IMPLEMENTATION OF TEACHER INSTRUCTIONAL COACHING IN HIGH-POVERTY SETTINGS: CASE STUDY ANALYSIS

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ABSTRACT

The current case study offers an in-depth case study analysis of the processes of an innovative instructional coaching, Classroom Strategies Coaching (CSC) Model for two teacher cases selected from a larger randomized, controlled trial (Reddy, Shernoff, & Lekwa, 2021) in New Jersey. A central component to the CSC intervention was the use of teacher formative assessment to inform coaching decisions and support actions for improving teacher evidence-based instructional and classroom practices in elementary school. Findings revealed increased use of Concept Summaries (single subject effect sizes of 10.56, 8.16; reliable change indices of 2.49, 3.82) and Academic Praise (single subject effect sizes of 3.07, 3.36), as well as improvements in the quality of Academic Performance Feedback (single subject effect sizes of -1.77, -4.93) for both teachers. Additionally, one teacher exhibited higher quality use of Behavior Praise (single subject effect size of -3.07; reliable change index of -2.08) and Behavior Corrective Feedback (single subject effect size of -16.20; reliable change index of -3.39). In terms of teacher perceptions of support, one teacher rated improvements in instrumental support (single subject effect size of 1.56; reliable change index of 3.91) while both teachers rated improvements in emotional support (single subject effect sizes of 6.55, 0.96; reliable change indices of 19.00, 2.78). Improvement in the area of stress support was also revealed (single subject effect size of -0.26), as well as increased student academic engagement (single subject effect size of 1.34) for one teacher at post-intervention. Overall results suggest the CSC Model is a viable means of professional development for high-poverty elementary schools.

Key Words: Formative assessment, teacher coaching, evidence-based strategies
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Introduction

In the United States today, concerns regarding our nation’s education system and achievement levels continue to rise, especially within our urban communities. Improvements in overall achievement and student outcomes often are minimal despite previous efforts of the research and government intervention (Darling-Hammond, 2009). In fact, according to the National Assessment of Educational Progress (NAEP), also known as the Nation’s Report Card, as recent as 2019, students have shown no progress in the areas of Mathematics and Reading nationwide (NAEP, 2019). As schools continue to demonstrate little improvement in academic success, pressure upon the nation’s educators continues to increase. This is particularly true for teachers employed in high-poverty districts which are often plagued with challenging school conditions and students performing below state benchmarks of proficiency (Lacour & Tissington, 2011). Furthermore, teachers working in high-poverty schools experience the highest rates of turnover. This has been linked to both job dissatisfaction and teachers pursuing jobs in other fields (Borman & Dowling, 2008; Ingresoll, 2004). Despite their best efforts, teachers’ self-efficacy begins to diminish and their ability to refocus their effort into their students becomes even more challenging.

In efforts to support teacher success, federal policies were created to fund districts annually for the professional development for teachers for at least more than a decade (Denton & Hasbrouck, 2009). An example of such legislation can be found as early as 2001 with the No Child Left Behind Act (NCLB) where the government began providing subsidies to state governments to utilize on continued education for school professionals to meet the changing needs of the nation’s students (U.S. Department of Education, 2002).
Since NCLB, a ground-breaking piece of legislation named the Every Child Succeeds Act (ESSA, 2015), has provided districts provisions to use government funding for teacher continued education of research-based practices and models (Every Child Succeeds Act, 2015). However, despite the implementation initiative, many school districts still opt to either continue to use traditional means or alternative non-research-based methods. Traditional means typically comprise one day or workshop-based seminars which have been deemed largely ineffective and often do not facilitate skill transfer (Bush, 1984; Darling-Hammond et al., 2009; Gulamhussein, 2013; Shernoff et al., 2016; Walpole, 2005). Although these types of methods allow for districts to disseminate large amounts of information to many educators at the same time, these approaches tend to utilize passive learning techniques. However, recent research suggests a core feature of professional development is active learning which is comprised of components such as meaningful discussion, planning and also practice of strategies/information learned (Garet, Porter, Desimone, Birman, & Yoon, 2001).

It is evident more research is needed to better examine the effectiveness of professional development (i.e., coaching) for teachers within high-poverty settings to ensure academic progress. Based on promising research conducted thus far, teachers would benefit from the implementation of research-based professional development which utilizes job-embedded approaches to enhance their use of evidence-based instructional and behavior management techniques in the classroom (Kraft, Blazar & Hogan, 2018; Lekwa, Reddy & Shernoff, 2019). With this, teachers from high-poverty settings may be better equipped to manage challenges within their settings and make a positive impact on student outcomes.
Unique Challenges for Teachers Employed in High Poverty Settings

Teachers employed in high-poverty schools face unique challenges. First, relates to the increased pressures of accountability due to ongoing low student performance. Teachers in high-poverty settings are often under greater scrutiny because many students continue to fail and the improvements in the achievement gap remain negligible (Wexler, 2009). One reason behind this struggle to meet expectations may be due in part to the federal government providing states and districts latitude in the allocation of funding (ESSA, 2015). The notion behind the flexibility in funding allocation was to provide discretion to states for how districts will meet local school needs of the students they serve. Unfortunately, scholars have indicated many states use formulas which either significantly underestimate education costs, especially in disadvantaged districts or are unable to provide the amount of funds anticipated due to budgetary constraints (Weber, 2019). This could meanwhile high-poverty districts are provided government funds to be used on interventions, either the money provided is being allocated inadequately to meet the needs of students or there may be miscalculation in the actual cost to make improvements toward academic progress. Moreover, instead of state government considering an error on their end, school personnel are left having to explain their lack of progress from year to year.

Another challenge for teachers employed in high-poverty settings is the complexity of student body. For decades research has indicated that students from high poverty communities are more likely to experience mental health problems as a result of exposure to Adverse Childhood Experiences (ACE) (Askarinam, 2016). ACE’s are comprised of events such as exposure to violence, home/family dysfunction, neglect, abuse amongst other instances that may induce trauma in a child (Center for Disease Control, 2019). Teachers from high-poverty, settings are responsible for teaching students who not only have experienced one ACE, but
several. This overwhelming amount of trauma manifests into mental health issues that can impede a child’s ability to learn as efficiently in school. Furthermore, students who experience ACE’s also typically suffer in other areas of functioning. These children are more susceptible to physical ailments and behavior concerns (Center for Disease Control, 2019). Students may have to deal with serious illnesses, physical abnormalities or even demonstrate difficulty in self-control or impulsivity. Teachers in schools that serve high concentrations of poverty-stricken students have increased demands to meet both the educational and development needs of their student body.

Other barriers teachers face include limited access to resources, cultural barriers, and systemic/political barriers that may impede their ability to teach effectively. Even with advancements in professional development, many models fail to recognize the complexities of the teaching process and most importantly the implementation support needs of classroom teachers. Further, traditional professional development or “stand and deliver” workshops have been offered in schools for several years and focus mainly on instructional strategies. However, research has demonstrated that traditional professional development and workshop-based training is often passive learning experiences which result in little to no skill transfer to the classroom (Bush, 1984; Darling-Hammond et al., 2009; Gulamhussein, 2013; Shernoff et al., 2016; Walpole, 2005) and fail to address the behavior needs of students as well.

**Teacher Professional Development**

Effective teacher development is regarded as one of the challenging aspects of education systems across the nation (Kraft, Blazar & Hogan, 2018). Moreover, research has explored the impacts commonly used professional development have on teacher instruction and student achievement. Outcomes suggest that these traditional approaches fail to demonstrate substantial
effects on these constructs, especially compared to impacts of professional development in other organizational systems (Garet et al., 2016; Glazerman et al., 2010). This discrepancy suggests professional development utilized in schools is not sufficient enough or may be lacking key components needed to generate sufficient change. Nevertheless, despite this, school districts continue to use comparable methods from years past with little deviation.

Some school districts continue to use such methods for several reasons. First, school personnel in charge of staff development are unaware of the limited effects traditional methods have on teachers and school personnel. Second, some school personnel believe teachers know how to implement use instructional methods in their classroom and they will effectively retain and use key steps of implementation for future use. However, with the lack of opportunities for active learning and classroom implementation supports, traditional professional development does not have the impact it was intended. Moreover, adult learning principles suggest that in order to increase the likelihood for information to be stored in long-term memory one must practice applying and utilizing the material to create a meaningful connection in the brain (Kapricke, 2016). Without the opportunity to practice new material teachers with support, uptake of the information is limited.

Traditional professional development is often regarded as being the most cost-effective means of providing ongoing learning; nonetheless, with test scores remaining largely unchanged there seems to be no return on this investment later down the road (Kraft, Blazar & Hogan, 2018). With very little or no improvement in the academic achievement of school districts, administrators are forced to utilize other resources to combat where the previous, conventional professional development fell short. This is especially true for high-poverty schools. At times this can present in the form of consultants coming into the district and additional future training
being provided. Due to constraints on resources, districts see the immediate feasibility of using traditional professional development yet fail to recognize these forms are unlikely to produce the anticipated outcomes.

Given that traditional professional development yields limited teacher and student outcomes, alternative, evidence-based approaches to enhancing teacher effectiveness are needed. One increasingly popular form of job-embedded professional development is instructional coaching that has been shown to systematically support teachers (Denton & Hasbrouck, 2009; Kurz, Reddy, & Glover, 2017). Professional development interventions such as instructional coaching have the potential to bolster teacher quality and effectiveness and save districts professional development costs by building internal capacity with instructional staff in schools.

**Evidence for Instructional Coaching**

Instructional coaching has become a popular and widely used professional development intervention in schools in the US and worldwide. Each year millions of dollars are spent across the nation on professional development which yields little impact (Kraft, Blazar & Hogan, 2018; Weisberg, Sexton, Mulhern, & Keeling, 2009) due to ongoing use of traditional methods. With this, the need for an alternative means for training educators has come back into the forefront of researchers. In 2018, Kraft et al. conducted the first meta-analysis of the coaching literature in efforts to exemplify the positive impacts of teacher coaching and to provide insight into the “critical features” which make coaching effective. Kraft and colleagues (2018) found coaching models can generate positive effects (effect size =.49) for teacher instructional outcome and student achievement (SD=.18; Kraft, Blazar & Hogan, 2018). The vast majority of these studies explored focused on elementary school settings, literacy, single practices and did not target instruction and classroom management.
Kraft et al., (2018) acknowledged the beginnings of teacher coaching as found as early as the 1980s. Joyce and Showers (1996) first began systematically exploring coaching in the late 1980s and were major contributors of the first empirical evidence in the field. Together they hypothesized that the most productive training design consists of teachers having classroom strategies modeled and then the opportunity for practice and feedback in live situations (Joyce & Showers, 1996).

This differed from previous notions of professional development that believed simply providing information to the teacher was satisfactory. Outcomes in early studies strongly suggested that if teachers were provided the opportunity to work collaboratively with a consultant (or coach) and are afforded frequent practice, then they were more likely to engage in more long-term use of the learned strategy (Baker & Showers, 1984). At this time, feedback was not found to be an essential component of coaching as there were speculations if it would impact the collaborative relationship. During the 1990s, performance feedback became an evidence-based coaching action in the process of coaching (Kraft, Blazar & Hogan, 2018). Federal legislation directed at improving the quality of reading instruction provided funds and formalized coaching positions (Denton & Hasbrouck, 2009). Such legislation included the Reading Excellence Act in 1999, No Child Left Behind in 2002 and the reauthorization of the Individual with Disabilities Act in 2004. Effects of these acts continued to remain in proceeding years as the role of a coach for providing intervention for teachers was explored throughout research (Kraft, Blazar, & Hogan, 2018).

One key component of the pioneering meta-analysis conducted by Kraft et al., was its insight into the features of effective coaching. In this examination, an exploratory analysis was performed to examine which aspects of teacher coaching facilitate improvements in instruction
and student outcomes. Outcomes suggest pairing teacher coaching with group training is associated with a larger effect size on instruction (SD = 0.31) and a large effect on achievement (SD = 0.12). These outcomes recognized that teachers may benefit from building their baseline skills and/or knowledge prior to coaching. Also, from an instructional standpoint, it was determined that pairing coaching with instructional resources is associated with greater gains (0.21 SD larger). Information on the amount of dosing of teacher coaching could not be determined based on the results of the meta-analysis.

With these outcomes, Kraft el al. set the preceding groundwork for researchers to take a deeper exploration into the key components of coaching. Ongoing research is being conducted to continue to narrow down critical factors for teacher coaching to have the necessary outcomes on student achievement. Prior coaching research, as well as more recent examinations, have shed light on other important factors to be considered.

**Key components of instructional coaching.** Experimental and qualitative data have been utilized to facilitate a more comprehensive approach to determine the essential elements that contribute to the effectiveness of teacher coaching (National Center for Systematic Improvement, 2015). In 2010, Kretlow and Bartholomew reviewed studies over the past three decades and found some shared features including classroom observation, modeling, performance feedback, and forming a collaborative relationship as key components. Each component holds significance in the teaching coaching process and work in an interrelated fashion to making coaching an effective strategy for teachers to enhance their abilities.

