Using the Schools and Staffing Survey/Teacher Survey to Compare General Education Teachers' and Special Education Teachers' Perceptions on Collaborative Themes

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Dissertation submitted to the faculty of
Virginia Polytechnic Institute and State University
in partial fulfillment of the requirements for the degree

Doctor of Philosophy
in
Curriculum and Instruction

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March 28, 2013

Blacksburg, Virginia

Keywords: collaboration, special education, general education, team teaching, mainstreaming, coteaching, inclusion

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Abstract

This paper compared the perceptions of secondary special education teachers (SETs) and general education teachers (GETs) on collaborative themes using the Schools and Staffing Survey/Teacher Survey (SASS/TS, 2007-2008) from the National Center for Education Statistics (NCES). In this study, ANOVAs, independent samples t-tests, and simple linear regression were used to analyze SASS/TS data comparing GETs and SETs on three themes derived from collaboration literature: 1) beliefs and values, 2) roles and responsibilities, and 3) teacher satisfaction. The results showed that there was a statistically significant difference in the perceptions of SETs and GETs on both beliefs and values and roles and responsibilities. This study also found that beliefs and values was a statistically significant predictor of teacher satisfaction for GETs and SETs. Roles and responsibilities was not a statistically significant predictor of teacher satisfaction.

Acknowledgements and Dedication

No dissertation can be developed without an exemplary advisor and dissertation committee.

Thank you Dr. Williams for taking me on and being there all the way to the very grinding end. Most of all for being the best advisor in the SOE
Thank you Dr. Billingsley for giving me the best start any doctoral student could have received
Thank you Dr. Asselin for keeping me grounded, focused and stress-less
Thank you Dr. Barksdale for excellent advice and insight during the whole process in your unassuming but always profound way

No doctoral process is possible without a loving and strong family:

Thank you my first and only love, Arvin, for being there without a day's complaint and only praise
Thank you Ayan and Shruti for reminding me that I am your mother first and foremost
Thank you Bobby and Madhu bhabhi for believing in me
Thank you Bhandaries for always being there and putting up with me
Thank you Chotu and Kitkit for listening to me outside of my head

No doctoral journey is fun without caring and exemplary friends:

Thank you (in alphabetical order):

Beth Macdonald
Cathy Cocke
Elvin, Lynne and Maggie Epting
Jenny Martin
Mike, Lucia and Bello Koryzcinski
Windi Turner

I dedicate this dissertation to my parents who always believed in me and in an education. I am sorry this day took so long that you could not physically be present, but your spiritual presence is just as strong. Thank you.

No matter what accomplishments you make, somebody helped you - Althea Gibson

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CHAPTER ONE

Background on Collaborative Practices

Legislation (IDEA P.L. 105-17, 1999; NCLB P.L. 107-110, 2002) requires students with disabilities to have access to the general curriculum and to make progress in general education classrooms. This has transpired into a new era of education where GETs and SETs teaching practices had to change. General education teachers had to open their doors to SETs to help them serve SWDs. Special education teachers had to enter general education classrooms and become equal partners in unfamiliar territory (Pugach, & Johnson, 1989; Villa & Thousand, 1992). In most cases, GETs and SETS went from being sole educators in their own classrooms to becoming collaborators in a shared classroom. Over thirty years, 'access' to the general education curriculum evolved from consultative corroboration between GETs and SETs to 'collaborative practices.'

After thirty years of 'working together' the meaning of collaboration went through different phases where educators' terminology showed an evolved understanding by defining a single collaborative practice as part of a variety of collaborative practices (Keefe & Moore, 2004). Between the 1950's and 1960's there were traditional structures and procedures being questioned that provoked progress in a direction towards collaboration. To have more efficient and effective instruction delivery, team teaching was born (Hanslovsky, Moyer, & Wagner, 1969; Pugach, Blanton, & Correa, 2011) where SETs worked separately in developing their curriculum around the general education curriculum. That was the extent of the collaboration. Students with disabilities did not interact or socialize with general education students. Special education teachers were not part of the main buildings in most school systems, therefore the students were also not part of the main school buildings.

During the 1970's and 1980's conversations about connecting special education with general education began in school systems. Those connections prompted educators to look at terminology that began building cultures of collaborative practices. Team teaching continued, whereas 'mainstreaming' 'coteaching' and 'inclusion' evolved as an understanding of legislature and disabilities were better appreciated. Mainstreaming was and still is the least amount of collaboration GETs and SETs have to exercise. In this case, consultation was not public, and only when the student in question needed academic services that matched the requirements of the IEP did teachers meet to discuss the needs of the student (Idol, 1997).

Coteaching and inclusion are the practice (coteaching) and the context (inclusion) in which current practices of collaboration occur. Coteaching is designed so that both the GET and the SET work together towards common goals for the students they serve. Idol (1997), and Murawski and Swanson (2001) outlined three service delivery models that gave a more robust definition of teachers practices in an inclusive environment highlighting collaboration efforts.

The first model is the consulting teacher model in which indirect services are provided to SWDs through the GET who provides the instruction after consultation with the SET (Idol, Nevin, & Paolucci-Whitcomb, 1994, 2000). The second is the cooperative teacher model in which the SET and the GET work together in a variety of coteaching arrangements that suit their purpose of the lesson, the nature of the content area or the need to address behaviors (Bauwens, Hourcade, & Friend, 1989).The third is the supportive resource program model in which the purpose of the collaboration is to ensure that the resource room program truly supports the general education program and is likely to support SWDs transferring what they have learned in the resource room to the general education classroom (Wiederholt & Chamberlain, 1989).

Further, instructional assistants may accompany the SWDs to a general education classroom with very specific duties as agreed upon collaboratively between the GET and SET.

Literature on High School Collaborative Practices

Finding articles that showcased high school teachers in collaborative or inclusive classrooms yielded few results. For example, among the 38 articles found, an equal number of studies had high school and middle school in the same study. In the larger studies where all three levels of public school were showcased, elementary schools were more dominantly presented with collaborative practices. Some of these articles were retained as it became apparent that elementary school studies generated substantial information on emerging themes when comparing GETs and SETs. For instance, Idol (2006) studied four elementary schools, two middle schools and two high schools in a metropolitan city to analyze what happens in schools as they move towards full inclusion. The elementary school participants were more positive and further along in their direction towards inclusion and could therefore contribute more to the literature. One of the two high schools participating used cooperative teaching as collaboration with little or no inclusion of SWDs. The second high school in Idol's study had inclusion in their school-wide plan and had a vision, but only favored inclusion so long as the SWDs were accompanied by support staff. Their contribution to the literature was limited as their beliefs did not match their practices. These teachers believed inclusion was a good idea, but only under certain conditions (Embich, 2001) and the type of student disability (Foley & Mundschenk, 1997).

Once articles pertaining only to high school studies were selected, there were few that showcased GETs and SETs comparisons on collaboration. The Beacons of Excellence studies (Caron & McLeskey, 2002; Morocco & Aguilar, 2002 Wallace, Anderson, & Batholomay, 2002)

were a starting point in which one of four high schools was studied without the elementary or middle schools included (Wallace, Anderson, & Batholomay, 2002). The Eleanor Roosevelt high school study (Cole & McLeskey, 1997) was the oldest study found examining high schools. Keefe & Moore (2004) represented a detailed study of the challenges facing high school coteachers in a large suburban area of the southwest. Three additional studies that included high school teachers on collaboration examined whole school districts so the findings were a combination of the three levels of public school (Janney, Snell, Beers, & Raynes, 1995; Villa & Thousand, 2002; Youngs, Jones, & Low, 2011). Other studies were based on discussions from legislation about collaboration (Hines, 2008; Jenkins, 2010; Murray, 2004), or were studies that showcased strategies (Dieker, & Little, 2005; Fennick, 2001; Fisher & Frey, 2001). Authors of these studies framed collaborative practices and reported best practices and solutions to resistance. Murawski and Swanson (2001) used meta-analytic procedures, to synthesize qualitative data on the effectiveness of coteaching which will be discussed further on in this paper.

The quality of data available was sparse when trying to research collaborative practices in high school settings (Ellett, 1993). Through studies with elementary schools, the issues in high school settings for collaboration were highlighted. In particular, high school architectural design, class sizes, logistics, acceptance of change, and content area knowledge were found to be barriers that served to limit collaboration between GETs and SETs. However, regardless of school level, three themes were maintained from all the studies: 1) beliefs and values for collaboration; 2) roles and responsibilities that develop in collaborative practices; and 3) tensions and resistance that develop as a consequence of implementing collaborative practices and its

impact on teacher satisfaction (Bauwens, 1989; Embich, 2001; Janney et al., 1989; Keefe & Moore 2004,).

In reference to studies done in high schools, GETs and SETs need to go through a processing system where leadership must initiate the change by providing support for the initiative, and ensuring a belief and value system for that initiative is generated. Next, a definition of roles that each teacher must transition into must be delineated with its responsibilities by examining instructional collaborative practices first. This is more so with high school teachers as content area takes premise over grade levels (Janney, Snell, Beers, & Raynes, 1995; Villa, & Thousand, 2002; and Youngs, Jones, & Low, 2011). By going through the process for collaboration, the belief system, support system and maintenance system are better served with successful and positive student outcomes. As student outcomes are evaluated by the quality of instruction they receive, teacher satisfaction for their instructional practices is important to recognize and evaluate too.

The purpose of this research is to advance understanding of high school collaborative practices, especially in the core content areas, by comparing GETs and SETs on features of collaboration. This research is significant because previous research espoused the need for quantitative statistical analyses to examine the impact of beliefs and values, and roles and responsibilities on GETs and SETs (Murawski & Swanson, 2001). The extent to which beliefs and values, and roles and responsibilities impacted teacher satisfaction in the context of collaboration, is relevant for research in terms of teacher attrition rates or teacher working conditions (Billingsley, 2004). Examining these questions with the SASS/TS data represents for the first time that these questions have been examined with a large scale survey design that is weighted to be representative of the population of teachers in the United States.

The three research questions addressed in this study are:

1) What is the relationship between the perceptions of general education teachers and special education teachers related to beliefs and values about collaboration?
2) What is the relationship between general education teachers and special education teachers on perceptions about roles and responsibilities related to collaborative practices?
3) What is the impact of beliefs and values about collaboration and roles and responsibilities on teacher satisfaction?

CHAPTER TWO

Literature Review

Coming together is a beginning; keeping together is progress; working together is success – Henry Ford

Collaborative practices were discussed and researched as educators continued to make changes slowly, with more fortitude, and with a better understanding than they did 30 years ago. No Child Left Behind (NCLB, 2002) and the Individuals Disabilities Education Act (IDEA, 1997) framed the practices for the successful education of students with disabilities (SWDs). Both pieces of legislation mandated SWDs access the general education curriculum, participate in standardized assessments, and achieve passing levels of performance. If there were to be any improvements, educators had to change their practices in order for SWDs to succeed in general education classrooms. Collaborative practices were designed to teach *all* students, including students with disabilities as long as the Individualized Education Program (IEP) stated that the student will benefit from the designated environment (Least Restrictive Environment (LRE) : 20 U.S.C § 1412(a)(5)(A)).

Collaborative practices were and continue to be defined in a variety of ways. Researchers have attempted to unpack the layers in a culture of one-teacher-one-classroom, teaching in isolation, cell organization, and egg-crate arrangements of school structures (Lortie, 1975; Welch 1998). Special education teachers (SETs) and general education teachers (GETs) have traditionally been taught separately at the pre-service level and continue to practice separately with little or no collaboration with their colleagues. For the past 30 years most teachers have a classroom all to themselves, usually with a challenging number of students and a variety of achievement and academic levels (Pugach, Blanton, & Correa, 2011).

To rationalize the different academic levels, separating and sorting of students became common practice in public school systems. Separating students according to their academic abilities created more categories for special education and increased the number of 'at-risk' students. However, sorting implied a separation of students under some sort of infrastructure (special education) which over time, improved the understanding and awareness of SWDs. Better informed educators matched their understanding of SWDs educational needs to access the general education curriculum. This was the first step towards the creation of collaborative practices.

Between the 1980's and the turn of the century there was cautious and broad usage of language around collaborative practices (Pugach, Blanton, & Correa, 2011). The definitions of terms related to and used within collaborative practices were taken from a wealth of articles prevalent in literature on collaboration (Bouck, 2007; Carter, Prater, & Marchant, 2009; Cook & Friend, 1995; Friend, 2008; Friend & Cook, 2010; Murawski & Swanson, 2001) (Appendix A). Most collaborative practices for SWDs were developed around the Least Restrictive Environment (LRE) from the Individual with Disabilities Education Act (IDEA, 2004). The following is the statement from IDEA.

> In General. To the maximum extent appropriate, children with disabilities, including children in public or private institutions or other care facilities, are educated with children who are not disabled, and special classes, separate schooling, or other removal of children with disabilities from the regular educational environment occurs only when the nature or severity of the disability of a child is such that education in regular classes with the use of supplementary aids and services cannot be achieved satisfactorily (20 U.S.C § 1412(a)(5)(A)).

Usually two teachers are charged with the responsibility to collaborate and provide effective instruction (Friend & Cook, 2010). Team teaching in the 1950s had a different definition than today. The 1950 definition was conceptualized around a team being responsible for SWDs where consultations were the *modus operandi* for communication between GETs and SETs. Knowledge was exchanged superficially without collaborative discussion of the information exchanged (Hanslovsky, Moyer, & Wagner, 1969). Currently, team teaching alludes to a team being charged with providing educational services to SWDs in the general education classroom. There is active discussion where the team exchange and inform each other with the intent of providing effective instruction in order to increase all students learning in their classroom.

However, there is often confusion between the terms team teaching and coteaching. Coteaching is the most contemporary term to date that would best showcase the comparison of GETs and SETs. Coteaching is the practice of two teachers working together towards the same goals for their students. With joint responsibility, they provide a solid team for all students to access the same curriculum (Friend & Cook, 2010).

Team teaching and coteaching have evolved into five collaborative practices in which each practice presents roles teachers take on to facilitate instruction and to be effective coteachers (Cook & Friend, 1995): 1) one teacher and one assistant; 2) station teaching; 3) parallel teaching; 4) alternative teaching; and 5) team teaching. These five practices show the understanding of collaborative practices is more than one definitive practice while illustrating the evolution of collaborative practices. Each practice has its own ‘personality’ depending on the level of students being taught, and the goal of the GET and SET for their students.

Collaboration, for the purpose of this research, was synthesized from these definitions. Collaboration occurs between two or more people in a team, working together towards a common goal. The ‘two people’ are the GET and the SET. The ‘or more people’ are the people involved in the process of fully including and serving students with special needs in a general education classroom such as administrators, related services personnel, instructional aides and parents. ‘Working together’ involves the delivery of instruction, planning the instruction, modifying the curriculum and evaluating the instruction. The ‘common goal’ for any educator and especially so in inclusive classrooms is that students’ efforts and learning are improved as a result of a team approach to instruction (Bouck, 2007; Carter, Prater, & Marchant, 2009; Friend 2008).

Instructional approaches outlined for collaboration essentially involve: mainstreaming, team teaching and coteaching. Mainstreaming involves the least amount of collaboration once the IEP team has agreed and documented that a student with a disability is best educated through the general education curriculum and requires minimal services through special education. Contact between the SET and the GET entails a discussion outside of the classrooms. Within the mainstreaming approach, the two teachers make sure the student will access the general education curriculum and will not require any modifications. If any accommodations are required, the GET needs to implement them based on the IEP.

Collaborative practices have mostly been studied in elementary schools. Middle schools and high schools were studied even less often. Out of 35 studies that showcased collaborative practices and compared GETs with SETs, 34% were elementary school examples, 28% were middle school examples and only 8% were high school examples while another 8% were both middle and high school examples combined.

There were few substantial studies on high school collaborative practices in the collaboration literature. Therefore, themes derived from elementary school research studies were used to examine collaboration in high schools. There was also a lack of quantitative statistical analyses on previously identified themes that can corroborate the qualitative research already done (Murawski & Swanson, 2001).

Other researchers examining concepts and practices of collaboration explained strategies for collaborative practices and the challenges of these practices. Some identified situations under which collaboration was the *modus operandi* in order to provide appropriate services for SWDs such as in developing an IEP, finding the appropriate assistive technology (AT), or appropriate general education classes. These strategies were designed to develop collaborative skills in the teachers and attempted to provide planning, instructional, and evaluation tools that both teachers had to use together.

