kagan Online Magazin*e.

    Retrieved from http://www.kaganonline.com/free_articles/dr_spencer_kagan/293/

    Structures-Optimize-Engagement

Kagan, S. (2007, Fall). The two dimensions of positive interdependence. *Kagan Online*

    Magazine. Retrieved from http://www.kaganonline.com/free_articles/dr_spencer_kagan/

    299/The-Two-Dimensions-of-Positive-Interdependence

Kagan, S. (2008, Summer). Kagan structures simply put. *Kagan Online Magazine.* Retrieved

    from http://www.kaganonline.com/free_articles/dr_spencer_kagan/284/Kagan-

    Structures-Simply-Put

Kagan, S. (2011, Fall/Winter). The "P" and "I" of PIES: Powerful principles for success. *Kagan*

    Online Magazine. Retrieved from http://www.kaganonline.com/free_articles/

    dr_spencer_kagan/345/The-P-and-I-of-PIES-Powerful-Principles-for-Success

Kagan, S. (2013). *Kagan Cooperative Learning Structures.* San Clemente, CA: Kagan

    Publishing.

Kagan, S., & Kagan, M. (2009). *Kagan Cooperative Learning.* San Clemente, CA: Kagan

    Publishing.

Kassner, K. (2002). Cooperative learning revisited: A way to address the standards. *Music*

    Educators Journal, 88(4), 17–19, 21–23.

Kivinen, O., & Risela, P. (2003, September). From constructivism to a pragmatist conception of

    learning, *Oxford Review of Education, 29*(3), 363–375.

    doi: 10.1080/0305498031000120300

Kuzu, A. (2007, July). Views of pre-service teachers on blog use for instruction and social

    interaction. *Turkish Online Journal of Distance Education, 8*(3), 34–51.

Labinowicz, E. (1980). *The Piaget primer: Thinking, learning and teaching.* Menlo Park, CA:

    Addison-Wesley.

Laguador, J.M. (2014). Cooperative learning approach in an outcomes-based environment.

    International Journal of Social Sciences, Art, & Humanities, 2(2), 46–55.

Lambert, L., Walker, D., Zimmerman, D. P., Cooper, J. E., Lambert, M. D., Gardner, M. E., &

    Szabo, M. (2002). *The constructivist learning* (2nd ed.). New York, NY: Teachers

    College.

Lazarowitz, R., & Karsenty, G. (1990). Cooperative learning and students' academic

    achievement, process skills, learning environment, and self-esteem in tenth-grade biology

    classrooms. In S. Sharan (Ed.), *Cooperative learning: Theory and research* (pp. 123–

    149). New York, NY: Praeger.

Lerner, C., & Ciervo, L. (2004). *Getting ready for school begins at birth: How to help your child learn in the early years.* [Brochure]. Los Angeles, CA: Zero to Three.

Lew, M., Mesch, D., Johnson, D. W., & Johnson, R. (1986). Positive interdependence, academic, and collaborative-skills, group contingencies, and isolated students. *American Educational Research Journal, 23*(3), 476–488.

Lewin, K. (1935). *A dynamic theory of personality.* New York, NY: McGraw-Hill.

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry.* Newbury Park. CA: Sage.

Linsin, M. (2009). *Dream class: How to transform any group of students into the class you've always wanted.* San Diego, CA: JME.

Marzano, R.J. & Pickering, D.J. (2011). *The highly engaged classroom.* Bloomington, IA: Marzano Research Lab.

Marzano, R. J., Pickering, D. J., & Pollock, J. E. (2001). *Classroom instruction that works: Research based strategies for increasing student achievement.* Alexandria, VA: Association for Supervision and Curriculum Development.

McCauley, V., & McClelland, G. (2004). Studies in self-directed learning in physics at the University of Limerick, Ireland. *International Journal of Self-Directed Learning, 1*(2), 26–35.

Mesch, D., Johnson, D. W., & Johnson, R. T. (1987). Impact of positive interdependence and academic group contingencies on achievement. *Journal of Social Psychology, 128,* 345–352.

Metcalf, T. (1997). Listening to your clients. *Life Association News, 92*(7), 16–18.

Michaelsen, L. K., Fink, L. D., & Knight, A. (1997). Designing effective group activities:

    Lessons for classroom teaching and faculty development. In D. DeZure (Ed.), *To improve*

    the Academy (pp. 373–398). Stillwater, OK: New Forums Press and the Professional and

    Organizational Development Network in Higher Education.

Milios, R. (2000). Working together to reach a goal. *Current Heath 1, 24*(2).

Mills C. J., & Durden, W. G. (1992). Cooperative learning and ability grouping: An issue of

    choice. *Gifted Child Quarterly,* 36(11), 11–16. doi: 10.1177/001698629203600103.

Nath, L. R., Ross, S., & Smith, L. (1996). A case study of implementing a cooperative learning

    program in an inner-city school. *The Journal of Experimental Education, 64*(2), 117–136.

National Education Association. (2012). Preparing 21st century students for a global society: An

    educators guide to the "Four Cs." Alexandria, VA: National Education Association.

National Governors Association Center for Best Practices & Council of Chief State School

    Officers. (2010). C*ommon Core State Standards*. Washington, DC: Authors.

North Carolina Department of Public Instruction. (2012). *The ABCs of public education: 2012*

    accountability report background packet 2012. Retrieved from

    http://www.ncpublicschools.org/docs/accountability/reporting/abc/2011-

    12/backgroundpacket.pdf

O'Donnell, A. M., & O'Kelly, J. (1994). Learning from peers: Beyond the rhetoric of positive

    results. *Educational Psychology Review, 6*(4), 321–349.

Olsen, R. E. W. B., & Kagan, S. (1992). About cooperative learning. In C. Kessler (Ed.),

    Cooperative language learning: A teacher's resource book (pp. 1–30). Englewood Cliffs,

    NJ: Prentice Hall.

Ormrod, J. E. (1999). *Human learning* (3rd ed.). Upper Saddle River, NJ: Prentice-Hall.

Paez, M. (2003, June). Gimme that school where everything's scripted! One teacher's journey toward effective literacy instruction. *Phi Delta Kappan, 84*(10), 757–763.

Pajares, F. (2002). *Overview of social cognitive theory and of self-efficacy.* Retrieved from http://www.uky.edu/~eushe2/Pajares/eff.html

Panitz, T. (1999). Benefits of cooperative learning in relation to student motivation. In M. Theall (Ed.), *Motivation from within: Approaches for encouraging faculty and students to excel, new directions for teaching and learning.* San Francisco, CA; Jossey-Bass.

Partnership for 21st Century Skills. (2008). *21st century skills, education & competitiveness: A resource and policy guide.* Retrieved from http://www.21stcenturyskills.org

Patton, M. Q. (1990). *Qualitative evaluation and research methods.* Thousand Oaks, CA: Sage.

Peter D. Hart Research Associates. (2006, December 28). *How should colleges prepare students to succeed in today's global economy? Based on surveys among employers and recent college graduates.* Retrieved from http://www.aacu.org.

Peter D. Hart Research Associates, Inc. (2010, January). *Raising the bar: Employers' views on college learning in the wake of the economic downturn.* Washington, DC: Author.

Peterson, S. E., & Miller, J. A. (2004). Comparing the quality of students' experiences during cooperative learning and large-group instruction. *The Journal of Educational Research, 97*(3), 123–133.

Piaget, J. (1926). *The language and thought of the child.* New York, NY: Harcourt.

Piaget, J. (1950). *The psychology of intelligence.* New York, NY: Harcourt.

Piaget, J. (1954). *The construction of reality in the child.* New York, NY: Ballantine Books.

Piaget, J. (1959). *The language and thought of the child* (3rd ed.). London: Routledge & Kegan.

Piaget, J. (1966). *The moral judgment of the child* (2nd ed.). New York, NY: The Free Press.

Piaget, J. (1968). *Six psychological studies.* New York, NY: Vintage Books.

Piaget, J.,& Inhelder, B. (1969). *The psychology of the child.* New York, NY: Basic Books.

Piaget, J., & Inhelder, B. (2000). *The psychology of the child*. New York, NY: Basic Books.

Pulliam, J. D., & Van Patten, J. J. (2003). *History of Education in America* (8th ed.). Upper
Saddle River, NJ: Merrill Prentice Hall.

Randall, V. (1999). Cooperative learning: Abused and overused? *Gifted Child Today Magazine, 22*(2), 14–16.

Ravenscroft, S. P., Buckless, F. A., & Hassall, T. (1999). Cooperative learning—A literature
guide. *Accounting Education, 8*(2), 163–176.

Rimmerman, H. (1996). *Resources in cooperative learning.* San Juan Capistrano, CA: Kagan
Cooperative Learning.

Rimmerman, H. (2004). *Resources in cooperative learning.* San Clemente, CA: Kagan.

Rivera, D. P. (1996). Using cooperative learning to teach mathematics to students with learning
disabilities. *LD Forum, 21*(3), 29–33.

Robinson, A. (1990). Cooperation or exploitation? The argument against cooperative learning for
talented students. Point-counterpoint-cooperative learning. *Journal for the Education of
the Gifted, 14*(3), 9–36.

Roseth, C. J., Johnson, D. W., & Johnson, R. T. (2008). Promoting early adolescents'
achievement and peer relationships: The effects of cooperative, competitive, and
individualistic goal structures. *Psychological Bulletin, 134,* 223–246

Ross, J. A. (1994). The impact of an in-service to promote cooperative learning on the stability
of teacher efficacy. *Teaching and Teacher Education, 10*(4), 381–394.

Sadker, M. P., & Sadker, D. M. (2005). *Teachers, schools, & society* (7th ed.). New York, NY: McGraw-Hill.

Sawchuk, S. (2010, January). Putting new standards into practice a tough job: Changes loom on curricular and teaching fronts. *Education Week, 29*(17), 16–19. Retrieved from http://www.edweek.org/ew/articles/2010/01/14/17practical.h29.html

Schiefele, U. (1999). Interest and learning from text, *Scientific Studies of Reading*, *3*(3), 257–279.

Schwarz, E., & Kay, K. (Eds.). (2006, Summer). The case for twenty-first century learning [Special issue]. *New Directions for Youth Development, 2006*(110), 1–6. doi: 10.1002/yd.161

Scrivener, J. (2005). *Learning teaching* (2nd ed.). New York, NY: MacMillan Books for Teachers.

Seidman, I. (1998). *Interviewing as qualitative research: A guide for researchers in education and the social sciences* (2nd ed.). New York, NY: Teacher College Press.

Sewell, A. (December, 2002). Constructivism and student misconceptions: Why every teacher needs to know about them. *Australian Science Teachers' Journal, 48*(4), 24–28.

Shanahan, T. (2012/2013). The Common Core ate my baby and other urban legends. *Educational Leadership, 70*(4), 10–16.

Sharan, Y. (2010). Cooperative learning for academic and social gains: Valued pedagogy, problematic practice. *European Journal of Education, 45*(2), 300–313

Sharan, S., Hert-Lazarowitz, R., & Ackerman, Z. (1980). Academic achievement of elementary school children in small group versus whole class instruction. *Journal of Experimental Education, 48*(2), 125–129.

Sharan, Y., & Sharan, S. (1992). *Expanding cooperative learning through group investigation.* New York, NY: Teachers College Press.

Shinn, G. C., Briers, G. E., Christiansen, J. E., Edwards, M. C., Harlin, J. F., Lawver, D. E., . . . Parr, B. A. (2003). *Improving student achievement in mathematics: An important role for secondary agricultural education in the 21st Century*. Unpublished manuscript. College Station, TX: Texas A&M University.

Siegel, C. (2005). Implementing a research-based model of cooperative learning. *The Journal of Educational Research, 98*(6), 339–349.

Slavin, R. E. (1981). Synthesis of research on cooperative learning. *Educational Leadership, 38*(8), 655–660

Slavin, R. E. (1990). *Cooperative learning: Theory, research and practice.* Englewood Cliffs, NJ: Prentice Hall.

Slavin, R. E. (1991a).*Student team learning: A practical guide to cooperative learning* (3rd ed.). Washington, DC: National Education Association.

Slavin, R. E. (1991b). Synthesis of research on cooperative learning. *Educational Leadership, 48*(5), 71–81.

Slavin, R. E. (1995). *Cooperative learning: Theory, research and practice* (2nd ed.). Boston, MA: Allyn & Bacon.

Slavin, R. E. (1996). Research on cooperative learning and achievement: What we know, what we need to know. *Contemporary Educational Psychology, 21,* 43–69.

Slavin, R. E. (2010). Co-operative learning: What makes group-work work? In H. Dumont, D.

    Istance, & F. Benavides (Eds.), *The nature of learning: Using research to inspire*

    Practice (pp. 161–178). Paris, France: Organisation for Economic Co-operation and

    Development.