Observation can be defined as when a teacher is being assessed in their classroom environment while engaging in instruction. This component is important because allows for coaches to collect data that facilitates the goal creation process as well as monitor progress
towards the established goals (Kretlow & Bartholomew, 2010). Direct observation also allows coaches to gain exposure to the culture and climate of the classroom so context-specific feedback can be given (Snyder et al., 2015). For teacher coaching to be effective, the coach must be cognizant of classroom dynamics and different aspects a teacher may encounter when working with his or her class. This allows for the most appropriate feedback to be given and also provides an opportunity to see how a teacher is implementing recommended strategies in live situations.

The information collected from each observation session is considered data which is discussed within coaching sessions. Research from various teacher coaching models has demonstrated data can be collected in an informal and formal fashion. Formal data would include a use of a date-driven, or formative scale that requires an examiner to look for specific criterion when observing a teacher. This means of data is considered to be more objective and can provide more sound insight into the progression of a teacher towards his or her goals. Informal data consists of typically consists of anecdotal notes being taken by an observed that may or may not be used to support formal data. An example of an observational approach that combines direct observation, rating scale methodology and sources of evidence (e.g., notes) is the Classroom Strategies Assessment System (CSAS, Reddy & Dudek, 2014; see methods for detailed discussion).

Modeling can be defined as when a coach actively shows a teacher how to appropriately use of strategy. Modeling is usually employed when a teacher is being taught a new strategy and/or demonstrating difficulty using an existing strategy (Neuman & Cunningham, 2009; Winton et al., 2015). The purpose of modeling is to provide teachers with a visual display of how to use a strategy he or she may have learned, and if being done in a live situation, what it
should look like in a classroom situation with actual students being present (Winton et al., 2015). This component often is not present in typical lecture-style professional development as again the purpose is to simply disseminate information. Coaching research suggests modeling improves teachers’ instructional practices and may lead to student outcomes (Biancarosa, Bryk & Dexter, 2010).

The next integral part of teacher coaching is the opportunity for teachers to practice recommended strategies with a coach. Practice has been deemed an effective aspect of both teacher coaching and professional development as it allows teachers to utilize evidence-based techniques in the presence of another individual (coach) to enhance the implementation quality or fidelity of such practice (Darling-Hammond et al., 2017). This notion behind this use of increased practice and feedback is comparable to techniques teachers ask their students to use in efforts to enhance academic retention as well as performance.

The next key ingredient for successful teacher coaching is performance feedback which is defined as when a coach provides teachers with the information gathered throughout an observation session. As mentioned previously, initial research from Joyce and Showers believed the use of feedback should be used with caution due to the concern it would create a power imbalance in the collaborative relationship. However, research has supported the use of ongoing feedback during coaching as it allows teachers to realize their progress towards their goals and can enhance both teacher and student outcomes (Cornelius & Nagro, 2014).

Hagermoser Sanetti et al. (2007) examined the type and dosage of performance feedback for teacher improvement on use of classroom strategies. In a sample of four staff participants from a second-grade teaching team findings indicated that providing teachers with individualized performance feedback is critical because this can have a direct and immediate impact on
teacher’s use of strategies. With this, teachers are likely to demonstrate increased fidelity when using evidence-based research strategies depending on the type of feedback provided by the coach (Hagermoser Sanetti, Luiselli, Handler, 2007).

Further, additional research on the use of performance feedback suggests it is most effective when it is specific, timely, positive and provides correction only where necessary (Scheeler et al., 2004). Feedback should be specific as it provides direct insight as to what the teacher did correctly or incorrectly and timely refers to when the teacher receives the feedback from the coach. Scheeler et al., recommend feedback to be provided within the same day of the observation to be the most impactful. Moreover, feedback should be administered in a positive manner as this will help preserve the relationship between the coach and teacher while reassuring the teacher is executing good strategies in the classroom. For corrective feedback, this should only be used when necessary and to implicate which strategies a teacher may need further practice on (Scheeler et al., 2004). Lastly, some researchers have suggested performance feedback, as well as practice, is more effective when it is provided in an environment of learning or classroom setting (Carlisle & Berebitsky, 2011; Lekwa, Reddy & Shernoff, 2017). How performance feedback should be delivered is still under examination. Different methods that have been noted across research including oral feedback (both in the moment and/or post-observation), video-based feedback or written feedback. Nevertheless, the best type of delivery may be dependent on the relationship between the teacher and coach and what is most effective for them.

Conceptual differences between consultation and instructional coaching. Before discussing the theoretical basis for this study, it is important to note the relationship between teacher coaching and teacher consultation. Teacher coaching can be defined as a collaborative
process between a coach and teacher that work together on tasks such as goal setting, creating a plan for accomplishing goals, performance feedback and sustainability of target behavior and instructional strategies (Fabiano, Reddy & Dudek, 2018).

Both teacher coaching and consultation have noteworthy similarities. They are collaborative in nature and can generally be thought of as indirect service delivery models. More specifically both focus on the role of a coach working with an individual teacher or a school personnel team to identify the needs of students. Both also collaborate with teachers in selecting and implementing interventions to meet student needs in schools.

However, there are also several differences between coaching and consulting. A coach is typically a member of the same organization (i.e., teacher promoted to instructional coach) that is believed to be an expert and works to enhance or change an individual(s) skillset (Denton & Hasbrouck, 2009). A consultant may or may not be a member of the same organization and would work more towards systemic level goals or institutional changes. An example of this role may be a professional contracted to work with teacher(s) implementing a school or district-wide intervention. Consultants also generally have a specialized set of skills in which they are trained which allows them to provide consultation to outside organizations (Denton & Hasbrouck, 2009; Erchul, 2015). Lastly, another key difference between coaching and consultation is that coaching is typically more job-embedded and continuous. The work of consultants tends to be short-term, while coaches tend to offer on-going relationship and intervention supports (Denton & Hasbrouck, 2009).

**Data-Driven Coaching: Classroom Strategies Coaching (CSC) Model**

The CSC Model is an efficient, research-based and collaborative process that utilizes classroom observation data to inform the coaching process. The CSC uses data to improve
teachers’ use of evidence-based instructional and Behavior management strategies (Reddy, Dudek & Lekwa, 2017; Reddy, Shernoff, & Lekwa, 2019). The CSC Model is manually based intervention that emphasized the use of key components such as observation, modeling, practice and performance feedback to enhance teachers’ implementation of research-based practices (Kretlow & Bartholomew, 2010). Each of these coaching components work in a cyclical nature and have been proven to make a positive impact on instructional and behavior management practices (Kurz, Reddy & Glover, 2017; Reddy, Dudek, & Lekwa, 2017). Further, the CSC Model uniquely examines the frequency and quality of classroom practices on the learning environment for all students. The model includes specific coaching phases: (1) identify teacher practice needs, (2) establish goals based on data, (3) provide model and practice opportunities for plan steps, (5) delivery continuous, visual performance feedback, (6) evaluating implementation and goal attainment, and (7) revising developed action plans as needed for generalization (Reddy, Dudek & Lekwa, 2017). Initially, a four-session CSC Model (two hours of coaching) was utilized with 89 elementary teachers in a randomized controlled trial (RCT; Fabiano, Reddy & Dudek, 2018). The sample of comprised teachers from 15 different schools in the New York and New Jersey who instructed grades kindergarten through fifth. Participants from each school ranged from one to 26. Baseline and postintervention data were gathered from 24 independent observers consisting of undergraduate or graduate students studying psychology or education. Results found that teachers in the experimental condition demonstrated significant improvements in observed behavior management practices. In addition, teachers from this study also self-reported an increase in behavior management strategies as well as use of instructional strategies when compared to control teachers (Fabiano, Reddy & Dudek, 2018; Reddy, Dudek, & Lekwa, 2017).
In recent research, the CSC Model has been expanded to an eight-session approach (four hours of coaching) which was found to yield significant improvements in teacher and student outcomes in high-poverty elementary schools (Reddy, Shernoff, & Lekwa, 2021). Specifically, using a sample of 106 elementary school teachers (n = 53 experimental, n = 53 waitlist controls) serving 2,195 students within 14 high-poverty schools, Reddy and colleagues (2019) found significant effects of coaching on teachers’ use of instructional strategies as well as an improvement in the quality of strategy delivered ($d = .60$). Further, this RCT results indicated CSC teacher-rated improvements in their students’ academic ($d = .96$) and Behavior functioning ($d = 1.24$) along with instructional ($d = 1.04$) and emotional support ($d = .90$) in comparison to waitlist teachers. Lastly, no change was found for teacher stress.

**Purpose of Study**

Building off the recent RCT, this study specifically examines the key coaching components and implementation processes observed in two separate teacher coaching cases in a high-poverty school. This study offers insights on the clinical nuances of the CSC Model in this context.

**Research Questions**

To following four research questions are addressed:

1. What are the critical actions and processes in the coaching process?
2. What are the coaching effects on observed teacher practices and student outcomes?
3. What are the coaching effects on teacher ratings of student academic and behavior functioning and perceived instrumental and emotional supports and work-related stress?
4. Do participating teachers value the implementation of teacher coaching for professional improvement?

This investigation utilizes qualitative and quantitative data to provide an in-depth appraisal of the processes and outcomes of the CSC Model for teachers working in high-poverty elementary settings. While case studies do not generate the causal outcomes or statistical significance found in experimental and quasi-experimental design, a case study format offers the opportunity to explore important nuances in the implementation process that may not be discovered in the other group-designs (Kazdin, 1981).

**Method**

**Participants**

Two cases were selected from a randomized control trial (RCT) study that examined the implementation and efficacy of the eight-session CSC Model in a large high poverty school district. This study was approved by the Institutional Review Board (IRB). Conditions of this study comprised a three-cohort, waitlist controlled, randomized block design to examine the impacts of the CSC Model (n = 53 experimental, n= 53 waitlist control) across 14 high-poverty elementary schools. The CSC Model utilizes formative assessment data of instructional and Behavior management strategies. This information is collected via use of the Classroom Strategies Assessment System (CSAS) and assesses the teachers’ use of evidence-based practices, teacher perceptions of support and stress and student academic achievement.

Participants of the study were assigned to either CSC coaching or waitlist control condition. Outcomes of the main RCT study (Reddy, Shernoff, & Lekwa, 2021) indicated that teachers in the coaching condition exemplified significant improvements in instructional quality (d = .41), behavior management (d = .52), and student engagement (d = .41). Furthermore,
teachers reported significant improvements in student academic ($d = .96$) and Behavior functioning ($d = 1.24$) along with instructional ($d = 1.04$) and emotional support ($d = .90$, respectively). Initial findings yielded no evidence of impacts on teacher stress.

For the teacher selection process, teachers were recruited by distribution of flyers, via meetings with administration, presentations provided to faculty to discuss study, and ultimately, follow-up meetings with those with an expressed interest in the study. Teachers with intent to participate were provided informed consent explaining the nature of the study. Teacher coaches consisted of 12 supervised M.A. level school practitioners hired to work on the study and/or being trained in a school psychology doctoral program with experience in high-poverty schools.

Coach demographics included a higher percentage for females (75%) and European American Caucasian (83%). The overall mean age was 28 (SD = 5).

**School Context**

Both teachers taught at the same elementary school within a high-poverty community. The demographic breakdown for this particular school was as follows: 52% percent of students were Black, 41% were Hispanic, 4% were White, 1% were Asian and the remaining percent were of native descent or a mix of two are more races. Approximately 10.6% and 10.2% of students were proficient in Math and English, respectively. There were 623 students in the school and 15% were eligible and receiving special education and/or related services.

**Case Description**

**Case 1.** Teacher 1 (T1) was a female, general education teacher who had several years of teaching experience and had been at that particular school for at least the past few years. She reported limited preservice training in behavior management and stated she would like to learn more instructional and behavior management techniques to improve her overall student
outcomes. Her classroom consisted of a majority of mainstream, general education students with a select few receiving special education services. She was assigned to a coach who was trained and supervised by project staff and also had previous teaching experience.

Case 2. Teacher 2 (T2) is a male, general education teacher in the same high poverty school. He reported a significant amount of teaching experience and stated he was approaching retirement at the end of this school year. Likewise to T1, he reported little to no training on behavior management in the classroom. He reported the desire to learn more effective behavior strategies as he has noticed increasing challenges with managing children in his classroom. T2 stated his area of interest initially began in the instruction of Mathematics and over time he was required to teach different subjects. He reported a deep desire to improve his teaching abilities with the challenging context of this high-poverty school so he could leave an impact within his final year of teaching. T2 was assigned another coach being supervised by project staff who also had extensive experience in high poverty schools as a school psychologist.

Instrumentation

Classroom Strategies Assessment Scale (CSAS). The Classroom Strategies Assessment System (CSAS, Reddy & Dudek, 2014) was used to assess teachers’ instructional and behavior management practices. The CSAS is a valid multi-method measure that assesses the frequency and quality aspects of teachers’ use of evidence-based instructional and Behavior strategies in the classroom (Reddy & Dudek, 2014). The CSAS includes both direct observation as well as rating methodologies as a means of progress monitoring and providing teachers with feedback towards their prospective goals.

CSAS consists of three sections which are Strategy Counts, Instructional Strategy/Behavior Rating Scales and The Classroom Checklist. Strategy Counts consist of the
total number of times or frequency a teacher uses either an Instructional Strategy or Behavior Management Strategy throughout a 30-minute observation. Two CSAS observations take place in between each coaching session and occurred during times of active instruction. There are eight total teaching behaviors observed, four in each section. Notes are also taken throughout this portion of the CSAS that may be used to assist in the completion of the rating scales.