Strategies (Appendix D) such as CBM, CRIME, Think-Believe-Do, Curricular Mapping, BACKDROP, CBC, and BRIDGE were identified, observed in practice and critiqued mostly in the context of elementary school settings. These strategies were designed to bring GETs and SETs together to enhance the difficult start-up towards authentic collaborative practices. They were evaluated by reflections, focus groups or student outcomes. Many of these strategies were not sustainable if the GETs and SETs had styles of teaching that were not synchronous or if resources for specific strategies were not easily available (Capizzi, & Barton-Arwood, 2009; Koppang, 2004; Nelson, & Van Meter, 2006; Nolet, & Tindal, 2004).

Although researchers have conducted more studies in elementary schools than in high schools, the findings from these studies were similar between: 1) GETs and SETs beliefs and values on collaboration; 2) roles and responsibilities between the GETs and SETs on

collaborative practices, and, 3) tensions and resistance that permeated collaborative practices between GETs and SETs and the impact on teacher satisfaction (Bauwens, Hourcade, & Friend, 1989; Bouck, 2007; Burstein et al., 2009; Carter et al., 2009; Desimone, & Parmar, 2006; Dieker, & Little, 2005; Fennick, 2001; Fink, 2004; Firestone, & Pennell, 1993; Friend et al., 2010; Gillette, 2006; Hammond & Ingalls, 2003; Hunt et al., 2003; Idol, 2006; Keefe & Moore, 2004; Magiera et al., 2005; Pugach & Blanton, 1989; Smith & Leonard 2005; Ruppar & Gaffney, 2011; Schnorr & Davern, 2005; Stoddard, Hewitt, & Danforth, 1997; Volonino & Zigmond, 2007; Worrell, 2008).

Leadership has been shown to be critical in order for teachers to buy into a new initiative which effectively and collectively promotes a vision of a collaborative environment. Leadership in collaborative practices did not necessarily mean school administrative personnel only. As a multitude of findings from studies indicated, both GETs and SETs had to believe and value the benefits of collaborative practices and when they did, they were leaders and advocates for the same initiative (Billingsley, 2007). Leadership must build commitment towards the initiative by fostering trust amongst each other. Whilst promoting an initiative leadership must also build a culture of knowledge sharing, expertise, and language to perpetuate collaboration (Bauwens, Hourcade, & Friend, 1989, Firestone & Pennell, 1993; Fox & Ysseldyke, 1997; Hines, 2008; Ploessl et al., 2012).

As mentioned earlier, teachers could also be leaders (Billingsley, 2007). When teachers believed in and were a part of planning and implementing reform, commitment was strong. When value for reform was realized, in-school leaders were born who would advocate and promote the reform showing ownership. As a progression of such leadership, conducting

effective professional development and training was better received by the teachers because the cause had more meaning (Caron & McLaughlin, 2002).

In a study done in an elementary school, Carlson (1996) quoted two teachers comparing collaboration to a marriage. “Maureen, ‘If you're not willing to bend then I don't think it would work.’ Kate (agreed), ‘It's like a marriage because you compromise and you're getting different outlooks. You don't want to be a clone of one another.’" (p. 137). The successful partnership in this case led Maureen and Kate to advocate for more teachers to collaborate the following year, highlighting the benefits. In contrast, Rice & Zigmond (2000) studied a high school English cotaught class where there was perceived collaboration.

> The two teachers described their practice as ‘an enmeshing of our abilities’ . . . but they were clearly not equal partners in the instruction. In most cases, this disparity in roles was explained as necessary because the special education teacher lacked content knowledge (p. 195).

This partnership did not sustain itself the following year. If the teachers cannot be the leaders of the reform handed down to them, the start-up is difficult and some of the plans to sustain the reform are lost. Change is a process.

Change is not easy when new beliefs and values have to replace longstanding ones (Fullan 2007). In the case of collaborative practices, GETs have to adjust their perceptions of SWDs; set aside their ego’s and learn to adapt their instructional practices to suit a diverse classroom of students (Cole & McCleskey, 1997). Rosenholtz (1989) and Fullan (2007) have long known about the value of collaboration versus the ‘debilitating effects of isolation’ (Fullan, 2007, p. 38). In a study of 78 schools in eight school districts, Rosenholtz (1989) found that the schools were not inclusive or were minimally moving towards inclusion. Taking into

consideration that this was when collaboration was still a new concept related to special education in schools, the findings were indicative of the need to build a vision, develop ownership and break the barriers preventing change in order to build a culture of collaboration while developing beliefs and values for a new reform.

Bessette (1999) interviewed a GET in an elementary school, who summed up the benefits of collaboration.

> Having Mary as the special education teacher showed me what she knows, could only make me a better teacher. And, I feel that's going to be the same with Kelly, too—she has lots of new ideas, and I've done nothing but learn, and change, and grow. (p. 110).

In contrast, there was dissonance of what collaboration was, between the GET and SET which resulted in an unsuccessful attempt to collaborate in a high school History/Government class.

> Christine (the general education social studies teacher) believed that the transfer of Katherine (the special education teacher) was a prime example of how teachers' opinions were disregarded when planning coteaching arrangements. Neither teacher had had a say in this change, and unfortunately, Katherine's coteaching experience with the U.S. Government teacher was not successful. (p. 510).

Elementary schools have the ability to take on collaboration reform with the advantages of school size, logistical structures, age level, and most of all, the depth of content area knowledge. This implies the changes were not as daunting as their high school colleagues. Cole and McCleskey (1997) also found that elementary schools embraced collaboration more readily than high schools. At the elementary school level content area information is more basic. School structures are smaller and easier to navigate. The students at this age level are considered to be more compliant. It is easier to schedule time in the elementary general education classroom

because schools are divided by grade level rather than content area (a very different dynamic and culture). The center of focus for elementary school teachers is the student rather than the content area. Obviously GETs and SETs had fundamental differences in their beliefs and perceived roles between the two levels of schools. The value GETs and SETs hold for each other is not equitable with content area knowledge noted as a major cause in high schools. This does not appear to be an issue in elementary schools (Cole & McLeskey, 1997).

Keefe and Moore (2004) interviewed three GETs, four SETs and one special education chair who had co-taught previously. Their study demonstrated some of the challenges high school coteachers experienced that were not expressed in studies with elementary or middle school levels. They found that because of the difficulty navigating through high school buildings (size and dynamics) that collaboration was hindered. High schools are structurally large buildings where every teacher has a classroom or office they call their own. Communication between the teachers was compromised. One of the primary reasons these teachers noted was the distance between their locations in the building. There was a perception that this distance also compromised their time. This proved to be a barrier for teachers to coteach. One teacher said, "we were planning on the fly most of the time" (p.82).

There was also the difference between an office space and the atmosphere of one versus a classroom space and atmosphere of one (Keefe & Moore, 2004). The first barrier, however, was stepping out of one's comfort zone (SET leaves their designated area, classroom or office) into a collaborative classroom (GET has to open their door to a new person and situation). One GET stated, "I don't even know why she's here (referring to the SET assigned to her), quite frankly – she's a nice person, the kids like her, but I don't understand the point of having her in my classroom." (p.83). "(S)he came in new and they paired her with me. I had never met her

before…and now when they bring new people in it's just here, you're working with so-and-so, and they don't have a clue what their job is." (p. 81). This illustrates an obvious dissonance of what collaboration is about.

Key components of collaboration stand out in these statements. First, the GET sees the classroom as hers implying no 'we' in 'me'. Second, 'they paired' implies the GET and the SET had no choice in the decision and they had to coteach as mandated by the powers that be. Third, there was a presumption the SET did not know her job or alluding to not knowing the content area.

> …well if they do not know the curriculum, I think it does lower them to just a supervisor and discipline you know…(the SET) was more of a hindrance than a help in the room because it was another person who didn't know her material. (p. 84).

Without equal ownership of the space, there was noticeable inequity in roles.

High school GETs and SETs found their attentions spread thinly where the forces at work in a high school classroom were complex and collaborative practices were diverted to suit the situation which was typically not collaborative in nature (Keefe and Moore, 2004). For example one GET said: "…we talked after school…we talked at lunch." (p.82). The GET spoke in the context of having so many students (35 in this case) at different levels, no set planning time together, no time to collaborate on curriculum, the need to grade assignments, and other paperwork. They were spread thin. They could only 'collaborate' in impromptu situations. The SET agreed to her lack of content knowledge, which made her accept her role as a discipline teacher, even though she alluded to the fact she had no choice in the matter. With lack of time together, the need to get content taught, discipline issues, and ensuring that 35 students were

receiving adequate teaching, the GET and SET had little or no time to get to know each other, develop camaraderie or share knowledge.

Scheduling a SET into a core content area or finding the logistic place and time to give a GET a co-taught class is a challenging task at a secondary school level. But even more formidable were the findings in Bouck's (2007) study. In an urban middle school setting located in Michigan, two eighth grade US History classes with a GET and SET teaching both the classes, the complexities of a coteaching relationship were revealed. They found eight roles, three spaces, three opportunities and three constraints (Appendix E).

The teachers came out of the experience defining what needs to be done before, during and continuously to implement and sustain collaborative practices: 1) both the GET and SET must be willing and volunteer to be collaborators, share a common planning time and be ready to share in all decisions; 2) define roles clearly without minimizing the function of any of those roles; 3) identify practices that enhance collaboration in order to maintain them and address all tensions to minimize them. Studies in elementary schools derived similar results (Caron & McLaughlin, 2002; Damore & Murray, 2009; Hammond & Ingalls, 2003; Kugelmass, 2001).

Scheduling in a large high school is a logistical nightmare where each department has a wish-list ready to satisfy their faculty and content area. Grade levels need to be considered and electives must be given their due place in the 'class' system of being non-core content areas. With inclusion on the increase, co-taught classes must be scheduled in such a way SWDs who need the necessary support are scheduled in the necessary co-taught classes and non-co-taught classes keeping in compliance with their individualized educational plans (IEPs). Moreover, this scheduling of SWDs implies the SET runs on another parallel schedule of which the least restrictive environment (LRE) and the IEP require certain SWDs to receive their education in a

special education classroom. The SET wears more than one hat *and* has more than one content area to satisfy.

Content knowledge or lack thereof causes the most tension in the high school setting. The GET is the curriculum expert while the SET is the instructional strategy expert (Cole, 1997; Fisher & Frey, 2001; Janney, Snell, Beers, & Raynes, 1995; McLaughlin, 2002; Villa & Thousand, 1992; Wallace, 2002). The SET teacher is most likely to be 'highly qualified.' Highly qualified SETs are those who provide direct instruction in the core content academic areas in terms of adapting curricula, using behavioral supports and interventions, or selecting appropriate accommodations. However they are not required to demonstrate subject-matter competency (NCLB, 2004). By 2015 all SETs must be highly qualified in at least one content area. Then there are SETs who have dual licensure, one in special education and the other in a content area (Villa & Thousand, 1992; Wallace, 2002). There is a vast difference in the training of a SET and a GET.

As a consequence, the SET has reservations of coteaching and taking an equal stance with the GET content area expert. The GET has spent more years in pre-service training and time on the content area than the SET, which undoubtedly makes them the content area expert. The two different pre-service trainings must be compromised at the high school level to lessen the resistance between the relationships of the SET and GET (Bauwens, Hourcade, & Friend, 1989; Villa & Thousand, 1992; Youngs, Jones, & Low, 2011).

Administrators are responsible for creating the environment, setting the stage, and promoting the reform (Billingsley, Carlson, & Klein 2004). However, teachers have a responsibility in their own work spaces to create a more conducive learning environment. Both GETs and SETs must respect the beliefs and values of each other. In doing so, they open up their

own belief systems to allow for changes and accept changes that work for the greater good (Fullan, 2007). For collaboration, one of the ways to improve beliefs for this practice is to have clear roles and responsibilities defined for both general education and special education teachers (Idol, 2006; Worrell, 2008). The GET and SET can customize their roles according to the needs of the students and the environment they wish to promote. There could also be generic roles already defined through research as long as these roles work for both teachers in order to promote their primary goal of working together to enhance learning. Building beliefs, valuing each other, having clear roles, and equitable responsibilities, tensions can be reduced and resistance will lessen. Thus giving way to authentic collaboration and authentic collaborative practices.

Beliefs and Values Theme in a High School Setting

In the 1998 Corey H. versus Board of Education of City of Chicago case (995 F. Supp. 900 (N.D. Ill. 1998)), a state mandate to implement collaborative practices was required. This set into motion a challenge for the Chicago Public Schools to be in compliance of the Individual's with Disabilities Education Act (IDEA, 2020 U.S.C. § 1400) which states that children should be educated in their least restrictive environment (LRE) according to their individual needs. The Illinois State Board was responsible for the Chicago Public Schools district-wide practice of assigning disabled students to classrooms based solely on their disability classifications. Administrators of school systems were faced with keeping in compliance with legislation while retaining their teachers through this reform. In that arena, the initial start-up of collaborative practices was not supported with professional development or an organized plan defining terminology, practices, roles and responsibilities. Before and since 1998, school districts all over

the United States had to reconfigure their special education departments to be an integral part of their general education departments.

In Murray's (2004) study, a three year (1999-2002) training program sponsored by the Office of Special Education Programs (OSEP) was designed to prepare 40 content area teachers in, English, math, science and art with skills and knowledge about special education. The trainings were weekly meetings and discussions accompanied by weekly reflections. Six meetings during a year were devoted to the topic, "Professional Collaboration" (p. 45). Project staff from the university took at least 20 minutes a week to discuss issues or concerns. Each group of teachers participated for a period of one year. Initially, the GETs understanding of the SETs were limited. The general education teachers expressed discontent with the level of support from the SETs. Building a belief system was challenging. Statements from teachers emphasized, roles were unclear, time was limited, no co-planning was provided, and physical distance (within a building) between teachers curtailed effective communication. Tensions and resistance were obvious.

The following is an example from Murray's study (2004) on how vocabulary for collaboration evolved among collaborative team teachers (CTTs). In this quote, CTTs are the equivalent of SETs.

> In most cases, CTTs play a passive role and only assist in classroom management and tutoring. They play the role of a teacher's aide, but both partners in the relationship should share the blame. General education teachers rarely make CTTs feel comfortable and do not go out of their way to welcome their (CTT) input. (p. 49).

This following narrative was also around language and environmental constraints and related to planning time.

> I need to make sure I communicate my lesson plans with my CTT teacher in advance and I talked to Ms. Jenkins about my lesson plans for the whole year. I wondered, however, when we would have the time to get together to discuss these things regularly. (p. 49).

The following narrative illustrated personal changes and accommodations to change.

> We met and agreed that we need to find a way to communicate with each other. Even though we don't have a common planning time, I think I need to start putting copies of my lesson plans in her mailbox and notes asking her to help with certain activities, or notes asking her if she has any input on lessons. (p. 49)

Belief systems were not strong enough to justify implementing the reform. Issues arising such as tensions and resistance towards reform were either not anticipated or not expected to the extent they became apparent. Keeping in mind that all these practices were rooted in developing efficient and effective instructional outcomes, then the initial belief system of two teachers in a classroom would do more good than harm. Friend, Cook, Hurley-Chamberlain, & Shamberger, (2010) found with team teaching, educators had to work together closely and divide teaching responsibilities to defined roles very much like sport teams. This meant that even though teachers were not typically engaged in the simultaneous delivery of instruction, they had to at least agree upon certain strategies and roles. Belief and value in this practice and its outcome had to develop.

Despite the challenges, the participants in Murray's (2004) study saw the initial issues as a starting point to think more inclusively and collaboratively and to learn to be more considerate of their colleagues. However, this pace of progress can be derailed due to compliance issues and vague language. Relating to the Corey H. versus Board of Education of City of Chicago case, ten years later, in 2008, a waiver for the percentage of SWDs placed in each school was requested.

Even after a ten year period of attempting collaborative practices, the belief system was still not established and there was not a value for the reform.

So how does one start to cultivate a belief system that will permeate value for reform in order to perpetuate the reform? Janney, Snell, Beers, and Raynes (1995) found that the way teachers' beliefs and attitudes were altered, was through their own experiences. Through interviews with 26 GETs across five school districts they came to understand how initial beliefs and attitudes influenced change and how initial beliefs were influenced by change. These interviews took place after two or more semesters of integrating SWDs in general education classrooms. Special education teachers were described through the lens of GETs. First, teachers' initial concerns were addressed by providing rationale for the reform, clarifying what the change would look like, and how procedures would be changed (this was by way of trainings and informal sessions). Second, the teachers were given the opportunity to volunteer to participate in the collaborative initiative and to be proactive on decisions about implementation giving them ownership and leadership about collaborative practices. Third, the teachers were given assurances that the work would not add to their current workload and that they would receive support.

