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Increasing Reading Achievement Through Guided Collaboration In an Elementary Setting

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Abstract

Increasing academic achievement for students with disabilities is important because students with Individualized Education Plans (IEPs) are often two or more years academically behind peers. Students with disabilities make slow progress and there is not a consensus on how to make improvements in academic achievement. This study sought to improve academic achievement through the use of cycle of continuous improvement based in a professional learning community (PLC) and the inclusion of special educators on these teams. Specifically, two questions were explored through a mixed methods design: Does a guided collaboration approach affect third grade students' reading performance? And if so, does a guided collaboration approach affect general and special education teachers' perceptions of collaboration? This study used two groups and a pretest/posttest to compare student achievement scores. The control group (n = 64) received traditional instruction and the treatment group (n = 80) received small group instruction based on data obtained in a guided PLC. Independent samples t-tests were completed to determine the difference in student achievement scores. The results suggest that the guided collaboration increased student achievement compared to those whose received traditional instruction. Future research exploring the implementation of guided collaboration in broader contexts such as at the school or district level is needed.

Keywords: Professional Learning Communities, Special education, Guided Collaboration

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Increasing Reading Achievement through Guided Collaboration in an Elementary Setting

There is an achievement disparity between students with disabilities and general education students. Students with mild to moderate disabilities (SWD), such as Specific Learning Disability or Speech Language Disability, have historically not met expectations in achievement growth set by government guidelines under the No Child Left Behind Act of 2001(NCLB) and its successor, the Every Student Succeeds Act of 2015 (ESSA). According to the U.S. Department of Education in 2014 SWD scored significantly below their peers without disabilities in reading and mathematics in Grade 4 on the 2013 National Assessment of Educational Progress. In Grades 8 and 12, SWD scored even lower relative to their peers in mathematics while remaining within reasonable statistical variance in reading (U.S. Department of Education, Institute of Education Sciences, 2014). While SWD demonstrate growth in reading achievement these gains are outpaced by their peers. This is apparent because SWD are being measured on the same standardized assessments, often without being exposed to the same academic content and state standards as their peers.

One of the most effective ways to increase student achievement for SWD is the integration of special education teachers into professional learning communities (PLCs; Blanton, 2011). DuFour, DuFour, Eaker, Many, and Mattos (2016) define a PLC as a group of educators that work collaboratively to improve their teaching skills and the academic performance of all students. Educators participating in PLCs meet regularly and are open to sharing their thoughts and expertise with each other (Schaap, 2017). Multiple researchers have investigated the impact of PLCs on student achievement (DuFour et al., 2019; Harris & Jones, 2010; Many & Schmidt, 2013; Saunders et al., 2009); however, few have studied the effects of including special

educators in the PLC alongside the general education teachers (Blanton & Perez, 2011; Malone & Gallagher, 2010; Shipley, 2006).

PLCs often differ in their group characteristics, collaborative activities, and collective outcomes. When educators work as a team and share a common vision about their aims and professionalism, the PLC is more often than not successful with their goals (Hattie, 2013). There are three major components to a successful PLC: collaboration between teachers, professional development led by a qualified professional, and administrative support (DuFour et al., 2019; Harris & Jones, 2010; Many & Schmidt, 2013; Saunders et al.,2009). These components promote collective teacher efficacy, understanding, and attitudes to the benefit of students. PLC's provide an opportunity for teachers to collaborate and focus on ways to improve student achievement.

Collaboration

Teacher collaboration through the PLC model is increasingly promoted as a way to improve collective teacher efficacy and student achievement. Collaboration is a constructivist approach to adult learning that allows adults to learn from their colleagues through shared experiences and reflections. For example, Joyce and Showers (2002) found that only 5-10% of teachers take on a new kind of learning when presented traditionally through a whole group staff meeting as opposed to up to 95% of teachers when new concepts are presented in a small group collaborative environment. PLCs provide structured time and opportunities to explore student data needed for extended collaboration that cannot be met through a traditional after school staff meeting time. Collaboration starts with establishing trust and creating an instructional focus.

Important facets of collaboration during successful PLC are respect, trust, shared leadership, and an instructional focus (Harris & Jones, 2010). In Bryk and Schneider's 2002 longitudinal analysis of restructuring schools, different types of trust in the school setting were

key factors in successful school reform. Bryk and Schneider (2002) discuss that relational trust, where each member of the school has set agreements and understanding of the obligations and expectations of others. The relational trust reduces vulnerability of members of a team and increases security of the team. When trust is broken teams will fall apart. Interactions between team members depend on the shared belief that all professionals have competence in their responsibilities to educate all students.

Furthermore, collegiality among members of the team and school district are needed for positive student learning outcomes. Successful teams also need to possess a knowledge and skill base that assists with effective learning by the team (Harris & Jones, 2010). Teachers working collaboratively need to have shared values and vision. Additionally, teams need shared leadership at the site level and support from administration. Collaborative teams need to be focused on the impact and outcomes for the students and have a continuous cycle of improvement.

A continuous cycle of improvement is an inquiry cycle that has three main phases: Plan-Prepare, Teach-Assess, and Analyze-Reflect (New Teacher Center, 2016) it is also presented as a plan-do-study-act (PDSA) (Tichnor-Wagnor, et. al 2017). Throughout the process teachers plan lessons together, teach and assess student progress followed by analysis of student work with reflection on teaching practices (New Teacher Center, 2016). During the PLC process the team uses the following questions to help guide them: “What do our students need to learn?” “How will we know if our students are learning?” “How will we respond when out students struggle to learn?” “How will we extend the learning for our proficient students?” (New Teacher Center, 2016). By using a continuous cycle of improvement teachers plan lessons together, teach and

monitor student progress followed by analysis of student work with reflection on teaching practices (New Teacher Center, 2016).

This cycle along with norms for decision making and involvement need to be agreed upon and implemented by the PLC and followed as a protocol. This can be helped by experienced classroom teachers bringing new members into the PLC and showing them how the team structure works. In Sutton and Shouse's 2019 study, a lack of setting norms in general was one of the major reasons teams failed. They investigated how members of an autonomous teacher collaborative team structured their time when working together and how different years of experience in teaching in a classroom played into their success as a PLC which in turn led to higher student achievement. Successful PLCs need to establish routines such as sharing information and practices. In order to facilitate this all members of the team should be treated as equals regardless of years of experience or status within the group. Status can have an effect on how the group functions. Sutton and Shouse (2019) identify that high- status teachers, or teachers with more years of classroom experience, tended to lead and dominate conversations, while novice teachers were reluctant to participate. Although novice teachers are generally ones that are more open and receptive to change. When novice teachers were encouraged to contribute to discussions and make decisions regarding problems of practice, they felt respected. This results in each member of the team being uniquely qualified in different aspects of teaching (Sutton & Shouse, 2019). Openness by all team members to try new materials and different routines offered by traditional professional development created a more positive atmosphere for the team (Sutton & Shouse, 2019). According to Goldring and colleagues (2014) 41.7% of public teachers who left the profession felt that opportunities from learning from colleagues was better in their current position then when they were educators. Additionally, 44.9% felt that they had better support and

recognition from administrators or managers in their current position. By incorporating key elements that foster trust and respect, PLCs offer a different avenue to professional development by creating a small group atmosphere

Professional Development

One way that a PLC can build teacher capacity to increase student achievement is through professional development (PD). In their 2011 study, Dingle and colleagues (2011) looked at Literacy Learning Cohorts for special educators to improve word study and fluency instruction of special education teachers. As part of the study, PD was delivered over a course of 6 months using a variety of methods of delivery: content focus, teacher-centered, active learning, coherence, and duration. Each piece of the PD provided a layer of learning for the teachers. By providing PD in increments, teachers were able to learn about the developmental process of the most important parts of word study and fluency (Dingle et al., 2011). The researchers saw that the impact of PD was more profound on the teachers who were able to implement and integrate the new strategy into their classroom (Dingle et al., 2011). Special education teachers bring a wide variety of knowledge and skill to content areas and that variety needs to be addressed when teachers are participating in a PLC and how they can apply that skill base to a team.