The Instructional Strategy and Behavior Rating Scales are completed post-observation and included 7-point Likert scales asking how often a teacher used the specific strategy (1 = never used, 3 = sometimes used, 7 = always used) and how often it was recommended for a teacher to use a strategy. These scales are divided into separate Instructional and Behavior Management sections consisting of 30 items each. From these ratings, discrepancy scores are generated by subtracting the observed frequency scores and recommended frequency scores. Differences can be used to indicate potential areas of improvement for a teacher. The larger the discrepancy scores it is suggested that there is an increased need for improvement (Fabiano, Reddy & Dudek, 2018; Reddy, Dudek, & Lekwa, 2017).

The CSAS reliability and validity follows the 2014 Standards for Educational and Psychological Testing and has been extensively studied in numerous publications. The CSAS demonstrates acceptable levels in reliability in addition to content, construct, convergent and predictive validity (Reddy, Fabiano, Dudek, & Hsu, 2013). In 2013, Reddy, Dudek and Hsu, examined several studies to assess the construct development and validity of the CSAS. The sample was comprised of 317 general education teachers from 73 elementary schools. In terms of internal consistency, the Cronbach Alphas ranged from .92 to .93 for the CSAS-O form indicating an acceptable result. For interrater reliability estimates range from .72 to .94. Test-retest reliability estimates were .70 to .86 for total scores on the CSAS.
Concurrent, discriminant and predictive validity was also assessed. Reddy, Fabiano and Dudek (2013) compared the CSAS scale with the Classroom Assessment Scoring System (CLASS) which was created by Pianta, La Paro and Hamre in 2008. The CLASS is a recognized classroom observation tool. Outcomes suggest the CSAS and CLASS corresponded on similar constructs whereas no relationship could be determined on unrelated. Concurrent validity was also found when comparing the CSAS to the Danielson Framework for Teaching.

For predictive validity, the CSAS was found to predict statewide, standardized test scores in the subjects of mathematics and language arts for students in third through fifth grade. Examples of such included Reddy et al. (2020) who found a relationship between the CSAS and student gains in mathematics for the Measure of Academic Progress (MAP) and both mathematic and readings scores on the MAP Rasch Unit (RIT). Likewise, Lekwa et al. (2019), article yielded similar results which suggest when teachers utilized evidence-based strategies identified on the CSAS, more gains were evident for the areas of mathematics and reading. Lastly, the relationship between the CSAS and the Cooperative Learning Observational Code for Kids (CLOCK) was examined by Reddy et al. (2019). Outcomes suggest when teachers increased their use of high-quality evidence-based instructional and behavior management strategies, increases were also evident in student academic engagement. Overall, these results indicate the CSAS data appears to be a good predictor of outcomes on a wide range of standardized assessments often used within the elementary school setting and may also be a good indicator of student progress as it relates to classroom engagement.

**Cooperative Learning Observational Code for Kids (CLOCK).** The Cooperative Learning Observation Code of Kids (Volpe & DiPerna, 2010) is an observational assessment tool that examines the level of student engagement in the classroom. When the observation is
performed, two categories are assessed, active and passive engagement (Briesch, Hemphill, Volpe, & Daniels, 2014). Active Engagement Time (AET) consists of a child participating in on-task behaviors (e.g., working on an assignment, raising a hand, or answer a question). Passive Engagement Time (PET) is when a student is required to take in and attend to instructionally relevant information (e.g., listening to lecture). Behavior is assessed by recording data in intervals more specifically called momentary time sampling. The CLOCK utilizes a random selection of a group consisting of 12 students to take baseline and post-assessment data. Observer repeats this sequence for a total of at least 36 minutes. The CLOCK demonstrates acceptable inter-observer agreement at 89% to 92% (Volpe, Young, Piana, & Zaslofsky, 2012).

**Teacher Stress and Support Assessment (TSSA).** The Teacher Stress and Support Assessment (TSSA) is a measure that examines stress experienced by teachers and their perceptions of support in the classroom. The assessment consists of 27 items that fall within three different scales: Stress, Instrumental Support and Emotional Support. The TSSA requires teachers to evaluate their classroom experiences over the past eight weeks and then rate this experience from 1 to 5 on a Likert Scale. The Stress scale asks teachers to assess their level of stress while in and outside of the classroom, 1 being “no stress” and 5 being “extremely high stress”. On the Instructional and Emotional Support scales, teachers rate their experience for items for the respective items with 1 being “strongly disagree” and 5 being “strongly agree”.

In terms of the content of the scales, the Stress scale consists of 13 items that assess stress in different contexts. The Instrumental Support Scale consists of eight items that focus on a teacher’s receipt of any supervision, performance feedback or instruction on classroom instructional management best practices. Lastly, the Emotional Support Scale consists of six items developed to assess teacher’s perceived encouragement or assurance from colleagues as
well as school administration. The TSSA is scored by taking the average of summed scores in each scale separately and then these individual scores are used to inform school administration on areas of need for better supporting their teachers.

In terms of the psychometrics for the TSSA, a recent analysis performed by Lewka, Reddy, Shernoff and Buscetta (2018) examined the reliability of the scale for its ability to measure teacher perceived support and stress. Results demonstrated good internal consistency across scales as per Cronbach’s alpha outcomes. The scales of Instrumental Support yielded a .92, Emotional Support yielded a .94 and Stress yielded a .88. Most items also had item-to-total correlations above .3. Further, upon examining the Exploratory Factor Analysis performed, three factors were identified for supporting the hypothesized structure. Lastly, ratings for items did not display a correlation with sample demographics when controlling for total scores. This outcome indicates freedom from item bias.

**Classroom Practice Improvement Questionnaire.** The Classroom Practices Improvement Questionnaire (CPI) is a measure used to assess a teacher’s feelings of instrumental and Behavior strategy use within the classroom setting as well as perceptions of student academic and Behavior functioning. This measure consists of 21 items which comprise three different scales: Instructional Usage, Student Academic Functioning, and Student Behavior Functioning. Each scale asks teachers to assess their level of stress while in and outside of the classroom, 1 being “very much worse” and 7 being “very much improved”.

The Instructional Usage scale asks a teacher to self-report his or her general use of concept summaries to students, academic response opportunities, praise, corrective feedback, and one or two-step directions. The Student Academic Functioning scale assesses the teacher’s perception of student academic abilities, specific academic abilities (e.g., math and language
arts), student willingness to share academic responses, use of praise/corrective feedback in the classroom, need to call home or consult with the principal about academic problems. The Student Behavior Functioning scale asks a teacher to self-report their overall student Behavior functioning, use of directives, student ability to follow rules, overall student appropriate behavior, student need for redirection and need to call home or consult with principal about behavior problems.

This scale is provided to the teachers prior to the onset of coaching and data derived is used as a baseline measure. Upon the completion of teacher coaching sessions, this measure is administered once again. This information is used as a post-intervention measure for comparison.

**Coaching Evaluation Scale.** The Coaching Evaluation Scale is a measure used to assess the experience of the coaching session based on teacher perception. When rating, teachers were asked to assess on based on 7-point Likert scale ranging from 1 being “Strongly disagree” and 7 “Strongly agree” and to consider occurrences over the past two months. Examples of items on the scale include statements regarding professionalism, level of skill of the coach, ability to provide appropriate teaching strategies, and impact of coaching on current classroom functioning. This measure also provides insight on teacher’s perception of the overall impact of coaching while checking for the quality of coach post-session.

**Coaching Model**

The Classroom Strategies Coach (CSC) Model is a manualized coaching framework that utilizes the data-driven assessment of the CSAS to assist in the use of instructional and behavior management strategies in the classroom. This model focuses on utilizing a problem-solving approach to identify teacher’s areas of strength/need, formulate practice goals and design
informed implementation plans for his or her work in the classroom. The use of teacher observational assessment data serves to be important as it allows teachers and coaches to target specific areas of needs and well as develop implementation plans in an informed manner. In addition to the use of classroom observations and the CSAS, trained coaches provide modeling of teaching strategies and allow for teachers to practice within the coaching sessions. Performance feedback is also addressed throughout this model. These key elements have proven to be effective when working with teachers on enhancing their performance in the classroom (Kurz, Reddy & Glover, 2017).

The Classroom Strategies Coach (CSC) Model consisted of eight 30-minute coaching sessions. In between these sessions (except the final session), two 30-minute CSAS observations/assessments are completed. Each coaching session is standardized as it follows a pattern throughout each meeting. Sessions consist of reviewing coaching observations based on CSAS data and provide the teacher with feedback, develop/review implementation plan and lastly, the coach modeling strategies and teacher practicing based on anticipated class lessons. Each session is outlined for what is to be addressed and checklists are provided to coaches to ensure reliability and consistency in the implementation of the intervention. Audio recording is also utilized for supervision purposes well as an additional fidelity check. The coaching sessions are outlined as follows:

**Session 1.** Coach provides the teacher with an overview of the coaching project and allows for teachers to ask any questions her/she may have. Coach then assesses for teacher’s overall goals for the classroom as well as any particular styles/strategies the teacher typically likes to utilize when working with students. CSAS Part 1 Strategy Counts are then defined and explained by coach and baseline CSAS data is reviewed. Coach and teacher create examples of
how these strategies can be utilized within the classroom and generate tentative goals for Part 1 Strategies.

**Session 2.** Coach defines and explains CSAS Part 2 Strategy Rating Scales. Teacher baseline data, as well as data from observations following session 1, are reviewed. Examples are generated for what these strategies would look like in his or her classroom. CSAS Part 1 Strategy Counts are also reviewed in this session in more depth. Areas of potential strength, as well as areas of improvement, are discussed depending on the desires and concerns of the teacher. Tentative goals are developed for Part 2 Strategy Rating Scales based on the information learned from coaching sessions.

**Session 3.** Coaches and teachers review CSAS data and feedback is provided. Implementation plans are collaboratively developed based on the goals that were discussed throughout the previous sessions. The coach models use of these strategy goals and then allows for teacher to plan/practice these items in session.

**Sessions 4-7.** Sessions 4 through 7 are comparable in structure, including an opportunity for teacher reflection of frequency and quality of implementation for strategies listed on the implementation plan. After this, data is reviewed, and feedback is provided by coach. Coach models the appropriate use of the goal strategies and teachers then plan/practice use of such strategies.

**Session 8.** In the final session, coach and teacher begin with the last teacher reflection. Data for all previous observations is then reviewed and feedback is provided based on progress and goals outlined in the implementation plan. Coach then attempts to develop a plan of sustainability with the teacher to try to identify how the teacher can maintain progress even
without the presence of a coach. Soon after this session, CSAS post-data is taken by independent observers to obtain the final set of data points for the teacher.

**Coaching Fidelity**

Coaching sessions were assessed for accuracy of implementation by the supervisor of the coach after each of the eight consultations with the teacher. Supervisors were provided with a coaching fidelity checklist which outlines each of the critical talking points for each session to ensure their completion. Supervisors listened to audio recording of the consultation session and then performance feedback was provided to the coach before the next scheduled meeting with the teacher.

**Procedures**

Once consent was obtained, teachers were randomly assigned to the experimental condition or waitlist control. Both conditions then received a baseline assessment, coaching condition or wait period, and post-assessment. The baseline assessment consisted of teachers completing a demographics classroom characteristics form, and a teacher self-rating of their perceived use of instructional and behavior management strategies as well as student’s behavior and academic functioning. Prior to coaching, independent observers conducted two CSAS observations for each teacher. Coaching began for the CSC condition after this baseline assessment process. Those randomly assigned to the waitlist condition received no exposure to coaches or study staff until post-assessment was completed. Those from the CSC participated in post-assessment at the end of the coaching process. Post assessment consisted of independent observers completing the CSAS for the same classroom lessons at baseline assessment and teachers completed the same forms from baseline again.
**Observer Training.** Independent observers were undergraduate and graduate students studying psychology and education who were involved in administering independent observations blind to the condition. They were unaware of blind to the condition in which they were observing and conducted both baseline and post-assessment observations. Demographics of independent observers consisted of students primarily of European American descent and majority female (80%). Trained observers predominately were in their junior and senior year of undergraduate study.

CSAS observer training was comprised of a three-and-a-half-day training which consisted of theory, design, evidence and scoring of the measure. Further, trained observers were provided instruction on specific instructional and Behavior management strategies derived from literature focusing on teacher best practices. Observers were trained on how to take notes to identify lesson flow, evidence of practice, and student-teacher interactions. Trainees were also required to engage in a group coding practice session where a Master coder would provide feedback. Upon completion of the training, knowledge of trainees was assessed by trainees independently coding five classroom videos to criterion. The criterion to be met consisted of at least 80% exact or adjacent agreement with Master coders which was similar to conditions found in research-supported classroom observation systems such as the Framework for Teaching (Danielson, 2013) as well as Classroom Assessment Scoring System (Pianta, La Paro, & Hamre 2008).

CLOCK training included instruction on the varying basic methods of systematic, direct observation of student behavior (e.g., methods of time sampling) and specific instruction on target behaviors and their operationalized definitions. Practice identifying these concepts was
used to provide feedback. Trainees were required to complete a certification test by coding classroom videos independently to criterion of 90% or higher with agreement to a Master coder.