Smith, B. L., & MacGregor, J. T. (1992). What is collaborative learning? In A. Goodsell, M.

    Maher, V. Tinto, B. L. Smith, & J. MacGregor (Eds.), *Collaborative learning: A*

    sourcebook for higher education (pp. 10–30).

Soy, S. (2006). *The case study as a research method.* Retrieved from

    https://www.ischool.utexas.edu/~ssoy/usesusers/l391d1b.htm

Stahl, R. (1994). The essential elements of cooperative learning in the classroom. Retrieved from

    http://files.eric.ed.gov/fulltext/ED370881.pdf

Stein, R. F., & Hurd, S. (2000). *Using student teams in the classroom: A faculty guide.* Bolton,

    MA: Anker Publishing Company.

Stevens, R. J., Madden, N. A., Slavin, R. E., & Farnish, A. M. (1987). Cooperative integrated

    reading and composition: Two field experiments. *Reading Research Quarterly, 22*(4),

    433–454.

Stevens, R. J., Slavin, R. E., & Farnish, A. M. (1991). The effects of cooperative learning and

    direct instruction in reading comprehension strategies on main idea identification.

    Journal of Educational Psychology, 83(1), 8–16.

Taylor, B. (1995, November). *Self-directed learning: Revisiting an idea most appropriate for*

    middle school students. Paper presented at the combined meeting of the Great Lakes and

    Southeast International Reading Association, Nashville, TN.

Trawick-Smith, J. (1997). *Early childhood development: A multicultural perspective.* Upper

      Saddle River, NJ: Prentice Hall.

Tudge, J., & Caruso, D. (1989). Cooperative problem-solving in the classroom. *Young Children,*

      44(1), 46–52.

United States Census Bureau. (2014). Retrieved from http://quickfacts.census.gov/qfd/states/37/

      37107.html

United States Department of Education, Office of Planning, Evaluation and Policy Development

      (2010). *A blueprint for reform: The reauthorization of the Elementary and Secondary*

      Education Act. Retrieved from http://www2.ed.gov/policy/elsec/leg/blueprint/

      blueprint.pdf

Vaughan, W. (2002). Effects of cooperative learning on achievement and attitude among

      students of color. *The Journal of Educational Research, 95*(6), 359–364.

Vygotsky, L. (1978). *Mind and society: The development of higher mental processes.*

      Cambridge, MA: Harvard University Press.

Vygotsky, L. (1986). *Thought and language.* Cambridge, MA: The MIT Press.

Webb, N. M. (1982). Student interaction and learning in small groups. *Review of Educational*

      Research, 52(3), 421–445.

Weil, M. L., & Murphy, J. (1982). Instruction process. In H.E. Mitzel (Ed.), *Encyclopedia of*

      educational research (pp. 890–917). New York, NY: The Free Press.

Wells, D. L., & Langenfeld, G. P. (n.d.) *Creating an environment for lifelong learning.* Session

      2563. Retrieved from www.asee.org

West, D., & Watson, D. (1996, June). *Using problem-based learning and educational reengineering to improve outcomes.* Paper presented at a "What Works II: Post Secondary Education in the 21st Century" conference of the National Center on Post Secondary Teaching, Learning and Assessment of State College, PA.

Zakaria E., & Iksan, Z. (2007). Promoting cooperative learning in science and mathematics education: A Malaysian perspective. *Eurasia Journal of Mathematics, Science & Technology Education, 3*(1), 35–39.

East Carolina University

Assent Form

Things You Should Know Before You Agree To Take Part in this Research

IRB Study #_____

Title of Study: **Perspectives on Cooperative Learning: A Case Study of Kagan Cooperative Learning Structures in the Classroom**

Person in charge of study: **Tina Hinson**

Where they work: **East Carolina University Doctoral Student**

Study contact phone number: **919-252-3905**

Study contact E-mail Address: **hinsont83@students.ecu.edu**

People at ECU study ways to make people's lives better. These studies are called research. This research is trying to find out how you feel about working with classmates in teams in the classroom.

Your parent(s) needs to give permission for you to be in this research. You do not have to be in this research if you don't want to, even if your parent(s) has already given permission.

You may stop being in the study at any time. If you decide to stop, no one will be angry or upset with you.

Why are you doing this research study?

The reason for doing this research is to assist the researcher, Tina Hinson, in answering research questions that are part of her dissertation.

Why am I being asked to be in this research study?

We are asking you to take part in this research because we are seeking to learn how students feel about working in teams with classmates.

How many people will take part in this study?

If you decide to be in this research, you will be one of about 600 people taking part in it.

What will happen during this study?

If you decide to be in this research, you will answer questions on an online survey. Your teacher will administer this survey to you and other classmates who choose to participate. The survey consists of twenty four questions and should take you no more than thirty minutes to answer.

This study will take place at Rural School and will last no more than three weeks.

Who will be told the things we learn about you in this study?

The information that is learned in this study will be included in my dissertation, a requirement for me to complete and earn my Ed.D.

What are the good things that might happen?

Sometimes good things happen to people who take part in research. These are called "benefits." The benefits to you of being in this study may be that you learn more about how you feel about working in teams.

What are the bad things that might happen?

Sometimes things we may not like happen to people in research studies. These things may even make them feel bad. These are called "risks." These are no known risks from participating in this study. You should report any problems to your parents and to the researcher

What if you or your parents don't want you to be in this study?

If you or your parents don't want you to be in this study, you may not participate.

Will you get any money or gifts for being in this research study?

You will not receive any money or gifts for being in this research study.

Who should you ask if you have any questions?

If you have questions about the research, you should ask the people listed on the first page of this form. If you have other questions about your rights while you are in this research study you may call the Institutional Review Board at 252-744-2914.

If you decide to take part in this research, you should sign your name below. It means that you agree to take part in this research study.

_____   _____

Sign your name here if you want to be in the study   Date

_____

Print your name here if you want to be in the study

_____   _____

Signature of Person Obtaining Assent   Date

_____

Printed Name of Person Obtaining Assent

APPENDIX B: PARENT CONSENT FORM

East Carolina University

Department of Educational Leadership

Dear Parent/Guardian,

I am presently working on my Doctor of Education in Educational Leadership at East Carolina University. As part of my degree requirements, I am planning an educational research project to take place at Rural School that will help me to learn more about student and teacher opinions of the use of Kagan cooperative learning structures in the classroom. This implementation places students in small groups to accomplish an assigned task together as a team. The fundamental goal of this research study is explore student and teacher attitudes and perceptions regarding their classroom environment after the implementation of Kagan cooperative learning structures.

As part of this research project, your child will participate in a one-time online survey in order to gain the data needed to determine student perceptions on the implementation of Kagan cooperative learning structures. As this study is for educational research purposes only, the results of your child's participation **will not** affect your child's grade.

I am requesting permission from you to use your child's data in my research study. Please know that participation is entirely voluntary.

If you have any questions or concerns, please feel free to contact me at 919-252-3905 or by emailing me at hinsont83@students.ecu.edu.   If you have questions about your child's rights as someone taking part in research, you may call the Office of Research Integrity & Compliance (ORIC) at phone number 252-744-2914 (days, 8:00 am-5:00 pm). If you would like to report a complaint or concern about this research study, you may call the Director of the OHRI, at 252-744-1971.

If you permit your child's data to be used in my study, please return the attached form by *[provide a date]).* Thank you for your interest in my educational research study.

Your Partner in Education,

Tina B Hinson

As the parent or guardian of _____**,**
(write your student's name)

☐ **I grant my permission for Mrs. Hinson to use my child's data in her educational research**
project regarding the implementation of Kagan cooperative learning structure in the
classroom. I fully understand that my child's data will be kept completely confidential and
will be used only for the purposes of Mrs. Hinson's research study. I also understand that I
or my child may at any time decide to withdraw my/our permission and that my child's
grade will not be affected by withdrawing from the study.

☐ **I do NOT grant my permission for Mrs. Hinson to use my child's data in her educational**
research project regarding the implementation of Kagan cooperative learning structures in
the classroom.

Signature of Parent/Guardian:_____

Date_____

Also, please initial the following statement if your child is between the ages of 7 and 12.

"By initialing in the following places, the parent/guardian and investigator indicate their opinion
that the patient is too young or otherwise not able to give consent/assent."

_____Parent/Guardian   _____Investigator

East Carolina University

Informed Consent to Participate in Research

Information to consider before taking part in research that has no more

than minimal risk.

Title of Research Study: Perspectives on Cooperative Learning: A Case Study of Kagan Cooperative

Learning Structures in the Classroom

Principal Investigator: Tina Hinson, doctoral student at East Carolina University

Institution/Department or Division: Educational Leadership

Address: 106 Blackjack Church Road Goldsboro, North Carolina 27530

Telephone #: 919-734-7800 (home) 919-252-3905 (cell)

Study Sponsor/Funding Source: No funding needed for research

Researchers at East Carolina University (ECU) study problems in society, health problems, environmental

problems, behavior problems and the human condition. Our goal is to try to find ways to improve the

lives of you and others. To do this, we need the help of volunteers who are willing to take part in

research.

Why is this research being done?

The purpose of this research is to investigate the perceptions of students and teachers on the effects

of Kagan cooperative learning structures on learning and engagement in the classroom. These

structures are designed to allow students to work in teams in the classroom. The decision to take

part in this research is yours to make. By doing this research, we hope to learn more about how students

and teachers feel about team work in the classroom.

Why am I being invited to take part in this research?

You are being invited to take part in this research **because** you teach at Contentnea-Savannah School and have attended a minimum of three days of professional development on Kagan cooperative learning structures taught by a Kagan cooperative learning staff member. If you volunteer to take part in this research, you will be one of about fifty teachers to do so.

Are there reasons I should not take part in this research?

You should not participate in this research if you have not attended the three day or five day training for Kagan cooperative learning structures.

What other choices do I have if I do not take part in this research?

You can choose not to participate.

Where is the research going to take place and how long will it last?

The research procedures will be conducted at Rural School. You will be given specific locations for participation in each portion of the research. The total amount of time you will be asked to volunteer for this study is about 2 hours over the next 3 weeks.

What will I be asked to do?

You are being asked to do the following:

All teacher participants will be asked to answer a one-time, online survey at his or her convenience before a given deadline Follow up from data gathered from the teacher surveys will consist of teacher focus groups, consisting of a voice recorded, thirty to forty five minute question and answer session with the researcher. The following questions will be asked during the focus group sessions:

1. How do students in your classroom benefit from working in cooperative learning groups?

2. Some have claimed that students are rarely interested in participating in group activities. Is this the case in your classes?

219

3. Do you notice an increase in student performance when they work in groups?

4. How have cooperative learning structure impacted your teaching-learning experience?

5. In what situations do you find cooperative learning structures to be most useful?

6. Talk about the difficulties you have encountered in implementing Kagan cooperative learning structures in your classroom.

7. Talk about your belief in the use of Kagan cooperative learning structures. How do they fit with the mix of other strategies that you use?

Once data is gathered from the focus groups, 10 teachers will be selected to complete a one-on-one interview with the researcher. This voice-recorded interview should take no more than 30 minutes to complete. The following questions will be asked during the interview sessions:

8. When and how often do you use a Kagan cooperative learning structure in your classroom? Why?

9. What do you think are the advantages of implementing Kagan cooperative learning structures in your classroom?

10. What are the disadvantages of implementing Kagan cooperative learning structures in your classroom?

11. In your opinion, what is the main purpose of implementing Kagan cooperative learning structures in the classroom?

12. Describe one successful experience when implementing a Kagan cooperative learning structure.

13. To what extent are student motivation and engagement affected when implementing Kagan cooperative learning structures?

14. In what ways has the implementation of Kagan cooperative learning structures affected student learning in your classroom

The total amount of time you will be asked to volunteer for this study could range from 30 minutes to no more than 2 hours, depending upon selection for the focus groups and interviews, over the course of about three weeks.

What possible harms or discomforts might I experience if I take part in the research?

It has been determined that the risks associated with this research are no more than what you would experience in everyday life.

What are the possible benefits I may experience from taking part in this research?

I do not know if you will get any benefits by taking part in this study. This research might help you learn more about the effects of implementing Kagan cooperative learning structures in the classroom on learning and engagement in the classroom. There may be no personal benefit from your participation but the information gained by doing this research may help others in the future.

Will I be paid for taking part in this research?

I will not be able to pay you for the time you volunteer while being in this study.

What will it cost me to take part in this research?

It will not cost you any money to be part of the research.

Who will know that I took part in this research and learn personal information about me?

To do this research, ECU and the people and organizations listed below may know that you took part in this research and may see information about you that is normally kept private. With your permission, these people may use your private information to do this research:

- Tina Hinson, the researcher

How will you keep the information you collect about me secure? How long will you keep it?