Echevarria (2010) notes that general education and special education teachers need to learn the best practices together in order to meet the needs of all learners. When PLCs meet regularly and are open to sharing their thoughts and expertise with each other student achievement can be increased (Echevarria, 2010). Peer observation and analysis of teaching methods is one of the main ways teachers can learn from others; focusing on the whole child and not their disability or language needs is an effective way to meet their specific areas of growth. This can be facilitated by support from administration.

Administrative Support

Administrators that invest time and guide discussions on how assessment data improves instruction for every student in the school, not just those in general education, effect greater academic outcomes for students. Schools that create a shared vision for their students often fail to address students that have disabilities and excludes them from consideration as the school moves forward (Blanton, 2011). By including special education students into the stated and unstated vision for the school, the practice of isolating special education becomes moot. Blanton (2011) further points out that school leaders should encourage spontaneous, voluntary, and development-orientated working relationships among teachers in a safe, nonthreatening environment where teachers can talk openly regarding their classroom practices and student learning.

The dialogue within PLCs in a collaborative culture needs to focus on student learning for all students. Carpenter (2014) explored supportive services and shared leadership structures at schools as a function of school culture, policies and procedures. School leaders that removed themselves from the cycle of continuous improvement created boundaries where it was difficult for teachers to propose divergent views or ideas about the improvement cycle. School administrators should promote teacher leaders by providing year-long training and follow-up with the professional learning community. In Carpenter's (2014) study, shared leadership practice was a central component of effective professional learning in collaborative groups. Furthermore, Carpenter (2014) found that distributed, supported, and shared leadership was a daily practice in successful schools and made for high gains in student achievement. Additionally, schools that did not have a shared leadership structure were more likely to have a culture of distrust, a lack of openness to improvement, and a focus on teacher accountability.

These findings are essential when implementing PLCs for general and special education teachers that focus on developing inclusive practices for SWD.

Collective Teacher Efficacy

Teachers working together in a PLC have a stronger impact on student achievement than working independently. According to Hattie (2017), collective teacher efficacy has the potential to considerably accelerate student achievement. Lee and colleagues (2010) analyzed PLCs; results indicated the more open and supportive a PLC is in a school environment, the more successful the team would be to in supporting student learning. By working collectively in creating and sharing instructional strategies, the PLC is creating a community of learning (Lee et al., 2010). Historically, PLCs have consisted of only general education teachers but the inclusion of a special education teacher into the collaboration team is a necessity for success (Bean & Lillenstein, 2012). A combined PLC of general and special education teachers help with teachers' understanding of students and attitude toward collaboration.

Teacher's Understanding and Attitudes

Saunders and colleagues (2009) found student achievement in schools which introduced PLCs that focused solely on improving students' classroom learning was dependent on teachers' shared understandings and attitudes of how PLCs work. Saunders and colleagues (2009) point out that the time for collaboration by itself, even when administratively supported, is unlikely to improve achievement unless additional conditions are in place that structure its use. Teachers with PLC time that was focused on improving instruction and achievement made student achievement gains. When learning teams had a specific, teacher created focus, they were productive and could work through the practices associated with curricular or instructional initiatives and mandates when aligned and managed well. The researchers expressed that solely

training principals did not produce significant gains (Saunders et al., 2009). Therefore, further emphasizing the role of collaboration of teacher leaders and special educators, as well as, administrators in a successful PLC model.

Inclusion of Special Education

Many and Schimdt (2013) discuss that through the use of PLCs general and special educators are able to communicate in an open environment. PLCs foster meaningful collaboration regarding about instructional pacing, expectations and standards. A major benefit is that special educators become experts in guiding general educators in strategies such as differentiation and modification (Many & Schmidt, 2013). In their study of special education teachers' attitudes and perceptions of teamwork, Malone and Gallagher (2010) indicated special educators who have a positive experience are more willing to participate and will have a positive influence on the group. Open and honest communication with all members of the team creates a productive atmosphere where students can benefit. Malone and Gallagher (2010) also point out that team-based support increases ownership and participation of the individualized education process and reduces the feelings of isolation for all stakeholders. Teams that have a positive perception of the team process are more likely to promote the process to others (Malone & Gallagher, 2010; Margolis and Fiorelli, 1984). Furthermore, special education teachers who have positive team experiences are more likely to participate fully in a collaborative process and be in a place to have more influence on a group. Special educators who are willing to work with a group will be willing to put additional time and energy into the PLC, which in turn will benefit students.

Benefits for Students

Many and Schmidt (2013) concluded that when teachers collaborated effectively with special educators student achievement increased. Creating alternative assessments for SWD did not demonstrate student growth; it was only with focused collaboration and teaching students with the rigor of the general education curriculum that increased student achievement (Many & Schmidt, 2013). Therefore, educators should focus on collaborating within a team of both special and general educators. As of 2014, the graduation rate for special education students was almost 20% below general education students (DuFour et al., 2016). Underscoring the need for SWD to have the exposure and rigor of general education. By collaborating with special education colleagues, general education teachers are exposed to a greater number of strategies to help struggling students, including those who are at risk or have Individual Education Plan (Blanton & Perez, 2011).

Conclusion

There is an achievement gap between SWD and their general education peers. Teacher collaboration through the use of PLCs has been shown to increase student achievement. Joyce and Showers (2002) found that when teachers participate in traditional professional development, which is presented in a whole group setting, after the school day or in a single day event, few teachers will take on new learning, but when teachers learn in a collaborative environment almost all will implement the new practice and increase collective teacher efficacy for all students. School leaders that encourage the use of PLCs in their school environment and develop positive working relationships among teachers by creating a safe, nonthreatening environment where teachers can speak openly regarding their classroom practices and student learning experience success bridging the achievement gap.

The dialogue within PLCs in a collaborative culture needs to focus on student learning for all, not just general education students. Once PLCs or in some districts grade level teams (GLT), are established, collective teacher efficacy improves and classroom practice becomes more successful (Dufour et al., 2016). Increased student achievement for all students, SWD and general education, is the ultimate result. Teamwork between general and special education teachers is a necessity to increase achievement for all students. All teachers are more effective when they work together to create a quality plan for student achievement (Paneque & Barbetta, 2006).

Methods

Research Question

This study has two research questions:

1. Does a guided collaboration approach affect third grade students' reading performance as measured by the developmental levels of a quarterly benchmark assessment?
2. Does a guided collaboration approach designed to focus on the growth of third grade students with special needs affect regular and special education teachers' perceptions of collaboration?

Hypothesis

As prior research demonstrates, a PLC that emphasizes teachers working together to develop a shared vision for student outcomes, improves their teaching practice, and learning for all students (Laine, 2013). Therefore, my hypothesis was that a guided collaboration approach focusing on the needs of a group of students would increase achievement for all students in the class and increase general and special education teachers' perceptions of collaboration.