**CSC coach training.** Coaches were provided a three-day training on the purpose and structure of the CSC Model. Trainees also were trained to reliability on the CSAS. Coaches participated in role-playing of coaching sessions and received ongoing supervision. Coaches were required to complete a CSAS certification test which included conducting observation on classroom videos to criterion. Criterion consisted of 70% or higher agreement to Master coders.

**Data Analysis**

In the current case study, relevant data was collected in various ways to assess outcomes. CSAS Strategy Counts and CSAS Rating Scales data was gathered respective of the goals selected. Goals were developed collaboratively by teacher and coach based on identified areas of needs/improvement. To assess baseline, data was collected from two sets of CSAS observations performed by two separate independent observers. CSAS data pertaining to goal areas was collected from observations after coaching meetings one through seven. For post-assessment, the same procedure was repeated for baseline. Both teachers in this case study had the same goals throughout their coaching sessions.

The data analytic approach used for this dual case study included descriptive statistics, time series graphing of progress towards goals, qualitative analysis by grounded theory (Charmaz, 2015; Glaser & Strauss, 1999; Scott, 2009), the computation of single subject effect sizes (Busk & Serlin, 1992) and the computation of the reliable change index (RC; Jacobson & Truax, 1991). In efforts to analyze the data, descriptive statistics were generated for CSAS outcomes data to give a better perspective of sample characteristics. Descriptives provide information pertaining to such data such as mean, median and mode of observed data. Time
series graphing was utilized to examine changes or improvement at face value based on frequency counts from CSAS observations.

For the qualitative portion of this study, a grounded theory design was utilized to systematically analyze and conceptualize emerging social patterns across CSC coaching sessions (Charmaz, 2015; Glaser & Strauss, 1999). Grounded theory is regarded as an inductive methodology which incorporates key components such as data collection, memo writing, coding, analysis and theoretical categorization (Glaser & Strauss, 1999). Data collection was completed by listening to the audio files for each session between teacher and coach. When doing so, memos were taken by noting outstanding items within sessions described by teacher or coach. Coding was then conducted by examining memos to consider what may be happening within data or if there were any reoccurring themes developing across coaching sessions (Charmaz, 2015). This information was then categorized as reoccurring challenges in terms of barriers to the implementation of recommended strategies expressed by the teacher. This data was finally utilized to make connections to existing CSC literature (Scott, 2009) in efforts to find similarities or anomalies in terms of implementation for teaching coaching within high-poverty, elementary settings.

Lastly, two types of analysis were used to assess for change or meaningful impacts of teacher coaching as an intervention. Single subject effect sizes were used to examine the standard mean difference (SMD) and reliable change index are used to assess for meaningful change. Due to reliability restrictions, reliable change data could only be computed for the CSAS and TSSA. Single subject effect sizes act as an evidence-based indicator for the amount of improvement by the client (Parker, Vannest & Davis, 2011), as well as provide an estimate of practical change for teacher’s use of strategies in the classroom (Busk & Serlin, 1992). The RC
was used as to find practical significance or to assess the reliable change in targeted practices from baseline to post-coaching for the two case studies (Jacobson and Truax, 1991).

**Results**

To address the primary research questions, both quantitative and qualitative methods were used to examine coaching processes and outcomes within the two case studies. Specifically, descriptive statistics such as means, standard deviations and ranges were used, as well as time series graphing, single-subject effect sizes (Busk & Serlin, 1992) and the reliable change index (Jacobson et al., 1984). Descriptive statistics time series graphs were used to assess changes in targeted strategies (practice goals) during coaching.

Busk and Serlin’s single-subject effect size was used to compute the standard mean differences (SMD) of the data set. This equation consists of the mean difference derived between treatment and baseline which is then divided by the standard deviation of the baseline. More specifically, this formula was used to compare the mean of frequency counts taken from the baseline independent observations and then post-coaching independent observations for the respective goal targets.

Likewise, Jacobson’s (1984) Reliable Change Index (RC) was used to assess the reliable change in targeted practices from baseline to post-coaching for the two case studies. This equation utilizes the difference between a subject’s pre-test and post-test scores which is then divided by the standard error of difference (Jacobson & Truax, 1991). The RC scored generated is compared to standard of 1.96 (p < .05) to account for if actual change occurred or if changes can be attributed to error. As it relates to this study, a score over a 1.96 would suggest changes occurred as a result of the coaching condition being introduced.
Lastly, qualitative data was collected to provide information on the interactions and delivery of coaching. Information relevant to the goals, implementation of identified strategies as well as teacher report of stress was noted and then analyzed for themes across this data.

**Pre-Coaching Teacher Data: Cases T1 and T2**

**Baseline CSAS Strategy Counts**

Table 1 represents baseline or pre-intervention data obtained from the CSAS Strategy Counts across two independent observations at baseline for both T1 and T2. Table 1 illustrates T1 used less than 1 Concept Summary (M = .05, SD = .5, range = 1) and slightly less than 18 Academic Response Opportunities (M = 17.5, SD = 6.5, range = 13). T1 used just over 1 Academic Praise statements (M = 1.5, SD = 1.5, range = 3) and over 2 Academic Corrective Feedback statements (M = 2.5, SD = 1.5, range = 3) across the two observations. T1 demonstrated an average of over 21 Clear One to Two Step Directives (M = 23.5, SD = 2.5, range = 5) and over 3 Vague Directives (M = 3.5, SD = 0.5, range = 1). T1 utilized 1.5 Behavior Praise Statements (M = 1.5, SD = 0.5, range = 1) and over 16 Behavior Corrective Feedback statements (M = 16.5, SD = 3.5, range = 7). Lastly, T1 utilized an average of 67 total counts of strategy use (M = .67, SD = 10, range = 20) across the two observation sessions.

Table 1 demonstrates T2 used one Concept Summary (M = 1, SD = 1, range = 2) and over 35 Academic Response Opportunities (M = 35.5 SD = 20.5, range = 41) within the two pre-coaching independent observations. She used both 3 Academic Praise and Academic Corrective Feedback statements (M = 3, SD = 2, range = 4). For Clear One to Two Step Directives, T2 displayed 10 (M = 10, SD = 4, range = 8) and she used over 4 Vague Directives (M = 4.5, SD = 1.5, range = 3). Similarly, T2 used over 4 Behavior Praise Statements (M = 4.5, SD = 1.5, range = 3). She also displayed over 10 Behavior Corrective Feedback statements (M = 10.5, SD = 0.5,
range = 1). For total counts for strategy use, T2 demonstrated an average of 72 strategies (M = 72, SD = 30, range = 60) across baseline observations.

**Baseline CSAS Strategy Rating Scale Discrepancy Scores**

Table 2 represents CSAS Rating Scales discrepancy scores found on the scales and subscales across the two independent observations prior the implementation of teacher coaching. CSAS Total (IS+BMS), Instructional Strategies (IS) and BMS scale scores are presented on Table 2 for the T1 and T2.

**TSSA and Classroom Practice Improvement Questionnaire Baseline Data**

Table 3 consists of baseline teacher ratings for the TSSA, and the Classroom Practice Improvement (CPI) Questionnaire completed prior to the beginning of the coaching sessions. Ratings for TSSA Instrumental Support, Emotional Support and Stress scales, as well as the Classroom Practice Improvement Questionnaire Instructional Usage, Student Academic Functioning and Student Behavior Functioning scales.

**T1 Baseline Data.** Table 3 illustrates that T1 reported an average rating of a one (M = 1, SD = 0.00) for the Instrumental Support scale. This rating fell in the “Strongly Disagree” category on the TSSA indicating T1 perceived a low amount of support or receipt of quality information/resources for enhancing instruction and classroom behavior management. For the Emotional Support scale on the TSSA, Table 3 demonstrates T1 reported ratings of 1 to 2 suggesting T1 “strongly disagreed” or “disagreed” with the receipt of emotional support from leaders, administrators and/or colleagues. In terms of the Stress Support scale on the TSSA, Table 3 illustrates ratings of 4 to 5 of between a four and a five (M = 4.53, SD = 0.84). This suggests T1, at baseline, perceived “high stress” in the current school setting.
For the Classroom Practice Improvement Questionnaire, Table 3 illustrates an average mean rating of 5 for T1 (M = 5.00, SD = 1.31) on the Instructional Usage scale. This equates to a “somewhat improved” rating or agreed she used instructional strategies (e.g., strategies identified on the CSAS Strategy Counts) with T1’s classroom at baseline. For the Student Academic Functioning scale, Table 3 displays T1 reported an average rating of closer to 3 (M = 2.88, SD = 2.42). This would fall into the “somewhat worse” category and suggests T1 perceived a lower level of academic functioning by from her students at baseline. In reference to the Student Behavior Functioning scale, Table 3 illustrates an average rating of a one for T1 (M = 1.00, SD = 0.00). This indicates T1 perceived a lower level of functioning from her students on their ability to regulate behavior in the classroom setting at baseline.

**T2 Baseline Data.** For T2 TSSA baseline data, Table 3 illustrates an average rating of about 3 (M = 3.13, SD = .60) was indicated for the Instrumental Support scale. This rating equates to a “neutral” rating on the scale as it pertains to the receipt of guidance or resources within the current school setting for enhancing instructional or behavior management. For the Emotional Support scale on the TSSA, Table 3 demonstrates an average of 3 (M = 3.67, SD = 0.99) which falls in between the ratings of “neutral” and “agree” for the receipt of emotional support from leaders, administrators and/or colleagues within current school setting. Lastly for the TSSA, Table 3 depicts ratings of 2 to 3 in between a 2 and 3 (M = 2.77, SD = 1.31) which equates to ratings of “disagree” or “neutral” for feeling supported in terms of stress support within T2’s current school setting at baseline.

For the Classroom Practice Improvement Questionnaire, Table 3 presents an average mean rating of 2 for T2 (M = 2.14, SD = 0.35) on the Instructional Usage scale. This equates to a “somewhat worse” rating or a slightly lower use of instructional strategies within the classroom
at baseline. For the Student Academic Functioning scale, Table 3 displays T2 indicated an average rating between 2 to 3 (M = 2.38, SD = 0.99). This would fall into between the “somewhat worse” and “very much worse” category and suggests T2 perceived a low level of academic functioning by from students at baseline. For the Student Behavior Functioning scale, an average rating of 1 was found for T2 (M = 4.29, SD = 0.45; see Table 3). This indicates T2 perceived a higher level of functioning from students on their ability to regulate behavior in the classroom setting at baseline.

**Case Conceptualization**

**T1 Case Conceptualization**

T1 appeared highly motivated and eager at the initial onset of teacher coaching. This level of motivation seemed to diminish slightly about mid-way through coaching as indicated by her self-reported forgetting to use identified strategies and follow through on suggestions to improve her chances of remembering these strategies. Toward the end of coaching, it appeared T1 regained some motivation as she committed to use of the strategies discussed with the coach. T1 attended all meetings and consistently demonstrated an openness to feedback/insight provided by the coach across all sessions. At the onset of coaching, T1 reported a desire to improve upon her behavior management skills in the classroom as she did not receive formal instruction on this area in her educational experiences or within the workplace. She indicated academic progress in class is often interrupted or delayed because of the behavior by select students in the classroom setting. T1 reported she would like to learn how to better regulate/manage overall student behavior so more time can be focused on the instruction of academic material.
**T2 Case Conceptualization**

T2 also appeared motivated and engaged throughout coaching. He seemed to maintain this level of engagement across all coaching sessions and was open to feedback/insight provided by the coach. T2 reported he wanted to learn new strategies for relating with students or connecting them to academic material. He reported he tries his best to make lessons as engaging and interesting as possible; however, this is impacted by the student’s lower academic functioning as well as adversity from the community outside of the school setting. T2 reported this adversity directly impacts student interest in school because they do not see how to apply skills learned in their everyday life. Further, T2 reported adversity from the outside community increases his work-related stress because he is unsure of the long-standing impact he is making for students learning. He indicated some students have reconnected with him to reassure him he has positively impacted them in one way or another. Nevertheless, T2 reported he would like to motivate more students to see the importance of academics.

**Coaching Process**

**T1 Coaching Sessions**

**Session 1.** Session goals were (a) begin establishing a collaborative relationship with T1 and T2, (b) overview the coaching study/coaching process (c) review baseline data for the CSAS Strategy Counts and (d) identify tentative targets for improvement listed in the CSAS Strategy Counts. Coaches reviewed the voluntary nature of the study as well as that anything discussed would remain confidential and not shared with school district. Teacher and coach discussed commonly used teacher practices or approaches towards instruction as well as areas of improvement. T1 reported use of small group instruction as her preferred lesson format. She described the students in her class performing better when they are actively working on
assignments throughout the period. T1 also stated select students in her class often engage in disruptive behaviors so managing this would be an area of improvement for her. She reported she previously attempted to use behavior charts and incentives for good behavior and lunch detention to address negative student behavior. T1 attributed the students’ misbehavior to academic deficits and delays.