Teacher resistance was addressed by further clarifications on organizational structure and understanding pre-existing cultures of one-teacher-one classroom changing to two-teachers-one classroom (Janney, Snell, Beers, and Raynes (1995). GETs and SETs developed positive perceptions about collaborative practices that came from GETs and SETs philosophical agreements that SWDs benefitted from accessing the general education classroom and curriculum. There were positive social, academic, and behavioral student outcomes that strengthened the teachers' willingness to reform their teaching practices. Special education

teachers saw their students' progress academically and socially while placed with their general education peers. General education teachers became comfortable working with SWDs. For both GETs and SETs (who were observed but not interviewed) they found that they were not doing additional work but instead had another professional to problem-solve with.

Individual change is not facilitated without social or organizational change, (for example, building size, and location of classrooms) which still trend toward tradition. Unfortunately this slow trend and the lack of new trends, act as barriers or resistance to the reform (Janney, Snell, Beers, & Raynes, 1995). To sustain and improve the integration effort a high school drama teacher said, "some kind of support network of teachers that have had some experience with it… to maybe encourage those that are starting out. To say, 'Yeah its okay, don't be afraid, everything will work out" is not a fair part of the support process. There were physical and academic spaces that needed to be enhanced for a suitable teaching and learning environment.

To work towards school-wide and eventually district-wide reform, a core group of GETs and SETs needed to be identified to carry out the pilot project for reform. This was where the experience had meaning. This core group had unique qualifications for successful collaborative practices. They had to be volunteers who would be willing to make personal and professional changes, sacrifice time towards being a future advocate for the reform, and build commitment towards the reform (Janney et al., 1995). Once the core group went through the necessary steps of being effective inclusive and collaborative partners, then the student outcomes and the professional relationships developed from collaboration in a classroom were apparent. When the philosophies of teachers were professionally compatible, they began the process of building belief systems and values around reform, thereby improving the school climate with an effective delivery system and atmosphere for collaboration (Villa & Thousand 1992).

The Winooski, Vermont school district (Villa & Thousand 1992) had a dual system where teachers were either assigned to teach in general education or special education. For ten years (1982-1992) the district removed that dual structure by eliminating categorical labels traditionally assigned to students, administrators, staff, materials, rooms, instructional procedures, and even behavior management. There was a serious examination of the language around collaboration. Roles were redefined through job descriptions that explicitly stated that all teachers were expected to collaboratively plan, teach, and share responsibility for even the most intensely challenged students. The result was an evolving process in which the actual titles given to personnel were changed as perceptions moved from 'separation' to 'collaboration.' For example, from Special Education Director the name was changed to Pupil Personnel Services Director to Director of Instructional Services. The school system viewed their successes as a result of their continuous collaborative teaming efforts. This was a unique way to build a belief system around school-wide and district-wide reform.

The inclusion of SWDs in a general education classroom was a good concept, but only if support was present and continuous (Fennick, 2001; Foley & Mundschenk, 1997; Hines, 2008). When there was limited research on school-level policies and practices that contributed to improved outcomes for students, then teachers beliefs and values for the reform were also limited (Burstein et al., 2004; McLaughlin, 2002). One way Burstein and colleagues found to support and strengthen the beliefs and values for inclusion and collaborative practices among two Californian school districts, was through the parents of students with disabilities. The parents advocated for inclusion because they saw and experienced the benefits through their children. They supported the teachers pledged time and resources. Teachers are known to respond to a job well done. When satisfaction is high among teachers, then school climate is

conducive to the reform. It was noted that both GETs and SETs who were neutral or negative toward the inclusion of SWDs in general education classrooms, developed a more positive attitude when they recognized the support and benefits.

When GETs and SETs perceived they were compatible in teaching styles and beliefs and values regarding collaborative practices, they felt supported by each other (Cole & McLeskey, 1997). However, differences in disciplinary styles caused tensions between the teachers. Cole & McLeskey (1997) noted that a GET felt that the SET had a rapport with the general education students that was different from hers and that they had fundamental differences disciplining the students. In another class in the same school, there were two teachers who did not have comparable teaching styles and discipline philosophies but still compromised by sharing their ideas and styles. These teachers were able to maintain consistent disciplinary actions for their students and sustain strong classroom management.

To deepen belief for collaborative practices and to sustain collaborative practices, a clear and detailed vision and a thorough pathway towards building a culture of those practices was needed. A culture of collaboration had to evolve. Collaboration is a process. The service delivery models helped teachers to develop definitions and descriptions of their roles and responsibilities in a shared space after several decades of working in isolation. In order to compromise that space (the classroom), teachers had to address the traditional beliefs and values they had for being the one-teacher-one-classroom model. They had to allow inclusive classrooms and collaborative practices to enter their belief system.

Claiming ownership of a classroom when there are two owners is more complex than when there is a single owner (Billingsley, 2007). Volunteering and finding compatibility are two initial ways to make the shared space a more welcoming one. Studies concerning volunteering

and finding compatibility were prevalent in the 1990's; with at least ten years of collaborative practices in place (Bauwens & Hourcade, 1991, 1995, & 1989; D'Alonzo, Giordano, & VanLeeuwen, 1997; Firestone & Pennell, 1993, Meadan & Monda-Amaya, 2008; Pugach & Johnson, 1989 & 1995; Scruggs & Mastropieri, 1996).

Wallace, Bartholomay, and Anderson (2002) identified exemplary collaborative practices. Four high schools were studied in which each school had their own set of inclusive practices to suit their school's population and culture. Every collaborative service delivery method mentioned in this research was practiced by these schools. In school number one, all students were enrolled in general education classrooms. In school number two, teachers used the coteaching models. School number three practiced four different service delivery models. School number four, a technical arts high school, developed a philosophy that teachers were coaches and students were workers. They developed a system called 241 (two for one) where students received an academic diploma and a career-oriented skills certificate (industry-focused programs and initiatives).

Students in all four schools received special academic and remedial services and were supported by a computer-based-system. There was a consistent school-wide philosophy that nurtured a culture of sharing and serving among teaching faculty for all students. This collaborative culture made movement and communication between teachers' easy, logistical issues manageable, and facilitated spaces where teachers could easily share materials and knowledge (Wallace, Bartholomay, & Anderson, 2002). A GET from school number three (with four service deliveries) commented how a nurturing and shared environment is sustained.

> …we have a culture of working together…there's a sense that we share what we do and we work together very well…we do that daily…we build it into our schedule…we sit and

> talk to each other…everyone wears a lot of different hats and that's what it comes down to. (p.362).

Two SETs corroborated (schools number three and four): "...we share a lot…it really starts from the top…all of us…have this wonderful rapport with one another."(p. 362).

Centering on the provisions of beliefs and values among high school GETs and SETs there were common grievances where these two groups of teachers felt they needed to be supported by administration (Billingsley, 2007; Janney et al., 2007; Wallace, Bartholomay, & Anderson, 2002), the special education department (Cole & McLeskey, 1997; Hines, 2008; Janney et al., 2007) or among themselves (Janney et al., 2007; Murray, 2004). They were philosophically in agreement that collaboration was beneficial, but physically challenged to find the time to be cooperative colleagues and share without a common planning time. With lack of sharing, (Murray 2004) there was lack of time to build a collaborative culture (Bauwens & Hourcade, 1999; D'Alonzo, Girodano, & VanLeeuwen, 1997; Pugach & Johnson, 1989 and 1995). Just as significant, high school GETs and SETs want to be recognized for a job well done (Burstein et al., 2004; McLaughlin, 2004). That provision for beliefs and values is derived from seeing student success, besides their own (Villa & Thousand, 1992). Parental approval also contributed towards promoting the belief that collaboration is worth advocating for (Burstein et al., 2004; McLaughlin, 2004).

When GETs and SETs understand and practice a reform together, they can better plan, organize and clarify a working partnership. This gives more justification to continue and build an even stronger relationship. In such contexts, teachers will be motivated to improve their service delivery as they develop into a seamless relationship and as they see the holistic outcomes for

special and general education students sharing the same classrooms. At this stage, roles and relationships become important to the collaboration process.

Roles and Responsibilities Theme in a High School Setting

In the second theme, roles and responsibilities, two salient roles emerge from the literature: 1) expert instructor, and 2) systems organizer. The responsibilities of the expert instructor belong to the teacher who has the deepest knowledge of the content area and curriculum. The systems organizer is more complex. The organizer needs to know the students and curriculum and in order to help the students organize their physical resources, materials, and accommodate and modify the curriculum to suit their learning styles.

Knackendoffel (2005) articulated that collaboration teaming embodied the idea of working together and that most of these collaborative relationships are characterized by mutual trust, respect and open communication. Central to these relationships are equity between the educators, multiple presentation methods, creative instructional delivery models involving both educators, and educational improvements that can be seen when both educators work together. This implies that if GETs or SETs, are to have effective collaborative relationships they must see themselves on the *same side.*

Cole and McLeskey (1997) revealed through their extensive research project with Eleanor Roosevelt High School, that true partnerships are the key to true collaboration. Eleanor Roosevelt High School began their collaborative efforts in 1990 by including all students with mild disabilities. The school had gone through seven years of collaboration and inclusive practices before Cole & McLeskey reported about them. The researchers found the partnerships developed between SETs and two math teachers were the foundation for their successful high school inclusive practices.

This successful practice was accomplished by addressing curriculum first. Both GETs and SETs lent their expertise to arrange the curriculum to be effective for all students and had back-up modifications ready to implement. The curriculum was not the only partnership effort, as the general education classroom was both the GET's and SET's to transform in order to meet the needs of SWDs. Significant changes were made in curriculum, delivery of instruction and classroom organization. The ninth grade math coteachers were an exemplary example of how this was achieved.

Adam and Gary were the GET and SET coteachers, respectively. They started out selecting a textbook for their class. They decided that the textbooks available did not suit their vision of what ninth grade math should look like. They wanted the students to know how math was solved in the real world and how they may access math driven solutions. Because this was part of both teachers' belief systems, they developed a math manual (much like a car manual) together and with the students. With their innovative approach came innovative instructional deliveries and innovative assessment methods.

Adam and Gary's language was all about 'we' and 'us.' They were an exemplary example at a time when collaboration was still a struggle. However, it must also be remembered that seven years of hard work had gone into this school and this was an exemplary example coming out of that effort. Common goals were developed to promote differentiated instruction and the teachers evaluated the students and their own work together. Eleanor Roosevelt High School understood the notion of being on the same side and equity of status.

Unfortunately, SETs have been known to enter what can be comparable to a minefield of uncertainties (Cole, & McLeskey, 1997). General education teachers were expected to open their classrooms to SETs who were equal in name but not believed to be equal in knowledge of the

content area. At Cactus High School (Keefe, & Moore, 2004) interviews were conducted among three GETs, four SETs, and one special education administrator on the nature of collaboration, their roles and student outcomes. Two main issues emerged on roles and responsibilities: 1) choosing partners, and 2) communication between partners.

The teachers were given the opportunity to choose their partners without any parameters, and as a consequence, the teachers chose someone they knew based on their social relationships or the fact that a novice teacher would suit the purpose. Although teachers had a choice, the choosing was not seen as an academic partnership. These teachers stated that they struggled from the very start as they were left to their own devices to make the partnerships work. With the lack of logistical support, time, and scheduled collaborative planning times, the teachers established a division of labor. The GET took on all curricular and content area duties and the SET took on supportive duties and felt like an instructional aide rather than an equal partner.

Grading was divided up where the GET graded all general education students' work and the SET graded all special education students' work. Overall the teachers felt they were ill-prepared and lacked skills in each other's area of expertise. The GET expressed lack of knowledge about SWDs and the SET expressed lack of knowledge in the content areas. If anything was agreed upon by both parties it was the need for positive outcomes for all students and the need for a clarification of roles.

The types of expertise high school GETs and SETs bring to the classroom are unclear when compared to the elementary school teachers. In elementary schools the content knowledge is basic and the grade level is more pronounced. High school GETs have highly specialized content knowledge while SETs have in-depth knowledge of individual student learning (Magiera, Smith, Zigmond, & Gabbier, 2005). After 49 observations of real-life coteaching

programs among eight high schools, eight math classes, and ten pairs of coteachers, Magiera and colleagues found that there were some common roles assumed by the coteachers usually in supportive roles such as monitoring independent practice 67% of the time (33 out of the 49 observations).

Cook and Friend (1996) found that the SET could be in a supportive role while the GET would be the main instructor in the beginning stages of collaboration which was also supported 49% of the observations in the Magiera et al. (2005) study. Forty-nine per cent is a significant percentage of SETs being in supportive roles for GETs rather than being in equal roles. Actual teaching as a team was observed 19% of the time, but only for short periods within each observation (a total of 60 minutes out of 405 minutes, or 15%). Only in 6% of the observations did the SET actually lead the math class and the GET act in a supporting role (for less than 20 minutes during an observation).

The perception that collaboration was occurring was relative. One general education teacher believed collaboration was taking place in this classroom.

> "Certainly, 1 think they (students) get a better understanding because they have more attention, because both of us are able to give them more attention just because we're not spread so thin. ...when I'm instructing she can sort of watch what they're doing and may pick up on when they're not attentive or what they're having more trouble with. Maybe they're afraid to ask questions. She can pick up on that and look over their shoulder and help them when they're working. We try to do it that way, and it seems to work well for us." (p.22).

One SET teacher offered a statement about how she started off with being a support for her students at the beginning of the reform, and adjusted to learning her cooperative teachers'

personalities and styles (she had more than one to work with). The SET said that she evolved into a more cooperative teacher as she learned the content area more thoroughly, but that the GETs still had trouble accepting her growth in specific content areas.

The role of a disciplinarian was an area of contention but also one in which both GETs and SETs believed they were skilled. When GETs had to relinquish the power of sole disciplinarian to share the discipline with SETs, there were cases where there was a struggle to keep discipline consistent between them (Idol, 2006). In other cases the role of disciplinarian was a trade-off for lack of content knowledge. In the Beacon Schools of excellence example (Wallace, Anderson, & Bartholomay, 2002), discipline was the main role among 75% of SETs in four high schools supporting GETs by providing them with behavior management strategies. Collectively the teachers perceived class management to be a collaborative practice for SETs in an inclusive classroom as they lacked the content knowledge. The minimal time span of actual teaching done by SETs in inclusive classrooms was presumed enough to justify a coteaching model was being practiced. However, by research standards, these divisions of labor were not in any way a show of equity of roles.

Among several studies (Cole & McLeskey, 1997; Wallace, Anderson, & Bartholomay, 2002; Youngs, Jones, & Low, 2011) the confusion of roles in a collaborative setting stemmed from the training teachers received in their pre-service programs. When a GET expressed that she knew her cooperating teacher came to her with a lack of content knowledge she implied that the SETs training was specifically different from her own (Keefe, & Moore, 2004). Moreover in these same studies researchers expressed that professional development is another problem perpetuating role confusion. Professional development for collaboration is often conducted separately for GETs and SETs. The solutions suggested by researchers offered that if

collaborative practices were to be more cohesive in nature, they must start at the training level and continue through professional development that invites both GETs and SETs to the *same* table.

Language has been the most subtle need that should be addressed so that teachers can put the 'we' in 'me.' A teacher's classroom is her professional sanctuary. Sharing indicates two way signals, where both GETs and SETs understand that they can share their expertise and knowledge. Teachers were informed by principals about their new coteaching assignments with little or no input. The expectations of these teachers was that planning, instruction and outcomes were to be expressed as 'we' without any training or pre-requisites to being coteachers. Looking through the studies in which researchers have interviewed teachers there are some representative examples of language used and sentiments high school GETs and SETs (Appendix F) that are testaments to what exists and what must change. The following is an example of how difficult sharing or cooperation between the teachers was and how difficult the task of building collaborative language was going to be.

> GET: "…she came in new and they paired her with me. I had never met her before …. and now when they bring new people in it's just here, you're working with so-and-so, and they don't have a clue what their job is." (Keefe & Moore, 2004, p. 81)
>
> SET: "Anytime you walk into another teacher's classroom there's going to be some type of negotiation that needs to occur for both of you in terms of just territory and what's asked of you. And that's a tough thing to negotiate." (Morocco & Aguilar, 2002, p. 408).

Administrative support does not appear to be a major barrier in high school collaborative practices. In fact there were positive trends for administrative support (Cole & McLeskey, 1997; Keefe & Moore, 2004; Idol, 2006; Magiera et al., 2005; Wallace, Anderson, & Bartholmay

2002). However, Embich (2001) conducted a study researching stressors that lead to burnout among 300 secondary SETs. It was found that lack of principal support contributed towards reduced sense of personal accomplishment. This was the strongest predictor for burnout among SET team teachers who taught a team taught class once a day. More studies are needed to corroborate the role of administrative support in terms of collaborative practice needs.

