Linking Collaborative Leadership Practices to Increased Student Achievement

Dissertation

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Abstract

This study explored the relationship between the implementation of processes directed at improving school-level functions and student academic success. Specifically, the researcher used the Collaborative Leadership Organizational Practices Survey (CLOPS) to measure how fidelity of implementation of the Ohio Improvement Process (OIP) influenced sixth grade students’ reading and mathematics achievement. The CLOPS identified areas of strength and weakness in school level OIP implementation, thereby exposing gaps in the school improvement process. The study was conducted in 57 schools in four midwestern districts. Each school administered the Northwest Evaluation Association’s (NWEA) Measures of Academic Progress (MAP) formative assessment tool during fall and winter in two content areas, reading and mathematics. Those same schools adopted the OIP as the school improvement model. Research design employed the survey responses, publically available demographic data considered as control variables. The change from fall formative assessment scores to winter formative assessment scores for reading and mathematics in Grade 6 was identified as the dependent variable. Data included principal responses that reflected the principals’ perceptions of the degree of OIP implementation at the school-level, demographic data retrieved from the state education agency website, and school aggregated formative assessment data from fall and winter assessments. Multiple regression analysis was used
to determine if the degree of fidelity of OIP implementation in a school influenced student achievement from fall to winter assessment administrations. Results identified three OIP practices at the teacher-based team level positively impacted the change in student achievement from fall to winter: (a) teachers on a team, which is described as membership on the teacher-based teams; (b) common post-assessment results, which are described as teams working together to review student progress after the completion of a common post-assessment and, (c) implementation of inclusive instructional practices, which are described as agreed upon instructional strategies that are research based with data that can be effective with all students. Practical implications for collaborative leadership practices within the context of a structured improvement process provide a model for districts to enhance achievement for all students. Future research should address ways to increase the impact of collaborative leadership practices in a structured improvement process. This research could include the impact of levels of trust, academic emphasis and collective efficacy of a staff within the structured improvement process on increased student achievement.

Key terms: collaborative leadership, school improvement process, student achievement
Dedication

This dissertation is dedicated to my parents, who provided me with a strong sense of social justice throughout their lives and the opportunity to earn a college education to serve first as a teacher, then a principal and now as a researcher, feeding my passion for social equity for all people through education; my husband, my study mate, and research partner, Gregory VanHorn, who made this journey with me so meaningful; and my children and grandchildren, who cheered and encouraged me in so many ways the last 5 years, always confident that I could complete this important work; and especially my late father, George Gaich, who provided unrelenting nudging and showed complete confidence that I was a leader, preparing me for a world led by men and how to navigate that world; and all those who struggle to have the opportunity to develop their potential in this life.
Acknowledgements

This project is the result of many people providing me with the opportunity for growth, encouragement, patience, and support. The path that I chose so late in life has been one that I could have never imagined. I have grown in ways I never knew I would or could. The process of this work is almost humbling as it is overwhelming. The sheer number of people who helped me through my mostly self-created obstacles on this venture is unexpected and truly appreciated.

Life has changed since I began 5 years ago. My father and husband’s mom will not see the completion of my work. My father’s undying support and love are still with me. My mother-in-law’s continued amazement of how I balanced family, work and school still makes me smile. My brothers Greg and Steve, my sister-in-law Carol, my son Rocky, and daughter-in-law Abby are all doctors in their own fields. That helped pushed me to pursue mine. My adult children Rocky, Joe, and Kendra taught me so much through their own school experiences and kept me current with the world our children are experiencing. Their teasing and joking about my lamenting finishing papers, taking tests and meeting deadlines has been more help to me that they will ever know.

Greg, my husband and life partner, has been my biggest supporter and cheerleader throughout my 40-year career. He always helped out any events or projects I had at
school. Together we have planned and chaperoned more than 200 homecomings, proms and other dances for our students as well as graduations, concerts, science fairs and academic and athletic recognition programs. He has always taken great pride in my work and seeing me grow from the challenges and opportunities that work has provided. We both share a strong commitment to social justice and equity. Our lives intersected at a summer camp for disabled students and adults. That common bond has served us for a lifetime as educators, parents and friends.

Dr. Belinda Gimbert, my advisor and mentor, allowed me to pursue my passion through my dissertation research. Her experience as a K–12 teacher and administrator was what I needed to help me shape my research into a reflection of that passion. Her patience, kind suggestions that were really not suggestions led me to the completion of my research. She pushed when she needed to and pulled when she needed to guiding my journey. I truly could have not had a better advisor. She was exactly what I had hoped for when I met her in 2012 for the first time.

I am thankful for the persistence of my committee members, Dr. Ann Allen, Dr. Colette Dollarhide, and Dr. Roger Goddard who met with me, providing me guidance and feedback along the way. Their commitment to my work has made my research study better. I will be grateful to them for accepting my invitation to serve on my committee and staying with me until the end. Their collective knowledge and expertise are humbling.

The Ohio State University has an incredibly amazing faculty that I was fortunate enough to have as instructors during my program. The quantitative courses were
exceptional and shaped my thinking for this work. Dr. Greg Gascon, Dr. Jerry D’Agostino, Dr. Jessica Logan, Dr. Dorinda Gallant, and Dr. Ann O’Connell were all amazing professors. My dissertation was influenced by all of them. The development and use of a Guttman style survey, the use of a subject matter expert panel, and the understanding of methods that helped me define this work are a direct result of the classes they each taught. Dr. Ann O’Connell was the model of what college teaching should look like. I learned so much from her on how to teach my own students at OSU. Thank you. Dr. Wayne Hoy is one of a kind. His class was the first one I took for the program and last one he taught at OSU before he retired. Taking his class changed my life. He had the freedom to do what he wanted with his last group and I had the opportunity to soak it all in. What I learned from him was always rolling around in my mind throughout the last 5 years. It is an understatement to say it was a privilege to be in his class. He has influenced me in my life, my professional work and in my research. Thank you.

