

GROUPING IN A TIME OF GLOBALIZATION: THE EFFECTS OF HETEROGENEOUS  
GROUPING AND PEER EVALUATIONS ON THE RECIPROCAL TEACHING PROCESS  
IN THE SECONDARY ENGLISH CLASSROOM

A Thesis by

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Bachelor of Arts, Wichita State University, 2006

Submitted to the Department of Curriculum and Instruction  
and the faculty of the Graduate School of  
Wichita State University  
in partial fulfillment of  
the requirements for the degree of  
Master of Arts

May 2012

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The following faculty members have examined the final copy of this thesis for form and content, and recommends that it be accepted in partial fulfillment of the requirement for the degree of Master of Arts in Teaching

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## DEDICATION

To my sisters and my parents; the former push me to do more, and the latter catch me when I try to do too much. They allow me to achieve more than I ever could alone.

“[Globalization] cuts across received categories, creating myriad multilayered intersections, overlapping playing fields, and actors skilled at working across these boundaries. People are at once rooted and rootless, local producers and global consumers, threatened in their identities yet continually remaking those identities.”

— Philip G. Cerny

## ACKNOWLEDGEMENTS

First of all, I would like to thank my parents and family for being such strong advocates of education. Rather than pursue education for monetary purposes, my parents have always encouraged me to seek education as an end in and of itself. The dividends of this pragmatic paradigm are paying off in ways that are more fulfilling than any salary. My desire to constantly pursue education has translated into a truly fascinating career, a fantastic group of friends, and an ever evolving outlook on the potential of the human mind to conquer obstacles.

Next, I would like to thank my committee members Jeri Carroll, Marlene Schommer-Aikins, and Katherine Mason for sustaining me along the path toward the culmination of this research. The conversations I have with each continue to expand my knowledge of educational research practices. The richness they have added to this experience makes me hungry to learn more about the topic of my study as well as educational research, in general.

I would also like to thank three people associated with the Transition to Teaching program at Wichita State University: Judith Hayes, Sherri Holle, and Sharon Goodwin. Each has been there to help me when the road to completion seemed impossible. They all deserve such incredible accolades for the work they do with transition to teaching candidates.

Finally, I need to thank my friend Reticia. Her words of encouragement while travelling on a parallel path to her own master's degree have been invaluable.

## ABSTRACT

This study reports the results of research done in three ninth grade English classrooms during a four week unit on *Romeo and Juliet*. The research focuses on the independent variables of ability grouping and evaluation modality as they have been found to be crucial to improving comprehension in English classrooms. The three classrooms were randomly assigned either the control condition or one of two experimental conditions. Each classroom received instruction using the Reciprocal Teaching Strategy. All 56 students were identified as either high or low level learners based on his or her most recent standardized reading test scores. The control classroom's student participants were placed in reading groups with students of similar ability and were evaluated daily by the instructor. The participants in the two experimental cohorts were placed in reading groups with a variety of learner levels. Additionally, one experimental classroom employed peer evaluations. The study found that high level learners had significantly higher gains on the classroom objective test when receiving peer evaluations combined with mixed ability groupings. This was in comparison to low ability level students under the same treatment and high ability level students receiving teacher evaluations in mixed ability groups. The fact that high ability students in mixed ability groups did not perform well when given teacher evaluations seems to imply that peer evaluations are best suited for high level students in mixed ability cooperative groups.

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# CHAPTER 1

## INTRODUCTION

Globalization is a multifaceted notion that affects a variety of issues within American society. In particular, in the educational world, the term “globalization” has created a movement to foster students in their development of global awareness. This impacts the teacher preparation that professionals must go through to become an educator, but more importantly, it changes what practicing teachers must do in terms of instruction. Globalization in schools means that students have access to a variety of communication tools within and outside of their school day which makes diversity an invisible inevitability (McCarthy, Rezai-Rashti, & Teasley, 2009). No longer can schools gauge their diversity on easily identifiable external factors such as race, ethnicity, and gender. Today’s students are able to survey a variety of opinions outside of those accepted by the mainstream of their identified cultural group. Even more so, as students go through the process of identity development, globalization is impacting the cultural diversity within groups.

In more concrete terms, globalization means shifting demographics. The United States has seen a dramatic increase in its Hispanic and Latino populations over the last four decades. From 1970 to 2010, the Hispanic population in the United States rose from 9.6 million to an estimated 47.8 million. Moreover, that number is projected to more than double in the next forty years to an estimated 102.6 million. In 2050, the Hispanic population is expected to account for over 25 percent of America’s total population (US Census Bureau, 2010). Not only will groups become more diverse within their own cultural borders but the literal boundaries between cultural groups will become blurred by an influx in minority populations. What this means for educators is an increased responsibility to create environments that stimulate awareness of others rather than reproduce outmoded paradigms of race, class, gender, religion, etc.

National standards are taking their cues from these trends and, as such, include global awareness within what is often coined, “21st Century Skills” (Partnership for 21st Century Skills, 2004). The abilities stressed within this framework center around qualities that students can take into any industry, situation, or context. This is of the utmost importance when today’s students are faced with the prospect of preparing for jobs that do not yet exist. For example, the National Governors Association (NGA), in partnership with the Council of Chief State School Officers (CCSSO), has developed a set of Common Core State Standards that were unveiled in the summer of 2010. Most states are expected to adopt the standards with heavy support coming from both economic and educational leaders (NGA & CCSSO, 2010). The standards cover literacy and numeracy in grades K-12 and seek to increase academic achievement through codified and rigorous expectations. Kansas has endorsed these standards and districts are seeking ways to integrate them into their existing pacing guide format.

What is not currently understood is the impact national standards will have on the achievement of students at an individual level. Proponents of national standards claim that they will remove barriers to a rigorous curriculum by establishing clear guidelines for student skills and knowledge. However, others point to international examples of educational devolution, such as Finland’s successful educational reforms, to criticize the national standards movement (Strauss, 2010). Additionally, the adoption of common core state standards will inevitably instigate the creation and cost of new standardized national assessments. Strauss emphasizes that “these standards - nor any other single effort- will be the silver bullet” (para. 25). Indeed, as globalization greets each new generation with unique and varied concerns, it is imperative that reformers look for individualized solutions for widespread problems in education. Transferable

skills such as communication and collaboration appear to give students the best chance of balancing the demands of a rapidly changing, globally focused workplace.

While national standards are being adopted, states are looking for ways to simply keep their schools from closing. Often, it is the simple threat of funding cuts that keep states loyal to the heavily centralized national education plan. The benchmarks set forth in the No Child Left Behind (NCLB) reauthorization of the Elementary and Secondary Education Act (ESEA) make schools responsible for meeting achievement targets on high stakes math and English exams. Whether realistic or not, schools are currently accountable for helping their students reach 100 percent proficiency on math and English assessments by 2014 (ESEA, 2001). With budget cuts looming over each fiscal horizon, schools are becoming keenly aware that failing to meet targets of Annual Yearly Progress (AYP) could have dramatic impacts on their teachers and students.

In 2010, the Kansas City School Board made the decision to close almost half of its schools in hopes of erasing massive budget shortfalls. This educational collapse left many local communities wondering where to send their students due to limited transportation. Saulny (2010) highlights that the tragedy of the situation is exacerbated by the fact that more could have been done earlier to minimize the impact of shifting demographics on school enrollment. As states and districts look to make their budgets leaner, educators are being forced to burden the same scrutiny from the state and national governments. Lack of funds may be a reason for closing a set of schools, but does not change the obligation on teachers to reach all students with an equivalent curriculum.

In Kansas, Common Core Standards as well as 21st Century Skills are being advocated by the state government (Kansas Department of Education, 2008). This support is somewhat loose at the moment due to a heavy financial commitment to English and math tests that have

been designed to align with existing state standards. Despite this slightly schizophrenic approach to standards, Kansas is positioning itself to be on the cutting edge of education by adopting the common core standards. However, the financial difficulties that come along with that decision are unfortunately being ignored at the moment. There is no doubt that Kansas is moving in the right direction, but many should question the timing of this decision to move toward new core standards based on fiscal responsibility. An inability to address these real concerns could lead to the ineffective implementation of crucial Common Core State Standards.

However, the real concern is how these national pressures will affect the logistics of the students' daily lives. In the classroom, students are more connected than ever. When students are not secretly messaging each other in class, they are posting messages on Facebook, Tweeting, and Skyping. This creates a community of learners where diversity is inevitable. Closed-mindedness is quickly being outmoded by technologies that make connection across culture a constant. That can translate to open-minded learners, but it can also engender hostility in the classroom. If classrooms do not provide space for students to test their assumptions of others, they run the risk of embedding those assumptions as dangerous stereotypes. Cooperative classroom activities create opportunities for students to work with others in a controlled set of circumstances. This allows for self-discovery and identity development as well as practice in peer mediation.