Research Design

This study utilized a quasi-experimental two group quantitative design with a treatment and control group. In this study the groups were collaborative teacher groups and their corresponding students; thus, the data were clustered with students being nested in their teacher's classrooms. During the seven-week study, the treatment group was given guided questions to help implement a cycle of continuous improvement and the control group met as a grade level independently without guiding questions. Both groups of students took the pre-test (i.e., STAR reading; Renaissance Learning, 2019), then the treatment group was given the intervention and the control group continued with meeting as they had in the past. After seven weeks both groups of students took the post test (i.e., STAR reading; Renaissance Learning, 2019). To examine growth in students' reading achievement, STAR (Renaissance Learning, 2019) data were used to measure the effect of the guided collaboration approach on the academic growth of students, as determined by developmental level scores.

Additionally, to answer research question two, teachers from both groups took the Teacher Perceptions of Collaboration measure (Laine, 2013; Appendix A) both before and after the intervention (i.e., pre and post). In looking for growth in teacher perceptions, the survey administered was designed to analyze perceptions of teachers relative to team collaboration with special education services and children at-risk, and sources of support for each teacher and contributions made by fellow team members.

Independent variable. The independent variable in this study was a guided collaborative approach to a Professional Learning Community (PLC), called a Grade Level Team (GLT) at that particular school site. The PLC consisted of general education and special education teachers and an Instructional Coach. The teachers and Instructional Coach met once a week for 30 to 45

minutes and discussed student goals and classroom strategies. The teachers created a SMART goal for student achievement in Language Arts (Dufour et al., 2016). A SMART goal is one that is Specific, Measurable, Achievable, Relevant, and Time-bound. Teachers in the study created SMART goals for their grade level and specifically for students with disabilities or at-risk students by using data from the STAR Reading test (Renaissance, 2019). Teachers completed a pretest and posttest collaboration reflection form created specifically for teacher perceptions by Laine and was used as a secondary data point (Laine, 2013). The teachers engaged in an inquiry cycle of improvement (Appendix B).

Dependent variable. The dependent variable in this study was students' reading achievement which is defined as growth in independent reading level as measured by the STAR reading achievement (Renaissance, 2019) sample questions include cloze sentences (Appendix C). The teachers completed a perceptions of collaboration form created by Laine (2013; Appendix A). In this study, perception is articulated as the comprehension or understanding of the PLC process.

The purpose of this research study was to add to the knowledge base the process of surrounding collaboration between general and special educators in a PLC. Collaboration for the purpose of this review considered teams of teachers (i.e., general and special education) working together to improve practice and increase student achievement outcomes in reading for all students (DuFour et al., 2016). Often perceptions of collaboration greatly differ from the reality of a group of teachers working together for a common goal. Through the use of a guided PLC, it was the intention of this study to increase collective teacher efficacy and fostering more effective communication between general and special education teachers to increase student achievement, especially for SWD.

Setting & Participants

This study took place in a school site within a low income, suburban community. The school was a TK-6 school with approximately 640 students and was part of mid-sized school district location in Central California. The school had 11% students with disabilities. Approximately 38% of the school's population were English Learners and 59% of the students were socioeconomically disadvantaged. 80% of the students were Hispanic and 3% White (California Dashboard, 2019).

Participants in this study were a PLC comprised of general and special education teachers and the Instructional Coach (the researcher). The students were clustered with their teacher. The PLCs selected were comprised of third grade and fourth grade teachers using purposeful convenience sampling. The third-grade team was the treatment group and the fourth-grade team was the control group. The third-grade team was selected because of their positive growth mindset and willingness to try new ideas to increase their effectiveness as educators. The fourth-grade team was a control group due to the demographic similarities to the control group. Overall there were seven educator participants and 144 student participants. Teachers in the study were asked to complete a pretest/posttest collaboration survey form (Laine, 2013; Appendix A). For the purpose of this study, this survey was administered through Google forms and included questions specific to special education students or students at risk in each classroom. Teachers filled out a Team Reflection Log at the end of each team meeting (Appendix D).

Treatment group. The treatment group consisted of four teachers with teaching experience ranging from 5 years to 20 years. There were two female teachers and two male teachers between the ages of 35 and 50. One of the teachers has a special education credential, the rest have multiple subjects credentials. The students were clustered with their teachers, there

are four classes in third grade including a special day class. There are 80 students, 17% are English Learners, 23% are SWD (California Dashboard, 2019).

Control group. The control consisted of three teachers with teaching experience ranging from five years to 25 years. They were two female and one male teacher between the ages of 30 and 70. Two of the teachers had multiple subject credentials and one teacher had a special education credential. The students in the control group were clustered with their teachers, there were 3 classes in fourth grade including a special day class. There were 64 students, 36% were English Learners and 33% were SWD (California Dashboard, 2019).

Intervention

The intervention for this study was guided collaboration meetings that took place once a week for seven weeks with the PLC and the instructional coach. The teachers created a SMART goal for student achievement in Language Arts. A SMART goal is one that is Specific, Measurable, Achievable, Relevant, and Time-bound (DuFour et al., 2016). Teachers in the study created SMART goals for their grade level and specifically for students with disabilities or at-risk students.

Under the guidance of the instructional coach, teachers brought formative data regarding student achievement in Language Arts each week. Each teacher chose a target student that they discussed amongst the group. Student progress was checked biweekly with a maximum of two students per teacher that were discussed. The teachers met for 30 to 45 minutes to discuss student achievement and create an intervention or enrichment plan for the students they chose. The teachers worked together to make data informed instructional decisions. By having the Special Day Class (SDC) teacher present at the meetings, teachers were exposed to different strategies that are not taught to general education teachers.

Procedures

Teachers participated in a guided collaboration with the Instructional Coach over the course of seven weeks. The Instructional Coach facilitated the meetings and did not participate in the survey or the peer observation lessons. The first meeting was a release day of 7 hours, followed by weekly meetings of 30 to 45 minutes once a week for two weeks, then another 7-hour release day. The cycle was then repeated for another three weeks. The final debrief session was cancelled due to the COVID-19 shutdown. The intervention was based on the content cycles for teacher learning (Learning Forward, 2019) and an inquiry cycle (Appendix B). Content cycles for teacher learning was a 3-week process of shared learning, planning and practice and assess student progress (Learning Forward, 2019). The inquiry cycle followed a similar outline of plan, do, check, act, reflect (New Teacher Center, 2016).

Week 1, during the grade level release day, the teachers met to have a planning/shared learning day (DuFour et al., 2016). During the day the teachers established norms for the group and identified two students that were at-risk or already had an Individualized Education Plan. The teachers then defined a focus or goal for the team (Learning Forward, 2019; Appendix E). The teachers used the STAR (Renaissance, 2019) reading assessment to identify a common area of need for the students. The teachers identified reading comprehension as an area of need as well as reading fluency.

Week 2, during a weekly PLC meeting, the teachers met to create an action plan (DuFour et al., 2019). As part of the action plan, the team analyzed a common text and discussed implementation strategies for the identified students. The team also aligned tasks to common core standards that were identified by the STAR Reading (Renaissance, 2019), as areas of need for the students. The group then co-planned a small group lesson. The small group lesson was a

series of lessons that help students with reading comprehension by creating a summary using a graphic organizer.

Week 3, during a weekly meeting the PLC checked on student progress (DuFour et al., 2019) through the use of student created graphic organizers about The Three Little Pigs, a story familiar to the students to reduce the cognitive process of learning a new story in addition to learning a new strategy. Also, during the week, the team observed each teacher instructing a small group lesson about creating a summary. At the weekly meeting, they provided constructive feedback to each other regarding the observed lesson.