Roles and responsibilities were not specifically delineated for high school systems. For instance, what seems like a simple enough task, can develop into a future problem unless addressed by the two collaborating teachers from the onset. Choosing the textbook was very eloquently done by Adam and Gary in Cole and McLeskey's study (1997). A small task, and yet an important one if each teacher is to have equal roles in selecting the textbook and teaching the contents of that textbook. Adam and Gary started their math class together from its very inception and developed a successful class with successful students, collaboratively.

Selecting and arranging curriculum and content, was perceived differently by GETs when compared to SETs. For instance Magiera et al. (2005) found through observations math GETs and their SET coteachers were not displaying collaborative teaching techniques nor was the content collaboratively conveyed by both teachers. The content was being taught primarily by the GETs and the teaching practice reverted easily to one teacher-one assistant. The GETs did feel that collaboration was being practiced. The SETs felt collaboration was being practiced by default; they were not knowledgeable about content nor confident to teach it and assumed that the role of behavior manager was their trade-off collaborative role. Keefe and Moore (2004) also found that the teachers in their study were not engaged in simultaneous delivery of instruction or content. Grading and discipline (Cole & McLeskey, 1997; Cook & Friend, 1996; Keefe & Moore, 2004; Magiera et al., 2005; Morroco & Aguilar, 2002; Wallace et al., 2002) were also

areas that were not well defined between the GETs and SETs resulting in unequal distribution of roles.

The roles and responsibilities that GETs and SETs must take on are complex and time consuming. The key is to reduce the time needed and make the collaborative partnership simpler and more efficient. Effective training at the higher education level is one solution offered in the literature (Cole & McLeskey, 1997; Janney et al., 1995; Murray, 2004; Wallace, Anderson, & Bartholmay, 2002; Youngs, Jones, & Low, 2011). The second solution is to provide supportive professional development that does not separate the partnership. Creating a seamless relationship with two experts in the classroom means the students have twice the chance to be better learners.

Tensions and Resistance Theme versus Teacher Satisfaction

Tensions and resistance are a natural part of human nature when change is eminent (Fullan, 2007). Resistance to new beliefs and values needs to be addressed along with tensions that roles and responsibilities create during the process towards establishing collaborative practices. All of these factors cause stress on top of the already heavy workloads that high school teachers' experience. This can reduce teacher satisfaction.

Embich (2001) examined 300 secondary school SETs building upon the research of Malsach (1982) on teacher burnout. Embich identified feelings of emotional exhaustion, depersonalization and reduced sense of personal accomplishment as symptomatic of burnout among SETs. She believed burnout was a three-dimensional psychological syndrome (feelings of emotional exhaustion, depersonalization, and reduced sense of personal accomplishment) that was especially prevalent in team teaching arrangements. Embich's findings supported Schwab, Jackson, and Schuler (1986) that role conflict, role ambiguity, and lack of administrative support were contributing factors towards burnout among teachers.

Embich found that SETs who team taught experienced high levels of emotional exhaustion. When the independent variables (age, workload, years of teaching, level of education, role ambiguity, role conflict, and principal support for teachers) were assessed for relative importance within each group, role conflict was the strongest predictor of emotional exhaustion for all team teachers. It was especially true for those who taught three or more team classes. Workload was the strongest predictor of emotional exhaustion for self-contained SETs. Lack of principal support contributed towards reduced sense of personal accomplishment, which was the strongest predictor for burnout among SETs who team taught one class a day. Role ambiguity also contributed towards reduced sense of personal accomplishment, which was the strongest predictor for burnout among SETs who team taught two classes a day. The role of the self-contained SET has a different dynamic in which the SET has more control on all aspects of the class structure, content to be taught and instructional practices. Clearly, role conflict/ambiguity and lack of administrative support are determinants of reduced satisfaction and burnout for SETs.

The role of the resource SET is unique. The resource classroom is equipped so that the SET can provide additional or supplemental information and materials for the SWDs that require the further help in order to stay well-informed in their general education classrooms and develop better study skills. This means the SET must consult with the GET so that the content knowledge information is appropriately learned by the SWDs. Resource SETs have to team with a variety of GETs to build the resource room materials for SWDs access to the general education curriculum. Moreover the study skills component is most often an objective in which the resource SET is in consultation with the SWDs special education case manager. Expansion of

roles and responsibilities has contributed significantly to feelings of depletion, fatigue and over-extension for SETs (Embich 2001).

In addition SETs had a variety of reasons that caused angst with the onset of collaboration. Entering situations where they were unwanted was the first reason (Voltz, Elliot, & Cobb, 1994). They were not receiving adequate training (Bauwens & Hourcade, 1995; Pugach & Johnson, 1995) and teaching courses outside of their skill area (Blase, 1986; Farber, 1991). High school administrators and policy-makers needed to pay attention to this information. These findings were a direct indication that tensions and resistance to collaborative partnerships at a high school level were significantly high and should be addressed to improve teacher satisfaction.

From a review of literature on barriers to inclusive practices, Worrell (2008) derived the seven sins of collaboration: 1) negative teacher perspectives, 2) lack of knowledge regarding special education terminology, 3) issues and laws, 4) poor collaboration skills, 5) lack of administrative support, 6) limited instructional repertoire and, 7) inappropriate assessment procedures. Negative teacher perspectives, lack of knowledge regarding special education terminology, issues and laws, and poor collaboration skills have been corroborated throughout the literature as maintaining resistance toward collaboration (Bauwens & Hourcade, 1995; Friend et al., 2010; Janney et al. 1995; Murray, 2004). However, the fifth sin, lack of administrative support did not appear to be a ‘sin’ or even part of the problem at some secondary schools (Cole & McLesky, 1997; Idol, 2006; Janney et al. 1995; Keefe & Moore, 2004; Magiera et al., 2005: Wallace, Anderson, & Bartholmay, 2002).

Limited instructional repertoire was a consistent issue among all studies concerning high school collaboration (Cole & McLesky, 1997; Keefe & Moore, 2004; Idol 2006; Magiera et al.,

2005: Murray, 2004; Wallace, Anderson, & Bartholmay, 2002). High school GETs were trained in specific content areas and how to teach that content area. Special education teachers in a collaborative situation are faced with a lack of deep content knowledge but a strong instructional repertoire. The seventh sin, inappropriate assessment procedures was an issue when GETs and SETs divided the labor of grading students (Janney et al. 1995; Keefe & Moore, 2004). General education teachers preferred to grade general education student work and would defer SWDs work to be graded by the SETs. This divisiveness did not inform GETs about the SWDs in their content area and did not inform SETs about general education students' capabilities in order to help them gauge the SWDs levels and progress. This only added to the want for resistance when authentic collaboration was not happening.

Embich (2001) showcased significant concerns that SETs were under stress, and developed tensions about collaborative practices. Limited instructional repertoire was also a significant finding in the Embich study. Embich did not find inappropriate assessment procedures to be a dominant factor in causing tensions between SETs and GETs.

The most dominant barrier expressed throughout the literature and extensively discussed was lack of content knowledge among SETs (Cole & McLeskey, 1997; Keefe & Moore, 2004; Knackendoffel, 2005). General education teachers who obtained post-secondary degrees to become experts in a specific content area simply did not believe that a SET with no content specialization would be able to match their level of understanding and ability to teach as a partner (Keefe & Moore, 2004). On the other hand, SETs were not only responsible for delivery of curriculum but were also responsible for instruction on careers, vocations, fundamental living skills, survival skills and transitioning services for special education students whose least restrictive environment (LRE) may not be the general education classroom. There was a major

gap in skill levels between GETs and SETs that prevented collaborative practices from being effective. General education teachers and SETs had professional belief systems that were essentially different and did not provide a foundation for sound collaborative relations. This only increased tensions among them in a shared space.

Resistance of beliefs and values slow down progress towards collaborative practices. However there were exemplary studies (Cole & McLeskey, 1997; Wallace, Anderson, & Bartholomay, 2002) where tensions and resistance were overcome, thereby generating positive aspects of inclusive practices. Resistance to collaboration and tensions between GETs and SETs were not necessarily barriers but part of a process towards breaking down barriers as beliefs transformed and as roles and responsibilities were clarified over time.

In high schools, the content areas showed tensions between GETs and SETs to be somewhat different compared to elementary schools. Math and science content area teachers and their special education coteachers seemed to have tensions regarding the actual knowledge of the content area. It appeared that general education teachers did not want to hurt the feelings of SET's for their lack of content knowledge. English and History GETs have the same sentiment of control over their content but in some cases proved to be more open to collaborative practices. For example, Fisher and Frey (2001) quote a tenth grade English teacher on her experience.

> "Being the only adult in my classroom can be stagnating. I mean, I get a lot of good ideas when there is another teacher in the room. We can talk about curriculum ideas or ways to support students who aren't receiving special education services. I think that the collaboration and resources that special education provides have made me a better teacher and my class more interesting" (p. 153).

In contrast, Magiera et al. (2005) reported a different view in one of the 49 observations of high school math classes.

> General education teacher continued a lesson using the overhead. General education teacher asked the class to name the numbered pairs. Several students answered. General education teacher used a large grid on the overhead for further explanation for finding slope. Special education teacher got up and observed from the side of the room. General education teacher passed out handout. (Observation #3, 2/29/01. Grade 9. School M). (p.21).

With the critical shortage of research on the inclusion of SWDs at the secondary level (Mastropieri & Scruggs, 2001), most researchers have reported secondary teachers to have more negative attitudes towards inclusive education than elementary education teachers (Scruggs & Mastropieri, 1996). Smith (1997) examined teacher perspectives in an inclusive ninth grade team of four teachers and one paraprofessional in an urban high school. She found that the teachers used a variety of strategies to adapt curriculum but reported that the demands of high school curriculum for SWDs was challenging. Smith concluded that inclusive education was a very complex phenomenon at a high school level in need of further study.

The nature of high schools presented greater challenges for coteachers. Mastropieri and Scruggs (2001) suggested that high school settings presented greater problems for coteachers on several fronts: the emphasis on content area knowledge, the need for independent study skills, the fast pace of instruction, high stakes testing, high school competency exams, am\nd less positive teacher attitudes. Smith (1997) reported that teachers were challenged by the varied gaps between students with and without disabilities together in one classroom accessing one

curriculum. All these issues are not resistant-free and require solutions to reduce the angst and dissatisfaction they created for collaborative practices.

Moore and Keefe (2001) conducted focus groups with general and special education teachers coteaching in elementary and high schools. They found that concerns about adequate planning time, administrative support, resources, professional development, and teacher willingness were similar across both levels. However, high school teachers implementing inclusive education felt additional barriers existed because of large school size, larger class sizes, seeing many more students each day, and unclear roles and responsibilities required of them (Ellett, 1993).

Within this third theme where tensions and resistance were still part of the process of moving towards collaborative practices, there were three criteria to be met: 1) resolving old and unwanted beliefs, 2) resolving logistics, and 3) resolving a hampering ego that hinders the progress of collaboration (Cole & McLeskey, 1997). When teachers were satisfied with their teaching assignments, they were known to teach better and enhance skills that worked. However, research suggests that unless traditional separation of training changes and professional development on collaborative practices were taught with both parties present (GETs and SETs), the tensions and resistance towards collaborative practices were more difficult to overcome (Cole & McLeskey, 1997; Wallace, Anderson, & Bartholmay, 2002; Youngs, Jones, & Low, 2011).

All these factors considered barriers towards inclusive practices caused disincentives for GETs and SETs to implement collaborative practices effectively. Therefore the resistance is high and dissatisfaction increased. As Fullan (1996) suggested tensions and resistance are all part of the process for reform if channeled in the right direction.

Conclusion

Literature on collaborative practices of high school GETs and SETs is limited. Much of the literature taken from elementary level studies applied to high school studies. However, more research is needed to augment the field and increase the knowledge base of collaboration in high schools. Research is replete with the types of collaborative service delivery models and characteristics of collaborative practices (Bauwens, Hourcade, & Friend, 1989; Idol, 1997; Murawski, & Swanson, 2001; Nevin & Paolucci-Whitcomb, 1994, & 2000; Wiederholt & Chamberlain, 1989). From this research three themes developed surrounding the initiation and sustainability of collaborative practices: 1) beliefs and values, 2) roles and responsibilities, and 3) tensions and resistance and teacher satisfaction.

The majority of studies in the 1990's dwelt on beliefs and values, explaining the process of change (Fullan, 2007) and how building a belief system takes time and serious effort on the collaborators and the personnel that support them (Burstein et al.; Fennick, 2001; Foley & Mundschenk, 1997; 2004: Janney et al., 1995). A culture of collaboration and inclusiveness are imperative to nurture the reform with a conducive school-wide climate to support GETs and SETs in their effort to teach all students (Bauwens, & Hourcade, 1991; Burstein et al., 2004; D'Alonzo, Giordano & VanLeeuwen, 1997; Fennick, 2001; Firestone & Pennell, 1993; Foley & Mundschenk, 1997; Janney et al., 1995; Pugach & Johnson, 1989, 1995; Wallace, Anderson, & Bartholomay, 2002). What is significant to note about the timing of these studies is the art of collaborating was becoming more and more important with legislation mandating SWDs access the general education curriculum more equitably.

What was not expected was the complexity of the roles and responsibilities the GETs and SETs were left to interpret and understand. In the beginning of the new millennium research was

more prevalent on finding out what collaboration looked like in classrooms and on outcomes for students. Through qualitative research studies two major roles were observed for high school GETs and SETs coteachers: the expert instructor and the systems organizer. These are two very separate roles where one is an expert on curriculum and content area and the other is an expert on how the student can best learn. Equity was difficult to find (Cook & Friend, 1996; Knackendoffel, 2005) and no knowledge or understanding of how to blend the two different expertise was available (Keefe & Moore, 2004; Magiera et al., 2005). Two exemplary examples were showcased where there was a perceived blend (Cole & McLeskey, 1997; Wallace, Anderson, & Bartholomay; 2002). Among comments made by teachers in the Wallace et al. study, there was a hint of a GET teacher assuming the separate but 'equal' duties were collaborative.

Cole & McLeskey's (1997) Eleanor Roosevelt High School study on the other hand had a thorough example of a true partnership. These were two male teachers who selected materials and content away from tradition, taught innovatively and were creative with their assessments. They circumvented at least six out of the seven 'sins' of Worrell (2008) by having positive perspectives, stayed in compliance with legislation and worked out issues collaboratively. They displayed exemplary collaboration skills and administrators were in favor of their creative and innovative methods of collaborating and delivering instruction. They were coteachers and the GET did not claim to be the only expert but consulted and collaborated with the SET to develop their 9th grade math content by selecting materials, resources, and assessments together.

When researchers reported about roles and responsibilities observed in collaborative partnerships, they backtracked to find that pre-service training and professional development initiatives needed to change to embrace effective collaborative skills and methods (Cole &

McLeskey, 1997; Keefe & Moore, 2004; Wallace, Anderson, & Bartholomay, 2002; Youngs, Jones, & Low, 2011).

Using meta-analysis, Murawski and Swanson (2001) conducted a comprehensive literature review for articles between 1991 and 2000 and provided a synthesis of the data available on the effectiveness of coteaching. That found a lack quantitative data to support the qualitative data .Numerous studies espoused coteaching as an effective teaching model but very few provide experimental data. Studies were mostly qualitative and done in schools where coteaching was 'successful'. One method of research that that would add to the scant research on high school collaborative practices is quantitative research to support the qualitative research conducted thus far (Mastropieri & Scruggs, 2001).

The National Center for Education Statistics (NCES) houses a national data set of more than 300,000 participants for the Schools and Staffing Survey Teacher Questionnaire (SASS/TS, 2007-2008) which is composed of nine sections and 75 questions. Section VII on School Climate and Teacher Attitudes (pp. 32-33) variables are provided that lend to significant information comparing GETs and SETs on issues pertaining to collaborative practices such as, selecting textbooks and materials, selecting teacher techniques and sharing beliefs and values about the schools mission and the impact of these variables on teacher satisfaction. This is a resource minimally used.

Researchers have attempted to study high schools and may have been faced with confounding obstacles that are not expressed nor stated. High schools are driven by core content assessments that prove their annual yearly progress (AYP) and funding. With those tensions hovering over them resistance to reform such as collaborative practices are only expected, especially if there are no parameters, or structures that support the reform and them. More

studies are needed to understand the nature of collaboration in high schools that prevent the practices growth. This research will employ the least used research method (quantitative research) to spring board statistical information into the field, supporting qualitative data.