Research records will be kept in a locked file in my home office; I am the only person who will have access to the records. Electronic data gathered from the online surveys will be placed on a thumb drive that will be locked in a safe located in my home; I am the only person that will have access to the thumb drive. Voice recorded data will be deleted once the final copy of my dissertation has been submitted to the School of Educational Leadership. The data will be used for the completion of my doctoral degree and to gather information on the implementation of Kagan cooperative learning structures in Lenoir County Public Schools.. The data will be collected anonymously and the surveys coded.

What if I decide I do not want to continue in this research?

If you decide you no longer want to be in this research after it has already started, you may stop at any time. You will not be penalized or criticized for stopping. You will not lose any benefits that you should normally receive.

Who should I contact if I have questions?

The people conducting this study will be available to answer any questions concerning this research, now or in the future. You may contact the Principal Investigator at 919-252-3905 (days, between 8:00-5:00) or 919-734-7800 (evenings from 6:00-8:00).

If you have questions about your rights as someone taking part in research, you may call the Office of Research Integrity & Compliance (ORIC) at phone number 252-744-2914 (days, 8:00 am-5:00 pm). If you would like to report a complaint or concern about this research study, you may call the Director of the ORIC, at 252-744-1971.

I have decided I want to take part in this research. What should I do now?

The person obtaining informed consent will ask you to read the following and if you agree, you should sign this form:

- I have read (or had read to me) all of the above information.

- I have had an opportunity to ask questions about things in this research I did not understand and have received satisfactory answers.

   - I know that I can stop taking part in this study at any time.

   - By signing this informed consent form, I am not giving up any of my rights.

   - I have been given a copy of this consent document, and it is mine to keep.

_____ _____

Participant's Name (PRINT)   **Signature**   **Date**

Person Obtaining Informed Consent: I have conducted the initial informed consent process. I have orally reviewed the contents of the consent document with the person who has signed above, and answered all of the person's questions about the research.

_____

Person Obtaining Consent (PRINT)   **Signature**   **Date**

APPENDIX D: STUDENT SURVEY

Student Survey on Cooperative Learning

THANK YOU!

Thank you for participating in my research study survey. Your feedback will be very helpful.

This survey is broken into four sections: Demographic Information, Learning Perceptions, Engagement Perceptions, and Overall Perceptions.

In order to gain the best information, please answer each question honestly.

Once again, thank you for participating!

Tina Hinson, EdD student

Student Survey for learning, engagement and Kagan cooperative learning stru...

Demographic Information

Please select the response that best corresponds to your personal information.

＊1. What grade are you in?

- ○ 3rd
- ○ 4th
- ○ 5th
- ○ 6th
- ○ 7th
- ○ 8th

＊2. What is your ethnicity? (Please check all that apply)

- ☐ American Indian or Alaskan Native
- ☐ Asian or Pacific Islander
- ☐ Black or African American
- ☐ Hispanic or Latino
- ☐ White / Caucasian

Student Survey on Cooperative Learning

*3. How old are you?

- ◯ 8
- ◯ 9
- ◯ 10
- ◯ 11
- ◯ 12
- ◯ 13
- ◯ 14
- ◯ 15
- ◯ 16

*4. What is your gender?

- ◯ Female
- ◯ Male

Student Learning Perceptions

Please select the response that best corresponds to your position for each statement.

*5. I learn more when I work on a team.

Strongly Disagree		Disagree	Agree		Strongly Agree
◯	◯	◯	◯	◯	◯

*6. I learn more from direct teacher instruction.

Strongly Disagree		Disagree	Agree		Strongly Agree
◯	◯	◯	◯	◯	◯

*7. Learning can be fun and enjoyable.

Strongly Disagree		Disagree	Agree		Strongly Agree
◯	◯	◯	◯	◯	◯

*8. I learn less when working in teams in my class.

Strongly Disagree		Disagree	Agree		Strongly Agree
◯	◯	◯	◯	◯	◯

*9. I can freely voice my opinion during classroom discussions.

Strongly Disagree		Disagree	Agree		Strongly Agree
◯	◯	◯	◯	◯	◯

*10. When we work in teams, we try to make sure that everyone on the team learns the assigned material.

Strongly Disagree		Disagree	Agree		Strongly Agree
○	○	○	○	○	○

Student Engagement Perceptions

*11. Team work encourages me to participate more in class.

Strongly Disagree		Disagree	Agree		Strongly Agree
○	○	○	○	○	○

*12. I do my fair share of work during a team assigned task.

Strongly Disagree		Disagree	Agree		Strongly Agree
○	○	○	○	○	○

*13. I do more work than some members of my team.

Strongly Disagree		Disagree	Agree		Strongly Agree
○	○	○	○	○	○

*14. I prefer to work alone.

Strongly Disagree		Disagree	Agree		Strongly Agree
○	○	○	○	○	○

*15. I ask questions of others when we work as a team.

Strongly Disagree		Disagree	Agree		Strongly Agree
○	○	○	○	○	○

*16. Others on the team ask me questions when we work together on an assigned task.

Strongly Disagree		Disagree	Agree		Strongly Agree
○	○	○	○	○	○

*17. I have more confidence to try problems when I work on a team.

Strongly Disagree		Disagree	Agree		Strongly Agree
○	○	○	○	○	○

Student Overall Perception of Learning

*18. I like school.

Strongly Disagree		Disagree	Agree		Strongly Agree
○	○	○	○	○	○

Student Survey on Cooperative Learning

＊19. I feel comfortable asking a team mate in my team for help rather than asking the teacher.

Strongly Disagree		Disagree	Agree		Strongly Agree
○	○	○	○	○	○

＊20. Working in teams improves my relationships with my classmates.

Strongly Disagree		Disagree	Agree		Strongly Agree
○	○	○	○	○	○

＊21. When I work on a team, ideas and opinions of everyone on the team are treated with respect.

Strongly Disagree		Disagree	Agree		Strongly Agree
○	○	○	○	○	○

＊22. When we work in teams, we have to share materials in order to complete the assignment.

Strongly Disagree		Disagree	Agree		Strongly Agree
○	○	○	○	○	○

＊23. When we work in teams, everyone's ideas are needed if we are going to be successful.

Strongly Disagree		Disagree	Agree		Strongly Agree
○	○	○	○	○	○

＊24. In this class, students learn a lot of important things from each other.

Strongly Disagree		Disagree	Agree		Strongly Agree
○	○	○	○	○	○

227

APPENDIX E: TEACHER SURVEY

Teacher Survey on Cooperative Learning

Welcome to the teacher survey

Thank you for participating in this survey. Your opinion is very important to the data collection and analysis.

Please complete each section of the survey in order for us to optimize results.

Thanks again!

Tina Hinson, EdD student

Section I
Demographic Information

Please complete the following demographic portion of the teacher survey.

✱1. What is your gender?

◯ Male

◯ Female

✱2. What is your age?

◯ 25 and under

◯ 26 to 35

◯ 36-45

◯ 46-55

◯ 56 and over

✱3. How many years of teaching experience do you have?

◯ 0 to 1 year

◯ 2 to 5 years

◯ 6 to 15 years

◯ 16 to 24 years

◯ 25 years or more

Teacher Survey on Cooperative Learning

＊4. What is your current teaching assignment?

○ Classroom teacher K-2

○ Classroom teacher 3-5

○ Classroom teacher 6-8

○ Specialist (Music, PE, ESL, Computers, Media Coordinator, Art, Band, or Chorus)

○ Special Education teacher

○ Vocational teacher

○ Other

＊5. Typical ability composition of your class(es).

○ Mostly above average ability students

○ Mostly average students

○ Mostly below average students

○ Mixed (all ability levels)

＊6. Number of years you have been implementing Kagan cooperative learning structures.

○ None

○ Less than 2 years

○ Between 2 and 4 years

○ More than 4 years

＊7. Type of follow-up support in implementing Kagan cooperative learning structures that you have received (mark all that apply)

☐ None

☐ With Kagan cooperative learning trainer

☐ With fellow colleagues at my school

☐ With colleagues from other schools in the district

☐ With administrators (principal, assistant principal, PD coordinator, etc...)

Section II
Impact of Kagan cooperative learning structures on student learning in my classroom

Please select the response that best corresponds to your position for each statement.

Please select the response that best corresponds to your position for each statement.

229

＊8. My students achieve more working together in a team than working alone.

Strongly Disagree		Disagree	Agree		Strongly Agree
◯	◯	◯	◯	◯	◯

＊9. Cooperative learning leads to more positive outcomes and fosters positive student attitudes towards learning than competitive learning situations.

Strongly Disagree		Disagree	Agree		Strongly Agree
◯	◯	◯	◯	◯	◯

＊10. Engaging in Kagan cooperative learning structures interferes with students' academic progress.

Strongly Disagree		Disagree	Agree		Strongly Agree
◯	◯	◯	◯	◯	◯

＊11. In my class, every team member must learn the material for the team to be successful.

Strongly Disagree		Disagree	Agree		Strongly Agree
◯	◯	◯	◯	◯	◯

＊12. Peer interaction helps students obtain a deeper understanding of the material.

Strongly Disagree		Disagree	Agree		Strongly Agree
◯	◯	◯	◯	◯	◯

Section III

Impact of Kagan cooperative learning structures on engagement in my classroom

＊13. My students are more motivated when I structure my class in cooperative learning teams.

Strongly Disagree		Disagree	Agree		Strongly Agree
◯	◯	◯	◯	◯	◯

＊14. If I implement a Kagan cooperative learning structure, too many students expect other group members to do the work.

Strongly Disagree		Disagree	Agree		Strongly Agree
◯	◯	◯	◯	◯	◯

＊15. My students are resistant to working in teams.

Strongly Disagree		Disagree	Agree		Strongly Agree
◯	◯	◯	◯	◯	◯

✱16. Verbal exchanges between students determine the outcomes of cooperatve learning.

Strongly Disagree		Disagree	Agree		Strongly Agree
○	○	○	○	○	○

✱17. All of my students give and receive explanations when they work in cooperative teams in order to ensure that all team mates understand the assignement and/or learn the material.

Strongly Disagree		Disagree	Agree		Strongly Agree
○	○	○	○	○	○

Section IV
Overall views of implementing Kagan cooperative learning structures

Please select your response that best corresponds to your position for each statement.

✱18. Implementing Kagan cooperative learning structures improves / increases a student's desire to excel.

Strongly Disagree		Disagree	Agree		Strongly Agree
○	○	○	○	○	○

✱19. Cooperative learning has helped to develop more positive attitudes toward learning in my classroom.

Strongly Disagree		Disagree	Agree		Strongly Agree
○	○	○	○	○	○

✱20. My students are more supportive of each other because I implement Kagan cooperative learning structures.

Strongly Disagree		Disagree	Agree		Strongly Agree
○	○	○	○	○	○

✱21. Cooperative learning helps students develop better communication skills.

Strongly Disagree		Disagree	Agree		Strongly Agree
○	○	○	○	○	○

✱22. My students know they have a responsibility to make sure that other members of their team have learned the material.

Strongly Disagree		Disagree	Agree		Strongly Agree
○	○	○	○	○	○

Teacher Survey on Cooperative Learning

*23. Cooperative learning benefits all students, regardless of learning style, multiple intelligence, or ability.

Strongly Disagree		Disagree	Agree		Strongly Agree
○	○	○	○	○	○

*24. My students achieve more when I use Kagan cooperative learning structures.

Strongly Disagree		Disagree	Agree		Strongly Agree
○	○	○	○	○	○

*25. I understand the use of Kagan cooperative learning structures well enough to implement them successfully in the classroom.

Strongly Disagree		Disagree	Agree		Strongly Agree
○	○	○	○	○	○

*26. The use of Kagan cooperative learning structures is consistent with my philosophy of teaching.

Strongly Disagree		Disagree	Agree		Strongly Agree
○	○	○	○	○	○

*27. The support that I receive from my colleagues plays a role in my success in implementing Kagan cooperative learning structures.

Strongly Disagree		Disagree	Agree		Strongly Agree
○	○	○	○	○	○

*28. Kagan cooperative learning structures are a valuable teaching strategy to implement in the classroom.

Strongly Disagree		Disagree	Agree		Strongly Agree
○	○	○	○	○	○

*29. Implementing Kagan cooperative learning structures in the classroom takes a great deal of effort and planning.

Strongly Disagree		Disagree	Agree		Strongly Agree
○	○	○	○	○	○

Teacher 03

QUESTION 1: When and how often do you use a Kagan cooperative learning structure in your classroom? Why?

Teacher 03: Umm…I try to use a Kagan cooperative learning structure in my classroom at least …at least two to three times per week…Yes…umm…I would love to do it more but…umm…with all that is taking place in our building, that is hard to do… I have seen that when I do use it…the Kagan structures…my students seem to…umm…learn more from each other than they would just listening to me in that same amount of time.

Researcher: So do you have your "go to's" that you just like to use for ease and personal preferences?