Dr. Allen’s class on policy in education allowed me to connect my work at the Ohio Department of Education with the research on policy. I was better at my job because of what you taught me. Thank you. The professors I had the honor of meeting and working with during my doctoral studies changed and influenced my thinking. There is no greater compliment than that. Thank you.

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Former colleagues at the Ohio Department of Education Heather Kantola, Ray Draghi, Tom Reed, Dustin Pyles, and Paul Conaway were encouraging me every day. My colleagues at the University of Dayton Grant Center Dr. Deb Telfer, Dr. Aimee Howley, Dr. Brian McNulty, Dr. Jim Gay, Don Washburn, and Allison Glasgow could not have been more helpful and understanding. Thank you for all the conversations about my work. My friends, former colleagues and current colleagues pushed to move on and get finished. Thank you all for all the ways you contributed to this work.
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Fields of Study

Major Field: Educational Studies
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Chapter 1: Introduction

Overview and Background of the Study

The nature of educational leadership most likely to accomplish school improvement and result in higher levels of student achievement has been identified as collaborative (Heck & Hallinger, 2010). Though some researchers distinguish between shared (Hallinger & Richardson, 1988), distributive (Heck & Hallinger, 2009), and collaborative leadership, the definition of each of these forms of leadership holds in common the concept of administrative decision-making based on the active participation and deliberation of major stakeholders, such as students, teachers, parents, and community. Collaborative leadership, considered by some to be the most highly evolved form of shared or distributed leadership, is defined by Heck and Hallinger (2010) as focusing on “strategic schoolwide actions directed toward improvement in student learning that are shared among teachers, administrators, and others” (p. 28). Such a leadership style recognizes and nurtures the interconnectedness of administrators, teachers, and students.

Leaders in high-performing districts engage school staff in collaborative inquiry about student learning and teacher performance in their schools; they then tailor the district’s support for improvement to schools’ specific needs (Leithwood & Seashore-Louis, 2012). When school staff members engage in interactions that promote learning as
a team and facilitate the work of the team, these interactions form a positive element in
the school’s improvement efforts (Fullan, 2013). Social interactions that occur on
collaborative teams among teachers and between teachers and administrators, in
particular, when focused on student learning are likely to increase sustainable student
achievement (Fullan, 2011). A study of teacher collaboration as it relates to student
achievement in 2007 introduced preliminary findings that students in schools where
collaborative leadership was employed at the teacher level achieved at a higher level.
(Goddard, Goddard, & Tschannen-Moran, 2007). Collaborative leadership was defined as
teachers working together on “curriculum, instruction and professional development”
(Goddard et al., 2007). This research is one of the first studies to look at the relationship
between teacher collaborative leadership and student achievement.

As with other effective forms of leadership, collaborative leadership views
classrooms and school buildings as integral parts of a larger education system, not as
stand-alone units inside a building or within a district. All entities within the district
affect and are accountable to each other; consequently, according to Seashore (2009),
there is a need for a districtwide development structure in addition to the personalization
of academic work based on student needs.

State education agencies, including the Ohio Department of Education (ODE),
have advocated for local administrators’ adoption of collaborative leadership practices to
improve student achievement. The Ohio Improvement Process (OIP) was designed to
effectively engage districts and schools in the implementation of the Ohio Leadership
Developmental Framework (Buckeye Association of School Administrators [BASA],
2013), a collaborative leadership model. The OIP defines collaboration as the “highest

2
level of functioning in a continuum of how information, knowledge, and working together operate in any organization” (ODE, 2012a). The leadership framework and processes of the OIP are realized in a multitiered state and district structure that embeds responsibility for improved student achievement in all levels of the school district and offers support and guidance through regional support teams in keeping with research on effective implementation models, such as reported by Bertram, Blasé, Shern, Shea, & Fixsen, (2011) and Blasé & Fixsen (2009). The principal’s role in collaborative leadership within such a structure is necessarily linked to the district, the building she or he administers, and the instructional practices within the building (BASA, 2013). The OIP uses district leadership teams (DLTs), building leadership teams (BLTs), and teacher-based teams (TBTs) to engage educators in necessary processes and protocols for increasing student achievement (Fullan, 2013; Leithwood & Seashore-Louis, 2012; Reeves & Hattie, 2011).

The challenge of convincing educational leaders that shared leadership implemented across school district processes that can advance all students’ learning is difficult. Notwithstanding widespread consensus, such a collaboratively driven districtwide process still is not widely practiced in most midwestern school districts and community schools. For example, the state of Ohio has yet to report significant gains in subgroup student achievement (ODE, 2015), despite more than 6 years of implementing school improvement processes. Existing scholarship has identified the most salient variable in improving student achievement as the degree to which the improvement process is implemented (Reeves, 2010). Meeting this implementation challenge is important.
A key missing component of continual and sustainable improvement is the monitoring of initiatives, interventions, and the performance of teachers and administrators (ODE, 2008). Effective monitoring, which is accompanied by frequent and specific feedback to teachers and administrators (Robinson, 2011), is still a challenge for many districts, despite the fact that planning, sharing ideas, and then failing to monitor implementation of those plans and ideas does not hold teachers, administrators, or central office staff accountable for doing their work with fidelity (Reeves & Hattie, 2011).