Next, the coaching stages and the use of the CSAS for guiding coaching decisions were discussed with T1. Specifically, the coach and T1 discussed coaching would entail approximately eight sessions with two observations in between each session, using CSAS data to identify practice needs/goals, create practice plans, support implementation (via modeling, practice, feedback) and monitor/evaluate progress towards goals. The coach introduced the Strategy Counts and provided examples of what each would look like in the classroom. The coach reported T1 demonstrated lower than recommended usage of Concept Summaries, and Academic Praise Statements for the Instructional strategies portion of the CSAS Strategy Counts in her baseline data (see Table 1). These two strategies were proposed as targeted goal areas. Further, the coach informed T1 of the recommended ratio of 3:1 for Behavior Praise and Behavior Corrective Feedback, respectively as per research (Shores, Gunter, & Jack, 1993) and also noted the ratio for inclusion classrooms would be 5:1 due to the increased need for behavior reinforcement. With this, the coach suggested these two areas be also included in the target goals for T1. For inclusion classrooms

Lastly, T1 and coach engaged in a brief introduction of the CSAS Strategy Rating scales. T1 was informed Strategy Counts focus on quantity of strategy use while Strategy Rating scales (i.e., discrepancy scores) focused on quality of strategy use. Coach briefly reviewed the Strategy Rating scales and provided examples or items for each.
**Session 2.** Session goals were (a) continue building a collaborative relationship between teacher and coach, (b) review CSAS Strategy Counts, (c) briefly review CSAS IS an BMS dimension definition, (d) review CSAS IS and BMS baseline data, (e) introduce potential IS and BMS goals and reconfirm Strategy Count areas of improvement.

Within this session, T1 began the discussion by stating she believed prior observations sessions went fairly well given that a few students had some misbehavior throughout the lesson. T1 described some behaviors were distracting to her, but she was able to remain focused on the lesson. Her and the coach used this as a transition to overviewing of the CSAS Strategy Counts where the coach began with brief definitions and examples to each T1. They also reviewed data from the first set of coach observations. Time series graphs were provided to illustrate the movement of counts from baseline. The coach and teacher discussed that T1’s use of Concept Summaries and Academic Praise continued to be an area of improvement and were solidified for the Instructional portion of the CSAS Strategy Counts. T1 and the coach also determined Behavior Praise and Corrective Feedback should also remain goals for the Behavior dimension on the Strategy Counts in efforts to get closer to the recommended research ratio.

In terms of the Strategy Rating scales, the coach and T1 overviewed these concepts again for reinforcement. The coach for T1 described strengths with the observations such as her use of Adaptive Instruction strategies such as changing the lesson format (e.g., using computers) to increase student engagement. The coach discussed with T1 possible areas in need of improvement as Academic Performance Feedback, Direct Instruction, Praise and Behavior Corrective Feedback due to higher discrepancy scores in this area.

**Session 3.** Session goals were: (a) review the CSAS Strategy Counts and IS and BMS data from baseline to observations 2a and 2b, (b) finalize CSAS Strategy Count and IS and BMS
dimension goals for coaching, (c) complete Classroom Strategy Goals Form, and (d) begin development of implementation plans to be used in subsequent meetings. Coach expressed her appreciation for the teacher attending the meeting and began the discussion on how they believed their lessons went while begin observed.

Coach pointed out that T1 provided praise/incentives to students. T1 reported she often used computer time as an incentive for work completion, especially with students who can often misbehave. Coach also highlighted the teacher’s use of Academic Response Opportunities and seemed to be attributed to her asking why a lot of prompting students to explain their thinking.

Coach and T1 reviewed the data derived from the CSAS observations conducted after meeting two with an emphasis on goal areas. They discussed Behavior Praise and Behavior Corrective Feedback continue to be the teacher’s greatest areas of improvement. The coach shared with T1 that praise can be administered in group and individual format which may be helpful to consider for increasing T1’s overall usage. The recommended ratio of 3:1 or higher was also emphasized again by the coach.

The coach and T1 also discussed the IS an BMS dimension data from the Strategy Ratings. An identified strength for T1 was adapting classroom to student needs, helping all students in need and walking around classroom throughout lessons. Coach recommended T1 break up material more to keep students more engaged. Improvement was also identified in the area of Direct Instruction and coach praised T1 relating material to everyday experiences. The final areas of improvement discussed were the need to increase overview of rules/classroom expectations, obtaining attention before giving directions, and using Behavior Praise as an alternative to Behavior Corrective Feedback. Coach provided T1 with the Classroom Strategies Goal Form for review which included operationalized definitions for proposed target areas as
well as the implementation plan to address what, when and how of accomplishment. The coach shared with the T1 that in the next meeting memory strategies will be discussed as well as take a deeper looks at the implementation plan.

**Session 4.** Session goals were: (a) complete Teacher Reflection Form, (b) review Classroom Strategy Goals Form, (c) review Implementation Plan, (c) overview all available CSAS data from recent observations, (d) instruct, model and then allow to practice evidence-based strategies, (e) and lastly, plan for implementing goals during the next classroom visits. Information reviewed in this session was focused on either IS or BMS strategies which would switch in later coaching sessions.

The coach and T1 began with the session by completing the Teacher Reflection Form. T1 reported an increased effort in using the recommended strategies overall. T1 identified her use of pre-planning techniques such as selecting parts of the lesson to administer certain strategies before the beginning of class. The coach shared more memory strategies would be reviewed in later portions of the session. The coach also praised T1 for her increase in use of Academic Praise and Behavior Praise which was evident in the recent observations. T1 demonstrated over 14 Academic Praise statements across observations 3a and 3b. Further, in terms of Behavior Praise, the coach reported that data from observations suggest T1 increased use of this strategy since observations 2a and 2b as well.

The coach shared data obtained from observations 3a and 3b with T1. The coach referred to the Classroom Strategy Goals Form and Implementation plan as a guide for analyzing data. T1 explained most of their conversation would focus on BMS areas and IS areas would be covered in subsequent meetings. Key outcomes from the data overview included T1’s decreased use of Concept Summaries and the suggestion was made to rephrase examples.
provided by students in class to reinforce the concept. Again, the coach highlighted T1’s increase in Academic Praise; however, reported the need to improve the specificity of the statements. Clear directives were highlighted as a relative strength and Behavior Praise frequencies were higher than baseline. Coach informed T1 while an increase is evident, improvement is still needed to be consistent with research recommendations. T1 agreed Behavior Praise appeared to be effective in the classroom.

When discussing CSAS IS and BMS Dimensions, the coach and teacher discussed an improvement in the Adaptive Instruction dimension, yet Direct Instruction remained an area of opportunity as discrepancies remained higher in this area. Coach also shared with T1 the discrepancies found for Praise on the BMS dimension appeared to decrease. T1, again, described a noticeable difference in the classroom when using more Praise. The coach followed up by suggesting T1 utilize Behavior Praise more consistently when students are compliant after given Behavior Corrective Feedback.

For the final portion of session four, the coach and T1 discussed the use of memory strategies to enhance strategy usage aligned to practice goals. Teacher chose hanging signs as a nonverbal or written reminder around the classroom as well as continuing her pre-planning technique before the commencement of lessons.

**Session 5.** Goals for sessions 5 -7 were (a) review Classroom Strategy Goals Form and Implementation plans, (b) overview CSAS Strategy Counts and IS/BMS Dimension performance, (c) provide instruction, modeling, and allow practice for evidence-based strategies and finally, (d) finalize plans for implementing goals during subsequent classroom visits.

The overview of the Teacher Reflection Form focused significantly on the memory strategies used to support the teacher using the identified strategies. This included providing
definitions as well as examples of what it would look like in the classroom. T1 reported some increased use of strategies, specifically in the area of Academic Praise. T1 and coach also discussed the established goals as a refresher before overviewing the recent data. Goals were identified as Concept Summaries, Academic Praise, Behavior Praise and Behavior Corrective Feedback for CSAS Strategy Counts. For CSAS IS and BMS Dimensions, T1 and coach agreed on Academic Performance Feedback, Praise and Corrective Feedback.

In terms of data overview, the coach reported an improvement in T1’s use of Concept Summaries; however, based on research improvement was still suggested. The coach praised T1 for her efforts to increase her use of Behavior Praise. For the dimensions, the coach applauded teacher for low discrepancies on the Adaptive Instruction domain and reported the teacher’s ability to change lesson format to meet student needs. Academic Corrective Feedback was identified as an area of improvement as it was not specific. Coach then described the teacher’s increase in Behavior Praise; however, she could still benefit from the use of nonverbal gestures as following up on Behavior Corrective Feedback with praise when a student demonstrates compliance. Coach then provided tip sheet to T1 with examples of praise as a resource.

**Session 6.** Session goals are similar to session five.

The coach and T1 began a discussion about the Teacher Reflection Form as well as provided brief general feedback for observed sessions. T1 shared she used a higher amount of instructional strategies as opposed behavior management strategies which she reported some use of. The coach praised T1 for her ability to maintain engagement of her students throughout the scheduled observations.

The coach and teacher went on to discuss the CSAS data. This discussion began with a more explicit overview of the BMS goals in the previous sessions (Behavior Praise and Behavior
Corrective Feedback) and then reported emphasis for session six and seven would be on IS identified. The coach and T1 also reviewed the instructional strategy of Concept Summaries described the benefits for use in the classroom. T1 and coach brainstormed specific examples of how Concept Summaries scan be incorporated in the classroom. The coach shared recommendations such as using the strategy at pauses or breaks in lessons, summarize or rephrase student statements, and lastly, use an anchor chart or written reference around the classroom as a reminder. T1 and coach agreed on the method of pre-planning strategy use before lessons as well as the use of written reminders to be placed on classroom walls.

Lastly, T1 and coach discussed how the strategy of Academic Praise can be increased. The coach described praise can be administered even if student answers incorrectly by saying phrases like “good try”. BMS strategies were briefly discussed. The coach informed T1 her performance on this portion of the CSAS somewhat declined across the various dimensions. T1 reported she sees the benefits of using Behavior Praise as an alternative to only using Behavior Corrective Feedback, especially in a district “like this”.

Session 7. Session goals were similar to session 6. T1 began the sessions with the report that her students were taking assessments for a majority of the week, so her use of the strategies was limited. She noted the information provided based on the lessons she was able to teach. For the reflection portion of the sessions, T1 reported high use of Concept Summaries and Academic Praise. She also reported using Behavior Praise and Behavior Corrective Feedback often.

For data overview, the coach highlighted a notable increase in Concept Summaries (CS = 8 and attributed this to their collaborative discussion on memory strategies. The coach shared with the teacher while this increase is progress, research suggests more per lesson so it should
continue to be an area of focus. The coach also reported an increase in T1’s use of Academic Praise. T1 teacher reported it “helped a lot” and she really “strives to use praise”.

For the CSAS IS and BMS Dimension discrepancy data, the coach identified Direct Instruction as an area of development and related it back to the teachers Concept Summary use. She also reported aspects such as presenting learning objectives as a means to improve the quality within this dimension. The coach suggested T1 establish clear objectives and require the students to recite these objectives throughout the lesson to reinforce the key concepts. She also suggested T1 link new material with information learned in previous lessons.

For the IS dimension, the coach shared T1 needed to be more specific when correcting students. The coach provided the suggestion for T1 to pre-plan expected answers from students so she can easily identify and report correctness. The teacher agreed this seemed like a good strategy and she would try to implement it. T1 and the coach reviewed BMS dimension goals and strategies. They discussed a decline in teacher’s use of strategies on this dimension which results in higher discrepancy scores. The coach attributed this potential decline due to teacher and coach discussions increased focus on instructional strategies since the commencement of coaching. T1 and coach agreed upon the memory strategy of as pre-planning in lesson book for use of Behavior Praise and/or Behavior Corrective Feedback. The coach emphasized the need for the praise and feedback to be specific in order to ensure high quality and lower discrepancy scores.

**Session 8.** Session eight was the final coaching session conducted between the teacher and coach. Session goals were: (a) conduct an overview of the CSAS Strategy Counts and IS/BMS Dimension performance data, (b) reflect on and provide instruction, modeling, and allow practice for evidence-based strategies as needed, (c) finalize plans for implementing goals
during subsequent classroom visits by independent observers, (d) review overall progress for all IS and BMS goals for CSAS, (e) refine implementation plans for all IS and BMS goals for CSAS and (f) discuss/develop long-term ways to maintain strategy use for sustaining goals.

For T1, the audio recording for this session was unavailable due to technical issues. Therefore, all data derived from this session was taken from graphs provided on outcomes for this coaching session which were input by coach upon completion of the meeting and results are hypothesized based on this data. It was reported that T1 demonstrated an increase in her Concept Summaries (CS = 7.5) and Academic Praise (AP= 19.5) use as well as maintained high use of Academic Response Opportunities. T1 also increased her use of Clear Directives and maintained her a low use of Vague Directives. T1 also used more Behavior Praise (BP = 11) in comparison to Behavior Corrective Feedback (BCF = 3.5) in the observed lessons.

In terms of CSAS IS and BMS Dimension data, T1 demonstrated an improvement in Academic Performance Feedback, Direct Instruction, Behavior Praise and Behavior Corrective Feedback. However, each area maintained over a 2.5 discrepancy score indicating some minimal need for improvement. Nevertheless, when examining scores from baseline, T1 appears to demonstrate lower discrepancy scores when looking at IS and BMS dimensions independently as well as overall scores.