A critical question for educators to resolve is what kind of control should be exerted over the circumstances in which students interact cooperatively? Each educator uses a set of indicators to group students. They range from as informal as shirt color to as formal as academic ability. In particular, when grouping by ability, some feel that students perform better when grouped with those of similar academic level. However, others argue that establishing a variety

of learner levels in a group is the best formulation for student inquiry and learning. It is because collaborative work offers so many benefits to the 21st Century learner that educators must be overtly aware of group environmental factors that impact student learning.

Schools are looking more than ever for strategies that will fulfill the needs of a 21st Century learner while engaging students in a standards-based curriculum. Collaborative work seems to fulfill the requirements of both 21st Century skill standards and core content expectations. While it is simple to group students without attention to group dynamics, it appears wiser to approach group work with more detail. A wide variety of research has been conducted in the area of grouping. A central question to address when looking at this evidence is what grouping schemata addresses the concerns of academics and expanded social interdependence within a collaborative student working environment? The following analysis of literature will focus on the different outcomes that have been observed between groups designed with learners of similar ability versus those with heterogeneity of ability. In addition, it will highlight some processes that have been accepted as effective for collaborative work.

## CHAPTER 2

### LITERATURE REVIEW

There are a variety of ways to have students work together cooperatively. Many educators have based their reputations on designing effective collaborative work structures. The “structure” refers to the way that the groups are arranged and how they will operate cooperatively. In this research heterogeneous versus homogeneous structures will be analyzed generally. However, there are a variety of cooperative strategies available for teachers to choose from in their classrooms. This review of literature will define collaboration and cooperative learning strategies as they have been used for the last few decades. In addition, the majority of research in the field of cooperative learning has been effect-oriented. At this point in the history of cooperative learning research, it might be possible to focus on more process-oriented approaches. Overall, the purpose of the review is to decipher an effective structure for cooperative student learning in an urban secondary English classroom and the best process for social research in the field of cooperative learning.

#### Collaboration and cooperative learning strategies

Collaboration as a concept draws up images of people working together toward the same goal. However, educators need concrete definitions of these concepts in order to translate them into workable student level models. Indeed, asking students at the secondary level to “collaborate” could generate a wide variety of results. Therefore, many teachers have taken on the task of codifying the term “collaboration” as it relates to student work (Nesbit & Rogers, 1997).

Cooperative learning strategies have developed as a specific range of activities involving collaboration. Foundational research in the 1970's and 80's supported the idea that students involved in cooperative group activities reached more positive learner outcomes (Sharan, 1980; Slavin, 1980). In response to these positive results, researchers sought to define the specific group guidelines that lead to positive student outcomes. Johnson and Johnson (1984) developed a set of requirements for cooperative learning projects. These sub-scales (positive interdependence, face-to-face interaction, individual accountability, and interpersonal skills) outline the conditions under which students benefit from the collaboration of cooperative learning. As research evolved in the area of cooperative learning, studies revealed that student outcomes of cooperative learning activities are highly related to the way the groups function (Cheng, Lam, & Chan, 2008; Janssen, Kirschner, Erkens, Kirschner, & Paas, 2010; Johnson, Johnson, Stanne, & Garibaldi, 1990). The sub-scale categories outlined by Johnson and Johnson (1984) accurately defined some general areas of interest within the cooperative learning movement. The power of this early work was to focus the research around the ways in which educators can develop cooperative learning strategies that are the most effective for students. Cooperative learning strategies for this reason are continually under research to provide a more definitive basis for their inclusion in school-wide reforms.

While researchers scurry to distill the magic within cooperative learning, some teachers continue to question the effectiveness of cooperative learning in the classroom. For example, King and Behnke (2005) raise two important concerns: group grades and heterogeneous groups. First, if students are assigned group grades, the individual accountability previously referred to is lost, and with it the motivation for all group members to contribute. Another interesting result of a group grade might be the devaluing of low achievers within the group. Because the group

grade is dependent on the work, students may be excised from the collaborative effort due to a perception that the student's work will be sub-par. Second, although most cooperative strategies call for random or heterogeneous grouping, there might be hidden disadvantages with respect to minority students. Students that are purposely separated as the token minority within groups may feel ostracized from the process. With mounting support behind cooperative learning educators must be mindful of pitfalls but not be steered away by them.

### Reciprocal Teaching

Although there are a variety of cooperative learning strategies available to teachers, few have the substantial educational research behind them that Reciprocal Teaching (RT) does. Established by Palincsar and Brown (1983), RT supports student learning by providing scaffolding, guided practice, and group discussions around text types studied in the classroom. It has shown an ability to increase student achievement across a wide variety of contexts (Alfassi, 1998; Hart & Speece, 1998; Lederer, 2000; Rosenshine & Meister, 1994; Spivey & Cuthbert, 2006). Overall, RT has become one of the most recognized strategies for reading comprehension across the curriculum.

RT delineates between four independent but related cognitive processes that occur during the reading process:

- Prediction: During the RT process one student is in charge of predictions. Periodically, at a point determined by the teacher or the student group, the predictor must ask the group members what their predictions are for the next section in the text. The predictor then synthesizes what he or she thinks is the best prediction. In this way, the students are all

actively participating, but the predictor must take a leadership role for selecting the final product.

- **Clarification:** The clarifier is in charge of elucidating unclear or complex ideas. The students will each provide feedback on what they found difficult or unclear in the text. The clarifier is responsible for clarifying ideas that they understand and obtaining answers for the issues that remain unresolved. The clarifier might delegate members of the group to search the dictionary, encyclopedia, Google, or ask the teacher. The clarifier is not responsible for knowing all the answers, but they are in charge managing the clarification process.
- **Questioning:** Critical readers question what they are reading. Therefore, in each group a student is in charge of questioning. The student group can create on the surface or under the surface questions. On the surface questions can be answered directly from the text. Under the surface questions involve subtext and require analysis and interpretation. This category emphasizes the process of actively questioning the text. It can be distinguished from the clarification category by virtue of necessity. Clarification is required to understand the text itself. During the questioning process the students should already be clear about what is occurring in the text. The questions should extend the students' thinking from what is immediate in the text through what is beyond the text in terms of themes, motifs, and symbols.
- **Summarization:** Finally, the student group must be able to succinctly summarize what they have just read. The summarizer provides the group with the key points from the text. The group works to create a summary that accurately captures the critical elements of the text. The summarizer initiates and approves this product.

These four reader-oriented tasks are highlighted by the RT process. Students engaging in RT are asked to not only process the text through these filters but to collaboratively discuss the process. This emphasis on cognition is assumed to be the strength of the strategy and cause for its success (Slater & Horstman, 2002). The RT instructional strategy meets both the needs of an increasingly globalized world and the concerns of those focused on a standards-based education. It provides students the opportunity to practice key collaborative and social skills while meeting content benchmarks.

The most exciting part of the research seems to be the level of performance observed in remedial readers. Alfassi (1998) found a statistically significant increase in the reading scores of students receiving RT instruction in remedial reading classes compared with those receiving traditional skills based instruction. Additionally, Hart and Speece (1998) noticed that post-secondary students at risk for failure saw similar improvements in comprehension scores. The results point to the fact that remedial readers, in particular, require specific instruction in cognitive processing of difficult texts. RT is not limited to the English classroom, though. Gains have been noticed in a variety of curricula concerning comprehension (Lederer, 2000; Spivey & Cuthbert, 2006; Van Garderen, 2004). High stakes math and science tests increasingly require students to unravel problems from complex paragraphs. Comprehension skills that are taught in English classes are requisite skills across the curriculum. Strategies that have import across a wide variety of curricular contexts will be preferred when schools look to reform their instructional strategies.

As stated previously, educators are currently accountable for closing the achievement gap on standardized tests. Therefore, strategies with a preponderance of evidence pointing toward increased reading test scores should be the most highly sought after. However, Hacker and

Tenent (2002) describe the situation as more nuanced than this. While some teachers will be attracted to RT because of its base in research, others will avoid the strategy because of its reliance on student lead discussions. This lack of teacher control is an all too common reason for teachers to avoid research based strategies. The unfortunate truth appears to be that the primary indicator of whether a teacher will use a strategy is not its failure or success in previous research but the teachers comfort level with the style of the strategy.