At the school building level, when principals can verify that classroom practice based on student needs is executed with fidelity, the desired increase in student achievement is likely to follow Blasé and Fixsen (2009). However, a major concern in this regard is timeliness. A primary goal in education is to increase the amount of quality instructional time with students (Hossler, 1988). To achieve this goal, administrators must efficiently identify needs in their school or district’s professional development plans for effective collaborative leadership practices each school year (Blasé, Fixsen, & Metz, 2016).

In Ohio, they also must increase and expedite involvement among BLTs and TBTs in OIP implementation every year. For a principal, each school year presents the challenge of meeting new students and new staff members and beginning the cycle of school improvement again. A professional development plan, created as part of a continual improvement building or district strategy, must be designed specifically for the needs of the staff in a specific building or district each year. Yet with new students and changes in personnel, revising collaborative practices and the organizational structure each year can take several months.
The OIP Implementation Rubric (OIPIR) was designed to guide districts, schools, and TBTs in effectively implementing and monitoring implementation of the OIP (ODE, 2012b). However, OIPIR is time consuming, which can lead to delays in the development of school improvement plans and customized professional development for school personnel. To address this problem, VanHorn and VanHorn (2014) developed the Collaborative Leadership Organizational Practices Survey (CLOPS) to allow measurement of the fidelity and level of implementation of the OIP in a timelier manner. Based on the OIPIR, the CLOPS streamlines the rubric rating of district, building, and teacher teams’ fidelity to OIP implementation. Timelier information about fidelity of implementation, defined as the degree to which the building and teacher teams implement the improvement process based on the OIPIR, could potentially reduce the time required to implement research-based instructional strategies that lead to increased student achievement.

For these reasons, CLOPS may be a potentially useful tool for schools to employ in measuring the fidelity of implementation of the OIP, as well as to identify gaps in the implementation process, by considering its results in terms of student assessment data. Strengthening the fidelity of OIP implementation may increase the efficiency of efforts to improve student achievement. Additionally, any identified gaps in the OIP implementation may be used to refine professional development plans for the principal, teachers, and staff.

A Brief History of the Ohio Improvement Process

In 2004, the ODE established a state leadership design team with the mission of developing tools to support systemic school improvement throughout each of the state’s
school districts (D. Telfer, personal communication, July 21, 2015). The State Leadership Design Team was composed of state system of support (SSOS) staff and ODE staff whose work focused on increasing student achievement through effective staff development. These team members interacted directly with Ohio school district personnel. The first major effort by the State Leadership Design Team was to operationalize the Ohio Leadership Advisory Council (OLAC) leadership framework into what became known as the OIP. The OIP is the heart of Ohio’s collaborative and school improvement research. The OIP embodies the following assumptions (BASA, 2013):

1. Improvement is everyone’s responsibility, at all levels of the district and in all districts, but especially those directly involved in corrective action or improvement status.

2. State-developed products and tools, including professional development, need to be designed for universal accessibility and applicability to/for every district in the state.

3. A unified statewide system of support requires the intentional use of a consistent set of tools and protocols by all state-supported regional providers, rather than allowing for multiple approaches across the state, based on preference.

4. Improvement efforts should be focused on improving instructional practice and performance at all levels in the system.

Both the OLAC Leadership Framework and the OIP are based on the collaborative and school improvement research conducted by DuFour (2004); Elmore (2006); Fullan (2006); Leithwood and Jantzi (2008); Marzano, Pickering, & Pollock (2001); Marzano, Waters, and McNulty (2005); Reeves (2000, 2006, 2008); and Schmoker (2001). The
unified SSOS in Ohio was given the responsibility of training internal facilitators (district leaders) to implement the OIP in each district. Lloyd, McNulty, and Telfer (2009) defined the expected changes in practice evolving from the implementation of the improvement process.

Table 1

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<tr>
<td>Multiple initiatives are “in play” but are not implemented consistently from teacher to teacher, or building to building</td>
<td>A limited number of initiatives are implemented in every building and in every classroom</td>
</tr>
<tr>
<td>Initiatives are often contradictory from one program/department to another</td>
<td>The district maintains a singular focus by eliminating contradiction across programs/departments</td>
</tr>
<tr>
<td>Initiatives have little/no relationship to district goals/strategies/actions</td>
<td>Initiatives implemented are directly related to the districts’ focused goals and strategies and included as strategies/action within the improvement plan</td>
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<tr>
<td>Plan developed in response to funding provided with school plans disconnected from each other and from the district</td>
<td>Plan drives intentional/aligned resource management and district plan drives development of school improvement plans</td>
</tr>
<tr>
<td>Monitoring degree of implementation does not occur in any systematic way</td>
<td>Systematic monitoring occurs at all levels</td>
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The OLAC Leadership Framework undergirding the OIP was constructed based on findings from research conducted on collaborative leadership linked to school improvement (DuFour, 2004; Elmore, 2006; Fullan, 2006; Leithwood & Jantzi, 2008; Marzano et al., 2001; Marzano et al., 2005; Reeves, 2000, 2006, 2008; Schmoker, 2001).
The OLAC project continued its refinement by adopting findings from recent studies (Heck & Hallinger, 2010; Leithwood & Seashore-Louis, 2012; McNulty & Besser, 2011; Robinson, 2011; Wahlstrom et al., 2010), thereby strengthening the foundation for the OLAC Leadership Framework. The same studies were used to revise the OIP tools and OLAC website for users. A primary strength of the OLAC work is its commitment to provide the most current research available for school improvement work, namely the OIP. Once the structure for the OIP was developed, additional research on collaborative leadership and school improvement strengthened the model as evidence emerged about how collaborative leadership models increase student achievement (Fullan, 2011; Hattie 2009; McNulty et al., 2011; Robinson, 2011; Wahlstrom, Seashore, Leithwood, & Andersen, 2010).