Teacher 03: Absolutely…I can easily ask my students to turn to their…umm…face partner or shoulder partner…these…for these, I do not even have to include them in my lesson plans…if I see struggle going on or…umm…if I just want to complete a quick formative assessment for something that I am working on in class, I just…umm…ask them to turn to one of their partners and discuss…This also works well with Showdown…I keep my white boards in the center of the group tables and they…umm…know this one very well…Very easy way to complete a quick assessment on the learning of the day. And…And…I guess another favorite is Hand Up Stand Up Pair Up…this is another structure that does not take much planning time…Just ask the students a question and get them up and…umm…moving around the room.

QUESTION 2: What do you think are the advantages of implementing Kagan cooperative learning structures in your classroom?

Teacher 03: I think that…umm…that there are several advantages…in fact, the advantages of implementing Kagan cooperative learning structures are really endless…umm…I really love how they…the structures…get my students up and moving at different times of the day… If I notice that my students are getting fidgety or antsy…umm…that they need to get up and move…They…umm… also allow them sometime to talk about what they are learning…umm…in the classroom…It appears in to me…well with my students that…umm…my students better retain information, when they are given the opportunity to talk to someone else about it or to teach it to another person…and I believe that many of these Kagan structures allow this processing to happen for each and every student in my classroom.

QUESTION 3: What are the disadvantages of implementing Kagan cooperative learning structures in your classroom?

Teacher 03: Well...one disadvantage of implementing Kagan structures that I have encountered is…umm…that if you do a structure…that is choose to implement a structure, where students are teaching one another, it is hard…as the "facilitator", to know if all students are talking about the right topic…that is staying on the content for the day…or teaching it in the correct way.

Researcher: One of the key things that I noted on the…umm…teacher survey was the teacher agreement with the amount of planning time needed to implement the structures. Do you see this or would this be a reason for you to use or not use the structures?

Teacher 03: Well…since I choose to use lots of the structures…you know Stand Up Hand Up Pair Up…I do not need much planning time…But, lots of time I do not choose some of the other…umm…structures because of the preparation that is needed.

QUESTION 4: In your opinion, what is the main purpose of implementing Kagan cooperative learning structures in the classroom?

Teacher 03: Well let's see…I think that…umm… the main purpose…for me….the main purpose of implementing Kagan…umm…is to have the students engage in more metacognition…I have found that in many of the structures…at least those I have chosen to use in my classroom, students must really take the time…they must take the time to think about the role they are playing …that is the role that they are playing with their group or partner umm…Not only do they have to think about that role…umm…they must be able to explain specific things or topics… I also believe that it gives the students …umm…regardless of their learning ability…a more equal learning experience… It gives ones who would not normally engage in discussion a safe way to do that.

QUESTION 5: Describe one successful experience when implementing a Kagan cooperative learning structures in the classroom.

Teacher 03: Just one…I have had several…Let me think about that one for just second…One successful experience when implementing a Kagan structure…umm…For me, I have engaged students in a review activity and have them do …well I use the structure "Stand up, Hand up, Pair up" to complete this learning activity…umm…Students love this…at least that is what I see and hear from my students…and they say that they enjoy it because they get to move around...umm…they get to work with different…several …people, and …umm…I see it as a safe way for them to share what they are learning….What I really like about using this…umm…activity is that they…my students… are learning without even thinking that they are learning…What more could a teacher ask for?

QUESTION 6: To what extent are student motivation and engagement affected when implementing Kagan cooperative learning structures?

Teacher 03: What I have seen is…umm…student motivation and engagement are greatly increased when implementing Kagan structures… regardless of the structure that I choose to use…I have…umm…noticed that my students ask to do it again and again...

QUESTION 7: In what ways has the implementation of Kagan cooperative learning structures affected student learning in your classroom?

Teacher 03: Hmm…The implementation of Kagan structures and they have affected learning in my room?...Well, they…have made learning fun…ah…that is for quite a few of my students who…umm…struggled to understand the concept prior to working with a classmate

or…umm...also for me…it has also made my students much better thinkers…umm…on the critical level and basic level... They seem to pick up on things that their classmates are doing well and strive to work harder too.

Teacher 05
QUESTION 1: When and how often do you use a Kagan cooperative learning structure in your classroom? Why?

Teacher 05: I usually use cooperative learning...I teach Language Arts, so I have what I consider to be multiple subjects areas within one; so I use my CL...Umm...structures mostly with my vocabulary, with grammar, and sometimes with literature; I usually don't use it with writing...um...but…but the majority of the time is vocabulary and grammar.

Researcher: Do you have specific structures that you tend to choose?

Teacher 05: We like to use Show Down when we do...uh... review for vocabulary...umm... I use a lot of Mix-Pair-Share or I kind of modified it... it's more like Mix-Pair-Complete the assignment...umm... we use some...uhh... face partner...shoulder partner if I just don't want them up and moving around the room at that time; They use...uhh... Round Robin... Rally Robin sometimes in different instances depending upon what the activity is and what I want them to do...Mm...Let me think; Those are my...the ones...my go to; And then we...I pull in other ones that I think would work... Like One Stray. We've used One Stray when I want a person from a particular team to go to another team and share what they have and gather information and take it back to their team.

Researcher: So it depends on the activity?

Teacher 05: The activity

Researcher: I meant the content at the time?

Teacher 05: Uh huh

QUESTION 2: What do you think are the advantages of implementing Kagan cooperative learning structures in your classroom?

Teacher 05: I believe with my students... I... I tell them...you know...that when... we… they change teams about every month or so; The reason that I do that as often as I do is because I want them to have an opportunity to work with as many of the other students in the class as possible so they have the chance to not only...umm... learn the content or gather...uhh... I don't want to say gather but gather strategies that others use to...to actually learn the content that they can utilize themselves; but I also want them to get to know each other as individuals and not just...you know... I see you in class but I don't know anything about you; And I tell them that they have an opportunity to...to utilize the strengths that other students have within that group dynamic so that they can...umm... things that they are all hopefully successfully learning the content material.

QUESTION 3: What are the disadvantages of implementing Kagan cooperative learning structures in your classroom?

Teacher 05: I have found that if they're working as a…a whole team, even if it is with the Round Robin structure or …even if they're working with face partners or shoulder partners, sometimes they want to work with the whole team because everyone is there in that one group; And I find that there are occasions when one person does the majority of the work...the other person is just sitting there listening...copying; I've also found that a lot of times that if you...if...not...even though they know the procedures...they've been told exactly what is expected, they tend to deviate from what they're actually doing and you tend to hear some gossiping or they're talking about something from another class and they're not really on task and focused like they need to be; That would be my main disadvantage, but there are some other ones, but that would be the...the more of the cooperative talking than the cooperative learning;

Researcher: The one thing that I did notice, on the sideline here, is in the survey there were a big percentage of teachers that said planning time

Teacher 05: Uh huh

Researcher: Time was a big disadvantage and I did notice that with lots of your "go to's", those are easy planning structures. Is that why you think those are your "go to's"...because you don't have to make cards like you do for Fan N Pick...

Teacher 05: Uh-huh

Researcher: So I didn't know if you need access to more structures so that you can add to your list of "go to's"?

Teacher 05: And I have done that; I've got...in fact I have some that I have already made but the way...the way my class works, I teach across grade levels...and I've done that for years, but...and that's not even the...the hindrance, but it's...it's...I just have so many different...and this year our whole school....our whole middle grades teach across grade levels; so they're all kind of getting a taste of it; But I've always taught sixth through eighth grade, so it's hard to make an activity where I have to sit down...like you've said...and I have to make the individual group...umm...whatever it might be...the cards, or the sentence strips, or whatever they are going to use; and I have to do it maybe for this group or for the sixth grade and it just so happens that same week I've got to do something...two or three things for seventh grade or eighth grade, I just don't have the time to do all of that...umm...and I think you are right; if we had an additional planning and preparation time would probably enhance my use of the other structures...just because I would have time to prepare

Researcher: Your answer just probably told me why...because a majority of the teachers who answered my survey were middle grades teachers
Teacher 05: uh-huh

Researcher: And so across grade level does make a difference

Teacher 05: uh huh...yes it does and for the majority of us this year, it's the first time they've done across grade level; even if they've never done it...some of us never done it before...they've just been in that specific grade level; even if the next year they change to a different grade level, they still have all of the same grade level in one year so they haven't ...everyone...I think they've...I think they've settled into it now, but at first it was a challenge because they were used to using that same lesson and just modifying it throughout the day depending upon what students they had; well now...now it's a...you know...on this curriculum we're dealing with this concept and here it's a different concept...so it has been a challenge, more so this year than previous years for the hallway that we're on.

QUESTION 4: In your opinion, what is the main purpose of implementing Kagan cooperative learning structures in the classroom?

Teacher 05: Well...I think it gives students the opportunity to talk to each other...umm..and students at this age...well, that is what they love to do; It...it also gives teachers a wonderful group of strategies that they can use to help to reach all of the students in their classroom...

QUESTION 5: Describe one successful experience when implementing a Kagan cooperative learning structures in the classroom.

Teacher 05: One successful experience...let me think...(two young ladies enter the classroom and the teacher has to stop to take care of them)

Teacher 05: Well...I...I think success...I guess it's success...Success just depends on the activity, it depends on what content we are covering...but I think it is successful when all of my students are on task and they actually... the structure or...umm... the whatever activity I've chosen for them that...that it engages them and they...I don't have any side conversations or I don't have any that seem like they are not focused or they are...you know...daydreaming or not interacting with whoever who their supposed to, whether it's a partner or a a whole group or whatever it might be; so to me that's successful when I can look around and say, "Oh this is really working"...I don't have any that seem to be goofing off until I walk to their table and they act like they're really working on what they should be...umm...and then I...I guess it's not really Kagan, but some of the other structures we've always used like Four Corners or...umm...things like that where they can get up...they like to be able to get up and move around the room at certain times and that...that gives me an opportunity to assess everyone at one time...just by...with a glance and I find that successful for me...not necessarily...I suppose it's successful for the students too...you know that majority of them seem to understand and they're learning it...so...quick formative assessment

QUESTION 6: To what extent are student motivation and engagement affected when implementing Kagan cooperative learning structures?

Teacher 05: To what percent...
Researcher: To what extent

Teacher 05: What extent

Researcher: How do you think it affects achievement?

Teacher 05: umm...I feel it does affect achievement because I have...I have found that when they do work together, not in every instance, but in most, when I circulate around the room...like if they...sometimes when we work in pairs or we work in whole group, they may not even be in their seats; they may be on the floor over in the corner, so I have to walk around a little bit more...but when I walk around, I realize that I can hear conversation where one student says, "well this is exactly what it is", and the other one says, "well I didn't see it that way" or when they are discussing and explaining it to each other or one is explaining it to the other, and they are like "oh...okay...I didn't understand that but now I do", I think it's...achievement is affected because that other student in the long run will have understood that and be able to...progress will be shown in their understanding.

Teacher 05: As far as motivation...oh they are always motivated to work in groups; actually, truly learning...umm...I think initially when we began implementing Kagan, the first year that we did, they were really motivated; they loved it; they loved the fact that in every class they were in groups instead of...you know...in rows or pairs or whatever the teachers had done; and they were really more engaged and focused; I think now it's a little bit old school for them because they are so used to using it that...that's when they start thinking "Oh well, it's not as important"...I don't know how to explain that; it's not as important anymore; they...you know we've done this all of the time...I mean they know...it's the same old same old...we're just learning. But for some students it is a motivation because they tend to struggle so them having input from others helps them. but of course the ones who are going to get it anyway...some of those actually want to work on their own; they don't want to group...it's not a motivator for them...they know...they know they know the material or they can learn it quickly and they can do it better by themselves than with others; so it depends upon the student and that...

Researcher: That was one of my student survey questions...it was pretty interesting because I thought that I would see more of the individualistic...but it's still not 80 percent group work with 20 percent individualistic...it's almost half and half

Teacher 05: Uh huh...

Researcher: So what you've said...kind of...we've done this and hey, I don't need your help; I got this anyway

Teacher 05: Uh huh

QUESTION 7: In what ways has the implementation of Kagan cooperative learning structures affected student learning in your classroom?

Teacher 05: I go back to probably the first several years...I think that we are maybe on our 4th year...I would have to count back...umm...I think it had a positive impact on learning and I think to a certain degree, it still does ...it depends upon what the student chooses to take away from it...Because it...if they realize...for example, there are certain structures we use that they love

because know they either get to move around the room or they get to compete against each other...whatever...depending upon what it is...they...umm...ask the question again...I lost my train of thought

Researcher: Repeats question

Teacher 05: mm...I think it is positive on learning because I could see that my students were understanding and retaining the content and the material a little bit better...and I think it is the same now, a little more so, other than it gets to be the point. like I said earlier, they take it for granted that we are going to do the structure of the activity...you know...they are not as engaged or they are not as focused or they don't feel like they ....they feel like their group is going to give them the information they don't have to think about it, but and then in some cases, I think that it may be a negative...But overall, learning...I think... I think it's...I think it's been a good thing...in my experience; if I kind of rule out all of the other factors and just...are they really and truly learning? or is it just that they are talking and at the end of the class, they cannot show you anything or quickly assessing they don't know anything...so I think that in my case, it has increased the percentage of students who know the material with an initial assessment before we have a lesson...revisit the material and then test again...I don't think I ...I don't feel like I have to do as much remediation and reassessment...