Week 4, during the grade level release day, the PLC brought example assessments used to monitor student progress (DuFour et al., 1017; Learning Forward, 2019). The PLC looked at student work, analyzed the culminating task for the previous weeks' language arts, and looked at student assessments from the current week in the curriculum to determine to continue with the target students or the chose another student. The team determined they were going to choose a different set of students to start a new learning cycle.

Week 5, during the weekly collaboration meeting the teachers looked a result from the STAR reading assessment from week 1 and determined a new set of students to instruct in a small group setting. The choice was made to instruct students in passage comprehension, developing the main idea and key details.

Week 6, during the weekly collaboration meeting, the teachers create a plan for observing the PLC instructing a small group lesson and a common piece of text was agreed upon that met the needs of all learners.

Week 7, during the weekly collaboration meeting, the teachers shared their observations and what they learned from the experience. The students took the STAR reading test

(Renaissance, 2019) due to the eminent shut down of site-based schooling due to the COVID-19 pandemic. Week 8 of the study was cancelled due to the shutdown; however, the teachers were able to take the post study collaboration survey before they left campus.

Students were administered the STAR reading test (Renaissance, 2019) during the first week of the intervention at a date predetermined by the district and at the end of the seven-week intervention time. The STAR reading test (Renaissance, 2019) was administered during the language art block as part of normal classroom procedures.

Data collection. Data were collected for students in the form of the STAR reading test (Renaissance, 2019) at the beginning and end of the study. Data for the teachers were collected pretest and posttest through the use of a perception of collaboration form (Appendix A) and a weekly team reflection log (Appendix D). No other data were collected during the study.

Fidelity. To ensure fidelity to the intervention the researcher had a second rater in the classrooms during pretest and posttest times for the STAR reading assessment (Renaissance, 2019). The second rater monitored test administration continuity and teacher engagement (Appendix F). The researcher also had a second rater in the collaboration meetings twice during the seven-week intervention or 28.5% of the intervention the second rarer reported that the PLC group was on task and were working collaboratively and that the instructional coach was leading a professional development session about graphic organizers.

Ethical Considerations

The guided collaboration approach intervention was not potentially harmful to any person involved; there were no threats to bodily injury, nor was there any significant emotional risks. Results were shared with staff and district administration with names of students and teachers removed for privacy. All collaboration and reflection occurred on the elementary campus and did

not require participants to travel to any other location that could present any danger or lack of security. Additionally, participants did not have to sacrifice time outside of the regular school day or normal grade level team release time. Students took an assessment that they would normally be taking at the time of year at the end of the study; therefore, there was no additional risk to the students.

Validity threats. Validity threats and extraneous variables in the study could be researcher bias, the grade level differences between the control and treatment groups, and school mandated tasks that impact the delivery of the intervention. The researcher and the objective observer ensured that personal bias did not impact how the teachers responded to the TPS (Laine, 2013) and participated in the intervention. The researcher selected the third-grade team as the treatment group due to their willingness to increase their impact as a collaborative group and the fourth-grade team, the control group, was selected because the demographic similarities to the treatment group. If school mandated tasks interfere with the collaboration time, alternative days were used and release time was given to the treatment group. The COVID-19 shutdown of all schools forced the students to take the post-assessment one week earlier than anticipated.

Data Analyses

All data were entered into the Statistical Package for the Social Sciences® (SPSS) for Windows, version 25.0.0 (SPSS, 2017). No names or identifying information were included in the data analysis. Before analysis was conducted all data were cleaned to ensure no outliers were present (Dimitrov, 2012). After cleaning the data, Independent samples t-tests (control and treatment groups) and dependent samples t-tests (pretest and posttest) were conducted to determine the significant difference in reading achievement between the two means scores on the STAR reading assessment (Renaissance, 2019).

Further, before interpreting the analytical out, Levene's Homogeneity of Variance was examined to see if the assumption of equivalence had been violated (Levene, 1960). If Levene's Homogeneity of Variance was not violated (i.e., the variances were equal across groups), data were interpreted for the assumption of equivalence; however, if the variances were not equal across groups the corrected output was used for interpretation.

Survey questions were divided into two categories: Teachers' Perception of the Guided Collaboration Process (Appendices G & H) and Exchange of Ideas During a Guided Collaboration (Appendices I & J) approach. The results are being used for descriptive purposes and no statistical analysis were conducted. Teacher perceptions were also monitored through a weekly reflection log. The results for the weekly reflection logs were coded into themes. Themes were teacher clarity, collaborative feedback and teacher perceptions of students

Results

The following results were organized according to the two research questions.

Research Question 1

Does a guided collaboration approach affect third grade students' reading performance as measured by the developmental levels of a quarterly benchmark assessment?

Two independent samples t-tests were conducted on the whole student sample (n = 144) for both the pre and post assessment scores on the STAR reading assessment (Renaissance, 2019). Results for the pre-test were: Levene's Homogeneity of Variance was not violated ($p >$ .05), meaning the variance between groups was not statistically different and no correction was needed and the t-test showed significant differences between the mean scores on the pre-tests between the two groups $t(142) = 3.03$, $p < .01$. Therefore, the groups were statistically different on the pre-test. This is aligned with research and theory, as the reading abilities between third

and fourth grade students should differ in terms of Lexile® levels (see Table 1). Although this change was statistically significant since Levene's Homogeneity of Variance was not violated the variances were statistically equal, further solidifying the models could be conducted without issues.

Results for the post-test were: Levene's Homogeneity of Variance was violated ($p < .05$) meaning the variance between groups was statistically different and the second line of data was used to interpret findings. The mean scores on the post-tests between the two groups were statistically different, $t(112.89) = 2.03$, $p < .05$. Thus, although both groups were able to raise their Lexile® levels, the treatment group was able to improve at a statistically significant higher rate than the control group. Further, this finding provides support for the inclusion of the intervention to improve student's reading achievement (see Table 1).

Table 1

Results of Independent Samples T-Tests

	Mean	SD
Pre Test		
Treatment	308.94	370.21
Control	508.63	417.03
Post Test		
Treatment	393.63	334.01
Control	531.41	451.99

Note. SD = Standard Deviation.

After determining the differences between pre and post assessment scores between groups, two paired t-tests were conducted for both groups (i.e., treatment and control) to determine if participants mean scores from pre to post were significantly different within each group (See Table 2). Results for each group were as follows: treatment group, $t(79) = -4.65$, $p < .001$; control group, $t(63) = -1.09$, $p > .05$. Therefore, the treatment group was able to make statistically significant improvements in reading achievement; whereas, the control group was not. In terms of mean scores, the treatment group was able to raise Lexile® levels by 84.69 points compared to the control group raising Lexile® by 22.78 points. Additionally, the negative t-value for each group indicates an increase in scores from pre to post assessment. Therefore, the intervention through the means of a guided collaboration PLC was successful for this study and should be studied further with different samples.

Table 2

Results of Paired T-Tests

	Mean	SD
Treatment Group		
Pre	708.94	370.21
Post	793.63	334.01
Control Group		
Pre	908.20	417.03
Post	931.41	451.99

Note. SD = Standard Deviation.

Research Question 2

Does a guided collaboration approach designed to focus on the growth of third grade students with special needs affect regular and special education teachers' perceptions of collaboration?

A pre and post-survey was given to each participant in the study. For the pre and post survey, all seven participants returned the survey. The treatment group consisted of third grade teachers, three general education teachers and one special education teacher. The control group consisted of fourth grade teachers, two general education teachers and one special education teacher.