The use of a professional collaborative structure with data teams at the district, building, and instructor (teacher) level, as exemplified in the OIP, is key to an effective improvement framework (McNulty & Besser, 2011). Teachers’ use of common formative assessments to examine student work and progress in meeting academic content standards is the foundation of this important work (BASA, 2013). Effective teacher-leaders are crucial to ensuring fidelity in the improvement framework resulting in increased student achievement (McNulty & Besser, 2011). The teacher-leaders’ role is an integral piece of shared leadership, and the role varies across and within school districts. Teacher-leaders are instructional coaches, teacher team leaders, resident educator mentors, data coaches, and professional development leaders (Katzenmeyer & Moller, 2009). The structure of shared leadership and collaboration using teacher-leaders can increase teachers’ effectiveness in public schools (Katzenmeyer & Moller, 2009). It is the
responsibility of the 16 regions making up the unified SSOS to coach districts and schools in implementing the process at a level that will result in increased student achievement and reduced subgroup achievement gaps. These 16 regions are funded by and work under a performance agreement with the Office of Exceptional Children and the Office of Innovation and Improvement (OII) at the ODE. Funding for this work is provided through Individuals With Disabilities Education Act (IDEA) discretionary dollars and Elementary and Secondary Education Act (ESEA) Title I special project dollars. The OIP Process Cycle of Improvement is shown in Figure 1 (ODE, 2012c).

Figure 1. The Ohio Improvement Process (ODE, 2012c)
The OIP is a four-stage process with the most important phase for increasing student achievement occurring in the Ohio 5-Step Process of Stage 3. The Ohio 5-Step Process is a recurring process that the DLT, BLT, TBTs cycle through several times during an academic school year. Resources and tools on the ODE and OLAC websites aid teams in the implementation of this process. As explained in “The Ohio Improvement Process Facilitator’s Guide,” the OIP operates according to seven principles (ODE, 2012b, p. 7):

- **Aligns vision, mission, and philosophy.** Every step of the continual improvement planning process should always be addressed in light of the vision, mission, and philosophy or beliefs of the district and community school. The questions should be “Do the strategies, actions, and resource allocations support our vision, mission, beliefs, and goals?” and “Are our behaviors and decisions congruent with our vision, mission, beliefs, and goals?”

- **Is continual and recursive.** Districts fully committed to high performance do not view continual improvement as a process that occurs in addition to what they do. Continual improvement is the core work at every level of the organization and by nature repeats itself.

- **Relies on quality data interpretation.** An effective planning process is predicated on the ability of the district or community school, buildings, and classrooms to use (collect, organize, analyze) data to identify critical problems, develop a focused plan, monitor progress, and evaluate plan impact.
• **Is collaborative and collegial.** Every plan gets its strength from the people who are committed to it. To make sure the plan will yield positive results, it is necessary to engage the community in understanding the plan, helping to make it stronger, and ultimately, becoming invested in making it work; to include business and community representatives, students, parents, teachers, administrators, and district or community school staff in the planning process and to make the draft plan available for input from the entire community; and to make sure the plan reflects the combined thinking and planning of collaborative teams who support plan development, implementation, monitoring, and evaluation.

• **Ensures communication with those who are affected by the success of the district or community school at each stage.** District or community school needs and challenges may be related to issues the communities and schools are seeing, and their representatives’ thoughts may help the planning team(s) better understand these situations. Multiple opportunities for communication and feedback should be included throughout the process.

• **Produces one focused, integrated plan that directs all district or community school work and resources.** Heretofore, districts and community schools have had many plans (e.g., technology, professional development, Title I, Title II, special education, career and technical education) for many reasons (e.g., basis of funding applications, federal or state requirements). Multiple plans diminish the district’s or community school’s ability to respond to the most critical needs. By developing one integrated and focused plan that responds to the most critical
needs, the district or community school will leverage resources to achieve lasting success.

- **Establishes the expectation for substantive changes in student performance and adult practices.** The purpose of having a well-conceived planning process is to produce a plan that, if implemented with fidelity, will change student and adult behaviors that lead to improved instructional practice and student performance.

In 2011, the team created the OIPIR. The Great Lakes East Comprehensive Center, funded through a federal grant, was assigned to support the ODE in meeting the federal guidelines of the ESEA, vetted the OIPIR. The rubric was designed to guide DLTs, BLTs, and TBTs to effective implementation of the OIP (United States Department of Education [USDOE], 2013). Beginning in 2012, schools identified by ESEA guidance documents in Title I (USDOE, 2013) and Differentiated Accountability (USDOE, 2008) as “not meeting benchmarks” for student subgroup gap reduction were required to complete the OIPIR. Sixteen State System of Support teams (SSOS) and the OII provided differentiated support to these schools during the 2012–2013 academic year.

ESEA school designations (Priority, Focus, Alert, and Improvement) were identified by student achievement data and compared across all schools in this midwestern state. The lowest performing schools, Priority Schools, received the most support. Focus Schools, Alert Schools, and Improvement Schools were assigned differing levels of support dictated by the ESEA school identification. The 16 SSOS region teams were assigned to districts as consultants and coaches. Data were collected regularly to benchmark school and district engagement using the OIP, and these data were reported annually to the ESEA officer responsible for Ohio.
SSOS and ODE staff members reported on monthly implementation levels of the OIP as well as the support provided in each of these schools. SSOS and OII analysis of data from the rubric and the monthly reports found that patterns of responses indicated that some schools were applying the OIP from a compliance stance, while other school personnel appeared to be deeply engaged with the OIP processes. Moreover, as stated in the ESEA Monitoring Report (ODE, 2013), those schools whose patterns from the rubric indicated deep engagement in the OIP showed greater gains in student achievement scores after one school year cycle.