In terms of helping T1 remember identified strategies, the coach and T1 agreed upon the pre-planning technique in lesson books and identifying specific students or instances where she could implement a strategy. The coach also reemphasized the idea of written reminders or hanging signs around the classroom.
**T2 Coaching Sessions**

**Session 1.** Session 1 goals were the same as those for T1. T2 and coach began their discussion about his approach towards teaching. T2's approach is to relate academic material to real-life scenarios and bringing humor into the instruction as much as possible. He shared his goal for doing so is to increase engagement for his students as many students in the class did not see the value of learning basic academic skills. T2 described he hoped to instill this importance by making learning more enjoyable. T2 also shared that he would like to improve his overall use of classroom strategies to positively impact a higher amount of his students.

The coach shared with T2 the coaching stages and processes and the use of the CSAS for guiding coaching decisions. She also introduced the Strategy Counts to T2 and provided examples of what each would look like in the classroom. T2 and the coach agreed upon the potential areas of improvement as Concept Summaries and Academic Praise of Instructional strategies as they were not used at a recommended frequency. The coach also noted Academic Corrective Feedback may be considered at a later time for target areas. For Behavior Strategy Counts, the coach and teacher agreed upon Behavior Praise as an area of improvement due to low frequency counts in this area.

**Session 2.** Session 2 goals were the same as they were for T1. The coach and T2 discussed the lessons which were observed by the coach. The coach described T2’s lessons as “spirited” and T2 attributed this to his attempts to incorporate the strategies discussed within lessons since the first meeting. The coach agreed and shared with T2 that lesson format also may have contributed to his behavior. The lesson format was whole group and then small group which incorporated the use of hands-on learning (computer use) and modeling to reinforce instruction. The coach also described T2’s observable increase in Academic Response
Opportunities as well as his use of Academic Praise Statements, Academic Corrective Feedback and Directives were maintained.

The coach and T2 reviewed the CSAS Strategy Counts and their definitions within this session. The coach provided brief definitions and examples to each teacher for reinforcement and clarity. T2 and the coach discussed a perceived relative strength found within Academic Response Opportunities and praised teacher for use this strategy so effectively in the classroom. This coach also shared T2 demonstrated an increase in Academic Praise and Academic Corrective Feedback; however, given the high use of Academic Response Opportunities it seems both Concept Summaries and Academic Praise may need to be higher. For Behavior, the coach and teachers reviewed the teachers continued need to increase us of Behavior Praise and Feedback. Both agreed to solidify these areas as target goal areas.

The coach and T2 also overviewed the CSAS IS and BMS domains which included providing definitions and examples. The coach described Adaptive Instruction as a strength as well as Student Directed Instruction for T2. The coach reported T2 often used multiple methods of delivery for student instruction and his ability to actively work with the students throughout the lesson. The coach and T2 also identified areas of improvement for Direct Instruction, Academic Performance Feedback, Praise and Proactive Methods. Examples of such included teacher’s lower use of concept summaries, specific academic feedback. The coach shared with T2 that a lack of class routine, reviewing rules/expectations, and moving around the classroom may also be impacting these areas. Both teacher and coach agreed upon these areas of target goals.
The coach closed out meeting two with confirming dates for the next set of observations. Dates/times were also solidified for meeting number three. Appreciation of teacher time and flexibility time was also expressed again upon completion of the meetings.

**Session 3.** Session 3 goals the same as those for T1. Within this session, T2 and coach discussed the writing lesson which was observed after session 2. T2 shared that students in his class do not like to write and implied this is why more behavior issues are evident during class time. With this, the coach transitioned into a review of data derived from the CSAS observations. The coach shared T2 demonstrated an increase in the areas of Concept Summaries and his Academic Response Opportunities remain a strength. She also reported continued work is needed in the areas of Academic Praise and Behavior Praise. T2 shared with the coach he was aware changes need to be made and he need to incorporate the identifies approaches/strategies in his classroom.

The coach and T2 also reviewed CSAS IS and BMS Strategy Ratings. The coach described T2’s low discrepancies in the areas of Academic Instruction and Student Directed Instruction, while outcomes in Direct Instruction did not change. Other areas of improvement were found within the Academic Performance Feedback dimensions as well as Proactive Methods, Praise and Corrective Feedback. The coach recommended T2 incorporate class routines, a review of rules and increased amounts of clear, specific behavior praise/corrective into his lessons. For the final portion of Session 3, the coach and T2 discussed the implementation plan and Classroom Strategies Goal Form. T2 had difficulty identifying short-term goals or memory strategy for improved use of recommended strategies. He described constraints placed on him by the school district which can make it challenging to implement certain strategies. T2 and goal agreed upon the use of awareness and self-monitoring as memory
strategies. Coach provided additional memory strategy recommendations to be considered in the future such as using counters in the pocket and/or written reminders on the wall.

**Session 4.** Session 4 goals were the same as the ones listed for T1. T2 and coach began session by reflecting on teacher practices since last meeting. T2 stated he believes his use of strategies increased by simply being more aware and attempting to use them as much as possible. He also asked the coach for further clarification on examples of what a quality Concept Summary looks like. The coach explained Concept Summaries should be used in high frequency and brief/clear to the point.

The teacher and coach also discussed the CSAS data for both Strategy Counts and Strategy Ratings. The coach identified Concept Summaries remains an area of needed improvement for T2. She shared recommendations for T2 such as beginning lesson with overview of previously-learned concepts and ending classes with a wrap-up. The coach also suggested the strategy of T2 rephrasing answers provided by students as a way to increase Concept Summary use. The coach and T2 discussed Academic Praise as a low performance area. She shared the importance of utilizing both group and individual praise to increase his frequency for both academic and behavior dimensions. Further, Clear Directives was identified as an area of relative strength. T2 and the coach briefly discussed the CSAS IS and BMS Strategy Rating data which was similar to outcomes on with what overview for the Strategy Counts portion.

The final topic discussed in Session 4 was memory strategies. The coach and T2 identified that strategy of written reminders for the wall which the teacher could reference when walking around the room. Further, the coach for T2 provided praise and gratitude for T2 partaking in the coaching with her as she learned this would be his final months before
retirement. The coach stated her intent for doing so was to get him excited to work on these items while enjoying the little time left has teaching.

**Session 5.** Goals for sessions 5 -7 were the same as those for T1. The coach and T2 reflected on his use of strategies since the last meeting. T2 shared he was trying his best to implement the recommended strategies. He reported he specifically focused on reviewing previously-learned concepts with students prior to the start of a new lesson. The memory strategy for doing so was identified as self-monitoring and consistently being mindful of the need to use the strategies.

For data overview, the coach informed teacher the focus of the discussion would be on the CSAS IS Dimension Strategies. She highlighted T2’s ability to change his voice and his use of Directives remains a relative strength. However, for the coach shared T2 needed to overview learning objectives more frequently throughout the lesson. T2 described that when he uses this strategy, student answers are often incorrect. The coach emphasized the recommendation of overviewing previously learned material prior to using Academic Response Opportunities at a higher level. With this, the students may be able to answer questions with more accuracy and T2 would be able to reinforce material with increased use of Concept Summaries. T2 informed coach he was hesitant to overview material as it “goes against his beliefs”. Nevertheless, it was ultimately agreed upon he would attempt the strategy. T2 shared he continues to have challenges with behavior in the classroom which he feels negatively impacted his teaching ability. Coach provided encouragement and reinforced increased use of prescribed strategies use will assist with misbehavior.

**Session 6.** Session goals were comparable to session five and the same as those for T1. The coach and teacher began with the reflection portion of the session. T2 reported he used
Concept Summaries and Academic Praise at a high rate. The memory strategy identified to increase implementation self-monitoring and being more mindful of discussed strategies. He also informed the coach he was trying his best to move around the classroom more; however, this was sometimes a challenge because so much energy is often put into negative behavior. T2 agreed he would continue to use the strategy as much as possible.

For CSAS data overview, the coach reported an increase in T2’s use of Concept Summaries in observations 5a and 5b. However, the coach identified T2 continued to need improvement in his use of both Academic Praise and Behavior Praise based on research recommendations for ratios. The coach also reported T2 demonstrated higher quality in the areas of Proactive Methods, especially with regards to moving around the classroom more and discussing learning directives throughout lesson. The coach and T2 discussed while his use of Behavior Praise and Behavior Corrective feedback was getting better, the quality in these areas could still use improvement to lower the discrepancy scores. The coach recommended T2 focus on increasing use, incorporating nonverbal praise and remaining consistent with using immediate praise. The coach provided T2 with prescribed ratios for using Behavior Praise and Behavior Corrective Feedback as well as strategies which would help him pre-plan his use of praise such as identifying situations or students prior to lesson where feedback can be administered. Lastly, the coach suggested T2 increase his use of Behavior Praise by implementing more nonverbal strategies such as using a thumbs up.

**Session 7.** Session goals were similar to session 6 and the same as the ones listed for T1. The coach and T2 reflected on strategy use throughout the week. T2 described using more Behavior Praise and engaging in Proactive Methods such as overviewing rules, maintaining
classroom routine and moving around the classroom. He also shared he attempted to use more nonverbal praise methods such as the thumbs up recommended.

For CSAS data overview, the coach and T2 discussed a moderate level of Concept Summaries use and Academic Response Opportunities remain a strength for T2. Moreover, the coach shared T2 demonstrated an increase in Behavior Praise frequency use as well as an increase in Behavior Corrective Feedback. The coach expressed understanding of why T2 needed to increase use of corrective feedback which was to regulate student behavior. However, it was emphasized T2 that when increasing corrective feedback T2 should be mindful of the need to increase Praise accordingly as well.

For CSAS Strategy Ratings, the coach reported the discrepancy scores from Direct Instruction was lower than previous observations; however, it remains an area of needed improvement due to ongoing discrepancies. The coach recommended T2 increase use of learning objectives throughout lesson to increase quality. She also reported discrepancy outcomes for Academic Praise were better for individual use as opposed to group use. In terms of Proactive Methods, the coach again reported while this area has increased in quality, it is recommended T2 continue to focus on this as it varies from research suggestions. The coach suggested T2 increase his use of class routines more, move around the class consistently, and review classroom rules/expectations prior to beginning each lesson to increase quality within this area. Lastly, the coach for T2 identified Behavior Praise as a continued area of improvement. T2 and the coach ended session with a discussion and review of memory strategies. These included pre-planning how to implement strategies in lesson. T2 described using memory strategies remained a challenge for him due to student behavior issues. The coach, again,
suggested T2 pre-plan or identify the most important rules for the class to follow and when a student complies, use this as an opportunity for praise.

**Session 8.** Session eight was the final coaching session conducted between the teacher and coach. These were the same for T2 as they were for T1. The coach reported a noticeable change in T2’s overall strategy uses which was attributed to the discussion of memory strategies from Session 7. The coach shared T2’s use of Concept Summaries and Academic Praise improved for whole group use; however, frequency of use should still be increased, especially when Academic Response Opportunities are so high. The coach explained Concept Summaries and Academic Praise should theoretically be higher since the students are afforded so many chances to answer questions. The coach then described T2’s improvement in Behavior Praise and Behavior Corrective Feedback ratio. She recommended T2 continue to be mindful of incorporating group praise to increase praise frequency and the importance of striving for the 3:1 ratio with corrective feedback as outlined by research data (Shores, Gunter, & Jack, 1993) and a 5:1 ratio for inclusion classrooms.

For Strategy Ratings scales, the coach reported a decrease in discrepancy scores for Direct Instruction and provided praise to T2 for his use of clear Concept Summaries and presenting learning objectives effectively throughout observation sessions. The coach reported a significant discrepancy in the area of Academic Praise remained and recommended T2 focus on the use of an enthusiastic voice, increase overall frequency, and using academic performance feedback for both groups and individuals. Proactive Methods was also identified by coach as an area of needed improvement for T2. She suggested T2 use clear class routines, increase movement around class and review rules/expectations more consistently. T2’s use of directives was highlighted as an of strength and suggested T2 use Behavior Praise more when he notices
compliances of any directives. Sustainable memory strategies were also discussed between coach and T2. The coach recommended T2 use the pre-planning technique to determine where certain strategies can be administered. T2 described he felt “confident, but it is what it is” for his ability to maintain strategy use. He also stated he would try to use written reminders on the classroom walls to increase his likelihood of recall.

**Summary of Coaching Outcomes**

*Research Question 1: What are the critical actions and processes in the coaching process?* Throughout the coaching process, both pairs of teachers and coaches implemented the key objectives as defined by the CSC model. For T1, it appeared the critical actions by the coach consisted of practice opportunities and the delivery of verbal and visual performance feedback. T1 appeared to have a good understanding of the evidence-based strategies discussed, especially after reviewing consistently with the coach. However, the most integral portion of this process appeared to be practicing how to implement these strategies within her own particular classroom and then being provided with formative data to monitor her progress. For T2, instruction and review of evidence-based classroom strategies, the provision of modeling and practice were critical for implementation and outcomes.