Additionally, even when educators decide to incorporate a research based strategy into their classrooms, the students are not guaranteed results. Indeed, in some classrooms the students have learned the techniques being taught but have not mastered the cognitive ability of applying the techniques under the appropriate circumstances (Marcell, DeCleene, & Juettner, 2010). It does little good for educators to produce experts in comprehension strategies. The resolution to this problem is a willingness to appropriately model the reading process to students and continuously monitor its use. The best results rarely occur when RT is undertaken in a large sweeping movement. Rather, RT has its best success when it is approached slowly and methodically (Rosenshine & Meister, 1994).

### Heterogeneous grouping

Teachers rarely know the power they have to guide student interaction through the use of heterogeneous grouping. School-wide movements to un-track their classes along with inclusion programs in Special Education have ensured that classrooms are not populated by one level of learner. As the ability spectrum in classrooms becomes broader, the demand on teachers to differentiate their lessons increases. Cooperative learning strategies are an excellent way to achieve this goal (Drake & Mucci, 1993). However, this is not the case when students are

grouped in a way that undoes the work of inclusion programs. A variety of empirical research has been conducted to analyze the effect of heterogeneous grouping on student achievement. The results have been mixed in terms of their recommendations for each level of learner. Therefore, this section of the review will be separated based on the specific recommendations for each level of learner: low level, middle level, and high level.

Most empirical studies agree that heterogeneous grouping benefits low level students (Corbett-Burris, Huebert, & Levin, 2006; Lejk, Wyvill, & Farrow, 1999; Saleh, Lazonder, & De Jong, 2005; Webb, Nemer, & Zuniga, 2002). The improved academic achievement of lower level learners in heterogeneous groups seems to be attributable to the peer tutoring that these students receive from their higher achieving group members.

However, some research has shown adverse effects for middle level learners (Baer, 2003; Saleh, et al, 2005). While lower level learners benefit from their exposure to different learner abilities, middle level learners seem to do better when streamed into similar ability groups.

Heterogeneous grouping's effect on high level learners has been the most mixed. While some studies show a benefit, others show a clear decrease in academic achievement (Baer, 2003; Lejk, et al, 1999; Webb, et al, 2002). The logic behind the grouping states that high achieving students will benefit from their opportunity to teach struggling students in the group (Corbett-Burris, et al, 2006). However, more often the grouping tended to create divisions within the group which precluded this reciprocal exchange of knowledge (Webb, et al, 2002). Overall, the basic tenets of collaborative grouping trump the instinct to heterogeneously group students. When students engage in structured-processing, their academic results reflect this positive interaction (Cheng, et al, 2008). When differences in ability become a catalyst for a breakdown in group processing, the results bear out this faulty collaborative measure.

The effect of this research should be to prove to educators that there are benefits in heterogeneous grouping. However, the positive outcomes that come with it are not ensured simply by composing groups of various abilities. Students must also be taught how to collaborate and be given the tools to do so effectively.

#### Peer evaluations

What is evident from the research cited above is that group composition is not sufficient to create positive outcomes for all student ability levels. The recommendations of Johnson and Johnson (1984) hold true for all collaborative groups. In the examples cited above, group processing seemed to be negated by a lack of positive interdependence. To generate a productive climate for all learner levels in heterogeneous groups there must be mechanisms to imbue a sense of shared responsibility.

Research in the area of peer evaluations has produced positive results for group processing. Social loafing, which can be loosely defined as the tendency of group members to do the least work possible and still achieve a satisfactory grade, has been noticed to drop as peer evaluations are introduced to group work environments (Aggarwal & O'Brien, 2008). Additionally, peer evaluations should not be viewed as simply the narrow opinion of the student. Levine, Kelly, Karakoc, and Haidet (2007) have seen proof that peer evaluations can accurately predict academic achievement on standardized, knowledge-based assessments. However, it is important to place peer evaluations within the classroom. Dommeyer (2006) found that peer evaluations completed outside of the classroom were less supportive than those completed during the class period. While this places an additional burden on the constrained schedules of classroom teachers, the benefits of a supportive work environment are too precious to overlook.

As educators, industry leaders, and students struggle to meet the challenges of both standards-based reforms and 21st century skills requirements, it is critical for teachers to take stock of what tools they have at their disposal and which meet the specific needs of this current challenge. Cooperative learning strategies provide students with the unique opportunity to engage the content of a subject while practicing the social skills that can be transferred to any workplace or economy. The ability of these strategies to meet both broad and narrow concerns simultaneously should give the educational community hope that solutions to complex problems are presently being discussed. RT appears to be one of the most deeply research based strategies specifically designed for reading comprehension. A question still unresolved is what effect heterogeneous grouping and peer evaluations will have on the strategy in an urban high school setting? There will be three definitive questions that this research will be sufficient to support or deny:

1. Does heterogeneous grouping increase academic achievement on classroom objective tests across learner levels or within a specific learner level when paired with Reciprocal Teaching?

2. Do peer evaluations increase academic achievement on classroom objective tests across learner levels or within a specific learner level when paired with Reciprocal Teaching?

3. Does the combination of peer evaluations and heterogeneous ability grouping within the context of Reciprocal Teaching produce the most effective results?

## CHAPTER 3

### METHODS

#### Rationale

The methodology for this research was based both on the type of research that was to be conducted (action research) and best practices from existing research surrounding the specific strategies being incorporated. The best possible scenarios for experimental research were not always achieved. Therefore, where the notion of “research” drove the methodology it will be noted. Equally, when necessity constrained the methods employed, it is noted, as well. In the following sections the participants, materials, and procedures are described.

#### Participants

##### District and school demographics

The research for this study was conducted within USD 259. The district serves the majority of students in the Wichita, Kansas area. USD 259 had a total enrollment of 49,779 during the 2010-2011 school year (Kansas Department of Education, 2012). The gender representation is split approximately evenly with 51.04% male and 48.96% female. Seventy four percent of the students being served were defined as economically disadvantaged. The district is ethnically diverse with 36.87% identified as White, 29.59% Hispanic, 19% African American, and 14.55% Native American, Asian, mixed ethnicity, or other.

Wichita West High School had a total enrollment of 1185 during the 2010-2011 school year. The gender representation was only slightly skewed with 53% male and 47% female. Eighty-six percent of the students attending West High School qualified for free or reduced

lunch. The school is ethnically diverse with 43.21% identified as White, 28.02% Hispanic, 16.29% African American, and 12.49% Native American, Asian, mixed ethnicity, or other.

### Classroom demographics

Three ninth grade English classes were involved in the research being conducted.

Classroom one. Classroom one consisted of 12 males and 6 females. There were 5 White students, 10 Hispanic students, 1 African American student, and 3 other.

Classroom two. Classroom two consisted of 7 males and 14 females. There were 14 White students, 5 Hispanic students, 1 African American student, and 1 other.

Classroom three. Classroom three consisted of 8 males and 13 females. There were 10 White students, 7 Hispanic students, 2 African American students, and 2 other.

### Materials

The materials that reflected the most pertinent information for this study were the pretest and posttest of objective classroom knowledge. While a variety of other qualitative measures took place during the course of the study, they will not be mentioned here in favor of more clarity for the issues at the foreground of this research. The necessity of qualitative research in the future will be mentioned in the discussion section of this document.

### Data collection

Since this study focused on quantitative aspects of student learning, the main indicator used was an objective classroom test. This measure most accurately perceived the extent to which grouping and evaluations impacted student achievement.

*Pretest and posttest.* The pretest and posttest for this study were identical in order to better quantify the increase in knowledge of the subject matter. The test covered all five acts of William Shakespeare's *The Tragedy of Romeo and Juliet*. All 50 questions were either multiple choice, true and false, or matching. The students answered using a Smart Response clicker, an electronic response tool. The first 20 questions were straightforward comprehension questions in multiple choice format. The next ten were true and false responses. Items thirty-one through forty-five asked the student to identify quotations from a list of five characters, and the last five questions required the students to match literary terms used in the text with definitions.

### Procedures

The procedures for this study followed a quasi-experimental format. Three classrooms of students participated: a control and two treatment classrooms. Each treatment revolved around the central theme of the two dependent variables: grouping and evaluation. Each classroom was assigned a condition by drawing a number out of a hat. The three classes received the same instruction and instructional materials. The pacing of the lessons followed the same outline. Each class was given an identical quantitative objective pretest/posttest. All students worked in collaborative groups using the RT strategy. Each day consisted of an opening (with a review of material from the previous class and a refocusing lesson on the RT strategy and collaborative

rubric), work time (where students were asked to collaborate around the assigned reading), and a closing (where students reflected on their learning, wrote a journal response, and took a short quiz on the assigned reading). The pacing of the lessons resulted in a unit that terminated within a four week window of instruction (see Appendix A).