In school improvement, making gains in student achievement in a one-year cycle is critically important. If immediate, the changes in student achievement may mitigate any further increases in achievement gaps and in fact may begin to close them. By 2014, analyses of OIPIR data by school personnel and SSOS team staff assigned to those schools suggested student achievement gains were aligned with OIP implementation levels. The OII closely followed three districts with large increases in achievement scores in one school year. The three districts continued receiving support from the SSOS teams based on their ESEA school identification. At the end of the 2013–2014 academic school year, the follow-up effort, which I was involved with analyzing for the ODE as director of innovation and improvement, suggested that changes in levels of implementation of the OIP in these districts aligned with changes in levels of student achievement.

Since patterns of improvement were aligned with the level of implementation of the OIP, finding a more streamlined and efficient way to identify gaps in the implementation of the OIP emerged as a good “next step” in supporting the work of school improvement. A tool that could condense the time frame for a district or school to
complete its annual continual improvement plans would be valuable in that it would allow for earlier plan implementation and increased efficacy. CLOPS is such a tool, allowing schools and districts to quickly identify gaps in their collaborative leadership and organizational practices that could inhibit the effectiveness of the OIP.

**Development of the Collaborative Leadership Organizational Practices Survey**

As early as 2012, the OII at the ODE had considered the idea behind CLOPS. The intention was for the survey to be an added tool to assist districts in the implementation of the improvement process. The use of a survey tool to measure the outcomes of OIP implementation offered several benefits. First, a survey could be less time-consuming to complete than the OIPIR. Second, the survey could provide a more efficient way to gauge changes in implementation on an annual basis. Third, regular monitoring of the OIP implementation could serve to support school personnel in identifying areas of strength and areas in need of improvement within their district and schools, an essential effort as implementation of improvement processes requires new skills in educators (Blasé & Fixsen, 2009).

The concept of a survey available to all districts and schools might also lessen the effects of perceived forced “compliance” and would offer the opportunity for all schools and districts to use the OIP to provide professional development customized to their own needs. Importantly, in accomplishing these purposes, a survey could promote increases in student achievement for all students as opposed to achievement limited to certain subgroups of students.

The time-consuming nature of the OIPIR resulted in the delay of continual improvement in plan development until October or November of each year ODE, 2013).
Consequently, the OII at ODE sought the development of a more efficient way to collect the same data. In fall 2013, the CLOPS pilot instrument was completed by 12 principals in a large urban district. The pilot survey was used to examine whether the survey design measured the intended outcomes.

Examining the results of the pilot survey and comparing these to OIP practices observed in the 12 schools showed that accurately measuring the fidelity of implementation through a relatively brief survey was possible. In 2014, a second version of the survey was designed, making more extensive use of language from the OIPIR (ODE, 2012b) and including all of the district and school collaborative leadership practices and organizational structures. This second version increased the scope of measurement of collaborative leadership and organizational structures.

In April 2015, a panel of experts convened to review the second version of the survey (CLOPS) for the purpose of establishing content validity. The SME panel protocol (Appendix B) was suggested by Dorinda Gallant, (personal communication, April 2, 2015), associate professor at The Ohio State University. The panel consisted of 25 education professionals who worked across Ohio consulting in the 417 districts that had successfully applied for and received a Race to the Top (RttT) grant. RttT incorporated the OIP in each of these districts, and the 25 consultants had a high level of expertise in the implementation process at both district and school levels. The OII trained these consultants in the OIP and provided recalibrations once a year for the duration of the grants. The survey developers, VanHorn and VanHorn (2014), incorporated feedback from the panel and made adjustments to the survey that reflected the experts’ recommendations. This process ensured that each component of the survey represented
the practices necessary for fidelity of implementation of the OIP. The survey developers also took into consideration overlapping or missing content components identified by the expert panel. This third version of the survey, the version used in this study, reflects all suggestions that were consistent with the content and primary goals of the survey.

Statement of the Problem

The failure to show improvement in student achievement across all student subgroups continues to be an issue in the forefront of national discussions and debate about education. Whether it comes from politicians, government agencies, private corporations, businesses, or news agencies, there is no shortage of proclaimed solutions for our country’s underperforming education system. Regardless of expertise, it seems as though everyone has a simple solution for this serious issue. Innovation, improvement, privatization, more unionization, or the elimination of collective bargaining, all are proffered as possible ways to provide high quality education outcomes for all students.

The OIP is the organizational structure that is designed to effectively engage Ohio districts and schools in the implementation of *Ohio’s Leadership Developmental Framework* (BASA, 2013). The system of support in Ohio embeds crucial elements of on-site direction, collaboration, coaching, monitoring, and evaluation strategies needed for systemic changes in the schools’ educational delivery system. An important key to increasing student achievement lies in the rigorous implementation of the model. The CLOPS survey, developed as a tool to measure the level of implementation and the leadership practices necessary for rigorous implementation of this continual improvement structure, offers a promising means of utilizing and assessing this model. The study described in this chapter and the following ones focus on a rigorous, research-based
approach to increasing student achievement across all student subgroups. Researchers (e.g., Leithwood & Seashore-Louis, 2012; McNulty & Besser, 2011; Robinson, 2011) have presented evidence that the use of collaborative teams is central to increased student achievement. Using the CLOPS as a benchmark for collaborative leadership practices toward school improvement, this study sought to discover connections between schools’ rigorous implementation of a collaborative leadership and continual improvement model (e.g., the OIP) and student achievement. The structure of this investigative model provides a recurring and research-based framework for making the collaborative leadership and continual improvement process effective for increasing student achievement in Ohio and, with adaptations to their implementation models, in other states as well.