Researcher: When you say that they know the structures, do you think it is time for more training on more structures?

Teacher 05: I think so...I think we've got...I don't know about any other teachers...I think we've got...I think I've just become...when we first started in the the first year or two, I would pull my book out and look to find which structure is going to work best and I would utilize more than what I probably am now...and now I'm like...okay I know this one really well and they know it so we are going to use it...I think seeing what would apply in different situations and even though you could pull that book out, I think...if we had some more professional development, where we are right there, because when we had ours, which I assume is how most of the training is, you are actually engaging and using those structures; then we could see how to use them; and I know we learned a lot of different structures, but it was so...packed...we had so much in that one week...that we didn't...you know you pick up a little bit on this one and a little bit on that one but until you can really understand a structure a little bit better and have more time with you , you may not use it.

Teacher 06

QUESTION 1: When and how often do you use a Kagan cooperative learning structure in your classroom? Why?

Teacher 06: I …umm…try to use Kagan structures in my classroom at least three times a week…I try to do this…umm…because the use of the structures allows my students to work and collaborate together…after all, socialization is exactly what students love to do, so…umm this works very well with them and their buy in into participation is pretty simple.

Researcher: Do you a list of structures that you like to use more than others?

Teacher 06: Well…there are several that I really like to use, but I like to try different ones to see how my students respond…for me, it is about student response…I have tried some and they did not work at all for me and my students…They really do well with Quiz Quiz Trade…lots of planning time for me, but…umm…my students really enjoy this one

QUESTION 2: What do you think are the advantages of implementing Kagan cooperative learning structures in your classroom?

Teacher 06: Well…I think that the biggest…umm…advantage for my students is the fact that students are allowed to work cooperatively to effectively learn…and to…umm…learn effectively is exactly what I strive for as an educator… Also, I have really seen that Kagan allows my students to learn in a manner that…a manner where they are able to get up and move around and …umm…the movement is exciting for students, especially for my second graders. They are engaged and energetic.

QUESTION 3: What are the disadvantages of implementing Kagan cooperative learning structures in your classroom?

Teacher 06: Time…Time…Time…that is that teachers have to take the time…well, not just take the time, they have to have the time to create activities such as Quiz Quiz Trade…In fact, if it were not for the amount of planning time that was needed for this particular structure…umm…this would be used quite a bit more often in my classroom. I must admit thought, that I like to laminate them so the cards can be used year after year…I realize that my choice may be what adds to the extra needed…the preparation time…However, if I do it right the first time, I should have a set of cards that can be used for several years…So…all of this…umm…this takes time to plan and create the activities that are needed for success with the structure

QUESTION 4: In your opinion, what is the main purpose of implementing Kagan cooperative learning structures in the classroom?

Teacher 06: We are now teaching to 21st century students and…umm…the 21st century future work force. In order to be successful with almost any job…umm…or chosen career path, you must be able to talk and work well with others. We are no longer a society where there is lots of "loner" work…So…umm…for me, these structures give my students the opportunity…they

allow the students to learn how to work cooperatively with their peers…and this is a much needed skill for success in today's society.

QUESTION 5: Describe one successful experience when implementing a Kagan cooperative learning structures in the classroom.

Teacher 06: Oh my…this is a simple one…The Kagan cheers…the Kagan cheers are awesome! By using them…well in my classroom…I am given the opportunity to observe the students implementing the cheers to their face and shoulder partners constantly. This is a part of the training that really appealed to me and since I began the implementation…umm…this is one of the pieces of the training that I continue to use each year. In fact, once they learn the cheers, I rarely…well pretty much almost never…have to remind them to praise the work of their partner with a cheer or form of praise. It is great…no awesome…to know that they do it…well choose to celebrate the successes of their classmates and teammates because they genuinely care about each other and want to see each other succeed…I must say that I really love the cheers!

QUESTION 6: To what extent are student motivation and engagement affected when implementing Kagan cooperative learning structures?

Teacher 06: One thing that I have really noticed since I began my implementation…my implementation of the Kagan structures is that making students feel like they are a part ...not just a part, but a celebrated member of a group truly affects motivation and engagement…not just every so often…but daily…enforcement of this is needed daily…They must also feel important and the implementation of the structures, and of course the cheers, has positively affected the motivation of all of my students…. Students want to be acknowledged by their peers and…umm…want to work with them cooperatively…Since this is a well-known fact, we, as teachers, need to train them properly…well, we must take the time to teach them the social skills that are needed… If teachers…umm…all teachers…train their students appropriately…it is my opinion…and I feel that students' motivation and engagement is affected tremendously.

QUESTION 7: In what ways has the implementation of Kagan cooperative learning structures affected student learning in your classroom?

Teacher 06: I believe students…well what I have noted with my students…they are…they are much more vocal and ready to share their ideas and thoughts. I do give much of the credit for this willingness to vocalize their learnings to the implementation of Kagan...umm…not just the structures but the entire learnings from the Kagan training. The cheers that I mentioned earlier, well…I believe that they have to be a part of what you do each and every day. Kids have to know how to praise…and when they do…and when they are given the opportunity to work together, the Kagan structures allow students to learn in an exciting and energizing manner It has truly made a difference for the students in my classroom.

Teacher 07

QUESTION 1: When and how often do you use a Kagan cooperative learning structure in your classroom? Why?

Teacher 07: Umm...Almost daily...um. I say at least three...I do the Kagan grouping and so that allows a lot of easy structures to be used and implemented; So, I would say like almost daily;

Researcher: Do you have your…a set of "go to's" that you can continuously go to?

Teacher 07: ...umm...yes...I like Find Someone Who and shoulder partners and face partners...I use all of that type of stuff...but probably my favorite one is Find Someone Who first and Stand Up Hand Up Pair Up.

QUESTION 2: What do you think are the advantages of implementing Kagan cooperative learning structures in your classroom?

Teacher 07: It just gives a ....it gives a structure and organization and it makes it easy to apply the content because they already know what to do and how to do it; they are just applying the different content...so it...you know...so that you do not have to introduce a new strategy or game every time and you do not spend time on the "rules" quote unquote...you can just say "okay, we're going to do this activity with this structure" and it just..it saves time on teaching stuff that's not really important...

Researcher:...that stuff you have to know but will not be tested on

Teacher 07:...exactly

QUESTION 3: What are the disadvantages of implementing Kagan cooperative learning structures in your classroom?

Teacher 07: Umm...It is difficult...the students find it difficult to sit in the groups of four...some students are just...they don't want that...there is always that one or do...so it does present a few behavioral issues and it is hard not to slide him back a ways and make him an island...but they do really need to be with their group...umm...other disadvantages...Well...I can't

Researcher:...well on the survey, teachers strongly agreed with the fact that it is a lot of planning time.

Teacher 07: ...It is...it is...it is...yeah it does take...it does take a lot of planning because you have to plan the activities that go with the structures do yeah it does; in the beginning it is a lot of planning...you know; but now I can just write in my plans that we are going to use this structure with this lesson...you know...see what I am saying? so in the beginning, it is a lot of teacher time.

Researcher:...Another sidebar question...with that being said, you all had training as a school...I think ...2 summers ago; so you really haven't had that since then

Teacher 07: No

Researcher: So unless you have learned the structures on your own

Teacher 07: Right

Researcher: You really have a repertoire of a few that you learned in five days

Teacher 07: Right

Researcher: Do you think that would change...do you think the idea of planning time would change if you could increase the number and more to choose from

Teacher 07: Oh yeah...

Researcher: Because you only know just a few

Teacher 07: Absolutely...yeah...yeah

Researcher: So children...my question as a researcher is are we just...are the children getting tired of Round Robin, Rally Robin, Roundtable, Rally Table, what you learn in five days? Is it time to increase your reportorial of structures so that you can keep them going

Teacher 07: Yes

QUESTION 4: In your opinion, what is the main purpose of implementing Kagan cooperative learning structures in the classroom?

Teacher 07: Umm...the main reason that I implement them is so that umm...I have to think about that one...I do it...it allows the organization and it sort of...they know what to expect and it also allows me to reach many more of my students...umm...I don't know

Researcher: So that is a hard one?

Teacher 07: It is...It is..because my school and district told me too

Researcher: And that may be the reason for you

Teacher 07: It is...I mean I like them and enjoy them...I think it does help with a lot of different things

Researcher: But you would chose something different if it was one of those things that you "needed" to do

Teacher 07: Right, Right. I may...you know that as teachers we are so flexible and change all of the time

QUESTION 5: Describe one successful experience when implementing a Kagan cooperative learning structures in the classroom.

Teacher 07: Umm...okay...let me think of one success...well it's got them talking to each other more about their content...like when say discuss with your shoulder partner bah bah bah bah...it forces them to talk about it and communicate about it and they may not do it if I just said...if I was just whole group asking an out loud question...only one child get to talk about it so I see that a lot...I like that part...I think that would be the best success...I may not get to hear every conversation in the room but they are going on about the math problem or the whatever you know...so I guess that my success would be that there is more conversation going on

QUESTION 6: To what extent are student motivation and engagement affected when implementing Kagan cooperative learning structures?

Teacher 07: Yes...they do...they highly affect engagement in my classroom...because like I said, it forces them to all communicate...to all have a part in it and not just...not just one person being engaged...you know they are all actively listening and speaking and talking at the same time and so it...yeah ...communication is good...as far as student learning...and you will probably get there in a second...

QUESTION 07: In what ways has the implementation of Kagan cooperative learning structures affected student learning in your classroom?

Teacher 07: Is there a measure that says it increases achievement...I don't know but it sure helps the engagement so of course the engagement will ultimately lead to the learning...you know...umm...but I don't as far as the learning...I don't have any hard core evidence that using Kagan structures in my classroom has increased my student learning but it has increased student engagement, student communication, and all of those things and so I's just guessing that it has...but I can't prove to you that it has

Researcher: On the student survey...I want your opinion of this one and then we will be done.

Teacher 07: Uh huh

Researcher: Umm...I did notice that the working group versus working alone, it was pretty much half and half. Do you think that it is your high level children that would say I would rather be alone than in the group. Do you notice that it is your high children that tend to be the ones who say "This isn't for me"

Teacher 07: Yes...yes...because they do not need someone to depend on anyone to bounce ideas off of...umm...yes in the past this group I have...I teach a transitional second grade and so these are a lot lower level second graders...these are the ones who struggling and almost were retained in first grade so I haven't seen that as much this year because I don't have as many of those...so

there is a whole lot of depending on one another...you know...and they are not really that confident...you know...so...

Teacher 08

QUESTION 1: When and how often do you use a Kagan cooperative learning structure in your classroom? Why?

Teacher 08: Ok...I mostly use Kagan structures with my math because the reading very scripted with our program and we do reading groups; there is so much to do; I do use Kagan with the reading groups and with reading activities, just not as much; I can find it more useful and I can fit it into my day better with the math...umm...did that answer everything?

Researcher: Uh huh

Teacher 08: Okay

Researcher: Do you still use it on a consistent basis even with the new

Teacher 08: Yes

Researcher: We all know that every year...regardless of the district you are in, there is something new every year...Are you still finding it easy to implement the structures on a pretty consistent basis?

Teacher 08: I am ...umm...I haven't...what's the word for it...I really liked it enough that I continue using it; It was my PDP last year or the year before last year, so I used it really heavily then and I continued it last year...I use it just a little bit less this year because I'm...umm...into something else right now like you said...something else is new and on the front burner right now...umm...but I still use it because I used it for so long it is a little bit natural just to pull one together real fast...umm..

Researcher: So you have your list of "go to's" ?

Teacher: Yes

Researcher: Do you think that it's time...Do you think you would use it a little more often if you had a few more structures that you could get...okay, I do these...they know them...how about if there are more out there...there are over 200 structures out there

Teacher 08: There is over 200? ..umm...I think I would be interested in learning more about the other ones that we have not learned...but I found...I have the ones that I like to use with this age group that I think works good with the subject matter and the age group...some don't work as well with...like that Inside Outside Circle...we have a hard time...they've had a hard time with

245

that...but there are others, like Showdown where they...you know... have the answer no or they have a board and then they flip it over, some that work a little bit better...so...you know I would be interested in trying them if they would work good.

QUESTION 2: What do you think are the advantages of implementing Kagan cooperative learning structures in your classroom?