CHAPTER THREE

Method

This section presents the research questions examined and then proceeds to an overview and purpose of the Schools and Staffing Survey (SASS; 2007-2008). This section also explains SASS sampling procedures and design, measures used for data collection, questionnaire design, data editing and data imputation. The information provided for the SASS overview was taken from the National Center for Education Statistics website (NCES, Schools and Staffing Survey, Methods and Procedures). The SASS data used for this research is the SASS/Teacher Survey (SASS/TS) questionnaire. The section titled, research design, describes the participants employed in this study, the rationale for the variables chosen for beliefs and values, roles and responsibilities, and satisfaction and the statistical analyses that were employed to answer them.

Research Questions

This study employed the Schools and Staffing Survey/Teacher Survey (SASS/TS; 2007-2008) from the National Center for Education Statistics (NCES) to answer the following research questions

4) What is the relationship between the perceptions of general education teachers and special education teachers related to beliefs and values about collaboration?
5) What is the relationship between general education teachers and special education teachers on perceptions about roles and responsibilities related to collaborative practices?
6) What is the impact of beliefs and values about collaboration and roles and responsibilities on teacher satisfaction?

Overview and Purpose of the SASS Data Set

With direction and permission from NCES, the following excerpts are directly taken from the website (NCES, Schools and Staffing Survey, Methods and Procedures). For the purpose of understanding the volume of participants in the SASS/TS data set, information of public charter, private and Bureau of Indian Education (BIE) funded schools are included. However these sections were *not* included in the study for this research.

Overview of the SASS Data Set

In the mid-1980's, the National Center for Education Statistics (NCES) conducted a number of separate surveys concerning schools and school personnel. In 1985, NCES undertook a critical review of its elementary and secondary school data system, identifying gaps in content and in design. As a result of this review, NCES redesigned the Schools and Staffing Survey (SASS) system to emphasize teacher demand and shortage, teacher and administrator characteristics, school programs, and general conditions in schools. SASS also collects data on many other topics, including principals' and teachers' perceptions of school climate and problems in their schools; teacher compensation; district hiring practices and basic characteristics of the student population.

From its inception, SASS has had four core components: the School Questionnaire, the Teacher Questionnaire, the Principal Questionnaire, and the School District Questionnaire. These questionnaires were sent to respondents in public, private, and Bureau of Indian Education/tribal schools. In 1999-2000, public charter schools were also included in the sample.

Sample Selection

To make sure that the samples contain sufficient numbers for estimates, SASS uses a stratified probability sample design. Public and private schools are oversampled into groups based on certain characteristics. After schools are stratified and sampled, teachers within the schools are also stratified and sampled based on their characteristics.

Data Processing and Privacy Protection

Once the Census Bureau receives the completed survey forms, staff enters responses from the surveys into electronic data files, which are checked against the survey forms for accuracy. Names, addresses, and other identifying information for schools, principals, teachers, library staff, and districts are removed from the files to protect respondents' confidentiality.

Purpose of SASS Data

SASS data can be used to describe and analyze factors related to schooling and teaching in a variety of contexts in the United States. The sampling design permits comparison across states, or across school sectors (public, charter, private, Bureau of Indian Affairs). Additional variables in the SASS data set allow for comparison across school contexts including school level (elementary or secondary) urbanicity, region, and many other attributes of schools. Data from multiple questionnaires can be used together to provide context and to compare vantage points (e.g., teacher and principal perceptions of a school problem). In addition, key measures of schools and staffing are collected in each administration, allowing them to be tracked over time.

SASS data are used by many organizations and individuals to serve purposes that range from writing analytic articles to informing federal policymakers. NCES uses SASS data to produce publications that provide descriptive statistics on topics that include class size, information on teachers and principals, professional development, out-of-field teaching, job satisfaction of teachers, state-by-state comparisons, and American Indian education. Publications produced by agencies outside NCES have addressed teacher supply and demand, gender inequality, second job holding, special education teachers, teacher certification issues, school leadership, and many other topics. For example, SASS is the primary source of information on out-of-field teaching in the United States.

Sample Procedures and Design

When designing the survey, SASS took into consideration the response burden for schools. The main design objective of the school survey was to provide estimates of school characteristics by the following key analytical domains: the nation; elementary and secondary levels for all sectors; public schools with a population of at least 20 percent American Indian or Alaska Native students; Bureau of Indian Education (BIE) schools at the national level; public schools by school level, region, and state; and private schools by school level, region, and affiliation strata.

Another objective was to balance the requirements of the samples in SASS. For each sampled school, all districts in the public sector, principals, and library media centers in the public and BIE–funded school sectors received questionnaires. The 2007–08 SASS sampled schools first, and then linked each

school to its corresponding school district (or local education agency). To obtain a representative teacher sample, schools were more likely to be selected if there were a larger number of teachers within a given school, although schools of all sizes were sampled. Teachers within schools were then sampled at a rate of at least one and no more than 20 teachers per school, averaging between three and eight teachers per school. The SASS sample design also sought to minimize selecting the same schools as other NCES school–based surveys.

Sampling Frames

To suit the SASS, the sampling frame for public traditional and charter schools was built from an extensively modified 2005–06 Common Core of Data (CCD) school survey, which is a universal survey of all elementary and secondary schools in the United States. For example, schools were added and deleted from the CCD in order to fit the definition of a school used in SASS. Schools operated by the Department of Defense or those that offered only kindergarten or prekindergarten or adult education were excluded from the SASS sample. The SASS sample is a stratified probability proportional to size (PSS) sample. All schools (except BIE–funded schools) undergo multiple levels of stratification, where the population was divided into subpopulations (strata) and random samples were taken of each stratum.

The sampling frame for the teacher questionnaires consisted of lists of teachers provided by sampled schools. The Teacher Listing Form (TLF) was collected as early as possible in the 2007–08 school year at all public (including public charter, private, and BIE–funded) schools in the SASS sample to obtain a

complete list of all the teachers employed at each school. The sample of teachers was selected from all of the schools that provided teacher lists. The teacher lists were processed for sampling where only a few teachers per sampled school were sampled. This is in order to avoid clustering within one school while maintaining representation of a diverse range of schools.

Measures for Data Collection

The 2007–08 SASS returned to the methodology used in the 1999–2000 SASS, which was a mail–based survey, with telephone and field follow–up. An advance letter was mailed to sampled schools during the summer 2007 to verify school addresses. Subsequently, a package containing all surveys and explanatory information was mailed to sampled schools. Using a computer–assisted telephone–interviewing (CATI) instrument to verify school information, schools were contacted to establish a survey coordinator, and to follow up on the Teacher Listing Form (TLF), which served as the teacher list frame. Sampled teachers were mailed questionnaires on a flow basis. Field follow–up was conducted for schools that had not returned the TLF. Schools were called from Census telephone centers to remind the survey coordinator to have staff complete and return all forms. Individual survey respondents (e.g. principal, librarian, and teachers) were called from the telephone centers to attempt to complete the questionnaire with them over the phone. Field follow–up was conducted for schools and teachers that had not returned their questionnaires.

Weighting

Weighting of the sample units was carried out to produce national, regional, and state estimates for public schools, districts, principals, teachers, and school libraries. Private schools, principals, and teachers were weighted to produce national, regional, and affiliation strata estimates (to increase the precision survey estimators). The weighting procedures used in the Schools and Staffing Survey had three purposes: to take into account the school's selection probability; to reduce biases that may result from unit nonresponse; and to make use of available information from external sources to improve the precision of sample estimates.

Replicate Weights

As required by NCES for SASS/TS balanced repeated replication (BRR) was the replicate weight type to be used and was supported by the Statistical Analysis Software (SAS, version 9.3) software. This is important to specify or the estimates will be rendered inaccurate.

There are several ways to create replicate weights. However, they are all based on a similar underlying logic. The sample is broken up into subsamples, called replicates. Next, the estimate of interest is calculated from both the full sample and from each replicate. Finally, the differences between the estimate from the full sample and each of the replicates is used to determine the variance, i.e., the standard error, around the estimate. Different methods of creating the subsamples yield the different types of replicate weights.

Response Rates

Weighted response rates are defined as the number of in–scope responding questionnaires divided by the number of in–scope sampled cases, using the base weight (inverse of the probability of selection) of the record. There are two sampling stages for teachers; first, the school–level collection of the Teacher Listing Form (TLF) from sampled schools, and then, sampling of teachers from the TLF. When both stages are multiplied together, the product is the overall weighted response rate. For all other components, only one sampling stage was involved; therefore, for these components, the weighted overall response rate and the weighted response rate are the same (see Appendix G).

Questionnaire Design

The 2007–08 administration of SASS consisted of five types of questionnaires: district questionnaires, principal questionnaires, school questionnaires, teacher questionnaires, and school library media center questionnaires. Teacher surveys were designed to measure teachers' education and training, teaching assignment, certification, workload, professional development, perceptions and attitudes about teaching, and income from school and non–school jobs.

Data Editing

The USCB (United States Census Bureau) conducted the data processing. Each questionnaire was coded according to its response status. For example, whether the questionnaire contained a completed interview, a respondent refused to complete it, a school district merged with another district, or a school closed.

The next step was to make a preliminary determination of each case's interview status, i.e., whether it was an interview, a non–interview, or if the respondent was ineligible for the survey. Information from the CATI (Computer-Assisted Telephoning Interviewing) instrument was also used to determine the preliminary status of questionnaires, particularly to determine if the school or other respondent was eligible for the survey or not.

Once the data were compiled, a computer program conducted a series of quality control checks: range checks (performed on numbers to make sure that they lie within a specified range); consistency edits (maintaining patterns and clarity), and blanking edits (any addition, removal, or change of content made in a deliberate attempt to compromise the integrity of the data), and generated a list of cases where problems occurred in each survey. After the completion of these checks, the program made a final determination of whether the case was eligible for the survey, and if so, whether there were sufficient data for the case to be classified as an interview. As a result, a final interview status recode value was assigned to each case.

Imputation

The Schools and Staffing Survey used four methods to impute values for questionnaire items that respondents did not answer. These were: (1) using data from other items on the questionnaire; (2) extracting data from a related component of SASS; (3) extracting data from the sampling frame (CCD or PSS); and (4) extracting data from the record of a sampled case with similar

characteristics (commonly known as the "hot deck" method for imputing item response).

Research Design

For this study the Schools and Staffing Survey/Teacher Survey (SASS/TS, 2007-2008) was used. The SASS/TS data set is a component of the SASS data set that houses district, school, principal, and teacher data.

Participants

In order to identify high school teachers, extraction of data from the main Schools and Staffing Survey/Teacher Survey (SASS/TS, 2007-2008) was first performed to separate high school teachers from the middle school and elementary school teachers. Second, the subject areas of interest for this study were extracted based on the codes given by the survey (Appendix C) English, Mathematics, Science, and Social Studies (variables T0067-T0506, and selection of codes from T0101-T0268; SASS/TS, 2007-2008). Special Education was a separate entity from the regular education classes and had to be extracted first as a ‘content area’ and then high school special education teachers identified from that pool of teachers. Special education teachers were teachers teaching students in any IDEA recognized disability group or more than one disability. There was no mining of high school teachers by age, gender, ethnicity, or number of years of service. Therefore the pool of teachers was all high school teachers surveyed in special education and general education core courses. Table 1 illustrates the raw number of cases from the SASS/TS and the final weighted number generated by the balanced repeated replication weighting procedure.

Table 1. Unweighted and weighted samples sizes of participants

Type of High School Teacher	Number of Cases Unweighted	Number of Cases Weighted
HS Special Education	1820	102709
HS English	2800	153335
HS Math	1920	103203
HS Sciences	1190	64122
HS Social Studies	2050	103261
Totals	10660	526630

Replicate Weights

As required by NCES for SASS statistical analyses balanced repeated replication (BRR) was the replicate weight type used and was supported by the Statistical Analysis Software (SAS, version 9.3) software. Replicate weights are a series of variables that contain the information necessary for correctly computing (via the replicate weight method, in this case, BRR) the standard errors of point estimates when analyzing survey data. There are many types of weights that can be associated with a survey. The most common is the sampling weight, sometimes called a probability weight, which is used to denote the inverse of the probability of being included in the sample due to the sampling design (except for a certainty, Primary Sampling Unit (PSU)). The probability weight is calculated as N/n, where N = the number of elements in the

population and n = the number of elements in the sample. For example, if a population has 10 teachers and 3 are sampled at random with replacement, then the probability weight would be 10/3 = 3.33. (NCES, Nations Report Card, Calculation and Use of Replicate Weights).

Rationale for Variables Selected for this Study

Once the participants were identified and mined from the SASS/TS data, variables that pertained to collaboration, collaborative practices, and teacher satisfaction were identified under School Climate and Teacher Attitudes (Section VII) of the Teacher questionnaire. As per the literature, the provisions for beliefs and values among high school GETs and SETs were the need to be supported by administration (Billingsley, 2007; Janney et al., 2007; Wallace, Bartholomay, & Anderson, 2002) and the special education department (Cole & McLeskey, 1997; Hines, 2008; Janney et al., 2007). The need to find support among themselves was described as teachers wanting to be cooperative but could not find the time, place and space to perpetuate the need for cooperative and collaborative sharing (Janney et al., 2007; Murray, 2004). The last provision for building value for a belief system was the feeling of a job well done (Burstein et al., 2004; McLaughlin, 2004). That provision for beliefs and values was derived from seeing student success, besides their own (Villa & Thousand, 1992). Parental approval also contributed towards promoting the belief that collaboration is worth advocating for (Burstein et al., 2004; McLaughlin, 2004). Symptoms of a collaborative culture (Bauwens & Hourcade, 1999; D'Alonzo, Girodano, & VanLeeuwen, 1997; Pugach & Johnson, 1989 and 1995) were collectively sought and aligned to the variables under section VII of the teacher questionnaire under School Climate and Teacher Attitudes (see Table 2).

For roles and responsibilities a similar process to align the literature findings with variables from the SASS/TS data set was performed. For instance, choosing the textbook was

small but relevant part of Gary and Adams process to have equity in their roles as coteachers in their math class Cole and McLeskey's study (1997). Selecting content and teaching techniques were not found to be collaborative in some studies, while the GETs and SETs perceptions were relative to their circumstances or level of content knowledge (Magiera et al., 2005). Keefe and Moore (2004) also found that the teachers in their study GETs and SETs were not engaged in simultaneous delivery of instruction or content. Grading and discipline were also two areas that were not defined well enough between the GETs and SETs resulting is separate actions, yet *perceived* to be equal distribution of roles (Cole & McLeskey, 1997; Cook & Friend, 1996; Keefe & Moore, 2004; Magiera et al., 2005; Morroco & Aguilar, 2002; Wallace et al., 2002).

Teacher tensions and resistance towards collaboration were found to discourage beliefs and values for collaboration and permeated through roles and responsibilities within collaborative practices. This caused teacher dissatisfaction. Therefore a variable for teacher satisfaction was identified (see Table 2).

Table 2 shows the themes in relation to the SASS/TS questionnaire from the section on School Climate and Teacher Attitudes (SASS/TS, p. 32). Each of the variables chosen were measured on a Likert-scale with the beliefs and values scaled from one through four with one being strongly disagree and four being strongly agree; for roles and responsibilities the scale was the same with one being no control and four being most control; for teacher satisfaction the scale was from one through four with one being strongly disagree and four being strongly agree.

Table 2. Collaboration Themes and Variables.

Theme	Section VII Teacher Questionnaire:
Beliefs and values	The school administration's behavior toward the staff is supportive and encouraging
	Most of my colleagues share my beliefs and values about what the central mission of the school should be
	There is a great deal of cooperative effort among the staff members
	In this school staff are recognized for a job well done
	I am given the support I need to teach students with special needs
Roles and responsibilities	Selecting textbooks and other instructional materials
	Selecting content, topics and skills to be taught
	Selecting teaching techniques
	Evaluating and grading students
	Disciplining students
Satisfaction	I am generally satisfied with being a teacher at this school

After determining which variables in the SASS/TS data under School Climate and Teacher Attitudes satisfied beliefs and values, they were summed into one variable and recoded, R_BV. The variables that satisfied roles and responsibilities were summed into one variable, and recoded, R_RR. The variable that satisfied teacher satisfaction was recoded, R_TCHRSATIS.

Statistical Tests

All data were analyzed using SAS, version 9.3. Descriptive statistics were performed during the data screening phase to describe the basic features of the data by providing simple summaries about the sample and the measures. Standard errors for the data were examined to insure fidelity of measurements. A comparison of means by teacher group and the dependent variables were run to summarize the position of teachers by group on beliefs and values, roles and responsibilities.