Survey questions were divided into two categories: Teachers' Perception of the Guided Collaboration Process (Appendices G & H) and Exchange of Ideas During a Guided Collaboration (Appendices I & J) approach. The results are being used for descriptive purposes and no statistical analysis were conducted. The survey results were analyzed by treatment and control groups, and changes over time were evident in treatment responses to four questions in the Exchange of Ideas (Table 3) and six questions in the Teacher's Perceptions questions (Table 4). The rest of the responses remained the same for the treatment group. There was an increase in the exchange of ideas with the special education teacher and the general education teachers.

Table 3

Exchange of Ideas Questions 3rd Grade Group

Survey Item	Pre- Survey	Post-Survey
6. At least one time during the week, outside of the GLT collaboration time, I discuss the progress of accommodations or other interventions needed by my students with special needs.	Agree=1* Disagree=3	Agree=3 Disagree=1
11. My GLT team spends time each week discussing the progress of special education students or students at risk.	Agree=1 Disagree=3	Agree=3 Disagree=1
13. Participation in a GLT with special education teachers has given me ideas, which I have implemented regarding instructional practices related to data based monitoring of student's academic performance.	Agree=2 Disagree=2	Agree=4 Disagree=0
15. When I have difficulty with a special needs student, I usually confer first with the special education teacher to identify possible interventions.	Agree=2 Disagree=2	Agree=4 Disagree=0

Note. * = Number of survey participant responses; N = 4.

In the Teacher Perception of Guided Collaboration Survey there were five questions that inferred that collaboration increased between special education and general education teachers. The response to questions five, fourteen, and nineteen showed the most change from the pre-survey. Question 5, in regards to professional development one teacher disagreed about whether the inclusion of a special educator addressed the professional development needs of the group. Question 14, the inclusion of the special educator helped the teachers modify curriculum to meet the needs of students at risk or with special needs. Question 19, the group no longer sees barriers to effective collaboration.

Table 4

Teacher Perceptions of Guided Collaboration Questions 3rd grade group

Survey Item	Pre-Survey	Post-Survey
5. Inclusion of a special educator in my GLT gives my team the professional development needed to address the diverse needs of students who are eligible for special education services.	Agree=4 Disagree=0	Agree=3 Disagree=1
8. I believe that working with the special education teacher during my GLT time is beneficial to my practice when addressing interventions for students with special needs.	Agree=3 Disagree=1	Agree=4 Disagree=0
9. The special education teacher provides major contributions for students with special needs as a member of the GLT team.	Agree=3 Disagree=1	Agree=4 Disagree=0
14. Participation in a GLT with special education teachers, more than information from general educators has affected my ability to modify curriculum objectives for special education students and students at risk.	Agree=2 Disagree=2	Agree=4 Disagree=0
17. Resources such as teaching techniques and assessment methods when applied to children with special needs are shared equally between regular and general education teachers.	Agree=2 Disagree=2	Agree=3 Disagree=1
19. I see barriers such as time and teacher knowledge that inhibit effective collaboration between general and special education teachers outside the time allotted for GLT meetings.	Agree=3 Disagree=1	Agree=1 Disagree=3

Note. * = Number of survey participant responses; N = 4.

Teacher perceptions were also monitored through a weekly reflection log. The results for the weekly reflection logs were coded into themes. Themes were teacher clarity, collaborative feedback and teacher perceptions of students. Feedback included teacher comments about the process, some comments were as follows: “It is nice to have a plan, I feel more organized.”; “I stopped making assumptions about what the students know or don’t know,” “If the small group

is struggling, then the whole group needs the lesson as well," "I didn't know they could read," (comment from a general education teacher in regards to Special Day Class students).

Discussion

The purpose of this study was to increase student reading achievement for third grade students, regardless of general or special education placement. Through the use of a Professional Learning Community (PLC) that included general and special education teachers as part of a team, the team used a plan-do-study-act (PDSA) method for an inquiry cycle. The study also qualitatively measured teacher perception of collaboration through pre/post surveys and weekly reflection logs.

To gather data about student reading achievement, the treatment and control student groups took the STAR (Renaissance, 2019) reading assessment as a pre-test. The treatment group used the data to create lessons based on student need in reading comprehension. Over the course of seven weeks the treatment group teachers participated in two cycles of continuous improvement that included peer observation (DuFour et al., 2016; Learning Forward, 2018). The PLC created a series of lessons addressing gaps in reading comprehension for general and special education students. At the end of the second cycle of continuous improvement, the treatment and control groups administered the STAR reading assessment (Renaissance, 2019) as a post-test.

The results indicated a statistically significant growth in Lexile® for the treatment group. The treatment group had a mean growth of 84.69L points for the seven-week intervention and the control group had a mean growth of 22.78L points. Growth in Lexile® indicates that students are increasing cognitively as well. The expected growth, according to Williamson (2009), for an entire school year is 113L for third grade students. The growth in scores also decreased the gap between third and fourth grade students. The results are significant because, according to

Williamson (2009), an increase in Lexile® scores demonstrates cognitive growth. Cognitive growth is important in overall learning because it is the construction of thought processes, especially inferential thinking. The higher changes in Lexile® score demonstrated a statistically significant increase in the student's reading comprehension.

Students in the special day class (SDC) increased their Lexile® scores on the STAR reading assessment (Renaissance, 2019) an average of 275L, compared to the general education classrooms averaging an increase of 53L points. The SDC benefitted the most from the treatment, as did the inclusion of the special education teacher into the PLC. All of the students in the treatment group received the same common core standards based lessons in reading comprehension, the lessons were focused on summarizing and comparing fiction and non-fiction.

Part of the PLC was professional development, the PLC created lesson plans for the intervention group. In Dingle's 2011 study, the researchers found that the impact of professional development was more profound on teachers who were able to implement and integrate the new strategy. The treatment group was able to implement strategies within a week of learning about them, leading to increased achievement on weekly assessments and overall reading achievement. The quick implementation of professional development learning also impacted teacher perceptions of collaboration.

To measure teacher perception of collaboration the treatment and control groups took a pre/post Teacher Perception Survey (Laine, 2013). The survey was focused on teacher perception of collaboration and exchange of ideas within a guided collaboration group. The teachers in the treatment group demonstrated a positive change in perception regarding collaboration with the special education teacher. Sutton and Shouse address high status teachers dominating conversations and leading the group and that newer teachers need to be included and allowed to

voice concerns. To address this the teachers created norms and expectations at the beginning of the study. They also revisited the norms as part of the weekly meeting agenda and as part of the weekly reflection log.

The weekly reflection log was completed as part of the study; however, the participants expressed that is was time consuming and that they saw little value in completing the logs. The log was part of the treatment group's intervention to reflect on different phases of the PDSA cycle. In future studies the group could choose not the include the logs as part of the intervention. The researcher also noticed that the general education teachers in the treatment group also started to ask for more clarification for student IEP goals. In Tichnor-Wagner's 2017 study of continuous improvement nearly all participants reported value in the PDSA; however, the participants felt that the data collection was too time consuming. This is similar to the findings from the treatment group; they also were not sure what evidence to collect as part of the PDSA.

Inclusion of special education teachers into a guided PLC provides for greater student achievement and teacher efficacy. By including special education teachers into a PLC there was greater access to collaboration time and space needed to have conversations about student learning needs. This corresponds with the study conducted by Many and Schmidt (2013) that found when teachers collaborated effectively with special educators, student achievement increased. The increase in the scores, especially for the students with disabilities, shows that a PLC that includes special education has a positive impact in achievement for all students.