Teacher 08: I think it helps focus the children's attention...you know...it gives them a chance to be active and...umm...they want to talk all the time, so it gives them a chance to talk...I mean now is your chance to talk...it gives them a chance to talk...they really like working together and I think people learn working together; I think it's just a...you know...natural for us to want to work together with somebody and they like leaning on each other...umm...but I think motivating them...it gives them a chance to move...it gives them a chance to talk...it helps them to stay focused because they like the activities so...you...know...they enjoy it...because of that they get into it.

QUESTION 3: What are the disadvantages of implementing Kagan cooperative learning structures in your classroom?

Teacher 08: The only disadvantage that I see is that I don't always have time to plan...there's more you could do if you had made the materials, not even purchased them, but made them...you know...I've got a great...umm...literacy book I purchased and I don't always have the time to go and make the copies. laminate the copies, cut them out, even with an assistant...umm...you know...the only disadvantage is I think if we had more planning time we could do way more with it...sometimes you need materials to go with it...especially in my age group
Researcher: And on the teacher survey that is the one question where I go a lot strongly agree because it was it takes a lot of time to plan

Teacher 08: Uh huh...

Researcher: And that is the one question out of all of those that I got strongly...a heavy strongly agree...so to hear you say planning time...that just says yes...that is the issue with it...is planning

Teacher 08: I would do more and some of it is my age group...you know you have to have copies of A, B, C, D...you know to show them I have...But there are things there is more that we could do if we had...so

QUESTION 4: In your opinion, what is the main purpose of implementing Kagan cooperative learning structures in the classroom?

Teacher 08: It is very useful...It is a great thing to add to your lessons because it motivates them...it centers their attention on you...they buy into it because they are doing what they want to do...they want to move and they want to talk...teachers are the same way...they want to move and they want to talk...so you know...and they want to work together...they don't want to do it my themselves...even in meetings, we do better if we are working with a partner than doing by ourselves

QUESTION 5: Describe one successful experience when implementing a Kagan cooperative learning structures in the classroom.

Teacher 08: Student motivation...By working together they are showing me what they learned in a different way...more than just seeing it written on a piece of paper...I am listening and watching...so...yeah...it gives them many opportunities to "praise" their classmates when they are working together…so…yeah…If it wasn't successful I would not use it...and I would make my own decision about that...how is this working in here...It's not working then I am not going to do it

QUESTION 6: To what extent are student motivation and engagement affected when implementing Kagan cooperative learning structures?

Researcher: Well that answers my QUESTION 6 so I am going to move to QUESTION 7

QUESTION 7: In what ways has the implementation of Kagan cooperative learning structures affected student learning in your classroom?

Teacher 08: I think it affects learning...I think it does because their peers are watching to see if they actually learned it or not...they are so involved...you know...it's obvious...if it is on a piece of paper, everyone doesn't know if they learned it or not, just the teacher and them or the parents...if it is with the whole group, everybody knows if they learned it or didn't...it stands out...yeah you know this or no you didn't...so the academically, I think it puts a little more pressure on them...I better learn this because they are going to ask me and everyone is going to know that I don't know it...so I think it...you know...it's good academically for that and I just think practicing it in a different way other than...you know...just doing it on a piece of paper like I said...giving them another way to do it and show...some of the kids don't like doing that to show it in a different way...you get to write it on a board or you get to stand up or you get to do a yes card or a no card...you know...stuff like that…and it gives me a very quick way to assess formatively what is actually being learned in the classroom…umm…and this gives me the opportunity to make sure that I am able to reach all of my students.

Teacher 11

QUESTION 1: When and how often do you use a Kagan cooperative learning structure in your classroom? Why?

Teacher 11: Umm...in years past I have been able to do it every day but this year was a little different because I started out with 28 students and so...in first grade...and that is difficult to do when you don't have an even number of groups at each table...so now we're back down to twenty; we've kind of had the revolving door so I try to do one a week...so but they know that they know their shoulder partner, their face partner...we do that every day...but as far as like a structure like a Quiz Quiz Trade, once a week?

Researcher: Do you have your "go to's" that you pretty much like to use

Teacher 11: Oh yes...oh yes...

Researcher: Is it just ease of planning or something else?

Teacher 11: They are easy...they are the ones that the children know...you have already gone over the expectations and they can just implement then...so...I go to those a lot

QUESTION 2: What do you think are the advantages of implementing Kagan cooperative learning structures in your classroom?

Teacher 11: I like the way the children are able to get out of their seats; they are able to work together cooperatively...umm…and they talk but they are talking about academics…and many of the students stop to think about their answer or have to thoroughly explain their answer to a team mate that is struggling to understand the concept or task...umm…I like the style of them not just sitting in the seat being cookie cutter, listen to me all day, they are actually learning from each other.

QUESTION 3: What are the disadvantages of implementing Kagan cooperative learning structures in your classroom?

Teacher 11: The disadvantages…umm...I think would be a large class size; I have seen that…that is tough to implement Kagan whenever you have...your busting at the seams...umm…another down side I think would be everything else that is on our plate makes Kagan hard to implement when you've got...we just got new technology this year so we want to push that rather than coming up with a great idea to implement a strategy for the week...so just kind of a lot going on and picking and choosing what you do and what you...what can wait.

QUESTION 4: In your opinion, what is the main purpose of implementing Kagan cooperative learning structures in the classroom?

Teacher 11: I think it is for cooperative learning; its' for the children to be working together rather than talking throughout the day; it is more student directed than teacher directed and I feel like they get more out of it whenever it is student-centered than teacher-centered teaching so...

QUESTION 5: Describe one successful experience when implementing a Kagan cooperative learning structures in the classroom.

Teacher 11: Well I think that Kagan successful for me as a first grade teacher because it allows like on a Thursday I do a lot of Kagan strategies on Thursday's to get us ready for Friday's assessments like your spelling test, your reading test and those kind of things. For instance I might have...umm. cut up sentence strips and they have to put them in order working as a team like a Round Table and they have to go around the table, put it in order, and I visit each table group or Kagan group and they have to read those sentences to me ...but what they don't know is that they think they are working together and it's a fun game, but they don't realize is that those

same words that they are reading to me...they are practicing for Friday's test...or doing Quiz Quiz Trade on Friday and they are getting up and doing their spelling words with each other Quiz Quiz and then trading and they love it...and then that is getting them ready for Friday so the success of it, I think, is it is just a different way to teach and the children love it and then they are getting something out of it...especially on an assessment instead of boring them with write these words three times...okay we are ready for our spelling test.

Researcher: I am glad that you said that...I am going to steal that idea in my classroom...I have not thought of Quiz Quiz Trade for practicing Spelling

Teacher 11: It is awesome...I do two different colors...just run them on a blue sheet and a gold sheet...cut them up and then pass them out that if you get a blue card you are looking for a gold card...and then they do the whole thing...then that way...it is so easy to do you just do it in word...print two out...run on two different colors and you got it

Researcher: I am going to steal that...I am glad that I talked to you...I got an idea that I can use now.

QUESTION 6: To what extent are student motivation and engagement affected when implementing Kagan cooperative learning structures?

Teacher 11: Anytime that I say today we are going to do a Kagan strategy...we're going to do this...or you know you are going to work with your shoulder partner today and you are going to do...umm...umm...they do the coach one...the coach structure where they do a problem and they have their shoulder partner coach them...they are motivated to it because I feel like…especially with first grade, they don't feel like they are alone...you know…they don't feel like that I have just given them a task to do and it might be too hard for them and they are going to get a little anxious about it...like whenever I tell them we are doing something Kagan related, they know that they are going to have support from one of their peers that they sit with…you know...their team...not just about them...if that makes sense.

QUESTION 7: In what ways has the implementation of Kagan cooperative learning structures affected student learning in your classroom?

Teacher 11: I see it...I see it...I wish I could implement it more because...you know…in years past, I did Kagan every day and I know it works because... you know...I see it in my assessments; my test scores show...you know...If I don't do Kagan one week and I grade papers…you know I might be like oh...they needed a little bit more; they needed a little bit more practice; but whenever...this is something that they are excited about; so once you get them won over with it that is one thing and...umm...so

Researcher: So let me on the side...on the teacher survey, the strongly agree, the only time that I had consistent strongly agree was on the question pertaining to the amount of planning time that it takes...where do you see the planning time with Kagan? Is planning time something that would stop you from implementing Kagan?

Teacher 11: yes...

Researcher: Because it takes too long?

Teacher 11: It takes too long because we have so many other things on our plate...I feel like as an educator, and you can relate to this, is every year it is something new...you know...Kagan for us was two years ago...there was this huge push for Kagan...you know the laminated Kagan mats were on our desks, everything was fresh and new...we were excited about Kagan and ...you know...I've done it for three years now...you know...implementing it and I have seen it work...but then whenever you give us four other new things to do...can you scaffold those...what do you want me to do? What is the most important?...you know...and so yes, I do think and that is one reason why I can say honestly that I don't implement it everyday now; you know that we have got these iPad's now and we have got to use those everyday and then Kagan is just one more thing when it would be nice if...you know...if that was the main thing that the district would maybe help us and support us and give us that planning time so that we could make it great; you cannot polish and make everything great; you have got to pick and choose it. You do not have enough time...you cannot spend all night here...but it seems that they want us too...

Teacher 13

QUESTION 1: When and how often do you use a Kagan cooperative learning structure in your classroom? Why?

Teacher 13: I personally used Kagan after our initial training in my own EC classroom daily. Now my reading program has been changed, and I do not use Kagan structures. In the inclusion settings, structures are used once or twice a month. I think the newness of the idea has worn off and I just see the terms "shoulder partner" "face partner" being used. I know of a teacher on the hall that has used Showdown recently. Most teachers have students in groups, but in the rooms that I serve I don't observe or implement regular Kagan structures. Not that I don't believe in them. I think we have just been overrun with initiatives and common core and this year with iPads in classes, so we mesh these ideas together and make them work.

QUESTION 2: What do you think are the advantages of implementing Kagan cooperative learning structures in your classroom?

Teacher 13: Kagan gives students opportunities to talk productively and to think out loud. For special needs populations, I think this is very valuable….that is the time that is needed for them to think before they answer a question… The structures are also another way to present and review information. Now we are learning to implement iPads daily, so technology is taking over.

QUESTION 3: What are the disadvantages of implementing Kagan cooperative learning structures in your classroom?

Teacher 13: It is always difficult to "make" students work together that don't want to. Even though supposedly everyone is held accountable, students will change the rules to their own and

overlook someone that chooses not to participate. The teacher has to be a very good manager of each group in order to keep everyone on task.

Researcher: So did you notice lots of your students not wanting to participate or was it always the same ones each time?

Teacher 13: I only had 1 or 2 that would sometimes not want to participate. With the self-contained students, you could never tell from one day to the next how they were going to react to what you were asking them to do. Although they did not mind working together, they just were sometimes not happy to be at school.

QUESTION 4: In your opinion, what is the main purpose of implementing Kagan cooperative learning structures in the classroom?

Teacher 13: My main purpose for implementing the structures…umm…was to get students to think about an answer before giving it to me, and for everyone to answer at one time instead of me calling on just one student, by using partner shares. I also liked to use structures for review.

QUESTION 5: Describe one successful experience when implementing a Kagan cooperative learning structures in the classroom.

Teacher 13: I used Quiz, Quiz Trade a lot for vocabulary terms in my room. My students enjoyed getting up and moving around…umm..they seemed more energized and ready to learn when given the opportunity to work together and move. I played fun music to move to. They did well in reviewing that way. Answering these questions has made me think of ways to incorporate iPads and Kagan together. Now I use the iPads and access quiz let - online flashcards and games for vocab., but the students could still use the iPads with the vocabulary terms within the structure for the QQT game. :).

Researcher: You stated that you played fun music to move to when implementing some of the structures. What did you see happening when you added the music?

Teacher 13: Oh…my students loved when I added the music. They were much more engaged in participation in the structure. I also saw very happy students willing to participate and work together.

QUESTION 6: To what extent are student motivation and engagement affected when implementing Kagan cooperative learning structures?

Teacher 13: They are more engaged in a structure than a plain book and worksheet by itself. They are more motivated to work when there are structures involved in the lesson. The technology resources that are available are key too. I still use the student selector tools weekly in my lessons to ensure that all students are thinking of an answer and a random student is chosen.

QUESTION 7: In what ways has the implementation of Kagan cooperative learning structures affected student learning in your classroom?

Teacher 13: In the past, Kagan was successful in the classroom for a new style of teaching. It improved student communication with each other. It provided examples of how to have positive and productive conversations with peers. The structures for team building were good to promote social skills, especially with students with behavioral needs. This year iPads have taken over as another way to engage students and as a new teaching style. We will have to get to a point where we can use both methods and have time to plan both.