### Control class

The control for this study consisted of one classroom. The classroom chosen for the control was randomly assigned by drawing a number from a hat. The structure for the control involved placing students into groups with others of similar ability based on standardized reading tests. The daily evaluation format followed a traditional teacher evaluation scheme. Students in the control were evaluated by the teacher but received their evaluations in the same form as the experimental classes; all classes were graded on a rubric based on components of collaboration set forth in research done by Johnson and Johnson (1984) (see Appendix B).

### Experimental classes

The first experimental class followed the same procedures as the control with one important difference; the grouping format involved placing students with others of different ability levels based on standardized reading scores.

The second experimental class received the same instruction and instructional materials as the control and first experimental class of students; however, both the ability grouping and the evaluation method were altered from the control class. At the conclusion of each session, all students filled out a rubric rating the other members of their team. At the beginning of the next

reading session, the students received their evaluations to determine what areas their peers viewed as strengths and weaknesses.

## Variables

A variety of processes interacted simultaneously during this research study. The goal of the research was to prove that heterogeneous grouping and peer evaluations should be preferred over other methods in a certain level of learner. However, this study stipulated that RT is a well-researched reading strategy that should be preferred for group processing. Therefore, in this study, the control variable of RT took on a key role in mediating the independent variables across treatment types.

### Independent variables

The independent variables for this study were both ability grouping and evaluation source. The purpose for having three groups in this study was that it allowed the data to better reveal which variables worked best together: teacher/homogenous, teacher/mixed, or student/mixed. The only combination not examined by this study was student led evaluations with homogenous grouping. This limitation is discussed later but does not threaten the validity of the data or its ability to address the hypotheses of the study.

### Dependent variable

The dependent variable for this research was the gain score (posttest minus pretest) on the teacher created, objective classroom test.

### Control variables

All students took the same pretest without receiving any treatment. This provided proper baseline data to determine student growth during the study. It is atypical to see an identical pretest and posttest for specific reading content in the English classroom. However, especially when dealing with subject matter of such cultural resonance as *Romeo and Juliet*, it was vital to perceive accurately the amount of knowledge students brought to the unit. Also, all students received the same instructional treatment via the RT strategy and the Workshop Model for instruction (NYC Department of Education, 2012). All classes followed the same basic unit pacing, and the same informal journal topics and quizzes were used in each class to maintain the control variable of consistent instruction (see Appendix C). These control variables were not just effective methods based on former research, they were necessary in order to decrease the confounding variables that might arise from deviating from a standardized approach.

### Instructional process

In order to properly replicate the research within this study it is important to understand the pedagogical underpinnings of the lessons and their format. Each lesson followed the Workshop Model for classroom instruction and learning which allows for a short period of instruction at the beginning of the lesson followed by an extended period of work time where students are focused on completing an assigned task. This is punctuated by a short closing period where students are asked to reflect on what they have learned and share their insights. All of this is based on brain research that has unearthed when students' minds are most prepared to receive and retain direct instruction. The district in which the study was conducted has adopted the Workshop Model as its preferred method of lesson pacing and structure.

### Workshop Model

The opening of every lesson began with a brief review of the RT strategy, the requirements set out by the collaboration rubric, a review of student performance on the rubric from the previous class period, and an assignment for the reading group for that day.

During work time the students had their chairs pushed together and worked as a group to (1) read the assigned material and (2) analyze the material using the four reading strategies set forth in the RT process. Groups were allowed the choice to decide how to collaboratively break up the reading. Some groups chose to assign character roles since the work being read was a play. However, some groups chose to break up the pages and give each person an equivalent amount to read aloud to the group. All groups were instructed to set up points throughout the text to reflect using the RT strategies.

The end of each lesson concluded with students completing a reflective journal, short quiz, and in the second experimental group, evaluating team members. The closing was used each day to allow students to process individually the learning they were doing in groups. While the individual quiz scores and journal responses were not used as data in this study, their presence is an important piece of the individual accountability facet of collaborative structured activities.

### Collaboration instruction

While students enjoy interacting with one another, they often need direct instruction to be comfortable with defined components of a collaborative structure. The week prior to the beginning of the unit, students were instructed on collaboration techniques as they related to the collaboration rubric. The rubric itself is based on the requirements for collaboration set forth by

Johnson and Johnson (1984): face-to-face interaction, interdependence, individual responsibility, and interpersonal skills. The list of requirements was altered by the instructor based on prior experience with the students being taught. The final list used for the rubric was: interaction, interdependence, responsibility, reflection, and collaboration. From discussions with the students, it became apparent that collaboration itself was a notion that the students could look for while working together.

The students received the following instructions for each of the categories:

- **Interaction:** Interaction includes a variety of both verbal and non-verbal cues. During work-time, please consider all of the ways you can interact with your group: asking questions, reading aloud, making eye contact while others speak to you and when you speak to others, and assisting others in finding materials or information they need. The variety of interaction opportunities available to you allows for a rich collaborative experience. The more you incorporate and explore, the stronger your collaboration skills and learning will become.
- **Interdependence:** As we have learned, the root ‘inter’ means ‘between.’ The word ‘dependence’ means ‘to rely on.’ Therefore, interdependence in this scenario roughly means that you rely on the interactions between group members to accomplish your task. While this word may sound like ‘independence,’ it is actually the opposite. Independence means relying on only you, while interdependence means relying on others. Merely reading the material is not sufficient to complete the task or learn the subject matter. You need the other group members to perform their roles in the RT process. Without them, you will not be able to digest all of the richness the text has to offer. Likewise, without you, they will not either. In this way, the component of

interdependence is a group score that really reflects the entire group's ability to rely on one another.

- **Responsibility:** Responsibility means fulfilling the requirements that are set forth for you at the beginning of each day. Simply turning the page, reading aloud, and following along with your group shows responsibility. However, students wishing to achieve a high score look for opportunities to take on responsibility. This means taking care of materials, keeping the group on task, taking notes for an absent colleague, or even cleaning up when others have forgotten. Responsibility shows that you take pride in what you do and how you do it.
- **Reflection:** Reflection during this activity will specifically be defined by the RT practices. Every time you stop to ask a question, clarify a word or phrase, make a prediction or summarize the plot, you are reflecting on the text. Students should fulfill their roles regularly. Remember to set up points throughout the text where you will consciously reflect. Make these points frequent enough that they allow you to accurately perform your role but not so frequent that they distract from your understanding. Reflection is crucial when attempting to understand a difficult task.
- **Collaboration:** Collaboration requires a combination of interaction, responsibility, and interdependence. Overall, though, there seems to be something unique about collaboration that cannot be taken apart or broken down. Collaboration means working together with others in a positive way that generates better ideas with less work. Students that display 'collaboration,' embody this concept by embracing the task and their group members without conflict or complaint.

The instructions were reiterated each day after handing back rubrics from the last class period. In the control class and in one of the experimental classes, the students were rated by the teacher. In the other experimental class, the students were instructed to score each other. In all cases, the students were made aware that these scores were formative and did not determine their final grade. Students in the peer evaluation classroom were encouraged to provide accurate feedback so they could improve in their collaboration skills and make their work together more productive.

The students viewed their rubrics daily as feedback on their collaborative performance. The collaborative structure was used as a control variable. Indeed, future studies could look at the level of participation among the group members and correlate that to performance on the objective classroom test. However, this study did not seek to accomplish that goal. Rather, the students were asked to use the rubrics as a way to look at different modes of evaluation: teacher versus peer. All students in the study participated in receiving graded rubrics of their performance, and all students from the peer evaluation class filled out and received rubrics within their reading groups.

## CHAPTER 4

### RESULTS

#### Research design

This study focused on three research questions. First, does heterogeneous grouping improve academic achievement on classroom objective comprehension tests in the secondary English classroom when formative evaluations are performed by the teacher? Second, does shifting the locus of control for formative evaluation from the teacher to the student improve academic achievement on objective classroom tests in the secondary English classroom within the framework of heterogeneous grouping? Finally, is there an interaction effect between treatment type and ability level?

An identical classroom pretest and posttest for knowledge of the assigned text was administered to 56 subjects spread over three classes to test for differences in knowledge after treatment. The control, which received the exact same instruction as the experimental classes, was comprised of 20 students. The first experimental class, which received the treatment of heterogeneous grouping, had 19 students. Finally, the second experimental class, which received the treatment of heterogeneous grouping and peer evaluations, was composed of 17 students. Students took these tests using Smart Response clickers. For this study, the gain scores from the pretest to the posttest were used as the quantitative measure of growth or dependent variable.