*Research Question 2: What are the coaching effects on observed teacher practices and student outcomes?*

**Teacher Practices.** Indicators used to determine outcomes of post-intervention included SMD (or single subject effect sizes) and RC for all CSAS data and SMD or face value mean differences for the additional measures. Outcomes suggest T1 was able to increase her use of Concept Summaries from approximately one at baseline (M = 0.5) to eight post-intervention (M = 8.00) based on independent observation, considered a large positive effect (single case effect
size = 10.56; Busk & Serlin, 1992) and a clinically significant change (RC = 2.49). Likewise, T1 appeared to increase her use of Academic Praise from approximately two at baseline (M = 1.5) to eight post-intervention (M = 8.00), resulting in a large positive effect (single case effect size = 3.07), but no clinically significant change could be detected (RC = 0.85). For Behavior Praise, T1 decreased her use of this strategy from approximately two at baseline (M = 1.5) to zero at post-intervention (M = 0.00) which indicates a large negative effect (single case effect size = -2.11). A clinically significant change was not evident for this area as well (RC = -0.37).

For Strategy Rating discrepancy scores, T1 was able to demonstrate a decrease for all four goal areas from baseline to post-intervention, yielding large negative effect sizes of -1.84 (Direct Instruction), -1.77 (Academic Performance Feedback), -3.07 (Praise), -16.20 (Corrective Feedback), reflecting reduced need for change in these specific practices at post-intervention. A clinically significant reliable change was evident in the areas of Behavior Praise and Behavior Corrective Feedback (RC = -2.08 and RC = -3.39, respectively).

For T2, outcomes suggest the teacher was able to increase her use of Concept Summaries from one at baseline (M = 1) to approximately thirteen post-intervention (M = 12.5) based on independent observation, considered a large positive effect (single case effect size = 8.16). A clinically significant change was demonstrated for the areas of Concept Summaries (RC = 8.16). Likewise, T2 appeared to increase his use of Academic Praise from three at baseline (M = 3) to approximately thirteen post-intervention (M = 12.5), resulting in another large positive effect (single case effect size = 3.36). For Behavior Praise, T2 increased his use of this strategy from approximately five at baseline (M = 4.5) to eight at post-intervention (M = 8.00) which indicates a large positive effect (single case effect size = 1.65). A clinically reliable change could not be
detected for the areas of Academic Praise and Behavior Corrective Feedback (RC = 1.24 and RC = 0.86).

For Strategy Rating discrepancy scores, T2 demonstrated some variability across goals areas. Discrepancy scores on Academic Performance Feedback domain improved from a baseline mean of approximately a six (M = 5.5) to a postintervention mean of a two (M = 2), resulting in a large effect size (single case effect size = -4.93). However, for the areas of Direct Instruction and Praise, discrepancy scores appeared to increase suggesting the difference between recommended use and observed use became greater (Baseline M = 4 versus Postintervention M = 5.5; single case effect size = .30 and Baseline M = 2 versus Baseline M = 3; single case effect size = .71, respectively). The single case effect size for the Proactive Methods could not be computed due to errors relating to standard deviation, yet at face value it appears the mean discrepancy score increased on this area as well (Baseline M = 3 and Postintervention M = 5) suggesting improvement. A clinically significant reliable change could not be detected for any of T2’s Strategy Rating IS and BMS domain areas.

**Student Outcomes.** Observations of class wide student engagement using the CLOCK (Volpe & DiPerna, 2010) indicate T1’s classroom Active Engagement Time (AET) decreased from approximately seventeen (M = 16.67) to four (M = 4.00), resulting in a large negative size (single case effect size = -4.38). T1 demonstrated an increase for Passive Engagement Time (PET) from approximately fifteen (M = 14.67) to over twenty (M = 20.25) which suggests a large positive effect size (single case effect size = 1.34). Observations of student engagement using the CLOCK indicate T2’s classroom AET decreased from fourteen (M = 14) to approximately nine (M = 8.75), resulting in a large negative size (single case effect size = -3.03).
Similarly, T2 also demonstrated a decrease for PET from twelve (M = 12) to over approximately eleven (M = 10.75) which suggests no improvement (single case effect size = -0.23).

Research Question 3: What are the effects of coaching on teacher ratings of student academic and behavior functioning and perceived instrumental and emotional supports and work-related stress? T1 reported improved Instrumental and Emotional Support from baseline to post-intervention (mean item rating of 1.00 “strongly disagree” versus mean item 5.00 “strongly agree” and mean item rating of 1.40 “strongly disagree” versus 5.00 “strongly agree”). The Instrumental Support effect size and reliable change could not be computer due to standard deviations of zero; however, Emotional Support scores resulted in a large positive effect (single case effect size = 6.55) and a clinically significant reliable change (RC = 19). For work-related Stress, T1 reported an improvement in this area which was evidence by a small negative effect (single case effect size = -.26) via a baseline mean rating of an approximately five “extremely high stress” (M = 4.54) to a post-intervention mean rating closer to a four “high stress” (M = 4.31). A clinically significant reliable chance could not be detected for this area (RC = -0.53).

T1 reported an improvement in instructional usage with an increase in mean rating of a five “somewhat improved” (M = 5) to a post-intervention mean rating of a seven “very much improved” (M = 7), resulting in a large positive effect (single case effect size = 1.42). Similarly, for T1’s reports of student academic functioning she also reported an improvement with a baseline mean rating of approximately a three “somewhat worse” (M = 2.88) to a postintervention mean of a seven (M = 7) “very much improved” indicating a large positive effect (single case effect size = 1.93). The effect size for student behavior functioning could not be computed due to error restrictions from a zero baseline standard deviation; however, T1 also
reported an improvement with a baseline mean rating of a one (M = 1) increasing to a post-intervention mean rating of a seven (M = 7).

For T2, the teacher reported improved Instrumental and Emotional Support from baseline to post-intervention (mean item rating of 3.13 “neutral” versus mean item 4.13 “agree” and mean item rating of 3.67 “neutral” versus 4.17 “agree”). Both resulted in a large positive effect size (single case effect sizes of 1.56 and 0.96, respectively) and a clinically significant reliable change (RC = 3.91 and RC = 2.78). Opposingly, for Stress Support, T2 reported an increase in work-related stress which was evidenced by a small positive effect (single case effect size = 0.23) with a baseline mean rating of an approximately two “low stress” (M = 2.88) to a postintervention mean rating of approximately a three “moderate stress” (M = 3.08). No clinically significant reliable change could be detected for this area (RC = 0.66).

T2 reported an improvement in Instructional Usage with an increase in mean rating of a two “much worse” (M = 2.14) to a postintervention mean rating of approximately five “somewhat improved” (M = 5.29), resulting in a large positive effect (single case effect size = 8.29). Similarly, for T2’s reports of Student Academic Functioning, he also reported an improvement with a baseline mean rating of approximately a two “much worse” (M = 2.38) to a postintervention mean of a seven (M = 4.25) “unchanged” indicating a large positive effect (single case effect size = 1.76). For Behavior Functioning T2 reported an improvement with a baseline mean rating of an approximately a four (M = 4.29) increasing to a post-intervention mean rating of a closer to a five (M = 4.71) which indicates a large effect size (single case effect size = 0.86).
Research Question 4: Do teachers rate CSC Model as acceptable as a professional development intervention?

T1 and T2 indicated within coaching sessions they valued the collaborative relationship with their respective coaches, as well as the incorporation of the identified evidence-based teacher strategies into their regular teacher practices. T1 specifically described a benefit of teacher coaching as being able to discuss formative data which can be used to directly inform her teacher practices. Moreover, T2 reported coaching has allowed for him to learn, practice and implement strategies in a consistent fashion to use with his students.

Both teachers completed the CES, yielding an average mean rating of approximately seven (i.e., “strongly agree”; $M_{T1} = 7$ and $M_{T2} = 6.45$), suggesting strong satisfaction with the CSC Model.

Discussion

The purpose of this study was to examine the CSC coaching processes and outcomes in two illustrative case studies selected from a randomized controlled trial study conducted in high-poverty elementary schools (Reddy, Lekwa & Shernoff, 2021). While case studies can offer a richer perspective into the coaching process and possible outcomes, causal inferences cannot be made on the effect of the CSC Model on intended outcomes. Nevertheless, findings from this study offer a glimpse into the key processes of CSC utilized throughout teacher coaching sessions and allow for a more in-depth analysis to be conducted. With this, outcomes in the current study suggest teachers receiving CSC displayed meaningful improvements on their goal-selected classroom instructional and behavior management practices from baseline to post-intervention. Likewise, class wide student academic behavior engagement reflected improvement from baseline to post-intervention for at least one teacher. Overall, findings from
these case studies offer evidence of the importance of using a systematic, evidence-based method which targets instructional and behavior practices, as well as the benefits teacher coaching may have on educator well-being in a high-poverty elementary school setting.

When overviewing existing research, findings are consistent with results from previous studies examining the effects of the CSC Model and other teacher coaching approaches (e.g., Reddy et al., 2017, 2019, 2021; Shernoff et al., 2017; Walker, Ramsey & Gresham, 2003). Key outcomes included improvements across teacher use of recommended instructional and behavior strategies post-intervention which are aligned with outcomes found in the Reddy et al. case study (2019). In both studies, findings revealed comparable positive effects for teachers’ use of strategies within the instructional and behavior domains for the CSAS Strategy Counts indicating an increase in teacher use of research recommended strategies. Further, positive effects found for the CSAS Strategy Rating Scale discrepancy scores suggest an increase in quality use of strategies or that teacher use of observed strategies became more aligned with suggested use as per research recommendations. Both teachers within the current study demonstrated meaningful increases in their use of Concept Summaries and Academic Praise which indicates improvements in their ability to provide clear, concise summaries of concepts to their students as well as provide positive feedback for student answer responses. For discrepancy outcomes, both teachers demonstrated improved quality use of Academic Performance Feedback which suggests they were able to both increase the frequency of academic feedback as well as improve upon the specificity and immediacy of this feedback. Moreover, these findings as well as others from the current study suggest an overall improvement in the teachers’ abilities to implement evidence-based classroom practices after participating in teacher coaching.
Another similar finding from existing research was the notable improvement from baseline to post-intervention for teacher feelings of support in elementary school setting. Comparable to the findings from the Reddy et al. (2019) case study, outcomes from this study demonstrated meaningful effects in regard to teacher perception of instructional and emotional support within the school setting. More specifically, teachers who engaged in the CSC coaching reported increases in their ratings of receipt of specific feedback on instructional practices, help with goal development, assistance with behavior management strategies, having personal ideas/interests supported, and encouragement from others. It appears that with the continuous support provided by coaches with the sessions, teachers felt the benefits of the higher level of assistance within their classroom setting and valued the assistance provided. Further, this finding is relevant to other research suggesting a greater need of support for teachers within high-poverty or more complex settings (Garcia & Weiss, 2019). Due to the unique challenges faced by both students and educators in this setting, it is evident teachers benefit and possibly strive for more ongoing support to more appropriately address their multifaceted set of needs.

Moreover, teachers within the present case study reported little to no formalized training on behavior management and described student misbehavior contributed greatly to their inability to teach effectively. These reports are consistent with a national poll conducted by the American Federation of Teachers (Walker et al., 2004) which stated students with disruptive behaviors have negative impacts on teacher instructional quality and the learning environment as a whole. Further, classroom disruptive behaviors can adversely influence teachers’ feelings of safety, job satisfaction and overall well-being (Reddy et al., 2018). These findings underscore the notion teachers within complex teaching scenarios need additional means of continued education outside of what is typically offered within school settings and/or an increased level of support to
more satisfactorily address their needs (Denton & Hasbrouck, 2009; Glover & Reddy, 2017). With this, CSC teacher coaching appears to be a viable means to meet teacher support and practice needs, while overcoming the limitations of traditional, workshop-based professional development (Jacobs et al., 2017; Reddy et al. 2017).

Further, outcomes from this study were also aligned with current coaching research investigating the key processes or actions from CSC literature which strive to further solidify teacher coaching as a beneficial means of evidence-based professional development. In a recent article by Reddy, Lekwa and Shernoff (2020), researchers explored the role of formative data and the observational process within teacher coaching amongst general education and special education teachers. While this study found no significant differences between classroom practices when comparing baseline data for general versus special educators, results allowed for greater insight on the importance of critical factors such as identifying practice needs, creating plans, and progress monitoring by using CSAS data. These factors are consistently found and noted as integral components of teacher coaching across in the coaching literature, in addition to others such as modeling and forming a collaborative relationship (Kretlow & Bartholomew, 2010). Moreover, within the present case study, both teachers also highlighted the critical role CSAS performance feedback, verbal and visual (graphs of scores) played within the coaching process and their implementation of strategies within their classroom.

Lastly, when considering the social validity or acceptability of the CSC, outcomes from this case study were consistent with findings in previous research which found high satisfaction amongst teachers after their receipt of coaching as a professional development intervention (Reddy et al., 2019; 2020, 2021). Teachers provided positive ratings or “strongly agreed” coaches were highly skilled, demonstrated interest, increased teacher preparedness, used
applicable assessment technique and most importantly, positively impacted his or her ability to provide quality instruction to students. With this, it seems teacher coaching not only can influence meaningful change in terms of use of evidence-based classroom practices but also is an acceptable means of intervention amongst the educators within high poverty settings who may benefit from it the most.