Administrative support played a key role throughout the study. The administrators attended part of the initial release day to show support of the PLC. The administrators also helped to release teachers from classes by covering classes themselves, so that the PLC could

fully participate in peer observations. The administrators had a shared vision with the staff that helped create a positive supportive atmosphere at the school site. This was a key aspect of this study and future studies need to include this element as well.

Limitations and Future Studies

Potential limitations to this study would include the absenteeism of students identified with special needs or at risk. If the students are not in school, they are unable to have the intervention on a consistent basis. The sample size of the teacher perceptions data is limited to the treatment and control groups ($n = 7$). With a larger sample size across a school district more data regarding teacher perceptions could be collected, this is important because a larger sample size would include a wider variety of experience and backgrounds for the teachers and it would continue to validate the PLC process.

This study demonstrates that a guided collaboration approach affected third grade students reading performance. Based on the significant results of this study, schools need to have a more structured professional learning process that includes special education and a more focused approach to professional development that goes beyond after school or day long sessions. Short cycles of continuous improvement that embed professional development targeted to the needs of the PLC do increase student achievement.

This research shows that PLCs that include special education teachers can be successful. The inclusion of special education teachers, particularly special day class teachers that have self - contained classrooms, provides valuable perspectives into student learning. It also provides exposure to grade level standards for students with special needs. By including special education into the PLC, the team helped to close the reading achievement gap. In the future, PLCs that

included special education would benefit the needs of all students. Students with special needs may learn in a different way, but they are capable learners when given the opportunity.

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Appendix A

Collaboration Survey

1. Please fill out the following about your experience as a teacher:
   General Education
   Special Education

   I work with students in grades:
   K-2
   3-5
   6-8

   I have been teaching for
   0-5 years
   5-10 years
   15-20 years
   20+ years

   I have been a teacher at this school for __ years.

   I have collaborated with this team for __months and __years.

2. The special education teacher provides major contributions for general education students as a member of the GLT team.
   Strongly disagree
   Disagree
   Agree
   Strongly Agree

3. When I have difficulty with a special needs student, I usually confer first with one of my general education colleagues to identify possible interventions.
   Strongly disagree
   Disagree
   Agree
   Strongly Agree

4. Participation in a GLT with special education teachers has given me ideas which I have implemented regarding instructional practices related to data-based monitoring of student's appropriate classroom behavior.
   Strongly disagree
   Disagree
   Agree
   Strongly Agree

5. Inclusion of a special educator in my GLT gives my team the professional development needed to address the diverse needs of students who are eligible for special education services.
   Strongly disagree
   Disagree
   Agree
   Strongly Agree

6. At least one time during the week, outside of the GLT collaboration time, I discuss the progress of accommodations or other interventions needed by my students with special needs.
   Strongly disagree
   Disagree
   Agree
   Strongly Agree

7. When I have difficulty with a special needs student, I usually confer first with an administrator to identify possible interventions.
   Strongly disagree
   Disagree
   Agree
   Strongly Agree

8. I believe working with the special education teacher during my GLT time is beneficial to my practice when addressing interventions for children with special needs.
   Strongly disagree
   Disagree
   Agree
   Strongly Agree

9. The special education teacher provides major contributions for students with special needs as a member of the GLT team.
   Strongly disagree
   Disagree
   Agree
   Strongly Agree

10. I don’t see any barriers that inhibit effective collaboration between general and special education teachers outside of the time allotted for GLT meetings.
    Strongly disagree
    Disagree
    Agree
    Strongly Agree

11. My GLT team spends time each week discussing the progress of special education students or students at risk.
    Strongly disagree
    Disagree
    Agree
    Strongly Agree

12. Participating in a GLT with special and general education colleagues has helped me identify the strategies needed to teach students with special needs and students at risk.
    Strongly disagree
    Disagree
    Agree
    Strongly Agree

13. Participation in a GLT with special education teachers, has given me ideas, which I have implemented regarding instructional practices related to data-based monitoring of student's academic performance.
    Strongly disagree
    Disagree
    Agree
    Strongly Agree

14. Participation in a GLT with special education teachers, more than information from general educators has affected my ability to modify curriculum objectives for special education students and students at risk.
    Strongly disagree
    Disagree
    Agree
    Strongly Agree

15. When I have difficulty with a special needs student, I usually confer first with the special education teacher to identify possible interventions.
    Strongly disagree
    Disagree
    Agree
    Strongly Agree

16. Each teacher (general and special education) has equal decision-making power when addressing the education of children in special education.
    Strongly disagree
    Disagree
    Agree
    Strongly Agree

17. Resources such as teaching techniques and assessment methods when applied to children with special needs are shared equally between general and special education students.
    Strongly disagree
    Disagree
    Agree
    Strongly Agree

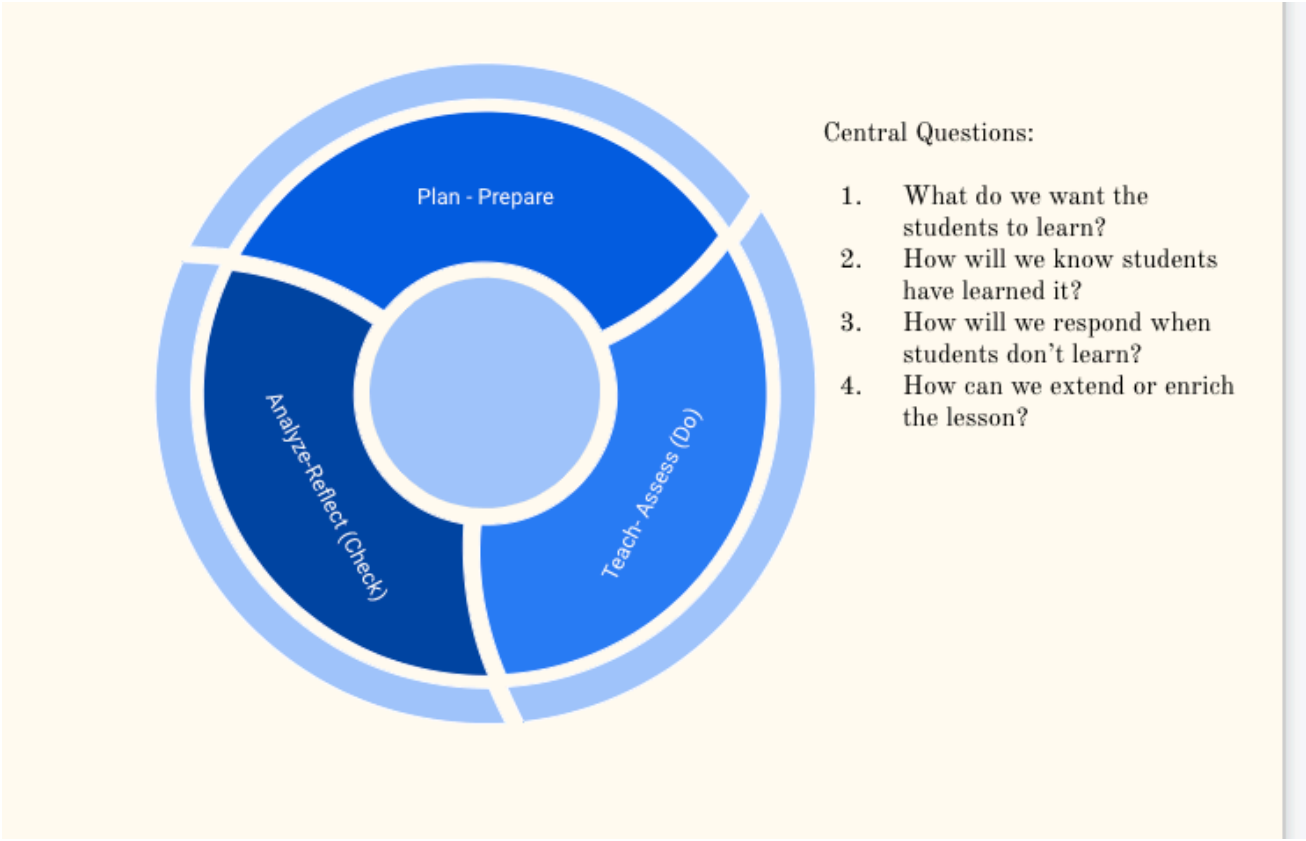
18. General and special education teachers share the responsibility for academic success (both positive and negative) of special education students.
    Strongly disagree
    Disagree
    Agree
    Strongly Agree