**Purpose of the Research**

The purpose of this study was to investigate whether schools’ fidelity of implementation of the OIP impacts student achievement. Fidelity of implementation of the OIP in this study was determined by the principals’ responses in completing the CLOPS. The relationship between specific collaborative practices or structures in the OIP, as measured by principal responses to the CLOPS, and student achievement was explored. The level of OIP implementation, as it predicts changes in student performance as measured by formative assessment data, was calculated using a multiple regression model.

**Research Questions**

The inability of schools in this midwestern state to show evidence of increased student achievement over time, despite the promise of collaborative leadership practices,
serves as the foundation for the proposed research questions. Increased achievement for all students with a focus on students with subgroup membership has not been demonstrated in this state’s schools’ Local Report Card (LRC) data (ODE, 2014). The lack of utilization of research-based collaborative leadership structures with fidelity may be one reason that student achievement remains an issue in the state (Leithwood & Seashore-Louis, 2012; McNulty & Besser, 2011). Through the research question and two related subquestions I sought to discover the impact of a continual improvement model, specifically the OIP, by investigating through principal perceptions to what extent fidelity of implementation predicts mean school achievement:

Is there a difference in mean school achievement predicted by OIP degrees of implementation after controlling for poverty, subgroup status, and ethnicity of students in the school? If so,

Which, if any, OIP practices have a greater relationship to changes in mean school achievement in reading and mathematics formative assessment trends in schools included in the study?

Which, if any, principal leadership practices that allow for implementation of the OIP model account for greater levels of mean school achievement in reading and mathematics?

**Significance of the Study**

Principal leadership and student achievement have been linked in the research literature, as has collaborative leadership and student achievement. The literature suggests that districts need to commit time and resources for all school and district employees to understand, engage, and practice collaborative leadership in the context of
their work. To this end, districts need to build and maintain a common knowledge base and an understanding of the literature linking student achievement to collaborative leadership structure. Local boards of education, administrative teams, teachers, and their unions need to work together to build a common vision using consensus that is consistent with collaborative leadership research. Instructional decisions should be based on student needs, and exceptions to using student data (achievement and nonachievement) to make district and school decisions should demand compelling justification. Most pertinent to this study, research suggests that the schools’ organizational structure needs to be implemented with fidelity to the researchers’ design (Blasé & Fixsen, 2009; Durlak & DuPre, 2008).

Within the context of implementing a research-based continual improvement cycle built on a collaborative leadership model, I asked whether the level of implementation of a structured collaborative leadership model using a continual improvement cycle impacts student achievement. In reviewing the literature, I found no evidence that the study’s research question has been addressed regarding effects of level of implementation of a collaborative leadership school improvement structure. If the OIP framework and its associated protocols and tools can be shown to provide schools with a structure for guiding principal leadership and collaborative or shared leadership practices linked to improved student achievement, that finding could influence educators’ willingness to adopt this model or similar ones. Such evidence might also support continuing this line of research, perhaps even creating a sense of urgency for educators to design further research studies to investigate the effects and possible refinement of a structure that shows promise to increase the academic achievement of all students.
The results of this study and the recommendations based on the findings may contribute to an increased understanding of the impact of collaborative leadership and organizational structures. Student achievement may be positively impacted by teacher collaboration through teams, principal leadership of those teams, and superintendent practices that provide systemic support.

**Key Concepts**

Terminology adapted from ODE (2012b).

*Achievement gap:* The disparity in academic performance on tests among identified groups or the difference between how a group performs and what is expected of that group. Typically, the disparity is defined as a difference between white students and students of color or between students who receive a free or reduced-price lunch and those who do not.

*Building leadership team:* A team of individuals who promote a culture of common expectations or commitment by maintaining a schoolwide focus on improving student achievement. The team fosters shared leadership and responsibility for the success of every child through the creation of purposeful communities.

*Collaboration:* Highest level of functioning in a continuum of how information, knowledge, and working together operate in any organization.

*Collaborative structure:* A structure designed to increase teacher or district staff capacity in meeting the challenge to close achievement gaps and raise the bar for all students. Other terms may be used, such as *data teams, grade-level teams, or department teams,* to describe a professional learning community in a district or building.

Characterized by continual school-based or district-based professional development,
mutual support, and coaching with peers; dedicated time for collaborative work; and permission to take risks as a staff to learn, practice, and hone their skills. Effective school and district leadership is fundamental to creating collaborative structures.

Continual improvement framework: The concept that effective schools are engaged in a long-term process of improvement of teaching and learning that is demonstrated by a pattern of continual improvement of learning for every child. The continual improvement cycle includes determination of prioritized needs, planning for focused improvement, implementation of the plan, and monitoring and evaluation of the results.

Data-driven decisions: Decisions districts and schools make by knowledgeably and effectively using a range of data at the classroom, school, and district levels to improve instructional support and practices.

Data-Driven Decisions for Academic Achievement: An ODE initiative that provides a systematic approach for Ohio educators to access data and aligns resources. Users are able to identify and access resources to meet specific needs from different systems that communicate using common standards.

Distributed leadership: See shared leadership

District leadership team: A team of individuals who promote a culture of common expectations or commitment by maintaining a districtwide focus on high achievement for all students.

Fidelity: The degree to which the plan accurately produces its effect: The term fidelity as defined in Stage 4 Implementation by the Center for Substance Abuse
Prevention (2016) “describes the degree to which a program or practice is implemented as intended” (p. 2).

*Focused plan:* A blueprint based on identified needs that directs all district work and resources and leads to improvement in student achievement.