Teacher 14

QUESTION 1: When and how often do you use a Kagan cooperative learning structure in your classroom? Why?

Teacher 14: Umm...usually it depends, but sometimes I use them once a day in a class and we'll do...for...umm...easy facts back and forth; We'll just RallyRobin facts back and forth or go around the group...just...let's say compromises...things like that go back and forth parts of compromises...(student enters and teacher addresses the student)

QUESTION 2: What do you think are the advantages of implementing Kagan cooperative learning structures in your classroom?

Teacher 14: It gets the kids engaged...which ultimately leads to energy in the classroom…umm…a classroom full of students excited to participate in the learning process… it's not just me talking the whole time, which they don't like...so when they get to talk back and forth, it gives them a break and their minds can relax a little bit...it's a quick way just to refresh and then they don't think that they are learning...they are just talking to their friend.

QUESTION 3: What are the disadvantages of implementing Kagan cooperative learning structures in your classroom?

Teacher 14: Umm...sometimes there are disadvantages; they want to get off task...if you are doing an entire group one, they want to get off task a little more than the one on one...If you don't have a strong group, they are going to talk

Researcher: One of the things in the survey was planning time...umm...would...is planning time an issue for you and whether you choose to use the structures as part of the lesson planning process?

Teacher 14: Sometimes...if I can't figure out how to implement it, then I am just not going to...Yes...planning time has affected my use…or let me say…umm…my lack of use…

Researcher: Has across grade...Now that all of you are across grade, that seems to make a difference...It was easier when you were only planning for one grade and could use it three or four times each day...

Teacher: Yeah

Researcher: So would you say that even the across grade has changed the way that you use the structures?

Teacher 14: Yes...I'm using it less than I did less year....I just had eighth grade last year...now I'm using it less because three grades with the same amount of planning time and it is just harder to do.

QUESTION 4: In your opinion, what is the main purpose of implementing Kagan cooperative learning structures in the classroom?

NOTE: As researcher is asking question, a student enters the room. The teacher assists the student and asks the researcher to repeat the question.

Teacher 14: I would say student engagement; I mean...I would say it helps on testing, but I would say it's more for engagement because it gets the students involved in the lesson which makes the outcomes higher for...for all students, regardless of their learning level...

QUESTION 5: Describe one successful experience when implementing a Kagan cooperative learning structures in the classroom.

Teacher 14: I would say the maps...I use it for maps... I'll put a map on the tables and then we'll use Fan N Pick so one person in the group is picking, one person is obviously fanning quizzing them, and then this person is the helper and the final person is keeping them on task...it actually helps; last year in eighth grade, my students learned the US map and beforehand they couldn't tell you where North Carolina was

Researcher: So with Fan N Pick you were able to accomplish that task?

Teacher 14: Yeah

Researcher: You have already addressed my questions six and how you see that motivation is greatly affected by the implementation so I am going to move to question number seven

QUESTION 6: To what extent are student motivation and engagement affected when implementing Kagan cooperative learning structures?

QUESTION 7: In what ways has the implementation of Kagan cooperative learning structures affected student learning in your classroom?

Teacher 14: For some of the lower level kids, Yes...for the higher level kids, who are sometimes reluctant to participate in the structure…not so much...they help to bring up the rest of the group...they seem to be like the little teachers in their groups sometimes.

Researcher: The focus of my study is engagement and achievement. Do you think, academically, that it affects anything besides those two pieces?

Teacher 14: It is hard to tell because there are always those students who are in the middle...the middle moved a little bit but they are still in the middle...It is hard to tell

Researcher: Do you find that your higher children are really the ones who struggle with the structures because they would rather work on their own?

Teacher 14: Yeah...they would rather just do it on their own...I have several each day that just want to branch off because they get tired of waiting.

Researcher: So when you team, you create your teams by homogeneously grouping with a high, medium high, medium low, and low?

Teacher 14: Yeah

Researcher: And it's your high kids that you see struggling with working in the group setting?

Teacher 14: Yeah

Researcher: Just clearing some of the student survey questions as well

Teacher 14: Yeah...we don't sit them side by side with a low kid, but still they are going to struggle in the group activity because they are waiting.

Researcher: So do you think that they feel like they take on the teacher role for the group?

Teacher 14: Yeah

Researcher: So like I've got this, why do I have to teach this?

APPENDIX G: TEACHER FOCUS GROUP TRANSCRIPTS

Focus Group for Teacher 01, Teacher 02, and Teacher 10

Question 1: How do students in your classroom benefit from working in cooperative learning groups?

Teacher 01: I think that they learn more by being able to teach each other...once they...and I know even myself that if I have an opportunity to talk with someone and bounce some ideas off of them, I may pick up something that they don't and they may pick up on something that I don't...so I think it is the same thing with children...

Teacher 02: umm...I ...very much a similar answer...but just adding that they also...I think when… when they are working with each other and having to ask and work within their group and figure out...making sure that you don't move on before everybody in your group is up to where they are supposed to be...I think that it allows...it helps kids learn how to ask a question; so it's not just...umm...I don't get it...I mean as a teacher I think that we start to understand the patterns, especially in math, of where they are not getting it; But for them to tell another student, they have to be a little more specific with their question other than I don't get it...

Question 2: Some have claimed that students are rarely interested in participating in group activities. Is this the case in your classes?

Teacher 01: Not at all...anytime they have the opportunity to work in a group, they are all over it...Now...they don't want to work in just any group, though...they want to work with who they want to work with...umm...you know because there are some personality clashes, there's some folks that you know you get along with better than others, and just like any other group, you know who is going to work and who is going to sit back and not pull their weight so...but mine...and I've taught...and this year I am teaching 6th, 7th, and 8th...for several years I have taught 6th...and especially the 6th graders are really about working together...7th graders this year are still pretty good...8th graders, not so much...but...but for the most part I think yes.

Teacher 02: My 8th graders...I think a similar issues...mine love to work together...and sometime they might get angry when I make them...you know...when I pull the Kagan groups and I make them work because I know that I cannot have a whole group over here of kids that have no clue what is going on ...they need somebody to try to push them on or if they get off task...my 8th grade has a tendency to really try to sway off and really go into the socialization some...umm...more so than my other classes...some of that I think is developmentally where they are at...umm...but when you start saying ok your job was to get this done in your group, and your job is to get this done in your group...

Teacher 01: Right

Teacher 02: Doesn't really matter how person over here did if you did your job then I am looking at how successful your group was or how successful you were, you got your job done

and if somebody else doesn't get theirs done, then they see that they have to pull up the slack a little bit

Researcher: With that said, do you see that there are always certain students that wait for someone else to do their job?

Teacher 01 and 02: uh huh

Researcher: And you have been able to recognize who they are?

Teacher 01: oh yes...absolutely

Researcher: so you

Teacher 01: absolutely

Researcher: so do you differentiate their job so that they have to be responsible for something?

Teacher 01: absolutely

Teacher 02: uh huh

Question 3: Do you notice an increase in student performance when they work in groups?

Teacher 01: With some things…umm...with some particular strands...now...fractions, fractions are a burr in my saddle...children hate them...you know that is the dirty f word...they hate them...they're not easy to teach...umm...but with most things yes...but with fractions comes to the forefront...I think we have a huge gap where knowledge of fractions is concerned...umm...and actually basic skills...you know...what actually the numbers mean...you know...we were working on an activity today putting some things on a number line...putting some fractions on a number line...where exactly do they belong? ...and we had benchmarks along the way 1, 1/2, 1, 3/2. 2...you know…where exactly do they go and it has been very enlightening for me as well as the children but for the most part I think that they activities do help...

Teacher 02: I think so too...umm...I completely...I was just sitting here thinking before you said fractions...I was thinking fractions for me is like...I don't...and I think that some of it comes with the way…umm...I want the school to teach 6th, 7th. and 8th grade math...I did not go to school to teach K, 1, or 2 math...and I think a lot of that fractional foundation is trying to...is...with common core now, they are pushing a whole of the concepts down...My daughter is in 2nd grade and I have seen she's...last year in 1st grade she was bringing home fraction after fraction...I think it's kind of like reading in middle school...you know how to read and you know how to teach students reading strategies as a middle school student but you don't necessarily know how to teach a student to read...so I can teach you how to operate a fraction, but I have a difficult time making you understand what a fraction is and what it represents and I think that is...and for me personally I think that is coming from...I understand what a fraction is but as far as communicating what that is...and I think that goes into the whole working in groups...I don't feel

comfortable with those probing questions with them...like I can't come with them...good enough ones for them to start thinking about them for them to have a conversation in the group...if that makes sense

Question 4: How have cooperative learning structures impacted your teaching-learning experience?

Teacher 02: I'll start...It has allowed me to really start looking at...umm...I am not just throwing kids into a group...particularly with Kagan...I am not just throwing kids into a group...Let's go 1234, 1234, 1234....1's here, 2's here...but I'm really looking at where my kids strengths and weaknesses are and trying to figure out...oak well this child does really well with understanding operations with integers...this child doesn't...we are going to focus on integers this week so we are going to put these kids together so that they can help each other out...and kinda has forced me to be more aware of individual strengths and weaknesses within kids...and I think that...I think that pays off dividens in the long run...sometimes it takes a little more assess that and along the way, but as a department that is one thing that we really try to focus on...to make sure we could...ummm...pull the kids up that need to be pulled up and to accelerate the kids that are already up.

Teacher 01: And a lot of the same thing..and when you...we were talking about weaknesses...going back to the jobs...one kid may be much better at writing the explanation...you know...the scribe in the group...it doesn't even have to be about math...

Teacher 02: uh huh..

Teacher 01: You know...where is your weakness...I mean where is your strength? Is your strength putting that explanation into words...is your strength coming up with an illustration?

Teacher 02: uh huh...

Teacher 01: To help your group understand? so...the being able to assign the different jobs...assign the different strengths within the group...I mean to the group and then the different strengths within each group.

Researcher: Am I hearing you say that it has really made you focus on the whole child?

Teacher 01: uh huh...

Teacher 02: uh huh...

Researcher: not just the mathematical child...

Teacher 02: Right...Right

Researcher: But the whole child?

Teacher 01: Right...the artist and the writer and the critical thinker and the creative one...you know...yeah...absolutely

Teacher 02: And that's what we did this morning...umm...it popped in my head that my 8th graders worked on functions and where we are going from graphs to stories and stories to graphs...like explain what is going on with this graph...if you see a graph with no numbers...you just see the lines and what the graph is doing...okay..(Teacher 10 enters the room) and I had some kids who could really go and explain the graphs but when they saw us put the creative stories to it, it was like...DONE...so I started switching around group members within our normal seats and they started working together...it was like...okay...I see what is going on with this graph...okay...this is like a basic explanation and then the kid that is a little more creative...oh okay and they came up with the story with more explanation there

Researcher: That is interesting...I have never looked at Kagan through that set of lens...maybe I need to hone in a little more on strengths and weaknesses rather than the high, medium high, etc...in order to place students in the right groups for particular activities...Researcher alerts new team member to how we answer questions using the teacher number and reads the focus group information

Question 5: In what situations do you find cooperative learning structures to be most useful?

Teacher 01: After we have...after I have introduced a topic we have been able to practice...I just go in with one to cement that idea before we are...umm...going to be formally assessed on it...you know give them something fun...you know...because they love...we do and this is not particularly Kagan...but I do scavenger hunts within the room a lot...umm... where one card takes you to another card...one clue takes you to the next...so that is easy to do...you know...make up a whole bunch of cards when we are getting ready to take a test...you know... that is on into the process

Teacher 02: One of the things that I like...especially with math...I can work it so much better with math than I could with Science...is doing steps of problems and using your shoulder partner to go back and forth...Like I have this step done, now I am going to pass it over and you do this step...Sometimes we will go around the table and sometimes we will just pass back and forth with the person sitting next to them or across from them....and umm...I like doing the...umm...I like doing the Quiz Quiz Trade...umm...

Teacher 02: uh huh

Teacher 01: with kids for review but I like...often times with math specifically, it's more like Teacher 02 said, when I have an interest in time and I have not given as much time for them practicing their skill...umm...when I taught Science, I did it a little differently...I would use it as an opportunity to have them do inquiry based work and present them with a problem and tell them to solve it...and see where they went with that

Teacher 02: You know another thing...with the Pairs Compare...you know...you've got two columns of problems and you have those kids...you have one working the problem while the

258

other one is encouraging them or diverting them as they are making a mistake...umm...you know...umm...and again, that along into when they are doing their independent practice...umm... Teacher 10: And I agree with both...typically when we us it is after the concept has been introduced and I reinforce the idea....we try to...I try to pair the ones who are struggling with those showing a little strength with the concept...

Question 6: Talk about the difficulties you have encountered in implementing Kagan cooperative learning structures in your classroom.