19. I see barriers such as time and teacher knowledge that inhibit effective collaboration between general and special education teachers outside the time allotted for GLT meetings.
    Strongly disagree
    Disagree
    Agree
    Strongly Agree

20. I believe that participating in a GLT with general education colleagues have primarily helped me to identify the strategies needed to teach students with special needs and students at risk.
    Strongly disagree
    Disagree
    Agree
    Strongly Agree

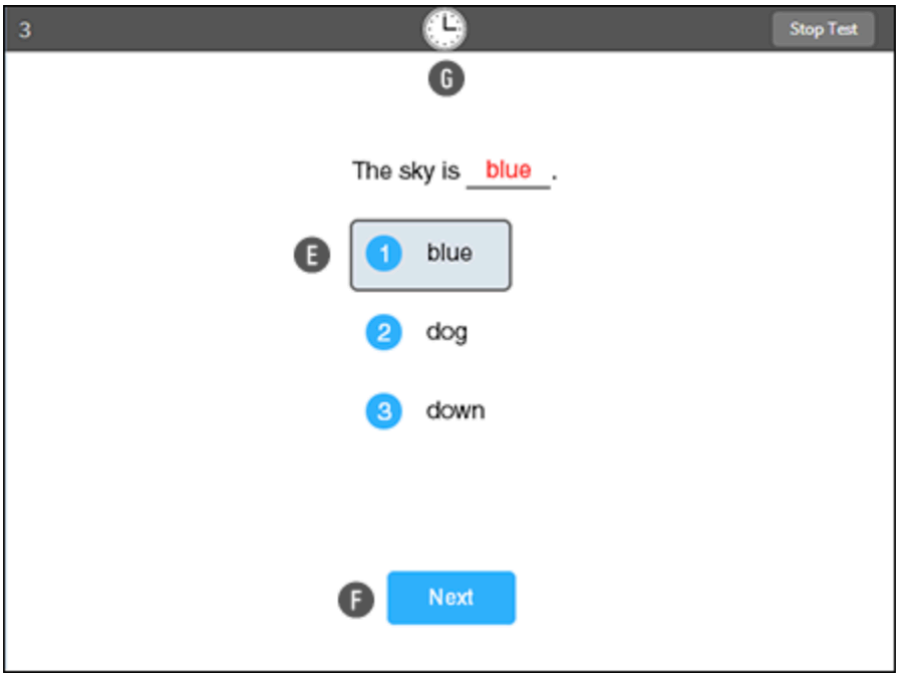
Appendix B

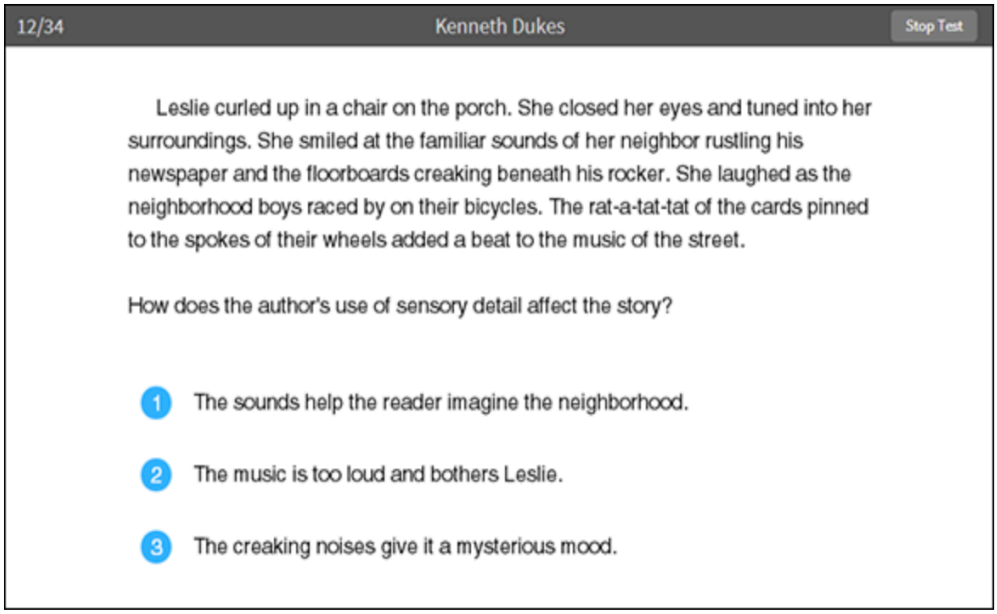
Inquiry Cycle Example



Appendix C

Sample questions from STAR Reading test





Appendix D

Weekly Team Reflection Log Sample

NEW TEACHER CENTER

Team Reflection Log

Facilitation—Team Development		Collaborative Inquiry
What Worked	Concerns/Challenges	**What did your team work/focus on during the team meeting?** **What did your team learn?** (about students, instruction, assessments etc.) **How will your team apply your learning in the classroom?**
Next Steps—Support Needed		**Team Agreements**
		• **Next Team Meeting Date:** • **Bring to Next Team Meeting:** • **Next Team Meeting Agenda Items:** • **Other Next Steps:**

PROCESS PEOPLE OUTCOMES

Appendix E

Inquiry Cycle Agenda Template

PLC Agenda Template – Blank (New Teacher Center)

PLC Team: **Date:** **Facilitator:** **Recorder:** **Time Keeper:** **Other Members Present:**	**Team Norms:**
Inquiry Focus/Question:	

Time	**Topics**	**Purpose/Process**	**Who**
10 min.	**Connector**		
5 min.	**Opening** • Outcomes, Agenda, Norms		
50 min.	**Inquiry Cycle** • Analyze and Reflect • Plan and Prepare • Teach and Assess		
5 min.	**Next Steps** • Clarify details of team agreements • Who? What? When?		
10 min.	**Closure** • Review progress on meeting outcomes • Discuss next PLC meeting outcomes and agenda • Confirm next PLC date and what to bring		
10 min.	**Feedback (+/Δ)** • Process: How did it go? • Content: What did we do/learn?		