A one-way analysis of variance (ANOVA) was used to compare the mean scores of the GETs and SETs for beliefs and values, and roles and responsibilities. One-way ANOVA was employed because the independent variable was created with three or more groups (English, math, science, social studies and special education high school teachers) and one dependent continuous variable. Rejection or acceptance of statistical significance was based on a standard of $p < 0.05$ level. This indicated that the difference was due to chance or sampling error 5% of the time and that the same results would occur 95% of the time should the test be run multiple times. An independent samples *t*-test was used to compare the mean scores between GETs and SETs on the variables that have been described under beliefs and values, and roles and responsibilities. Therefore SETs were compared on each theme with their general education colleagues.

A simple linear regression test was run to analyze the predictive ability of beliefs and values and roles and responsibilities on teacher satisfaction. In this analysis the dependent variable was teacher satisfaction and the independent variables were roles and responsibilities and beliefs and values. The regression analysis was used to determine whether roles and

responsibilities and beliefs and values were statistically significant predictors of teacher satisfaction.

CHAPTER FOUR

Results

In this section, the results from the statistical tests conducted to answer the research questions are presented. A means-comparison test was run to review the means of teachers' responses for the variables under beliefs and values (administrative support, sharing of beliefs, cooperation, recognized for a job well done, and support for students with special needs). This procedure was repeated for the variables under roles and responsibilities (selecting textbooks and other instructional materials, selecting content, selecting teacher techniques, grading students and disciplining students) (see Appendix H).The data were then analyzed through the ANOVAs and independent samples *t*-tests.

The ANOVAs were conducted to evaluate the significance of the relationship between GETs and SETs on beliefs and values, and roles and responsibilities. The independent variables, teachers, included GETs by content level (Math, science, English and social studies) and SETs in high schools. The dependent variables included beliefs and values, and roles and responsibilities. The first test was the five groups of teachers on the sum of the variables under beliefs and values, while the second test was the five groups of teachers on the sum of variables defined under roles and responsibilities.

The nature of these relationships between GETs and SETs were made clearer when independent samples *t*-tests were run to see which GET-SET groups had statistically mean score differences. The pairs were math-special education, science-special education, English-special education, and social studies-special education.

A simple linear regression was run to examine the impact of beliefs and values, and roles and responsibilities on teacher satisfaction for all GETs and SETs selected for this study.

Research Question One

What is the relationship between the perceptions of general education teachers and special education teachers related to beliefs and values about collaboration?

Special education teachers had the lowest scores for beliefs and values (M = 9.41, SD = 2.84) when compared to GETs (M = 9.89, SD = 2.82). The ANOVA was statistically significant for beliefs and values, $F(4, 88) = 3.71$, $p = .0069$, (M = 9.81, SD = 2.83). Specifically, independent samples t-tests showed that beliefs and values were statistically significant when comparing high school English teachers (M = 10.04, SD = 2.93) and high school SETs, $t(1) = 12.71$, $p = .0006$, (M = 9.80, SD = 2.90). On average, English teachers had higher perceptions of beliefs and values than SETs. The 95% confidence interval for the difference in means ranged from 9.82 to 10.26 indicating the true value of the parameter was within the confidence interval and that there was a statistical significance.

Beliefs and values were not statistically significant when comparing high school math teachers and high school SETs, $t(1) = 1.26$, $p = .265$, (M = 9.60, SD = 2.75). Beliefs and values were not statistically significant when comparing high school science teachers and high school SETs, $t(1) = 3.07$, $p = .083$, (M = 9.62, SD = 2.81). Beliefs and values were not significant when comparing high school social studies teachers and high school SETs, $t(1) = 3.52$, $p = .064$, (M = 9.63, SD = 2.88). The 95% confidence interval for the differences in means indicated the true value of the parameter was not within the confidence interval and that there was no statistical significance.

Research Question Two

What is the relationship between general education teachers and special education teachers on perceptions about roles and responsibilities related to collaborative practices?

Math GETs (M = 12.02, SD = 2.27) had the lowest scores for roles and responsibilities when compared to their SET colleagues (M = 12.84, SD = 2.58). The ANOVA was statistically significant for roles and responsibilities, $F(4, 88) = 10.79$, $p = .0001$, (M = 12.66, SD = 2.33). Specifically, independent samples t-tests showed that roles and responsibilities were statistically significant when comparing math GETs and SETs, $t(1) = 28.37$, p=.0001, (M = 12.40, SD = 2.42). The 95% confidence interval for the difference in means ranged from 11.45 to 12.48 indicating the true value of the parameter was within the confidence interval and that there was a statistical significance.

Science, $t(1) = 0.73$, p=.396, (M = 12.74, SD = 2.45); English $t(1) = 0.16$, p=.690, (M = 12.83, SD = 2.41), and social studies, $t(1) = 0.10$, p=.750 (M = 12.81, SD = 2.42) were not statistically significant when comparing SETs control over roles and responsibilities. The 95% confidence interval for the differences in means indicated the true value of the parameter was not within the confidence interval and that there was no statistical significance.

Research Question Three

What is the impact of beliefs and values about collaboration and roles and responsibilities on teacher satisfaction?

Simple linear regression was employed to determine whether beliefs and values and roles and responsibilities were predictors of teacher satisfaction for GETs and SETs. The simple linear regression analysis revealed that the beliefs and values was a statistically significant predictor of teachers' satisfaction, $r^2 = .10$; F (1, 3) = 17.49, p <. 01. This indicated that beliefs and values accounted for 10 percent of the variance of teacher satisfaction for this sample. Roles and responsibilities was a not significant predictor of teacher satisfaction.

CHAPTER FIVE

Discussion

This study compared high school GETs from the four core courses (Math, Science, English and Social Studies) and high school SETs (with any of the IDEA endorsements) on their perceptions on collaborative themes. Historically, elementary school teachers were the leaders in taking on the challenge of collaboration. They contributed much towards the collaborative research and their findings were extrapolated to middle schools and high schools. Previous research with elementary and middle schools had delineated three salient themes that needed to be developed (beliefs and values), be deliberated upon (roles and responsibilities), and obviated (tensions and resistance) to ensure successful collaborative practices and healthy teacher satisfaction. The four exemplary high schools described in the Wallace & Bartholomay, (2002) study also stressed the need for a belief and value system, the need to define roles and responsibilities and the need to promote teacher satisfaction by reducing tensions and resistance, within the context of their school building's mission.

To initiate a better understanding of high school collaborative practices based on the themes derived from the literature, this study employed the SASS/TS 2007-2008 data set using variables also based on those same themes using comparable variables in the SASS/TS 2007-2008 data set. This use of the data set is significant because the SASS/TS 2007-2008 data was weighted to be representative of all the teachers in the United States across all demographic variables. Therefore, it represents the first comprehensive study comparing high school SETs and GETs across the three collaborative themes found in the literature.

In that effort, beliefs and values were defined with the collection of variables on the quality of administrative support (Bauwens, Hourcade, & Friend, 1989, Billingsley, Carlson, &

Klein, 2004; Firestone, & Pennell, 1993; Fox, & Ysseldyke, 1997; Hines, 2008; Ploessl et al., 2012), sharing beliefs and values (Bessette, 2009, and Janney, Snell, Beers, and Raynes, 1995) cooperation between colleagues (Murray, 2002, and Wallace et al., 2002), being recognized for a job well done (Burstein et al., 2004; Cole & McLeskey, 1997; McLaughlin, 2002), and support given to teach SWDs (Cook & Friend, 1996, and Magiera et al., 2005).

Roles and responsibilities were defined with the collection of variables on selecting textbooks, instructional materials, content, topics, skills to be taught and teaching techniques (Cole & McLeskey, 1997; Friend et al., 2010; Janney et al., 2002; Rice & Zigmond, 2000; Villa & Thousand, 1992; Wallace et al, 2002); evaluating and grading students (Cole & McLeskey, 1997; Keefe & Moore, 2004), and disciplining students (Bauwens, Hourcade, & Friend, 1989; Cole & McLeskey, 1997; Wallace et al., 2000).

This study found that there were statistically significant differences between SETs and GETs on beliefs and values and roles and responsibilities. However these differences tended to be isolated to English teachers and SETs for beliefs and values and math teachers and SETs for roles and responsibilities. The predictive ability of beliefs and values and roles and responsibilities on teacher satisfaction was mixed. It was found that only beliefs and values impacted teacher satisfaction and accounted for 10 percent of the explained variance for teacher satisfaction.

Beliefs and Values

With a relationship that showed significant differences between GETs and SETs at a high school level for beliefs and values, there was an indication that administrative support along with support from special education, cooperation between teachers, sharing of beliefs and being recognized for a job well done were not perceived comparably between the two groups.

Therefore in the context of collaboration, if there were any collaborative practices in the buildings of the teachers tested, their belief in that concept or practice was still not fully established.

Nevertheless this difference in perceptions of variables defined for beliefs and values seemed to be significantly between high school, general education English teachers and SETs. The high school general education English teachers were more positive and agreed that they were receiving support from their administration and special education department; they also felt positive and agreeable cooperation among their colleagues and were able to share beliefs in the same fashion. The general education English teachers also perceived themselves to be recognized for a job well done and were therefore significantly different from their special education colleagues. Moreover, SETs were the least agreeable on all the other variables that defined beliefs and values for this study. Therefore if these teachers were in coteaching positions, the SETs would not be perceived nor be willing to be as cooperative and sharing as their English colleagues which puts them in an unpleasant situation; they perceive a lack of support from administration that would also create a sense of tension between the English and SET; the lack of support from their own special education department may be a confounding variable as the relationship between SET and their department is more complex than just support.

High school SETs and the high school math, science and social studies were more closely related in their opinions on beliefs and values. This too, in the context of a collaborative classroom, proves to be a problem. If both the GET and SET are unhappy with support, being cooperative, sharing or even perceiving lack of cooperation and sharing then that indicates that both groups are not in a space and place in which they are able to cooperate and share their

beliefs. Not being recognized for a job well done, indicates that both groups are not satisfied at work and require recognition or more value for the work they were doing.

Either way, beliefs and values were not positioned well among GETs and SETs. The difference in their relationship on this theme creates an awkward situation if SETs are already perceiving themselves to be second-class citizens and their colleagues are not, in the case if the English teachers. When the relationship is on the same plane where all perceive a lack of beliefs and values, then there is a stalemate among the teachers on how to move on from a situation that requires agreement and not dissonance.

Roles and Responsibilities

With a relationship that showed significant differences between GETs and SETs at a high school level for roles and responsibilities, selecting textbooks, content and materials, teaching techniques, grading and discipline were perceived comparably between the two groups. Therefore in the context of collaboration, if there were any collaborative practices in the buildings of the teachers tested, their roles and responsibilities were still not fully established.

The most significant difference was found to be between high school general education math teachers and SETs, where the math teachers did not feel they had full control over their class organization as their SET colleagues did. However, the high school general education science, English and social studies teachers did. In the context of collaborative practices, this would be a triumph as roles and responsibilities were well in control of most teachers. The confounding variables were 1) high school general education math teachers are given well-organized materials, teaching techniques and pacing guides so that all math teachers teaching one math area (such as Algebra I) are on the same page and pace; 2) special education teachers were not separated by their teaching assignments so one teacher may be a self-contained class teacher,

a resource room teacher and a coteacher for one or more content areas. This would give them more control on the organization of their classrooms than if they were only coteachers.

The variables chosen for roles and responsibilities did not prove to be a strong set of variables in the context of collaborative practices. Either more variables were required to give vigor to roles and responsibilities or SETs had to be mined further from the data in order to separate coteachers from self-contained and resource class teachers.

Teacher Satisfaction

When comparing high school GETs and SETs on beliefs and values and roles and responsibilities there were significant differences. When seeking the impact of these themes on teacher satisfaction, beliefs and values was the most significant predictor. Interpreted in the context of collaboration, this is a significant finding. Collaboration or any reform is a process where beliefs and values are required first, and foremost. This has been known to impact teacher satisfaction in collaborative practices.

Implications for Beliefs and Values and Teacher Satisfaction

The findings for beliefs and values did not only show a significant difference in the relationships between GETs and SETs but was also a significant predictor for teacher satisfaction for both GETs and SETs. This helps explain the importance of beliefs and values as the factors that constitute a belief and value system for collaboration with the corresponding variables chosen from the SASS/TS data are ones that show the need for support (from administration and the special education department), and the need for togetherness (having a space and place to share their beliefs and values; being able to show cooperation among themselves). Teachers are inherently professionals who want to share. They do so with their students and within their departments. They are also inherently cooperative professionals; they are in a system that

demands that trait, and constantly having to support colleagues in sports, arts, drama and music. Therefore, when they are being superficial in their relations with their colleagues, the support and togetherness are not authentic. High school teachers require quality working conditions and school climate to be able to carry out their daily routines and lead their students towards graduation.

With a representative and statistical difference between GETs and SETs on beliefs and values, and administrative support as part of the belief system, administration are at the forefront to cultivate that belief system, and in the context of collaboration, special education departmental support is also required (Bauwens, Hourcade, & Friend, 1989, Billingsley, Carlson, & Klein, 2004; Cook & Friend, 1996; Firestone, & Pennell, 1993; Fox, & Ysseldyke, 1997; Hines, 2008; Magiera et al., 2005; Ploessl et al., 2012). Administrators and special education personnel have to enhance their teachers' retainability (Billingsley, Carlson, & Klein, 2004). Therefore there is still room and need to develop more collaborative environments where supports and sharing are accessible in an atmosphere that promotes safety, trust and respect. The high school teachers tested in the data are not in that space and place as GETs and SETs showed collective disagreement that they shared beliefs, perceived cooperativeness, or that they were recognized for a job well done. This is not only implied from the data, but also supported by research (Burstein et al., 2004; Cole & McLeskey, 1997; McLaughlin, 2002; Murray, 2002, and Wallace et al., 2002). The English teachers were the only ones that were ready for collaboration as they were more agreeable that support, sharing beliefs and cooperation were in their buildings. This can be investigated further as high school English general education teachers can be role models for collaborative reform.

Implications of Roles and Responsibilities and Teacher Satisfaction

The implications of roles and responsibilities on the relationship between GETs and SETs was not a very strong one. There was a significant difference when high school general education math teachers were compared to SETs. However, high school science, English and social studies teachers were more inclined towards the SETs, feeling and perceiving control of their classroom organization. This can be due to the nature of their departments and how those departments organize their teachers, how much autonomy they give and the expectations of their teachers. Math teachers may not have as much autonomy as other core content area teachers have due to the nature of their content. Another reason that SETs had more control than their math colleagues was most likely the positions SETs held other than coteaching which gave them more autonomous reigns of their classrooms.

Teacher satisfaction was significantly different between the GETs and SETs but was not predicted by roles and responsibilities. This is an indication that their satisfaction in their jobs does not rely on things like selecting textbooks, content, teaching techniques or grading and discipline They are in need of supports, and recognition, and to feel more one among their own through sharing beliefs and seeing and practicing cooperation.

Summary

With the findings from beliefs and values it can be concluded in the context of collaboration, that high school GETs and SETs are not ready to take on the reform without supports and recognition, and without a space and place to share beliefs and find cooperation among themselves. These factors also affect their satisfaction on teaching. However roles and responsibilities are not an issue among all the teachers except math teachers, and there was

collective consensus that the selected roles and responsibility variable responses did not affect their satisfaction in teaching.

Limitations

There were three limitations that may have contributed to the outcomes of tests run for roles and responsibilities: 1) the assortment of special education teachers that taught self-contained classes and resource room classes. When the extraction of high school special education teachers was performed, there was no reliable way to extract special education teachers that only cotaught. Extracting by disability area was also not a viable option as there were many SETs endorsed in more than one area. With that understanding, self-contained and resource room class teachers have control over all aspects of their classes. Those same teachers may also be in several classroom settings such as being coteachers (for more than one class), and resource room teachers. Collectively these assorted teaching assignments may have impacted the results for this theme; 2) there may have been a logistical reason math teachers did not feel they had control over their classroom organization and not an emotional one as collectively with all the other teachers tested there was no impact on teacher satisfaction; 3) the selection of variables in this study may not have been robust enough to encompass roles and responsibilities even though they were taken directly from research and complemented the variables from the SASS/TS 2007-2008 data.

One of the dominant findings in the literature was the lack of knowledge on two fronts. First the SETs lack of knowledge of content, and second, the GETs lack of knowledge of SWDs. To confirm those two pieces, either comparable combination of variables would have to be sought through the professional development section or the data was just not designed to derive that kind of information.

Future Recommendations

This study did not examine teacher training or professional development. However, the literature does emphasize traditional separate preservice teacher training and professional development has to transition to more unified teaching training programs and professional development (see Cole & McLeskey, 1997; Keefe & Moore, 2004; Wallace, Anderson, & Bartholmay, 2002; Youngs, Jones, & Low, 2011). The impact of preservice teacher training and professional development on beliefs and values and more robust roles and responsibilities would add to the research in high schools for collaboration.