Teacher 01: Not really difficulties other than the just management type things...you know...where they want to veer off and move into the social aspects...these are middle school kids who want to play...they are not...you know...your only job is to be a student...you are not here to play...we are not here to socialize...we are here to learn...but other than that...not really...the only thing I would really say is that some of the...like the...umm...sometimes it takes some time to implement...like the Quiz Quiz Trade cards...you know...if you are doing or own and stuff...that takes some time...you know to come up with them, cut them. laminate them, cut them again...you know...yeah...Of course you never have enough time or money

Teacher 02: One of the biggest struggles I have...umm...and not so much this year as I have in the past...I was initially trained in 02004 when I worked in Florida and so, I have been doing bits and pieces here and there since then, and when Lenoir County went in...but one of my biggest issues was and is teaching kids how to complete the structures...what does this job and what does it entail? When we are doing this structure...how it works...so you have to have the time to model that but there...because there are more of us doing it, that is not as big a problem as I have seen in the past.

Teacher 10: Yeah...everything is difficult...my biggest problem is I think I am more spontaneous with today's lesson...whatever is needed and Kagan structures have to be planned out before your lesson

Researcher: And that was one of the things that we said earlier...it was one of the things...planning time and Round Robin you can just do...Rally Robin you can just do...so one of my questions is...it has been two years since you all have had your PD...is it time for someone to come back in and share some more of those spontaneous types of structures?

Teacher 10: or have it planned and then we kind of veer off of different direction to fit our purposes

Question 7: Talk about your belief in the use of Kagan cooperative learning structures. How do they fit with the mix of other strategies that you use?

Teacher 10: Some of it does

Teacher 01: Absolutely...and I with middle school kids, you have to keep it fresh...you have to change up ...you know...so I might have them doing something on the clickers today for 015 minutes and then we might have the calculators out and we are going over something new on the

calculators...you have got to be diverse, especially with middle school kids...that attention span is like that (snaps fingers) ...so you have got to keep it fresh and you gotta mix it up...yeah...absolutely

Teacher 02: I think...umm...I think if it is done right, Kagan can mesh well with most other strategies and initiatives...umm...the technology piece that we are getting ready to encounter and the elementary is already encountering is another issue...and I think that is one of the things...we are going to have to determine how we are going to take the technology and incorporate it with the Kagan structures...if that makes sense...we do not want them to be isolated...because reality is you don't work ....well...some jobs have no human contact all day...but for the most part. you have to work with people and you have to be able to problem solve, you have to be able to...that is what STEM is all about...we are looking at STEM stuff...we are a STEM school so we have to mold these things...I think Kagan is a very good avenue to really teach that to kids...how to work with others and how to divide up within a group to solve a problem...so...I think if is done right and done well, I think it meshes with most things with the right planning

Teacher 10: Could you restate the question

Researcher: Repeats question

Teacher 10: I don't think I have ever done a Kagan structure exactly how it was supposed to be done...I think that I have always changed them somehow...whether it be a lot or a little...

Teacher 02: But I think that is okay...I don't think a whole lot of us do it ...you know..

Teacher 10: Because of all of the other things

Focus Group for Teacher 09 and Teacher 12

Question 1: How do students in your classroom benefit from working in cooperative learning groups?

Teacher 09: umm...it takes the stress off of some of them that don't know how to do something...they have a partner, someone else in the group if they do know it...then they can hear it and they can piggy back off of what...you know...what they said...they learn better from each other than from me...so...that is how it benefits my students

Teacher 12: Can I say she stole my answer?

Researcher: Absolutely

Teacher 09: We've been married for a long time

Researcher: I can imagine

Teacher 12: The same thing...that sometimes they will have an idea but when they hear someone else's idea or answer, then it kind of helps them lead to something else...so it almost gives them also another platform...they might think a little further than what they started things off of...so piggybacking off her answer, I can just add a little more

Question 2: Some have claimed that students are rarely interested in participating in group activities. Is this the cased in your classes?

Teacher 12: Rarely...but the key word there...I usually see it with maybe one student in the class who does not like to work in a group...usually I have one a year who has a hard time working in a group and if they are asked they will ask to work independently and a lot of times I will let them work independently and then when they see what the other ones are doing they'll want to merge themselves back in...so I give them that opportunity as well

Teacher 09: I recognize a lot of this with the AG kids that don't have the patience to work in a group and so sometimes...depending on what it is...sometimes they don't want to work together and other times they are more willing to

Researcher: That was the one...I was going to piggyback on this one from the student survey...because in the student survey, I asked if they like to work alone?...I prefer to work alone...I prefer to work in a group....and it is about half and half...and so my...what I was going to ask is...do you see the ones who are kind of like resistant as the high kids

Teacher 12: yeah

Teacher 09: uh huh

Researcher: And they are more like I don't need anyone's help?

Teacher 09: uh huh...

Question 3: Do you notice an increase in student performance when they work in groups?

Teacher 09: I don't...I don't know if it is because of the assignments I give...umm...in groups...umm...you know....sometimes if they don't know it, they just don't know it...you know...whether you are in a group or not...I haven't seen the benefits...you know...of achieveing more...of achieving more right now…

Teacher 12: I agree that I don't really see a lot of academic improvement...I think that...umm...the ones who struggle, even in their group, even if they have a job that they are doing...it doesn't necessarily prepare them better to work independently...they become more dependent on those around them to help them with their job...and usually what happens is somebody else is going to aid them in what they are doing instead of them doing it alone.

Question 4: How have cooperative learning structures impacted your teaching-learning experience?

Teacher 09: It gives me something else to do with them...another means of getting information...it has taken away the old guided practice sometimes...the I do, we do, you do...sometimes…you know...I'll do a whole group and then turn them a loose...guided practice...they are doing with each other...so like...you know...your stronger person in the Kagan group really takes on my job...I can just step back as facilitator and they do the work

Teacher 12: She used the word facilitator which was what I was thinking...but also, I see...umm…I see it as new activities that I can do with them...umm...sometimes I'll do the group work and the teacher lead part and then I will give them the Kagan structures as well...because I feel like they need those

Teacher 9: It saves time too…if they're doing...you know...stand up hand up pair up and you don't want to hear fifty paragraphs, then you know

Teacher 12: uh huh

Teacher 09: You pair up...you get to read your paragraph over and over again but you can read it to your friends and you can hear them but it saves time

Question 5: In what situation do you find cooperative learning structures to be the most useful?

Teacher 12: I would say that in…umm...math...I do not teach math this year, but I have taught it in previous years and I like it in math...when I do math groups or when I am working in math with games or problems or if they have to do a problem solution or story board or something...umm...but I also like it for just learning to talk to each other...cooperatively, I guess...with like our PBIS and...umm...our ...that they can communicate with each other...speak nicely to each other...learn to ...umm...give positive comments towards each other and not knock each other down so much

Researcher: So like a social tool?

Teacher 12: yeah

Teacher 09: They know the expectations...you know...If I am number 1...if you're numbers ones, you know do this and there is no griping about...you know...I didn't get to do this...well you are not number one hon...

Teacher 12: Yeah...the selector

Researcher: So they realize the randomness of selection?

Teacher 09: Yes…there is little argument over who does what

Researcher: So is it almost like an advantage...because now you take that out of it...that having to select somebody...I don't have to...you are not a one?

Teacher 09: Right

Question 6: Talk about the difficulties you have encountered in implementing Kagan cooperative learning structures in your classroom.

Teacher 09: I think when we first started they said to grab one and do that one well...there are so many structures and you know that sometimes if it is one that you have not really practiced and you plan to use it and it bombs you are like...you know it is about choosing the best one to go with what you are teaching...you know....some of the ones that are the most fun are not the most appropriate...

Researcher: And the easy ones are not always the most appropriate, so you may end up having one...oh my gosh...I would love to use this, but I don't have thirty minute to make this, this, and this for Fan N Pick?

Teacher 09: Right

Teacher 12: I would say that preparation sometimes for the ones that are like Stand Up Hand Up Pair Up or Quiz Quiz Trade...those are easier ones...but some of the other ones...it's just with...you know...time like it is and everything else we are doing the...DIBELS, TRC, portfolios, assessing small groups, whole group...it is easier and less stressful to go with what you know

Teacher 09: You are right

Teacher 12: So it is hard to like branch out with some more and I find that probably happens

Teacher 09: I just use the same five all of the time

Researcher: Are they the ones that Kagan recommends to start with?

Teacher 09: I believe so

Researcher: When you said there are so many, there are over 200 structures now

Teacher 12: Wow...

Researcher: Lots to choose from

Teacher 9: That can be over whelming

Researcher: Unless you have seen them in action...is it time for more staff development? Are there more out there that you could find just as easy to use? It has been two years...so that is one

of the things that I looking into...are there more that are easy to implement and have we really quit using it because of the lack of ease and exhausted the easier to plan...

Question 7: Talk about your belief in the use of Kagan cooperative learning structures. How do they fit in with the mix of the other strategies that you use?

Teacher 09: I am guilty of treating it like an isolated program...you know...I know they want it to be fluid all day long...cooperative learning but sometimes...you know... okay we are going to do our Kagan instead of it just being a part...you know...so I haven't yet made it fit across the board...it is still pockets of Kagan instead of I use Kagan to teach...if that makes sense

Researcher: it does

Teacher 12: umm...The same thing...I don't think...If I don't say...like when the kids were doing their student surveys, they weren't exactly sure because I don't say that this is a Kagan strategy when we do Stand Up Hand Up Pair Up...they don't necessarily know it has a name...if that make sense

Researcher: uh huh

Teacher 12: So...you know...I guess maybe I need to draw more attention to that for them to recognize what they are doing instead of this is just another task we are doing or another activity that we are doing...umm...and also, I don't think children always need to sit in groups and like I prefer...horseshoe

Teacher 09: For the third nine weeks I am going to horseshoe...sometime they just need to look at me while we get closer to EOG

Teacher 12: We are getting ready to change our seating because we need a little alone time...

Researcher: Are you finding it easy to integrate Kagan with the new iPad initiative or is it two separate pieces?

Teacher 09: Right now they have tunnel...they don't want to talk to anyone else when they are doing that...QR codes...now we are just tinkering with ebackpack...they don't want to do anything...they don't want to talk with anyone...which is what technology will cause...

Teacher 12: Right before Christmas we were doing a unit on penguins and informational text and expository text...that sort of thing and they had to use a QR code to research information about penguins on their iPads and to read the articles and they could use their shoulder partner...that was a nightmare...I finally just stopped it and said the assignment was independent...you are on your own...they could not keep up reading...they couldn't...they don't know how to read and article for information yet on the iPad and so that was just a no go...I stopped that after the first fifteen minutes...it was a disaster...so we just stopped and they were happier...

Researcher: I know that there are times when we have to call children at the end of their technology class because they are so into what they are doing on the screen
Teacher 09: Yes...they are so quiet...you will get to doing something and realize "oh my" we have been doing this for twenty minutes...because they are so focused and into what is going on on their iPad

APPENDIX H: INSTITUTIONAL REVIEW BOARD APPROVAL LETTER

EAST CAROLINA UNIVERSITY

University & Medical Center Institutional Review Board Office

4N-70 Brody Medical Sciences Building· Mail Stop 682

600 Moye Boulevard · Greenville, NC 27834

Office **252-744-2914** Fax **252-744-2284** **www.ecu.edu/irb**

Notification of Initial Approval: Expedited

From: Social/Behavioral IRB

To: Tina Hinson

CC: Robert Reardon

Date: 11/10/2014

Re: UMCIRB 14-001705 Perspectives on cooperative learning

I am pleased to inform you that your Expedited Application was approved. Approval of the study and any consent form(s) is for the period of 11/10/2014 to 11/9/2015. The research study is eligible for review under expedited category #6, 7. The Chairperson (or designee) deemed this study no more than minimal risk.

Changes to this approved research may not be initiated without UMCIRB review except when necessary to eliminate an apparent immediate hazard to the participant. All unanticipated problems involving risks to participants and others must be promptly reported to the UMCIRB. The investigator must submit a continuing review/closure application to the UMCIRB prior to the date of study expiration. The Investigator must adhere to all reporting requirements for this study.

Approved consent documents with the IRB approval date stamped on the document should be used to consent participants (consent documents with the IRB approval date stamp are found under the Documents tab in the study workspace).
The approval includes the following items:

Name	Description
Chapters 1-3	Study Protocol or Grant Application
Parent Consent Form	Consent Forms
Script for student oral assent	Additional Items
Student Assent Form	Consent Forms
Student Survey Questions	Surveys and Questionnaires
Teacher Focus Group Questions	Interview/Focus Group Scripts/Questions
Teacher Interview Questions	Interview/Focus Group Scripts/Questions
Teacher Participant Consent Form	Consent Forms
Teacher Survey Questions	Surveys and Questionnaires

The Chairperson (or designee) does not have a potential for conflict of interest on this study.