Appendix F

Fidelity Checklist

Fidelity Checklist					
Treatment Group Observer			Control Group Observer		
• Teacher team working together towards a common goal. • Teacher team members are speaking collaboratively in a group discussion regarding student achievement. • Teacher team members are discussing strategies for at-risk student or student with disabilities. • Teacher team members are making group decisions regarding lesson planning. • Team is facilitated by instructional coach.			• Teacher members are having discussions not focused on learning. • Teacher members are discussing teaching strategies. • Teacher team members are lesson planning individually with little or no discussion. • More time in meeting is devoted to individual work than team work.		
Date	Time	Signature	Date	Time	Signature

Appendix G

Teacher Perceptions of Guided Collaboration - 3rd Grade Group (n = 4)

Survey Question by number	Pre-Survey	Post-Survey
5. Inclusion of a special educator in my GLT gives my team the professional development needed to address the diverse needs of students who are eligible for special education services.	Agree=4 Disagree=0	Agree=3 Disagree=1
8. I believe that working with the special education teacher during my GLT time is beneficial to my practice when addressing interventions for students with special needs.	Agree=3 Disagree=1	Agree=4 Disagree=0
9. The special education teacher provides major contributions for students with special needs as a member of the GLT team.	Agree=3 Disagree=1	Agree=4 Disagree=0
10. I don't see any barriers that inhibit effective collaboration between general and special education teachers outside the time allotted for GLT meetings.	Agree=4 Disagree=0	Agree=4 Disagree=0
12. Participating in a GLT with special and general education colleagues has helped me identify strategies needed to students with special needs and students at risk.	Agree=4 Disagree=0	Agree=4 Disagree=0
14. Participation in a GLT with special education teachers, more than information from general educators has affected my ability to modify curriculum objectives for special education students and students at risk.	Agree=2 Disagree=2	Agree=4 Disagree=0
16. Each teacher (regular and special education) has equal decision making power when addressing the education of children in special education.	Agree=3 Disagree=1	Agree=3 Disagree=1
17. Resources such as teaching techniques and assessment methods when applied to children with special needs are shared equally between regular and general education teachers.	Agree=2 Disagree=2	Agree=3 Disagree=1
18. General and special education teachers share the responsibility for academic success (both positive and negative) of special education students.	Agree=3 Disagree=1	Agree=3 Disagree=1
19.I see barriers such as time and teacher knowledge that inhibit effective collaboration between general and special education teachers outside the time allotted for GLT meetings.	Agree=3 Disagree=1	Agree=1 Disagree=3
20. I believe that participating in a GLT with general education colleagues have primarily helped me identify the strategies needed to teach students with special needs and students at risk.	Agree=3 Disagree=1	Agree=3 Disagree=1

Appendix H

Teacher Perceptions of `Guided Collaboration - 4th Grade Group (n=3)

Survey Question by number	Pre-Survey	Post-Survey
5. Inclusion of a special educator in my GLT gives my team the professional development needed to address the diverse needs of students who are eligible for special education services.	Agree=3 Disagree=0	Agree=3 Disagree=0
8. I believe that working with the special education teacher during my GLT time is beneficial to my practice when addressing interventions for students with special needs.	Agree=2 Disagree=1	Agree=3 Disagree=0
9. The special education teacher provides major contributions for students with special needs as a member of the GLT team.	Agree=3 Disagree=0	Agree=1 Disagree=2
10. I don't see any barriers that inhibit effective collaboration between general and special education teachers outside the time allotted for GLT meetings.	Agree=1 Disagree=2	Agree=1 Disagree=2
12. Participating in a GLT with special and general education colleagues has helped me identify strategies needed to students with special needs and students at risk.	Agree=3 Disagree=0	Agree=3 Disagree=0
14. Participation in a GLT with special education teachers, more than information from general educators has affected my ability to modify curriculum objectives for special education students and students at risk.	Agree=2 Disagree=1	Agree=3 Disagree=0
16. Each teacher (regular and special education) has equal decision making power when addressing the education of children in special education.	Agree=1 Disagree=2	Agree=3 Disagree=0
17. Resources such as teaching techniques and assessment methods when applied to children with special needs are shared equally between regular and general education teachers.	Agree=2 Disagree=1	Agree=2 Disagree=1
18. General and special education teachers share the responsibility for academic success (both positive and negative) of special education students.	Agree=2 Disagree=1	Agree=3 Disagree=0
19.I see barriers such as time and teacher knowledge that inhibit effective collaboration between general and special education teachers outside the time allotted for GLT meetings.	Agree=1 Disagree=2	Agree=3 Disagree=0
20. I believe that participating in a GLT with general education colleagues have primarily helped me identify the strategies needed to teach students with special needs and students at risk.	Agree=2 Disagree=1	Agree=3 Disagree=0

Appendix I

Exchange of Ideas During a Guided Collaboration - 3rd Grade Group (*n* = 4)

Survey Question by number	Pre-Survey	Post-Survey
2. The special education teacher provides major contributions for general education students as a member of the GLT team.	Agree=4 Disagree=0	Agree=4 Disagree=0
3. When I have difficulty with a special needs student, I usually confer first with one of my general education colleagues to identify possible interventions.	Agree=3 Disagree=1	Agree=3 Disagree=1
4. Participation in a GLT with special education teachers has given me ideas which I have implemented regarding instructional practices related to data based monitoring of student's appropriate classroom behavior.	Agree=4 Disagree=0	Agree=4 Disagree=0
6. At least one time during the week, outside of the GLT collaboration time, I discuss the progress of accommodations or other interventions needed by my students with special needs.	Agree=1 Disagree=3	Agree=3 Disagree=1
7. When I have difficulty with a special needs student, I usually confer first with an administrator to identify possible interventions.	Agree=1 Disagree=3	Agree=1 Disagree=3
11. My GLT team spends time each week discussing the progress of special education students or students at risk.	Agree=1 Disagree=3	Agree=3 Disagree=1
13. Participation in a GLT with special education teachers has given me ideas, which I have implemented regarding instructional practices related to data based monitoring of student's academic performance.	Agree=2 Disagree=2	Agree=4 Disagree=0
15. When I have difficulty with a special needs student, I usually confer first with the special education teacher to identify possible interventions.	Agree=2 Disagree=2	Agree=4 Disagree=0

Appendix J

Exchange of Ideas During a Guided Collaboration Approach - 4th Grade Group (n = 3)

Survey Question by number	Pre-Survey	Post-Survey
2. The special education teacher provides major contributions for general education students as a member of the GLT team.	Agree=3 Disagree=0	Agree=3 Disagree=0
3. When I have difficulty with a special needs student, I usually confer first with one of my general education colleagues to identify possible interventions.	Agree=1 Disagree=2	Agree= 1 Disagree=2
4. Participation in a GLT with special education teachers has given me ideas which I have implemented regarding instructional practices related to data based monitoring of student's appropriate classroom behavior.	Agree=3 Disagree=0	Agree=2 Disagree=1
6. At least one time during the week, outside of the GLT collaboration time, I discuss the progress of accommodations or other interventions needed by my students with special needs.	Agree=0 Disagree=3	Agree=1 Disagree=2
7. When I have difficulty with a special needs student, I usually confer first with an administrator to identify possible interventions.	Agree=1 Disagree=2	Agree=2 Disagree=1
11. My GLT team spends time each week discussing the progress of special education students or students at risk.	Agree=1 Disagree=2	Agree=2 Disagree=1
13. Participation in a GLT with special education teachers has given me ideas, which I have implemented regarding instructional practices related to data based monitoring of student's academic performance.	Agree=3 Disagree=0	Agree=2 Disagree=1
15. When I have difficulty with a special needs student, I usually confer first with the special education teacher to identify possible interventions.	Agree=2 Disagree=1	Agree=2 Disagree=1