*Formative assessment:* A continual instructional process used by teachers to obtain evidence of student understanding for the purpose of improving teaching or learning. To be effective, teachers must be skillful in using various assessment strategies and tools, such as observation, student conferences, portfolios, performance tasks, prior knowledge assessments, rubrics, feedback, and student self-assessment. More important, they must have a deep understanding of the formative assessment process and understand its close relationship to instructional scaffolding.

*Job-embedded professional development:* Ongoing professional development grounded in day-to-day teaching and designed to enhance teachers’ content-specific instructional practices with the intent of improving student learning, aligned to learning standards and school and district improvement plans (Darling-Hammond & McLaughlin, 1995; Hawley & Valli, 1999; Hirsh, 2009; NSDC, 2010).

*Monitoring:* The practice that DLTs and BLTs use to supervise the plan in progress to ensure the tasks, actions, and strategies are on course and on schedule in meeting goals as measured by progress against indicators.

Professional learning community or team: See collaborative structures.

*School improvement plan:* The school’s focused plan for improvement.

*Shared leadership:* Leadership shared by team leaders and team members—rotating to the person with the key knowledge, skills, and abilities to address the
particular issues facing the team at any given moment with the focus on “improvement of instructional practice and performance, regardless of role” (Elmore, 2006).

Subgroups: A smaller group distinguished in some way from other members of the larger group of which it is a part. Under federal law, each school and district is assessed to determine whether it has achieved adequate yearly progress (AYP) for all students in communication arts and mathematics, as well as among each subgroup (Asian and Pacific Islander, Black, Hispanic, American Indian, White, free or reduced-price lunch, individualized education program [IEP], limited English proficient [LEP]) unless there are 30 or fewer students in the subgroup. There must be at least 50 students in the IEP and LEP subgroups for a school or district to be accountable for AYP.

Teacher-based teams: TBTs are teams composed of teachers working together to improve instructional practice and student learning through shared work. As part of the OIP use of collaborative structures, TBTs follow a common set of guidelines described in a five-step process connected directly to the focused goals, strategies, and actions described in the school improvement plan.

Chapter 1 provides the reader with an overview of this study and its research questions and introduces the body of scholarly literature, which focuses the purpose and supports the need for this research. In order to provide the reader clarity, applicable key concepts are listed. Chapter 2 offers a synthesis of the existing scholarship in order to explain from a historical perspective how current leadership theories have been shaped. Within this following chapter, studies related to the emergence and influence of collaborative leadership are interrogated. In particular, findings are examined that report how school improvement structures have impacted in practice the concept of
collaborative leadership. A summary of the OLAC and OIP provides the context for the development of the CLOPS survey, which is the tool of measurement under study.
Chapter 2: Review of the Literature

The goal of this chapter is to provide a history of the development of leadership theories during their modern evolution, from the mid-20th century through the early 21st century, and the history of the development of the OIP as a structure to implement collaborative leadership at a districtwide level supporting improved student achievement. The need for this study is identified by a gap in the literature that links a districtwide structured collaborative leadership improvement process to student achievement. The implementation level of the OIP and changes in student achievement are the variables that form the basis for this study. Research that links collaborative leadership effectively led by a building principal with increased student achievement is analyzed in this chapter. The OIP was designed from evidence provided by research on shared leadership and its impact on student learning. This current study explored the degree to which the level of implementation of the OIP influences student achievement.

An Overview of Various Models of Leadership

A keyword search in the library search engine using the words *education leadership* yielded 4,129 results. When *education leadership* was entered, the search yielded 621 results. I entered the term *education leadership* into the Google search engine, which turned up 37,500,000 results in .57 seconds. Researchers are still trying to decipher what educational leadership is and what about it really works. This chapter
reviews models in leadership that have evolved over the last several decades, beginning with leadership research from the post-World War II era, which saw the emergence of a new philosophy on leadership evolving over time into collaborative leadership which is the foundation of this research.

**The “Great Man” Theory of Leadership**

The 1940s continued the earliest trend of research on leadership: considering qualities or traits of effective leaders. The underlying theory of this research, the “great man” theory, had been popular since the 19th century, asserting that certain people are born with a key set of traits, i.e., personality attributes, skills, motives, and values that define “natural” leaders (Yukl, 2002). This view continues to have its proponents, and in the late 20th century, Bass (1985) found more than 300 studies focused on this theory of leadership. During the post-World War II period, however, a different approach to leadership—considering its process and results, rather than the characteristics of the leader—focused on management and productivity. A key figure in this new approach, W. Edwards Deming (1986), offered a highly powerful different kind of management model. While in Japan working on a national census, Deming began working with major Japanese companies: Toyota, Sony, and Fuji. In part because of his concepts of leadership and management, these companies grew into world market leaders. Forced into a new way of thinking by this competition, American corporations began consideration of this revolutionary way of managing, which became known as total quality management, although Deming did not name it or take much credit for it until years later when he wrote the story of this innovative approach to management (Deming, 1986).
Between 1945 and the early 1990s, Deming’s total quality management revolutionized business and industry and started to influence leadership in schools. Psychiatrist William Glasser (1992) applied Deming’s work to create the quality school model; and components of Deming’s 14 point philosophy can be seen in educational leadership models that are used today. Many of the points in the 14 points philosophy are integral to the OIP, which is the focus of this study (see Appendix A).