#### Ability level

Since a basic proposition of the study revolved around grouping students based on some facet of their pre-existing ability level, two groups were defined to compare higher ability students versus lower ability students. In order to logically create these two groups, the same

data that was used to group the students for their RT groups was used to define two equal groups: one above the median incoming state reading test score and one below it. This study used the students' most recent state reading test scores. The median score for this sample group was 79.5%. Students scoring 80 percent or above were placed in the upper bound group. Those scoring 79% or below were placed in the lower bound group. This resulted in creating two equal groups of 28 subjects. In the control class the ability level was split 14 students in the high level group and six students in the low level group. In the first experimental class which received teacher led evaluations under heterogeneous grouping the split was 11 low and 8 high. Lastly, the second experimental classroom which received student led evaluations with heterogeneous grouping contained six high level students and 11 low level students. These distinctions served as a further analytical tool in determining for whom the treatments were effective.

### Analyses

A 2x3 ANOVA was conducted with ability level and treatment type as the independent variables and raw gain scores (posttest minus pretest) as the dependent variable. Table 1 displays the descriptive statistics for this analysis in terms of pretest and posttest percentage scores.

TABLE 1

## DESCRIPTIVE STATISTICS: PERCENTAGE SCORES FOR PRETEST AND POSTEST BY TREATMENT AND ABILITY LEVEL

Group Type	Ability Level	Pretest		Posttest	
		M	SD	M	SD
Teacher/Homogenous	Low	38.33	6.976	56.00	13.387
	High	35.00	9.821	60.14	12.996
	Total	36.00	9.015	58.90	12.904
Teacher/Mixed	Low	35.45	12.493	50.91	11.291
	High	56.50	7.309	71.25	11.311
	Total	44.32	14.881	59.47	15.068
Student/Mixed	Low	36.73	10.326	49.27	14.036
	High	33.00	8.741	70.00	11.243
	Total	35.41	9.689	56.59	16.337

There was a significant main effect for treatment type:  $F(2, 50) = 3.5, p < .05, \eta^2 = .13$ . There was a significant main effect for ability level:  $F(1, 50) = 11.8, p < .01, \eta^2 = .19$ . There was also a significant interaction effect between treatment type and ability level:  $F(2, 50) = 5.8, p < .01, \eta^2 = .19$ . Table 2 displays the significant results from the ANOVA test conducted on the three classes and two ability levels.

TABLE 2

## 2 X 3 ANALYSIS OF VARIANCE COMPARING ABILITY LEVELS AND TREATMENT TYPE

Item	<i>df</i>	<i>F</i>	<i>p</i>	$\eta^2$
Treatment Type	2	3.568	.036*	.125
Ability Level	1	11.841	.001***	.191
Treatment and Ability Level	2	5.843	.005**	.189
Error	50			
Corrected Total	55			

R Squared = .355 (Adjusted R Squared = .291)

\*  $p < .05$

\*\*  $p < .01$

\*\*\*  $p < .001$

The main effect for ability showed that the high level students continued to outperform their low ability level counterparts even in the gain scores. The interpretation of the other significant findings could only be understood with post hoc analyses which are presented next.

Post hoc analyses examined the high ability students across treatment types and the student led heterogeneously grouped students across ability. The first post hoc analysis examined the effect of student led heterogeneous grouping for both high and low ability students. This one-way ANOVA generated a significant result:  $F(1, 15) = 15.8, p = .001, \eta^2 = .514$ . Comparing means indicated that the high ability students benefited significantly more than the low ability students in the student led heterogeneous treatment type. Table 3 shows the significant result for the post hoc comparison of ability level within the student led heterogeneous treatment.

TABLE 3

ONE-WAY ANOVA OF ABILITY LEVEL WITHIN THE STUDENT LED  
HETEROGENEOUS TREATMENT

Item	<i>df</i>	<i>F</i>	<i>p</i>	$\eta^2$
Ability Level	1	15.839	.001***	.514
Error	15			
Corrected Total	16			

\*\*\*  $p < .001$

The second follow up analysis compared treatment type for the high ability students only. This analysis of variance was significant:  $F(2, 25) = 8.3, p < .01, \eta^2 = .40$ . Examination of the means indicates that for the high ability students only, student led evaluations with heterogeneous grouping was the most beneficial; teacher led evaluations paired with homogenous grouping was the second best, and teacher led evaluations paired with heterogeneous grouping was the least effective. Table 4 shows the significant result for the post hoc comparison of high ability students across treatment types.

TABLE 4

## ONE-WAY ANOVA OF TREATMENT TYPE FOR HIGH ABILITY STUDENTS

Item	<i>df</i>	<i>F</i>	<i>p</i>	$\eta^2$
Treatment Type	2	8.263	.002**	.398
Error	25			
Corrected Total	27			

R Squared = .398 (Adjusted R Squared = .350)

\*\*  $p < .01$

Comparison of the gain score means by ability level and treatment type helps apprehend the significant difference in ability types across and within treatments. The high level students in the student led, mixed groups treatment had a significantly higher gain score mean than their lower level counterparts within the treatment and a significantly higher gain score mean than

their higher ability level peers in other treatment types. Table 5 shows the gain score means for all three groups by ability level.

TABLE 5  
GAIN SCORE MEANS BY TREATMENT TYPE AND ABILITY LEVEL

Treatment	Ability Level	Gain Scores		
		M	SD	N
Teacher/Homogenous	Low	17.67	11.413	6
	High	25.14	8.254	14
	Total	22.90	9.657	20
Teacher/Mixed	Low	15.45	12.201	11
	High	15.00	9.442	8
	Total	15.26	10.836	19
Student/Mixed	Low	12.55	10.921	11
	High	37.00	14.184	6
	Total	21.18	16.809	17

## Graphic representation

A graph of the gain score means aids in visualizing the difference between ability levels across treatment types. In the following figure, the treatment types are labeled on the x-axis, the gain scores are scaled on the y-axis, and each line represents either the high ability level students or low ability level students. Figure 1 displays the gain score means by ability level and treatment type.

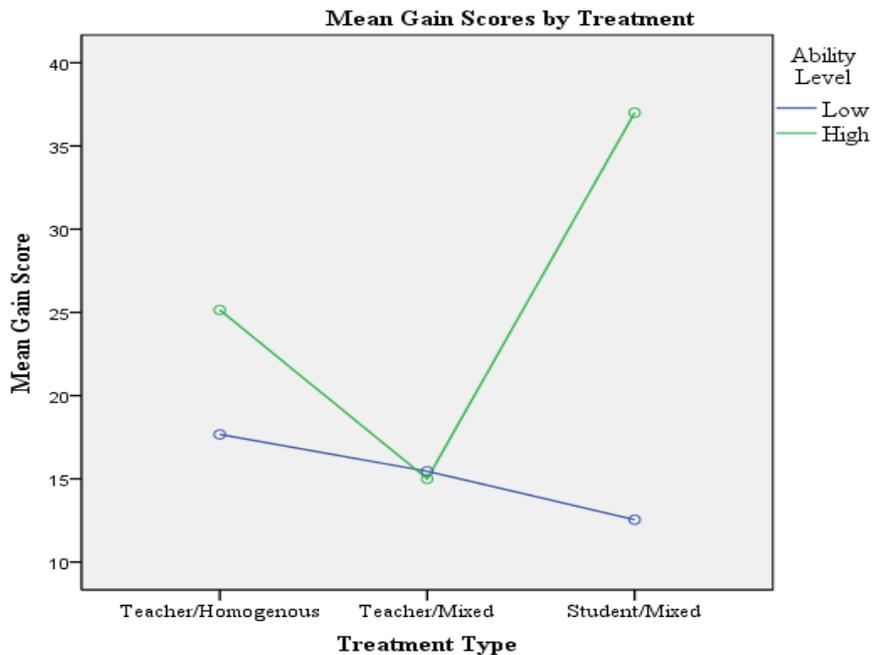


Figure 1. Graph of mean gain scores by treatment type and ability level.

The line representing high ability level students clearly dips at the treatment that combined teacher led evaluations with mixed ability grouping. The greatest difference between learner level can be visually seen within the student led heterogeneously grouped classroom. Across treatment type, the greatest difference is visually displayed by the line representing the high ability level students, while the line representing the lower level students is virtually flat.