Administrators are at the forefront of any reform to take place in their buildings. Statistical models where administrators perceptions of beliefs and values, their perceptions of teachers roles and responsibilities and their perceptions of teacher satisfaction in the context of collaboration, should be examined with those of their SETs and GETs.

The content knowledge issue has to be settled. A shift in paradigm of what two teachers in a high school classroom should look like needs to be re-conceptualized for GETs and SETs. The ‘second-class citizenship’ complex has to be resolved by accepting and recognizing *all* skills GETs and SETs bring in the classroom are equitable.

While this study scratched the surface for collaboration comparing high school GETs and SETs using a representative data set, the statistical differences found should not be ignored. In the high school setting, working conditions need to be improved upon in the areas of supports, creating the space and place for teachers to trust each other in order to feel like sharing and cooperate among themselves. A good place to start in that process is ensure the belief system is in place and valued.

Time for the process has to be allotted. Human relationships are complex, differences must be respected, and challenges overcome. Last, teachers need to understand with the rapid logistical, managerial, instructional and technological changes taking place in schools, two teachers in the classroom might not be such a perplexing concept. Like Helen Keller said, "Alone we can do so little; together we can do so much."

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Appendixes

Appendix A

Table 3. Collected definitions of collaboration (word for word from the authors' articles)

Study	Definition given
Bauwens, J., Hourcade, J.J., & Friend, M. (1989). Cooperative teaching: A model for general and special education integration. *Remedial and Special Education, 10*(2), 17-22.	Cooperative teaching (or co-teaching) refers to an educational approach in which GETs and SETs work in a coactive and coordinated fashion to jointly teach academically and behaviorally heterogeneous groups of students in educationally integrated settings (i.e., general classrooms). Cooperative teaching is a direct complementary outgrowth of the collaborative consultation model described by Idol, Paolucci-Whitcomb, and Nevin (1986) Specifically cooperative teaching has both GETs and SETs simultaneously in the general classroom, maintaining joint responsibility for specified classroom instruction that is to occur within that setting
Bouck, E.C. (2007). Co-teaching…Not just a textbook term: Implications for practice. *Heldref Publications,* 51(2), 46-51.	CT: two or more teachers who are equal in status located in the classroom together, working together, and providing instruction" (Dieker & Murawski, 2003) CT: two or more professionals delivering substantive instruction to a diverse or blended group of students in a single physical space (Cook & Friend, 1995. P. 2). Five models: 1) 1 teacher and 1 assistant: One teacher delivering instruction 2) Station teaching: both teachers deliver instruction to stations of students 3) Parallel teaching: Teachers plan together but split class and deliver to their respective groups 4) Alternative teaching: One teacher pre, re, or supplements teaching to small groups 5) Team teaching: Teachers share instruction to entire class; both teachers collaborating on all components of the educational process.
Carter, N., Prater, M.A., Jackson, A., & Marchant, M. (2009). Educators' perceptions of collaborative planning	Collaboration in education is generally defined as co-equal professionals' voluntarily co-planning to achieve common goals (Friend & Cook, 2006).

processes for students with disabilities. Heldref Publications, 54(1), 60-70.	• Teachers who collaborate effectively share resources, decision-making responsibility, and assume joint responsibility for outcomes. • Three needs for success: 1) Planning time 2) Effort 3) Administrative support
Carter, N., Prater, M.A., Jackson, A., & Marchant, M. (2009). Educators' perceptions of collaborative planning processes for students with disabilities. *Heldref Publications, 54*(1), 60-70.	By completing the CRIME (Prater 2003) *process*, collaboration is defined: 1) Voluntarily agreed to collaborate 2) Contributed in different ways consistent with their knowledge, expertise and experience 3) Discussed and defined a problem to discuss 4) Expressed joint commitment for addressing the problem
D'Alonzo, B.J., Giordano, G., & Vanleeuwen, D.M. (1997). Perceptions by teachers about the benefits and liabilities of inclusion. *Preventing School Failure, 42*(1), 4-11.	Various values lie behind the different inclusive movements (Fuchs & Fuchs, 1994). Inclusion can assume a philosophy that acknowledges the value of collaboration by teams of professionals working in a single educational system (Hardman, 1994)
Fennick, E. (2001). Co-teaching: An inclusive curriculum for transition. *Teaching Exceptional Children, 33*(6), 60-66.	Bauwens, Hourcade & Friend (1989): In co-teaching, GETs and SETs work as teams to modify the setting, the curriculum, the materials or the teaching methods of a general education class. The teamed teachers plan together regularly and teach the class together on a daily basis to incorporate inclusive practices
Fink, J. (2004). Conclusions on inclusion. *Viewpoint, 77*, 6.	Inclusion definition: "From what I recall our working definition was as follows: 'mainstreaming special education students into a population of general education students.' Looking back at this definition now with almost two years of experience in this environment under my belt, I can say with great confidence that I wish it were that simple"
Firestone, W.A., & Pennell, J.R. (1993). Teacher commitment, working conditions, and differential incentive policies. *Review of Educational Research, 63*(4), 489-525.	Collaboration occurs when two or more people work together on a task In a school setting two teachers working together to develop curricula, plan and implement programs, perform peer coaching, or team teach Socio-cognitive and affective dimensions providing: a. Opportunities to learn content and methods and receive feedback in order to monitor and adjust behavior

	b. A sense of collegiality or shared endeavor
Friend, M., Cook, L., Hurley-Chamberlain, D., & Shamberger, C. (2010). Co-teaching: An illustration of the complexity of collaboration in special education. *Journal of Educational and Psychological Consultation, 20*, 9-27. doi: 10.1080/10474410903535380.	Friend (2008): Co-teaching may be defined as the partnering of a GET and a SET or another specialist for the purpose of jointly delivering instruction to a diverse group of students, including those with disabilities or other special needs, in a general education setting and in a way flexibly and deliberately meets their learning needs Kohler-Evans (2006): In the context of this article: Co-teaching has been referred to as a professional marriage because of the importance , as in strong personal partnerships, of building a strong and parity-based relationship
Friend, M., and Cook, L. (1996). *Interactions: Collaboration skills for professionals,* (2nd ed.). White Plains, NY: Longman.	A style for direct interaction between at least two co-equal parties voluntarily engaged in shared decision making as they work toward a common goal (p. 6)
Hammond, H., & Ingalls, L. (2003). Teachers' attitudes toward inclusion: Survey results from elementary school teachers in three southwestern rural school districts.	Authors (2003): Inclusion implies SWDs of both high and low incidence will receive a quality education among peers without disabilities and who are of similar age. Salend (2001): Inclusion is an attempt to 'establish collaborative, supportive and nurturing communities of learners based on giving all students the services and accommodations they need to learn, as well as respecting and learning from each other's individual differences' (p.5)
Idol, L. (2006). Toward inclusion of special education students in general education. *Remedial and Special Education, 27*(2), 77-94.	Idol (1997, p.4) In the inclusive school, all students are educated in the general education programs. Inclusion is when a student with special learning and/or behavioral needs is educated full time in the general education program, enrolled in age appropriate classes 100% of the school day. Also: Inclusion is when students with disabilities receive their entire academic curriculum in the general education program. This is different from

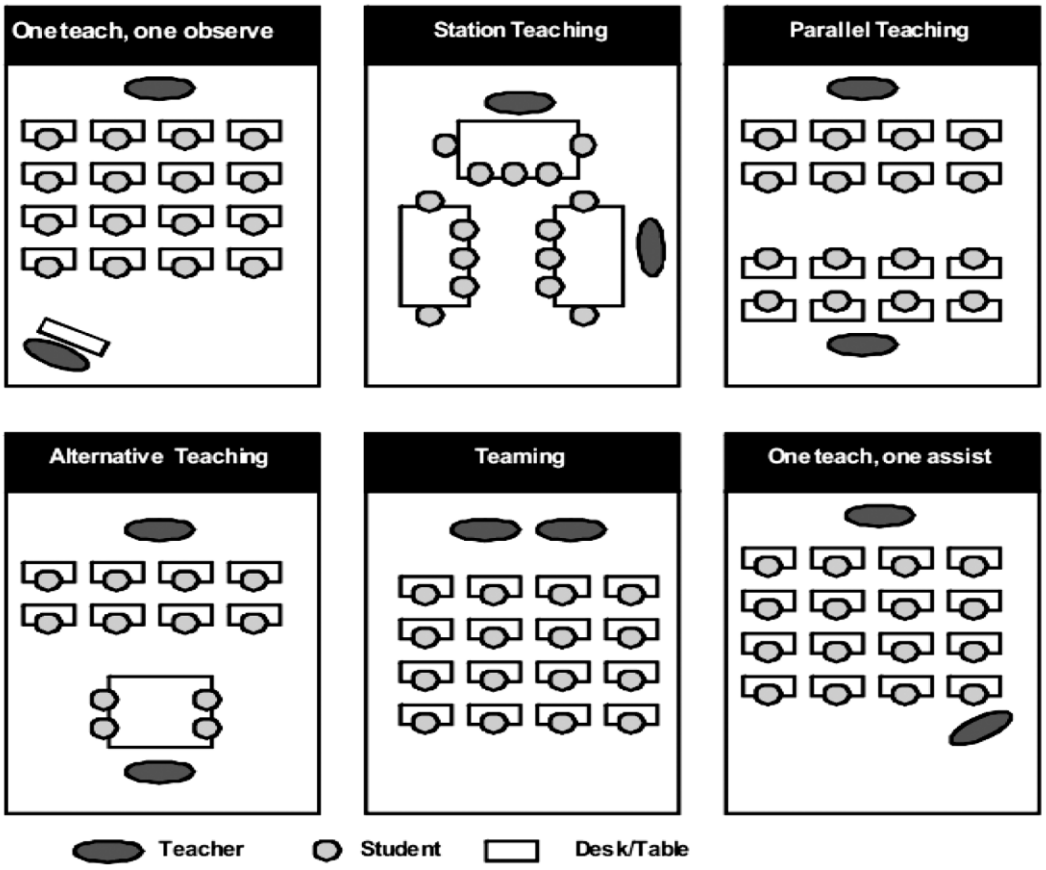
	mainstreaming, which is when students with disabilities spend a portion of their school day in the general education program and a portion in a separate special education program
Knackendoffel, E.A. (2005). Collaborative teaming in the secondary school. *Focus on Exceptional Children, 37*(5), 1-15.	The term *collaborative teaming* seems to embody this concept of working together. Knackendoffel, Robinson, Deshler, and Schumaker (1992): Described collaborative teaming as an ongoing process whereby educators with different areas of expertise work together voluntarily to create solutions to problems that are impeding students' success, as well as to carefully monitor and refine those solutions. Collaborative teaming means people working together in a supportive and mutually beneficial relationship, its possibilities and different configurations are truly endless Friend & Cook (1992): That is not meant to imply (the above) that anything goes and can be passed off as teaming. Collaboration has become the buzz word of the 1990s and the appearance of being in step with the latest educational innovations (p.2)
Koppang, A. (2004). Curriculum mapping: Building collaboration and communication. *Intervention in School and Clinic, 39*(3), 154-161.	Value of inclusive schools, i.e. schools that demonstrate an appreciation for diversity by creating accessible and supportive learning environments for *all* children and their families.
McLaughlin, M.J. (2002). Examining special and general education collaborative practices in exemplary schools. *Journal of Educational and Psychological Consultation, 13*(4), 279-283.	Friend & Cook (2000); Vaughn, Schumm & Arguelles (1997): Researchers describe collaboration in terms of co-teaching and team teaching models as well as support and consultation approaches. Collaboration may also encompass a school-wide culture. For example, research on the impact of school culture (Lee & Loeb, 2000) has demonstrated that student achievement is enhanced in schools where faculty share 'collective responsibility' for the performance of all students. Collaboration in these exemplary schools include both specific teaching practices as well as a community of professionals working together to improve teaching and achievement for all students. Within special education,, collaboration between special and general

	educators is considered central to the successful inclusion of students with disabilities into general education classrooms. IDEA (P.L. 105-17); McLaughlin (1999); Nolet & McLaughlin (2000): Students with disabilities receive access to and make progress in the general education curriculum, regardless of where they are being educated. Under these new policies collaboration means more than just helping an individual student be present in a classroom. Collaboration must now involve teachers planning and problem solving around specific curricular goals to insure that every student is given an opportunity to learn challenging content in the schools. NCLB (P.L. 107-110): Require schools to set and meet performance targets for sub-groups of students, including those with disabilities.
Nolet , V., & Tindal, G. (1994). Collaboration in schools. *Focus on Exceptional Children, 27*(3).	Collaboration occurs when two or more individuals work together to complete a project, create a product, or solve a problem. When people collaborate, they enter into a purposeful, goal-directed relationship with equitable contributions from all participants. In schools, collaboration could involve teachers working together to plan lessons, develop curricula, team teach, engage in peer coaching,, or adapt instruction for a particular student.
Stainback, W., & Stainback, S. (1990). *Support networks for inclusive schooling: Independent integrated education.* Baltimore, MD: Paul II. Brooks.	One that educates students in the mainstream …providing (them with) appropriate educational programs that are challenging yet geared to their capabilities and needs as well as any support and assistance they and/or their teachers may need to be successful in the mainstream (p.3 of Stainback & Stainback, 1990) (p.277)
Stanovich, J. (1996). Collaboration: The key to successful instruction in today's inclusive schools. *Intervention in School & Clinic, 32*(1).	The collaboration itself must be inclusive, encompassing general education teachers, special educations teachers, principals and other administrators, parents (of students with and without disabilities), the students with special needs and their nondisabled peers, paraprofessionals, ancillary professionals, and outside consultants.

Villa, R.A., & Thousand, J.S. (1992). How one district integrated special and general education. *Education Leadership,* 39-41.	Team members agree to coordinate their work to achieve common, publicly agreed upon goals.
Wallace, T., Anderson, A.R., & Bartholomay, T.(2002). Collaboration: An element associated with the success of four inclusive high schools. *Journal of Educational and Psychological Consultation, 13*(4), 349-381.	Cook & Friend (1991, p. 25): …a style for direct interaction between at least two coequal parties voluntarily engaged in shared decision making as they work towards a common goal.

Appendix B

Figure 1. Collaborative practices (Friend, Cook, Hurley-Chamberlain, & Shmaberger, 2010)



Appendix C

Table 4. Detailed themes aligned between literature and SASS/TS data set (2007-2008)

#	Lit. Review Theme	Code	SASS/TS Theme	Question
54	Roles & responsibilities	X	School Climate and Teacher Attitudes	How much actual control do you have in your classroom at this school over the following areas of your planning and teaching?
54a	Roles & responsibilities	0280	School Climate and Teacher Attitudes	Selecting textbooks and other instructional materials
54b	Roles & responsibilities	0281	School Climate and Teacher Attitudes	Selecting content, topics. And skills to be taught
54c	Roles & responsibilities	0282	School Climate and Teacher Attitudes	Selecting teaching techniques
54d	Roles & responsibilities	0283	School Climate and Teacher Attitudes	Evaluating and grading students
54e	Roles & responsibilities	0284	School Climate and Teacher Attitudes	Disciplining students
55		X	School Climate and Teacher Attitudes	To what extent do you agree or disagree with each of the following statements?
55a	Beliefs in a shared space	0286	School Climate and Teacher Attitudes	The school administration's behavior toward the staff is supportive and encouraging
55i	Beliefs in a shared space	0294	School Climate and Teacher Attitudes	Most of my colleagues share my beliefs and values
55k	Beliefs in a shared space	0296	School Climate and Teacher Attitudes	There is a great deal of cooperative effort among the staff members

55l	Beliefs in a shared space	0297	School Climate and Teacher Attitudes	In this school staff are recognized for a job well done
55o	Beliefs in a shared space	0300	School Climate and Teacher Attitudes	I am given the support I need to teach students with special needs
55q	Teacher satisfaction	0302	School Climate and Teacher Attitudes	I am generally satisfied with being a teacher at this school

Appendix D

Table 5. Collaborative strategies

Year	Author	Strategy
2009	Capizzi	CBM: enhancing collaboration
2004	Koppang	Curricular mapping: teachers coming together sharing a range from skills to resources
2006	Nelson	BACKDROP: strategy to collaborate
1994	Nolet	CBC: strategy to collaborate – Identify, plan & share

Appendix E

Table 6a. Teacher roles transplanted into practice (Bouck, 2007)

Role	Translation into practice
Instructor to large class	Provide instruction to whole class (e.g., give directions, present content).
Instructor to individuals	Provide instruction to individual students within the same classroom (e.g., restate instructions, read directions or texts).
Disciplinarian to large class	Provide discipline to the entire class (discuss behavior challenges of whole class to all students).
Disciplinarian to individuals	Provide discipline to individuals (discuss privately or publicly behavior challenges with individual students).
Classroom manager	Handle management activities of the classroom (e.g., grades, attendance).
Supporter	Provide support to other teachers professionally and personally.
Gatekeeper or authority	Monitor students during entry and exit in the classroom, including bathroom privileges.
Confidant or friend	Provide friendship and confidence to students regarding their personal issues.