**Barrier and Facilitators of the Coaching Process**

This study highlighted some noteworthy barriers which may have directly or indirectly influenced the process of coaching. First, the CSC coaches in this study were external to the participating schools. Specifically, coaches were students from Rutgers University trained and supervised to implement the coaching intervention. While external coaches were used as a design feature of the larger RCT, the coaching process may not be routinized or seamless as it could have been if the coach was a part of the school or district as they often are (Reddy et al., 2019). Second, utilizing coaches external to the schools may have contributed to some scheduling issues for classroom observation and coaching sessions. Coaches and/or teachers may have had conflicts in schedules due to sick/personal days, inclement weather, conflicting school events, school breaks, district testing and teacher observations.

One indirect barrier which may have impacted the coaching process and outcomes is the theory some teachers may believe classroom disruptive behaviors are related to external factors outside of his or her control (Alperin et al., 2020; Ding et al., 2010; Johansen et al., 2011, Nemer et al., 2019; Wang et al. 2020). With this, teachers who buy into this theory may not be as open-minded or find value in considering all potential solutions to support their students. Examples of such from the present study may include that both teachers in this study attributed student misbehavior due to factors not related to instruction within the classroom environment. More
specifically, T1 reported beliefs that academic delays were the root cause of misbehavior, while T2 stated his students seem overwhelmed by community influences (e.g., poverty, poor family dynamics, potential gang involvement, etc.) which ultimately impacts their ability to focus on school. Likewise, it is important to consider teacher receptiveness to recommended strategies or suggestions provided during coaching may have impacted feelings of lacking control of their classroom setting and therefore, limited outcomes or potential results from teacher coaching.

Several possible facilitating factors were observed as part of the CSC coaching process in this study. First, participating teachers volunteered to participate in a large randomized controlled trial (RCT) implemented in their school district. With this, teachers who participated may have had an intrinsic desire to improve their instruction and behavior management practices. Second, the original CSC study permitted participating teachers to use their outcome data for their own professional purposes including evidence for job performance. Thus, teachers could use results from their participation in the CSC coaching for formal reviews within their district or opt not to, at their own discretion. This flexibility could either (1) allay teacher concerns that poor outcomes would adversely affect perceptions of teacher efficacy by their district or (2) act as an incentive for their participation to demonstrate their willingness to partake in the additional professional development outside of what is required.

Limitations of Study

This study includes limitations. The first relates to the nature of the study being that it was completed in a case study format. Case studies, unlike experimental methods, cannot speak directly to statistical significance or causality of factors due to the restricted amount of participants. Nevertheless, this study was chosen in effort to obtain insight into the critical actions found within the coaching process (Kazdin, 1981; Reddy et al., 2019; Shernoff et al.,
2017). Single-subject effect sizes and the reliable change index were used to generate clinical or practical significance while qualitative data was used for a richer means of data analysis. Second, the small sample size restricted the range of inferences that may be made with the data. For example, missing audio data from T1 meeting eight precluded a fully qualitative analysis of all primary coaching sessions for this case. Third, the findings from these case studies cannot be generalized to other teacher populations, grade levels, and school contexts (elementary rural and suburban schools, middle schools or high schools). Being that these findings are specific to high-poverty settings, outcomes may not apply to these other types of environments.

**Recommendations for School Practice**

The outcomes from this current study offer several recommendations for school practice. The first recommendation is for school leaders to reassess their current means of professional development as outcomes further demonstrate the need for more effective means of support. Teachers working in high-poverty settings have been found to need more supports than those in non-high poverty settings (Gehrke, 2005; Garcia & Weiss, 2019). Being that teachers in high-poverty settings face so many unique or complex challenges, it is imperative that district administrators reevaluate their current trainings or method of continued education in effort to combat these challenges (Jacobs et al., 2017).

Further, it recommended school leaders utilize an evidence-based professional development approach that uses observational data to guide decisions and actions for improving universal classroom practices known to improve student educational outcomes (Reddy et al., 2021). Likewise, the CSC Model is a promising approach to address teacher instructional and classroom management practices, student engagement and well-being as measured via perceived support in larger experimental design studies (Reddy et al., 2020; 2021). Teacher coaching that
is skill-focused, context-dependent and utilizes valid assessment data to guide performance feedback and monitor changes in practices over time is important in all settings especially urban high-poverty schools (Reddy, Dudek, & Lekwa, 2017).

The third recommendation for educators is to be aware of the tendency to focus solely on student deficits or disadvantages. Moreover, it is suggested from research that intervention should “encourage teachers to broaden their view of a child toward understanding the emotional underpinnings and impact of environment on disruptive behaviors” (Rote & Dunstan, 2011). An intervention like teacher coaching can assist with this by focusing on strategies that can be controlled by a teacher inside the classroom rather than on uncontrollables such as the outside community or student family situation. This shift in thinking is a more solution-focused and systematic way of reorienting teachers to the importance of using evidence-based strategies with their students. Moreover, if educators adopt this solution-oriented mindset and receive ongoing coaching support, it may help reduce feelings of inefficacy which can contribute to stress, burnout or lack of motivation within the school setting.

**Directions for Research**

This study offers several directions for research. First, more experimental research is needed to gain a stronger or more concrete statistical understanding of key components and/or critical actions in teacher coaching. While outcomes of this article suggest CSC factors such as practice, modeling, performance feedback and goal-development yield positive impacts, these factors as well as other factors must be more thoroughly explored via rigorous experimental designs and methodologies.

Second, studies are needed that examine the impact of specific coaching components and processes on intended outcomes. As Kraft et al. (2018) indicated in their meta-analysis, there are
numerous coaching models, however detailed information on the effectiveness of these steps or components remains unclear. It is imperative that the processes of teacher coaching are more thoroughly explored to determine which steps are critical to positive outcomes amongst both students and educators across a variety of educational settings.

The third direction and final direction is that more research is needed which not only explores key components of teacher coaching but also more clearly compares the various teacher coaching models and their outcomes. At this time, it appears there is a satisfactory amount of coaching literature available; however, strong research-based evidence is lacking for which model yields the highest level of impacts on teacher and student outcomes. Such information is critical so school leaders can make informed decisions on which model is most appropriate for their setting and what level of change can be expected from implementation. Lastly, with a compilation of outcomes from the various coaching models and details on key characteristics of the population, this will help facilitate the selection process for school leaders when considering the appropriateness for their specific settings.

Conclusion

This article examines the processes found within the CSC Model of teacher coaching and outcomes within two illustrative case studies derived from a high-poverty, elementary setting. Outcomes were largely favorable and indicated that teacher’s use of instructional and behavior strategies improved as a result of their participation in coaching sessions. Further, teachers also demonstrated increases in their overall feelings of support and decreases in their perceptions of stress within the school setting. Some degree of increase in student academic behavior engagement was also evident. Nevertheless, these outcomes should not be used as a sole means of determining the effectiveness of the CSC for teaching coaching; however, should be used in
consideration with existing literature on the topic. Important takeaways from this study include the need for additional research on the key components or actions with the teacher coaching process as well as ongoing exploration on the effectiveness of various teaching coaching models relative to one another. It is imperative these investigations be more experimental which would allow for conclusive or causal data. With this, it is hoped these case studies provide future researchers and/or school leaders a richer understanding of the value of teaching coaching as a means of professional development and emphasize the need to promote the use of more continuous, evidence-based interventions amongst both educators and students within the academic setting.
References


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Ingersoll, R., & Smith, T. M. (2004). Do Teacher Induction and Mentoring Matter?. Retrieved from https://repository.upenn.edu/gse_pubs/134


Neuman, S. B., & Cunningham, L. (2009). The impact of professional development and


http://dx.doi.org/10.1037/h0088949


Appendix A

Table 1

Baseline CSAS Strategy Counts

<table>
<thead>
<tr>
<th>Strategies</th>
<th>T1 Mean</th>
<th>T1 SD</th>
<th>T2 Mean</th>
<th>T2 SD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Instructional Strategies (IS)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Concept Summaries</td>
<td>0.5</td>
<td>.71</td>
<td>1</td>
<td>1.41</td>
</tr>
<tr>
<td>Academic Response Opportunities</td>
<td>17.5</td>
<td>9.19</td>
<td>35.5</td>
<td>28.99</td>
</tr>
<tr>
<td>Academic Praise Statements</td>
<td>1.5</td>
<td>2.12</td>
<td>3</td>
<td>2.83</td>
</tr>
<tr>
<td>Academic Corrective Feedback</td>
<td>2.5</td>
<td>2.12</td>
<td>3</td>
<td>2.83</td>
</tr>
<tr>
<td><strong>Behavior Management Strategies (BMS)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clear One to Two Step Directions</td>
<td>23.5</td>
<td>3.54</td>
<td>10</td>
<td>5.66</td>
</tr>
<tr>
<td>Vague Directions</td>
<td>3.5</td>
<td>.71</td>
<td>4.5</td>
<td>2.12</td>
</tr>
<tr>
<td>Behavior Praise Statements</td>
<td>1.5</td>
<td>.71</td>
<td>4.5</td>
<td>2.12</td>
</tr>
<tr>
<td>Behavior Corrective Feedback</td>
<td>16.5</td>
<td>4.95</td>
<td>10.5</td>
<td>.71</td>
</tr>
</tbody>
</table>

*Note:* This table demonstrates the baseline descriptive data for the CSAS Strategy Counts for T1 and T2 which was obtained within two observations sessions by independent observers prior to the onset of the CSC implementation. Strategy count data represents the frequency of use for instructional and behavior strategies.
Appendix B

Table 2

*Baseline CSAS Strategy Rating Scale Discrepancy Scores*

<table>
<thead>
<tr>
<th>Strategies</th>
<th>T1</th>
<th>SD</th>
<th>T2</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Instructional Strategies (IS)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adaptive Instruction</td>
<td>3.5</td>
<td>.71</td>
<td>4</td>
<td>1.41</td>
</tr>
<tr>
<td>Student Directed Instruction</td>
<td>1.5</td>
<td>2.13</td>
<td>4</td>
<td>2.83</td>
</tr>
<tr>
<td>Direct Instruction</td>
<td>12.5</td>
<td>3.54</td>
<td>5.5</td>
<td>4.95</td>
</tr>
<tr>
<td>Promotes Students’ Thinking</td>
<td>6.5</td>
<td>4.95</td>
<td>5.5</td>
<td>0.71</td>
</tr>
<tr>
<td>Academic Performance Feedback</td>
<td>11</td>
<td>2.83</td>
<td>5.5</td>
<td>0.71</td>
</tr>
<tr>
<td>Total IS Discrepancy</td>
<td>41</td>
<td>5.66</td>
<td>24.5</td>
<td>9.19</td>
</tr>
<tr>
<td><strong>Behavior Management Strategies (BMS)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proactive Methods</td>
<td>7</td>
<td>2.83</td>
<td>3</td>
<td>0.0</td>
</tr>
<tr>
<td>Directives</td>
<td>6</td>
<td>0.0</td>
<td>2</td>
<td>1.41</td>
</tr>
<tr>
<td>Praise</td>
<td>6.5</td>
<td>2.12</td>
<td>2</td>
<td>1.41</td>
</tr>
<tr>
<td>Corrective Feedback</td>
<td>13.5</td>
<td>.71</td>
<td>6.5</td>
<td>2.12</td>
</tr>
<tr>
<td>Total BMS Discrepancy</td>
<td>33</td>
<td>1.41</td>
<td>13.5</td>
<td>2.12</td>
</tr>
</tbody>
</table>

Total IS + BMS Discrepancy: 74 7.07 38 11.31

*Note:* This table demonstrates the baseline descriptive data for CSAS Strategy Rating Scale discrepancy scores for T1 and T2. Discrepancy scores indicate the difference between quality of strategy use by teachers versus the recommended use by observer.
Appendix C

Table 3

*Baseline TSSA and CPI Questionnaire*

<table>
<thead>
<tr>
<th>Strategies</th>
<th>T1</th>
<th>Mean</th>
<th>SD</th>
<th>T2</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TSSA</strong></td>
<td></td>
<td>Mean</td>
<td>SD</td>
<td></td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>Instrumental Support</td>
<td>1.00</td>
<td>0.0</td>
<td></td>
<td>3.13</td>
<td>0.64</td>
<td></td>
</tr>
<tr>
<td>Emotional Support</td>
<td>1.40</td>
<td>0.55</td>
<td></td>
<td>3.67</td>
<td>0.52</td>
<td></td>
</tr>
<tr>
<td>Stress Support</td>
<td>4.54</td>
<td>0.88</td>
<td></td>
<td>2.77</td>
<td>1.36</td>
<td></td>
</tr>
<tr>
<td><strong>CPI Questionnaire</strong></td>
<td></td>
<td>Mean</td>
<td>SD</td>
<td></td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>Instructional Usage</td>
<td>5.00</td>
<td>1.41</td>
<td></td>
<td>2.14</td>
<td>0.38</td>
<td></td>
</tr>
<tr>
<td>Student Academic Functioning</td>
<td>2.88</td>
<td>2.14</td>
<td></td>
<td>2.38</td>
<td>1.06</td>
<td></td>
</tr>
<tr>
<td>Student Behavior Functioning</td>
<td>1.00</td>
<td>0.0</td>
<td></td>
<td>4.29</td>
<td>0.49</td>
<td></td>
</tr>
</tbody>
</table>

*Note:* This table demonstrates the baseline descriptive data for the TSSA and CPI Questionnaire. Both are rating scales which were given pre- and post-intervention CSC implementation.