## CHAPTER 5

### DISCUSSION

#### Interpretation

Evaluation and instruction do not exist in vacuums. When educators prepare or deliver instruction, evaluation is a key tool in the process of developing knowledge and skill. However, too often, these two components (instruction and evaluation) are seen as separate entities that can be thrown together without impacting the integrity of one another. Lessons created without proper consideration given to this facet of educational reality are not always impactful. The rationale for this study was that teachers, researchers and educational leaders should take a greater interest in finding ways to create holistic solutions rather than piecemeal bandages for the problem of educating 21<sup>st</sup> Century learners in a standards-based curriculum. The answer to competing expectations from globalization and a commoditization of educational resources does not appear to be taking several useful strategies and throwing them together without consideration. Rather, investing in a more rounded vision of education in the 21<sup>st</sup> Century involves doing considerable research to determine what avenues produce the best results in combination. This study presents just the tip to this iceberg of possible permutations.

This research began by seeking an answer to the question, under the continually mounting pressures of our globalized world, what holistic technique will provide the best opportunity for students to gain content knowledge for the tests they must take while at the same time providing real world skills that are transferrable across a 21<sup>st</sup> Century economy? RT, as a collaborative instructional practice, is the most thoroughly researched and effective mechanism for producing readers that can collaborate in an ever shifting environment. Much like the content being studied by the students (*The Tragedy of Romeo and Juliet*), the goal of this study was to

find answers with timeless import. The research questions for this study were (1) does heterogeneous grouping provide better gains for students at a single learner level or across learner levels (2) do peer evaluations increase academic achievement over teacher led alternatives, and (3) will the combination of peer evaluations with heterogeneous grouping provide the best results for all student levels or only a specific learner level?

The hypotheses for this research were based on the assumption that since evaluation and instruction are so closely related, there must naturally be a best fit when looking at different modes of each. The hypotheses for this study were: (1) students grouped heterogeneously will outperform those streamed into similar ability groups; (2) students using peer evaluations will outperform those receiving teacher evaluations; and (3) peer evaluations combined with heterogeneous grouping will produce the best results on the classroom objective test. Hypothesis (1) was not supported by the data in the results of this study. The students that were grouped with a variety of learner levels did not achieve higher gain scores than the control which was streamed into similar ability groups. Hypothesis (2) was supported for the high ability level students. As well, hypothesis (3) was supported only for high ability students.

The gain score data reveal two main patterns. First, the low ability level students' gain scores were flat across control and treatment groups. It could be inferred that the treatments considered in this study had no effect. However, it should not be assumed that none of them were of any benefit. Due to the nature of this action research, all procedures were of high quality for student learning. It is quite possible that each of the conditions considered were of benefit to the low level learners. In this case, the law of diminishing returns might apply. In this way, the subtle improvements grouping style and evaluation modality offer might be have been eclipsed by the significant effect RT had on student learning. Also, the text that was covered during the

unit of study (*Romeo and Juliet*) was significantly harder than other possible texts. The difficulty level itself could have mitigated the positive influence one of the treatments might have had for that level of student.

Second, the high level students' gains were significantly smaller under one condition: when receiving teacher evaluations in mixed ability groups. This complex and unexpected result clearly points to the fact that combinations of treatments do in fact matter. The precise meaning of this result is debatable but seems to provide evidence that high level learners, while working with peers from lower ability levels, do not perform as well when receiving teacher evaluations.

Pressure to perform for the teacher on behalf of the group could impede actual interaction with their peers resulting in lower gain scores. While this is not substantiated with any qualitative data, it appears to explain the dip in gain scores among high level students. For instance, high level students, placed with other high achievers, gained more than those in mixed ability groups when receiving the same teacher generated evaluations. Furthermore, high level students gained most when mixed with lower learner levels and evaluated by those same peers. Overall, the treatment results must be analyzed in context of one another to truly appreciate the impact of each individually. Mixed ability grouping may only reap benefits when the evaluation type supports the structure and expectations of collaboration.

Different pressures impose themselves once the locus of control is shifted in terms of collaborative evaluation. The benefits of collaboration for high level students' comprehension might be negated by teacher evaluations once the dynamics of the group are altered by mixing ability levels. While the teacher is still the evaluator of the students' final grades for the unit, the procedure for this study asked students to focus on their behaviors in the group. If students' interactions were meaningful, the evidence proving collaboration effective should have come to

bear on students' gains. A possible explanation for a dip in gain scores is a lack of collaboration among those students. As Johnson and Johnson (1984) note, in order for meaningful collaboration to occur, a sense of interdependence must be instilled. Mixed grouping may change the students' perceptions of the group so that teacher evaluations make independence among high level achievers more attractive.

### Congruity with literature

The results of this study in some cases lay flush with the data already compiled on RT, mixed ability grouping, and peer evaluations. However, in many ways the former adds new complexity or even challenge the assumptions on which are based.

The prevailing belief that RT provides the meaningful outcomes for low level readers (Alfassi, 1998; Hart & Speece, 1998; Lederer, 2000; Rosenshine & Meister, 1994; Spivey & Cuthbert, 2006) was not supported by this study. However, since the focus and design was not built to explore this assumption it cannot be said that RT in general is not of benefit to the low level readers in this study. As stated previously, a main obstacle between the low level students and mastery of the content may have been the difficulty level of the text itself. Elizabethan English might have been outside the zone of proximal development for these students, thus nullifying the beneficial elements of collaborative reading and analysis.

Similarly, previous research points to mixed ability grouping as a boon for low level students (Corbett-Burris, et al, 2006; Lejk, et al, 1999; Saleh, et al, 2005; Webb, et al, 2002). Unfortunately, that result was not demonstrated clearly through this research. Rather, low level students' gains in the heterogeneous grouped classroom were flat when compared to the homogeneously grouped classroom.

Finally, the most significant result from the study was observed among high level students that received peer evaluations. Peer evaluations have a strong propensity to decrease social loafing (Aggarwal & O'Brien, 2008). Keeping them located securely within the context of the classroom is important when attempting to preserve a positive and collaborative work environment (Dommeyer, 2006). Unfortunately, low level students did not appear to benefit from peer level feedback during the course of this research. Rather, it was their high level classmates that saw the greatest gains in achievement. In this case, peer evaluations are preferable for high level students, especially when student ability grouping leans toward heterogeneity.

#### Limitations

Limitations, while natural to any research design, are certainly most apparent when dealing with human subjects. Also, not only were the subjects of this study human, they were children below the age to consent for treatment operating under the assumption that they are receiving the best possible learning opportunities from their teacher. For this reason, it would have been impossible to deprive certain treatment groups of instructional practices found to be beneficial. The action research produced in this study merely sought to discover if one style of treatment is beneficial over another, and because of its very nature, this style of research produces limitations that impact internal and external validity.

The initial limitation inherent to this research was from sampling. Since the participants in this action research were the classroom students of the investigator, no random sampling could be conducted. In addition, the sample size in this study defies the impetus to generalize. These two sampling errors affect the internal validity of the study. However, the treatments were

selected for each classroom by drawing numbers from a hat and in all logistically possible ways the design of the research attempted to control for the inherent differences between samples. These included control variables such as lesson pacing, lesson delivery, teacher instructions, essential questions, journal topics, and informal quiz questions.

The second limitation of this study was the research design. While a true experimental design would have been preferable, due to the considerable obligation to teach each student with the best strategies available, selections in treatment were made in this study that might have mitigated differences in the treatment groups. For instance, the use of RT among all groups might have clouded differences that could become apparent without its use or with limited use in only the treatment classrooms. Also, the Workshop Model for instruction created homogeneity among treatment groups that could have diminished possibly significant differences. These confounding variables surely constrict the internal validity of the study and its results.

#### Further research

The results of this study point toward peer evaluations as an option to unlocking greater gains among students in collaborative groups. In the future, research could focus on qualitative descriptions of peer evaluations' effects on student learning within different types of classrooms. Also, due to the limitation of sample size, peer evaluations were not observed in the context of homogeneous ability grouping. Peer evaluations should be more closely observed in a variety of content areas and within a variety of instructional practices to determine if they are uniformly beneficial for high level students' gain scores.

In addition, further research should be done that combines strategies. Although this can threaten the internal validity of a study's central focus, it can often provide better external and

ecological validity. Rarely do educators select strategies out of a hat and pair them together; they are ushered toward strategies that their districts have spent considerable sums of money to implement. How often do district leaders consider the impact those strategies will have on one another? More educational research should focus on a holistic vision of teaching and learning rather than narrow narratives of specific strategies.