Table 6b. Teachers' shared and divided spaces (Bouck, 2007)

Space	Description	How shared	How divided
Physical	It was a moderately sized classroom with 32 student desks arranged in rows as well as a teacher's desk.	Both teachers used the general education teacher's desk and the physical classroom.	Teacher provided instruction to individuals (more one-on-one instruction with students). Teacher divided the room (in terms of physical placement) to maximize student-teacher ratio for behavior management.
Instruction	Teacher led group instruction in the class for all students.	Teachers took turns leading instruction at the same time.	Teacher divided instructional responsibility (making assignments, presenting content). Teacher provided individual instruction to students.
Management and	Teacher addressed the	Both teachers	Not one teacher

discipline	classroom management or students' behavioral challenges.	addressed discipline with both general education and special education students. Both teachers had the same philosophy of classroom management and expectations of behavior.	handled the discipline with all students or groups of students, but the special education teacher was more likely to handle discipline of special education students.

Table 6c. Teachers' opportunities and constraints (Bouck, 2007)

Opportunities	
Created freedom	• Created instructional freedom: If one teacher absent, lesson continued with minimal interruption • Created personal freedom: Teachers able to leave classroom to run school errands or address personal education business because another adult present
Offered new role opportunities	• Teachers afforded time to perform more and multiple roles within the classroom. • Special education teacher provided increased large group instruction; general teacher provided more one-on- one instruction.
Offered support	• Professional support assistance or support during instruction and behavioral situations are provided. • Teachers able to support each other over challenging student situations reassuring, encouraging • Teachers could support each other with personal or private situations.
Constraints	
Constrained teachers' autonomy	• Teachers used to managing own classrooms in own way. • Decisions need to be made jointly, so each teacher needed to compromise. • Required teachers to accommodate themselves to different instructional or discipline techniques.
Supported or constrained existing roles	• Primary assigned role or students' or colleagues' associations of teachers' roles are not removed. • Special education teacher associated with serving special education students, accommodating, and individualizing; general education teacher associated with being in charge of the classroom

Devalued others' roles or made others feel devalued	• Devalued a teacher's individual roles; at times minimized individual contributions or autonomy

Appendix F

Table 7. Teacher quotes/testaments on collaboration

Finding	What the GET said	What the SET said
Choosing co-teachers	…she came in new and they paired her with me. I had never met her before. …and now when they bring new people in it's just here, you're working with so-and-so, and they don't have a clue that their job is.	…they're (teachers) very territorial. I couldn't imagine me going in, and, you know, playing by someone else's rules. And that's the thing I really had a problem with.
Communication & compatibility	It's almost more important than what you teach, it's how you get along. And also because you're modeling in front of the classroom. You're modeling that behavior. This is how colleagues work. …totally open communication.	In my opinion the most important thing for an inclusion program to work is how well the teachers get along. The most important thing and the most difficult thing is to predict how well the teachers get along. …You know it's like a marriage.
Numbers & time	…we were planning on the fly…we talked after school…we talked at lunch	But all this is so hard, trying to get in the time because even with us, with our team meetings, we did not really have much time to work on curriculum.
Roles	…it's just here, you're working with so-and-so, and they don't have a clue what their job is, either party really. There was no, I didn't have to say, well I want to do this, we just taught. You know based on material. We were both engaged in the material and went from there. I know it worked.	But no, there was never any discussion about who's, or what my role or their role would be
Limited role of the SET	I don't even know why she's here, quite frankly. She's a nice person, the kids like her, but I don't understand the	I focus a lot on my kids, but no one in the classroom knows who I am really…every once in a while

	point of having her in my classroom	I might teach a lesson but for the most part I just help the teacher with whatever is going on. Minor duties …it can be as insulting as, 'I need some coffee'.
Importance of content knowledge	…well if they do not know the curriculum, I think it does lower them to just a supervisor and discipline you know …(the SET) was more of a hindrance than a help in the room because it was another person who didn't know her material	You have to know the curriculum. You have to know the subject area. Because if you don't, they don't trust you, you can't help them as much, it just doesn't work out
Modification	…it's just real practical stuff like what we do for a kid, for example, is dyslexic and we're reading huge novels and we're reading Shakespeare. What can I do to help this kid understand rather than get frustrated. And usually they're simple solutions.	…(important to) explain totally what a learning disability is and what kind of modifications are reasonable
Grading	…getting graded the same ***versus*** everyone gets an individualized grade	So yesterday I felt like it was a real kind of success for me when she was grading a test and I said 'well can I grade it' and she said 'okay' and I said 'well, I'd like to give partial credit if they do part of a problem right' and she said, 'well if a problem's not right, it's not right'. And I said, 'well you know I feel like we should motivate them if they're at least heading in the right direction'. So she gave in and let me give partial credit and she let me grade it.
Preparation for roles	I did not find that particular course useful	

Positive student outcomes	…a firm believer in inclusion classes. I think that for the kids, this is an incredible opportunity for them to realize, especially at the junior/senior level, when they can take on responsibilities, get things completed, and for their work, to not have asterisks after it.	I had two classes of 11th graders and I did one class on my own and took one class in hers, inclusion, and I really saw a big difference in the way those kids in the inclusion class functioned. They learned a lot more. What they produced was a lot higher level.
Negative student outcomes		…for some kids inclusion is appropriate, for some kids it's not. They really, most of them, wanted to learn the stuff, but the classes, they were too big.
Outcomes for teachers (2 extremes)	…it was just very pleasant, happy and a great experience .For me as a teacher and for those students	This sounds terrible, but don't do it (co-teach) unless you're absolutely sure what you're getting into.

Appendix G

SASS 2007-2008 Methods and Procedures. Additional Information.

Questionnaire Design

The 2007–08 administration of SASS consisted of five types of questionnaires: district questionnaires, principal questionnaires, school questionnaires, teacher questionnaires, and school library media center questionnaires. District surveys contained questions on student enrollment, staffing patterns, teacher recruitment, hiring practices, teacher dismissals, salary schedules, school choice, magnet programs, and graduation requirements. Principal surveys collected information about principal demographic characteristics, training, experience, salary, goals and decision making, judgments about the seriousness of school problems, and, new to 2007–08, instructional time, and teacher and school performance. Public and private school surveys obtained information such as grades offered, number of students enrolled, staffing patterns, teaching vacancies, high school graduation rates, programs and services offered, and college application rates. Teacher surveys were designed to measure teachers' education and training, teaching assignment, certification, workload, professional development, perceptions and attitudes about teaching, and income from school and non–school jobs. School library media center surveys were designed to obtain information about the amount and experience of library staff, and the organization, expenditures, and collections of the library media center.

Sampling Frames

The sampling frame for public traditional and charter schools was built from the 2005–06 Common Core of Data (CCD) school survey, which is a universe survey of all elementary and

secondary schools in the United States. Prior to stratification and sampling, the CCD frame was modified extensively to meet the needs of SASS. For example, schools were added and deleted from the CCD in order to fit the definition of a school used in SASS. Schools operated by the Department of Defense or those that offered only kindergarten or prekindergarten or adult education were excluded from the SASS sample. The SASS sample is a stratified probability proportional to size (PSS) sample. All schools, except BIE–funded schools, undergo multiple levels of stratification.

A separate universe of schools operated or funded by the Bureau of Indian Education (BIE) in 2005–06 was drawn from the Program Education Directory maintained by the BIE. (CCD now defines BIE as its own "territory," similar to Puerto Rico and other non–50 state territories, and does not permit duplicates to be reported by the states). All BIE schools meeting the SASS definition of a school were included in the sample.

The sampling frame for private schools employed a dual frame approach since the list frame does not provide complete coverage. The list frame was based on the 2005–06 Private School Universe Survey (PSS), updated with private school organizations and state lists collected by the Census Bureau in the summer of 2006. An area frame was used to find schools missing from the list frame, thereby compensating for the incomplete coverage of the list frame.

The sampling frame for the teacher questionnaires consisted of lists of teachers provided by sampled schools. The Teacher Listing Form (TLF) was collected as early as possible in the 2007–08 school year at all public (including public charter), private, and BIE–funded schools in the SASS sample to obtain a complete list of all the teachers employed at each school. The sample of teachers was selected from all of the schools that provided teacher lists.

Sample Design

The sample design for the school survey met the objectives for SASS and took into consideration the response burden for schools. The main design objective of the school survey was to provide estimates of school characteristics by the following key analytical domains: the nation; elementary and secondary levels for all sectors; public schools with a population of at least 20 percent American Indian or Alaska Native students; BIE schools at the national level; public schools by school level, region, and state; and private schools by school level, region, and affiliation strata.

Another objective was to balance the requirements of the samples in SASS. For each sampled school, all districts in the public sector, principals, and library media centers in the public and BIE–funded school sectors received questionnaires. The 2007–08 SASS sampled schools first, and then linked each school to its corresponding school district (or local education agency). To obtain a representative teacher sample, schools were more likely to be selected if there were a larger number of teachers within a given school, although schools of all sizes were sampled. Teachers within schools were then sampled at a rate of at least one and no more than 20 teachers per school, averaging between 3 and 8 teachers per school. The SASS sample design also sought to minimize selecting the same schools as other NCES school–based surveys.

Data Collection

The 2007–08 SASS returned to the methodology used in the 1999–2000 SASS, which was a mail–based survey, with telephone and field follow–up. An advance letter was mailed to sampled schools during the summer 2007 to verify school addresses. Subsequently, a package

containing all surveys and explanatory information was mailed to sampled schools. Using a computer–assisted telephone–interviewing (CATI) instrument to verify school information, schools were contacted to establish a survey coordinator, and to follow up on the Teacher Listing Form (TLF), which served as the teacher list frame. Sampled teachers were mailed questionnaires on a flow basis. Field follow–up was conducted for schools that had not returned the TLF. Schools were called from Census telephone centers to remind the survey coordinator to have staff complete and return all forms. Individual survey respondents (e.g. principal, librarian, and teachers) were called from the telephone centers to attempt to complete the questionnaire with them over the phone. Field follow–up was conducted for schools and teachers that had not returned their questionnaires.

Data Editing

The U.S. Census Bureau conducted the data processing. Each questionnaire was coded according to its response status—for example, whether the questionnaire contained a completed interview, a respondent refused to complete it, a school district merged with another district, or a school closed. The next step was to make a preliminary determination of each case's interview status, i.e., whether it was an interview, a non–interview, or if the respondent was ineligible for the survey. Information from the CATI instrument was also used to determine the preliminary status of questionnaires, particularly to determine if the school or other respondent was eligible for the survey or not.

Once the data were compiled, a computer program conducted a series of quality control checks, such as range checks, consistency edits, and blanking edits, and generated a list of cases where problems occurred in each survey. After the completion of these checks, the program

made a final determination of whether the case was eligible for the survey, and if so, whether there were sufficient data for the case to be classified as an interview. As a result, a final interview status recode value was assigned to each case.

Imputation

SASS used four methods to impute values for questionnaire items that respondents did not answer. These were: (1) using data from other items on the questionnaire; (2) extracting data from a related component of SASS; (3) extracting data from the sampling frame (CCD or PSS); and (4) extracting data from the record of a sampled case with similar characteristics (commonly known as the "hot deck" method for imputing item response).

Weighting

Weighting of the sample units was carried out to produce national, regional, and state estimates for public schools, districts, principals, teachers, and school libraries. Private schools, principals, and teachers were weighted to produce national, regional, and affiliation strata estimates. The weighting procedures used in the Schools and Staffing Survey have three purposes: to take into account the school's selection probability; to reduce biases that may result from unit nonresponse; and to make use of available information from external sources to improve the precision of sample estimates.

Response Rates

Weighted response rates are defined as the number of in–scope responding questionnaires divided by the number of in–scope sampled cases, using the base weight (inverse of the

probability of selection) of the record. There are two sampling stages for teachers; first, the school–level collection of the Teacher Listing Form (TLF) from sampled schools, and then, sampling of teachers from the TLF. When both stages are multiplied together, the product is the overall weighted response rate. For all other components, only one sampling stage was involved; therefore, for these components, the weighted overall response rate and the weighted response rate are the same.

Table 8. SASS sample sizes and base weighted unit and overall response rates: 2007–08

Survey population	Sample size	Unit response rate	Overall response rate
Public School Teacher Listing Form	9,800	86.2	†
Private School Teacher Listing Form	2,940	85.1	†
BIE School Teacher Listing Form	180	87.3	†
Public School District	5,250	87.8	†
Public School	9,800	80.4	†
Private School	2,940	75.9	†
BIE School	180	77.1	†
Public School Principal	9,800	79.4	†
Private School Principal	2,940	72.2	†
BIE School Principal	180	79.2	†
Public School Teacher	47,600	84.0	72.4
Private School Teacher	8,230	77.5	65.9
BIE School Teacher	750	81.8	71.4
Public School Library Media Center	9,800	81.7	†
BIE School Library Media Center	180	78.9	†

† Not applicable

NOTE: The number of sampled public and private school teachers reported in this table differs from that reported in 2007–08 SASS First Look Reports. About 160 public school teachers and

50 private school teachers were sampled from schools that were later determined to be out of scope for SASS.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, "Public School Teacher, BIE School Teacher, and Private School Teacher Listing Forms, Public School District, Public School, BIE School, Private School, Public School Principal, BIE School Principal, Private School Principal, Public School Teacher, BIE School Teacher, Private School Teacher, Public School Library Media Center and BIE School Library Media Center data files," 2007–08.

Manuals and Technical Reports

NCES 2009320: Characteristics of Public School Districts in the United States: Results From the 2007–08 Schools and Staffing Survey

NCES 2009321: Characteristics of Public, Private, and Bureau of Indian Education Elementary and Secondary School in the United States: Results From the 2007–08 Schools and Staffing Survey

NCES 2009322: Characteristics of Public and Bureau of Indian Education Elementary and Secondary School Library Media Centers in the United States: Results From the 2007–08 Schools and Staffing Survey

NCES 2009323: Characteristics of Public, Private, and Bureau of Indian Education Elementary and Secondary School Principals in the United States: Results From the 2007–08 Schools and Staffing Survey

NCES 2009324: Characteristics of Public, Private, and Bureau of Indian Education Elementary and Secondary School Teachers in the United States: Results From the 2007–08 Schools and Staffing Survey

NCES 2010332: Documentation for the 2007–08 Schools and Staffing Survey Results (Forthcoming)

Appendix H

Table 9. Mean Comparisons.

Mean Comparisons											
		support from admin	share beliefs	coopera tion	staff recognized for a job well done	special needs	select textbooks	select content	select techniques	grading students	discipline
SETs	*M*	1.67	1.92	1.90	2.04	1.89	2.87	2.90	3.66	3.60	3.41
	SD	.809	.686	.761	.841	.861	1.123	1.032	.616	.650	.703
	SEM	.003	.002	.002	.003	.003	.004	.003	.002	.002	.002
English	*M*	1.73	1.96	1.94	2.14	2.28	2.82	2.93	3.73	3.67	3.39
	SD	.833	.746	.815	.882	.857	1.027	.949	.564	.572	.697
	SEM	.002	.002	.002	.002	.002	.003	.002	.001	.001	.002
Math	*M*	1.64	1.95	1.89	2.03	2.27	2.50	2.44	3.71	3.66	3.38
	SD	.779	.678	.760	.796	.814	1.031	1.000	.557	.567	.702
	SEM	.002	.002	.002	.002	.003	.003	.003	.002	.002	.002
Science	*M*	1.66	1.92	1.92	2.11	2.30	2.85	2.66	3.76	3.70	3.37

	SD	.807	.668	.777	.856	.830	1.051	1.000	.510	.533	.691
	SEM	.003	.003	.003	.003	.003	.004	.004	.002	.002	.003
Social Studies	*M*	1.68	1.94	1.92	2.06	2.22	2.80	2.89	3.75	3.73	3.39
	SD	.848	.738	.769	.846	.851	1.041	.994	.511	.510	.701
	SEM	.003	.002	.002	.003	.003	.003	.003	.002	.002	.002

M=mean; *SD*=standard deviation; *SEM*=standard error of the mean