The 21<sup>st</sup> Century holds within its grasp transformational advances in technology. Those advances are being made by virtue of our connectedness. Rather than teach students to use technologies that will be outdated in a matter of months, educators should be keenly concentrated on preparing students to connect meaningfully with other people. Often these connections are made possible by unique and innovative technologies. But, the basic drive to connect is something that technology did not create. While students can spread their arms globally using Google, Facebook, a cell phone or an iPad, educators still need to teach those students how to reach across a row of seats and simply say, “Hello.” Globalization makes it necessary to interact across continents, but it also reinforces the need to hone the skills of communication within the classroom.

## BIBLIOGRAPHY

## BIBLIOGRAPHY

- Aggarwal, P., & O'Brien, C. L. (2008, August). Social loafing on group projects: Structural antecedents and effect on student satisfaction. *Journal of Marketing Education, 33*(3), 255-264. doi:10.1177/0273475308322283
- Alfassi, M. (1998, Summer). Reading for meaning: The efficacy of reciprocal teaching in fostering reading comprehension in high school students in remedial reading classes. *American Educational Research Journal, 35*(2), 309-332. Retrieved July 2010 from <http://www.jstor.org/stable/1163426>
- Baer, J. (2003, Fall). Grouping and achievement in cooperative learning. *College Teaching, 51*(4), 169-175. doi:10.1080/87567550309596434
- Cheng, R. W.-Y., Lam, S.-F., & Chan, J. C.-Y. (2008, June). When high achievers and low achievers work in the same group: The roles of group heterogeneity and processes in project-based learning. *British Journal of Educational Psychology, 78*, 205-221. doi:10.1348/000709907X218160
- Corbett-Burris, C., Heubert, J. P., & Levin, H. M. (2006, Spring). Accelerating mathematics achievement using heterogeneous grouping. *American Educational Research Journal, 43*(1), 105-136. doi:10.3102/00028312043001105
- Dommeyer, C. J. (2006, September/October). The effect of evaluation location on peer evaluations. *Journal of Education for Business, 82*(1), 21-26. Retrieved from ERIC database. (EJ773166)
- Drake, D. D., & Mucci, R. (1993, November/December). Untracking through the use of cooperative learning. *The Clearing House, 67*(2), 123-126.
- Green, E. G., Deschamps, J.-C., & Paez, D. (2005, May). Variation of individualism and collectivism within and between 20 countries: A typological analysis. *Journal of Cross-Cultural Psychology, 36*(3), 321-339. Retrieved January 2011 from [http://www.ehu.es/pswparod/pdf/articulos/greenetal2005\\_JCCP.pdf](http://www.ehu.es/pswparod/pdf/articulos/greenetal2005_JCCP.pdf)
- Hacker, D. J., & Tenent, A. (2002, December). Implementing reciprocal teaching in the classroom: Overcoming obstacles and making modifications. *Journal of Educational Psychology, 94*(4), 699-718. doi:10.1037//0022-0663.94.4.699
- Hart, E. R., & Speece, D. L. (1998, December). Reciprocal teaching goes to college: Effects for postsecondary students at risk for academic failure. *Journal of Educational Psychology, 90*(4), 670-681. Retrieved from ERIC database. (EJ587337)
- Janssen, J., Kirschner, F., Erkens, G., Kirschner, P. A., & Paas, F. (2010, June). Making the black box of collaborative learning transparent: Combining process-oriented and cognitive load approaches. *Educational Psychology Review, 22*(2), 139-154. doi:10.1007/s10648-010-9131-x

## BIBLIOGRAPHY (continued)

- Johnson, D. W., & Johnson, R. T. (1984, October). Cooperative small-group learning. *Curriculum Report, 14*(1), 1-8. Retrieved from ERIC database. (ED249625)
- Johnson, D. W., Johnson, R. T., Stanne, M. B., & Garibaldi, A. (1990, August). Impact of group processing on achievement in cooperative groups. *The Journal of Social Psychology, 130*(4), 507-516. Retrieved from ERIC database. (EJ422057)
- Juchun Chu, R., & Zichun Chu, A. (2010, August). Multi-level analysis of peer support, Internet self-efficacy and e-learning outcomes: The contextual effects of collectivism and group potency. *Computers and Education, 55*(1), 145-154. doi:10.1016/j.compedu.2009.12.011
- Jung, D., & Avolio, B. (1999, April). Effects of leadership style and followers' cultural orientation on performance in group and individual task conditions. *Academy of Management Journal, 42*(2), 208-218. Retrieved January 2011 from <http://www.jstor.org/stable/257093>
- Kansas Department of Education. (2008, June). Curricular standards, model standards, and resources. In *Kansas State Department of Education: Standards*. Retrieved June 2010 from <http://www.ksde.org/Default.aspx?tabid=1678>
- Kansas Department of Education. (2012, April). Wichita West High School report card. In *Kansas Department of Education report card*. Retrieved April 2012 from [http://svapp15586.ksde.org/rcard/building.aspx?org\\_no=D0259&bldg\\_no=1844](http://svapp15586.ksde.org/rcard/building.aspx?org_no=D0259&bldg_no=1844)
- King, P. E., & Behnke, R. R. (2005, Spring). Problems associated with evaluating student performance in groups. *College Teaching, 53*(2). Retrieved from ERIC database. (EJ711945)
- Lederer, J. M. (2000, January/February). Reciprocal teaching of social studies in inclusive elementary classrooms. *Journal of Learning Disabilities, 33*(1), 91-106. Retrieved from ERIC database. (EJ601417)
- Lejk, M., Wyvill, M., & Farrow, S. (1999, March). Group assessment in systems analysis and design: A comparison of the performance of streamed and mixed-ability groups. *Assessment and Evaluation in Higher Education, 24*(1), 5-14.
- Levine, R. E., Kelly, P. A., Karakoc, T., & Haidet, P. (2007, January/February). Peer evaluation in a clinical clerkship: Students' attitudes, experiences, and correlations with traditional assessments. *Academic Psychiatry, 31*(1), 19-24. Retrieved from ERIC database. (EJ806656)
- Marcell, B., DeCleene, J., & Juettner, M. R. (2010, May). Caution! hard hat area! comprehension under construction: Cementing a foundation of comprehension strategy usage that carries over to independent practice. *The Reading Teacher, 63*(8), 687-691. Retrieved June 2010 from <http://www.reading.org>

## BIBLIOGRAPHY (continued)

- Marzano, R. J., Pickering, D. J., & Pollock, J. E. (2001). Applying the research on instruction: An idea whose time has come. In *Classroom instruction that works* (chap. 1). Retrieved from <http://www.ascd.org>
- McCarthy, C., Rezai-Rashti, G. M., & Teasley, C. (2009). Race, diversity, and curriculum in the era of globalization. *Curriculum Inquiry*, 39(1), 75-96. Retrieved June 2010 from <http://www.blackwell-synergy.com/doi/abs/10.1111/j.1467-873X.2008.01438.x>
- National Governors Association/Council of Chief State School Officers. (2010). National Governors Association and State Education Chiefs launch common state academic standards. In *Common core state standards initiative*. Retrieved July 2010 from Council of Chief State School Officers website: <http://www.corestandards.org/articles/8-national-governors-association-and-state-education-chiefs-launch-common-state-academic-standards>
- NYC Department of Education, (2012, April). The Workshop Model. Retrieved April 2012 from <http://schools.nyc.gov/documents/d75/math/Workshop%20model.pdf>
- Nesbit, C. R., & Rogers, C. A. (1997, Winter/Spring). Using cooperative learning to improve reading and writing in science. *Reading and Writing Quarterly*, 13(1), 53-70. Retrieved from ERIC database. (EJ589374)
- Oyserman, D., & Lee, S. W. (2008, March). Does culture influence what and how we think? Effects of priming individualism and collectivism. *Psychological Bulletin*, 134(2), 311-342. doi:10.1037/0033-2909.134.2.311
- Palincsar, A. S., & Brown, A. L. (1983, January). *Reciprocal teaching of comprehension-monitoring activities* (Rep. No. 269). Retrieved from ERIC database. (ED225135)
- Partnership for 21st century skills. (2004). Framework for 21st century learning. In *The partnership for 21st century skills: Overview*. Retrieved July 2010 from [http://www.p21.org/index.php?option=com\\_content&task=view&id=254&Itemid=119](http://www.p21.org/index.php?option=com_content&task=view&id=254&Itemid=119)
- Rosenshine, B., & Meister, C. (1994, Winter). Reciprocal teaching: A review of the research. *Review of Educational Research*, 64(4), 479-530. Retrieved from ERIC database. (EJ500529)
- Saleh, M., Lazonder, A. W., & De Jong, T. (2005, March). Effects of within-class ability grouping on social interaction, achievement, and motivation. *Instructional Science*, 33(2), 105-119. doi:10.1007/s11251-004-6405-z
- Saulny, S. (2010, March 10). Kansas City to close nearly half its schools. *New York Times*. Retrieved June 2010 from <http://www.nytimes.com/2010/03/11/us/11kansascity.html>

## BIBLIOGRAPHY (continued)

- Schaubroeck, J., Lam, S. S., & Cha, S. E. (2007). Embracing transformational leadership: Team values and the impact of leader behavior on team performance. *Journal of Applied Psychology, 92*(4), 1020-1030. doi:10.1037/0021-9010.92.4.1020
- Sharan, S. (1980, Summer). Cooperative learning in small groups: Recent methods and effects on achievement, attitudes, and ethnic relations. *Review of Educational Research, 50*(2), 241-271. Retrieved from ERIC database. (EJ229098)
- Slater, W. H., & Horstman, F. R. (2002, Summer). Teaching reading and writing to struggling middle school and high school students: The case for reciprocal teaching. *Preventing School Failure, 46*(4), 163-166. Retrieved from ERIC database. (EJ653731)
- Slavin, R. E. (1980, Summer). Cooperative learning. *Review of Educational Research, 50*(2), 315-342. Retrieved from ERIC database. (EJ229101)
- Slavin, R. E., Lake, C., & Groff, C. (2009, June). Effective programs in middle and high school mathematics: A best-evidence synthesis. *Review of Educational Research, 79*(2), 839-911. doi:10.3102/003465430833096
- Spivey, N. R., & Cuthbert, A. (2006, October). Reciprocal teaching of lecture comprehension skills in college students. *Journal of Scholarship of Teaching and Learning, 6*(2), 66-83. Retrieved from ERIC database. (EJ854927)
- Strauss, V. (2010, June 3). What common core state standards are -- and aren't [Web log post]. Retrieved June 2010 from The Answer Sheet: <http://voices.washingtonpost.com/answer-sheet/national-standards/what-the-common-core-standards.html>
- US Census Bureau. (2010). *Hispanics in the United States* [Data file]. Retrieved June 2010 from [http://www.census.gov/population/www/socdemo/hispanic/files/Internet\\_Hispanic\\_in\\_US\\_2006.pdf](http://www.census.gov/population/www/socdemo/hispanic/files/Internet_Hispanic_in_US_2006.pdf)
- van Garderen, D. (2004, April). Reciprocal teaching as a comprehension strategy for understanding mathematical word problems. *Reading & Writing Quarterly, 20*(2), 225-229. doi:10.1080/10573560490272702
- Webb, N. M., Nemer, K. M., & Zuniga, S. (2002, Winter). Short circuits or superconductors? Effects of group composition on high-achieving students' science assessment performance. *American Educational Research Journal, 39*(4), 943-989. Retrieved June 2010 from <http://www.jstor.org/pss/32024>

## APPENDICES

APPENDIX A

LESSON PACING GUIDE AND PLAN

Monday	Tuesday	Wednesday	Thursday	Friday
<ol style="list-style-type: none"> <li>1. Pretest</li> <li>2. Introduce essential question</li> <li>3. Journal about essential questions</li> <li>4. Introduce collaboration rubric</li> <li>5. Introduce Reciprocal Teaching</li> </ol>		<ol style="list-style-type: none"> <li>1. Review RT</li> <li>2. Review collaboration rubric</li> <li>3. Reading Assignment=Act I, scene i</li> <li>4. Journal and quiz</li> <li>5. Evaluation</li> </ol>		<ol style="list-style-type: none"> <li>1. Review RT</li> <li>2. Review and return collaboration rubric</li> <li>3. Reading Assignment=Act I, scenes ii-v</li> <li>4. Journal and quiz</li> <li>5. Evaluation</li> </ol>
	<ol style="list-style-type: none"> <li>1. Review RT</li> <li>2. Review and return collaboration rubric</li> <li>3. Reading Assignment=Act II, scenes i-iii</li> <li>4. Journal and quiz</li> <li>5. Evaluation</li> </ol>		<ol style="list-style-type: none"> <li>1. Review RT</li> <li>2. Review and return collaboration rubric</li> <li>3. Reading Assignment=Act II, scene iv-Act III, scene i</li> <li>4. Journal and quiz</li> <li>5. Evaluation</li> </ol>	
<ol style="list-style-type: none"> <li>1. Review RT</li> <li>2. Review and return collaboration rubric</li> <li>3. Reading Assignment=Act III, scenes ii-v</li> <li>4. Journal and quiz</li> <li>5. Evaluation</li> </ol>		<ol style="list-style-type: none"> <li>1. Review RT</li> <li>2. Review and return collaboration rubric</li> <li>3. Reading Assignment=Act IV</li> <li>4. Journal and quiz</li> <li>5. Evaluation</li> </ol>		<ol style="list-style-type: none"> <li>1. Review RT</li> <li>2. Review and return collaboration rubric</li> <li>3. Reading Assignment=Act V, scenes</li> <li>4. Journal and quiz</li> <li>5. Evaluations</li> </ol>
	<ol style="list-style-type: none"> <li>1. Review RT</li> <li>2. Review and return collaboration rubric</li> <li>3. Review Day with group</li> <li>4. Journal and quiz</li> <li>5. Evaluations</li> </ol>		<ol style="list-style-type: none"> <li>1. Posttest</li> <li>2. Return evaluations</li> <li>3. Debrief collaboration experience</li> <li>2. Review the essential questions</li> <li>3. Journal over essential questions</li> </ol>	

APPENDIX B

COLLABORATION RUBRIC

Student Name: _____				
Date: _____				
	0	1	3	5
Interaction				
Responsibility				
Interdependence				
Cooperation				
Reflection				
Please mark an X in the box for each row (Interaction, Responsibility, Interdependence, Cooperation, and Reflection) based on how the student performed during this class period.				
5=above average, 3=average, 1=below average, and 0=not observed				

## APPENDIX C

### ESSENTIAL QUESTIONS, QUIZ QUESTIONS, AND JOURNAL TOPICS

#### Essential Questions

1. Why do we (collectively as a human race) read really old literature? Why aren't we reading something more modern that contains the same themes, topics, or lessons? What is it about classic literature that compels us to read and teach it?
2. What does it mean to be a family? This is a structure that has existed for as long as we have record of human history? What do all families have in common, no matter the time period, cultural background, or geographic location?

#### Quiz Questions

##### Act I

##### (Day 2)

1. Who starts the fight on the streets of Verona at the beginning of the play and how?
2. Why, specifically, are Romeo's parents worried about him?
3. What does Romeo tell Benvolio?

##### (Day 3)

4. Who wants to marry Juliet?
5. Why does Juliet's father say no?
6. Who knows Juliet better than anyone else?
7. Why does Romeo go to the Capulet ball?

##### (Day 4)

##### Act II

8. What do Romeo and Juliet decide?

9. Why does Friar Laurence not buy into Romeo's interest in Juliet?
10. What does Friar Laurence agree to do and why?

(Day 5)

11. Where do Romeo and Juliet get married?

Act III

12. Who kills Mercutio?
13. Who kills Tybalt?
14. What happens to Romeo?

(Day 6)

15. Why is Juliet sad, then happy, then sad again?
16. What is Lord Capulet's plan to cheer her up?
17. What is Juliet's reaction to this plan?
18. What is the nurse's advice?

(Day 7)

Act IV

19. Whom does Juliet go to for advice?
20. What is the plan she devises with this person?
21. What does she fear about this plan?

(Day 8)

Act V

22. How does Romeo die?
23. How does Juliet die?
24. What do the families and Prince decide to do?

## Journal Topics

(Day 1)

1. Why do we (collectively as a human race) read really old literature? Why aren't we reading something more modern that contains the same themes, topics, or lessons? What is it about classic literature that compels us to read and teach it?
2. What does it mean to be a family? This is a structure that has existed for as long as we have record of human history? What do all families have in common, no matter the time period, cultural background, or geographic location?

(Day 2)

3. Describe a time when you were in an argument with someone. How could you have avoided conflict with this person?

(Day 3)

4. What are your feelings about arranged marriage? What would you do if your parents tried to set you up on a date?

(Day 4)

5. Do you believe in love at first sight? Why or why not?

(Day 5)

6. Is murder ever justified, individually or as a state action (death penalty)?

(Day 6)

7. Do you believe in fate over free will or free will over fate; what rules your life?

(Day 7)

8. When is it okay to keep a secret? When is it not?

(Day 8)

9. Why is suicide never a good option? Name three things you can always be thankful for no matter how sad you are feeling.