**Evolving Alternatives to the “Great Man” Theory of Leadership**

While Deming’s management leadership work was being used in Japan, resulting in corporate change and new profit levels, the research on defining traits of a leader was finding little empirical data to support the “great man” theory. Researchers’ next step in the evolution of leadership models focused on behaviors and styles of leaders. Halpin and Winer (1957) found empirical evidence for two characteristics of leadership: “consideration” (p. 41), defined as the degree to which a leader is supportive toward those he/she supervise; and “initiating structures” (p. 42), defined as how the leader defines their role and the roles of those they manage as those roles relate to meeting the goals of the group. During the 1950s, researchers continued to find similar characteristics of effective leaders that identified relationships between managers and workers, parameters around roles of people in the organization, and the concept of goal setting and achievement of those goals (Katz & Kahn, 1952; Likert, 1961)—all characteristics that align with Deming’s philosophy on management.

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1 In this paper I use singular *they*, *their*, and *themself* to recognize the concept of the gender spectrum in accordance with the American Psychological Association’s (2015) “Guidelines for Psychological Practice With Transgender and Gender Nonconforming People.”
In the 1960s, leadership research continued to evolve, building on the unanswered questions of previous leadership research. In the meantime, corporations in Japan used Deming’s model and disrupted marketplaces, which forced major American corporations to rethink their own management models. Blake, Mouton, Barnes, and Greiner (1964) proposed the “managerial grid” (p. 135), which looks at leadership behavior along two dimensions: concern for results and concern for people. Much like other grids used to illustrate research findings, the managerial grid showed that leaders tend to vary in task and relation orientation, but the most effective managers have high concern for both people and production. This finding gave rise to the “9.9” theory of leadership that “represents maximal concern for both human relationships and production” (Blake et al., 1964, p. 135). The grid used a range of 1 through 9; 1 represents the lowest level of managerial concern for results or people, and 9 was the highest level of concern for results and for people. If a manager demonstrated a 9 for each area of concern, they were described as a 9.9, which is the highest rating on the grid.

Leadership theories continued to emerge as researchers tried to find the evidence for effective leadership that previous leadership models could not. During that time, Tannenbaum and Schmidt (1973) developed the “leadership continuum” of decision-making, combining “forces” in the manager, subordinates, and situation to form an important function of leadership that was most appropriate to specific situations, ranging from “boss-centered leadership” at one end to “subordinate-centered” leadership at the other end. As the use of formal authority decreases, the area of freedom for subordinates’ increases, thus creating opportunities for group decision-making fostered by a democratic
leadership style. This situational leadership model was moving closer to the concept that leadership is a group process, not an individual process or profile.

Along a similar line of research, a situational leadership study often cited in leadership literature, Hersey and Blanchard’s (1993) tri-dimensional leadership effectiveness model considered the correlation between relationship-oriented behavior, task-oriented behavior, and the readiness or “maturity” of the group. Hersey and Blanchard suggested that the effectiveness of “situational leadership is based on an interplay among the amount of guidance and direction a leader gives, the amount of socioeconomic support a leader provides, and the readiness level or ‘maturity’ that followers exhibit in performing a specific task, function or objective” (p. 170). Situational leadership was the bridge leading to the development of transformational leadership, a concept that emerged in the late 1970s.

The theory of transformational leadership unfolded in key studies by Burns (1978), Bass (1985), and Kouzes and Posner (1987). The term *transformational leadership* is taken from work done by Burns. Building on humanistic psychological theories, Burns focused on leadership as a relationship between leader and follower. This relationship could be either transactional or transformational. In a transactional relationship the leader exchanges a reward for a specific performance by the follower. In transformational leadership, a relationship is built on mutual growth of the leader and follower. Both are “transformed” by the experience.

Recently, Chubb (2014) defined the common characteristics of transformational leadership in a higher education setting. He examined six university programs that offered transformational leadership training and identified the commonalities:
What is most striking about these six programs is their shared emphasis on one element of transformational leadership: the ability to promote followership. Leaders must be able to inspire with vision. They must be able to instill trust. They must build personal relationships with colleagues and constituents. They must develop the strength to hold people accountable and the warmth to offer them support. (p. 9)

People skills, old fashioned as these skills may be, are likely the most important skills for securing a different future for our schools and our students. Education is ultimately a people business. The quality of a school will never be greater than the quality of its people. Transformational leaders are those who can cultivate the extraordinary support from their school communities to chart a new course (Chubb, 2014, p. 10).

Transformational leadership was the foundation that redefined leadership effectiveness in interpersonal terms rather than as a defined role that assumed functions or procedures for each group member. Proponents emphasized the importance of awareness of self and of group dynamics in effective leaders, stating that the relationship-oriented behaviors are more important and effective than task-oriented behaviors (Bass, 1985; Burns, 1978). Hooper and Potter (1997), like Goleman, Boyatzis, and McKee (2002), saw leadership as an emotional, rather than intellectual, process, positing that the success of organizations is correlated to how people feel about their work. Goleman et al. proposed six distinct leadership styles relating to emotional intelligence competencies, and they identified leadership style as either predominantly resonant or dissonant. Resonant styles, including visionary, affiliative, democratic, and coaching styles, according to their research, have a positive impact on the organizational climate.
Conversely, dissonant leadership styles, including coercive and pacesetting leaders, tend to degrade organizational climate over time.

**Distributed, Shared, and Collaborative Leadership**

In distributed leadership, a concept that emerged from earlier research, members of an organization take on various leadership roles without regard to their formal position (Harris, 2008, 2011). In settings in which leadership is distributed, people in certain leadership roles become the “house expert” on an assigned area and work with other the members to achieve their goals. In short, distributed leadership maximizes the human capacity within the organization (Harris, 2008). Further, Harris and Chapman (2002) found that the principal who uses distributed leadership by working with and through teams encourages all members of the educational community to accept responsibility for the school’s development. Distributed or shared leadership, although synonymous with each other, are not entirely synonymous with collaborative leadership. Shared leadership in schools was identified in the mid-80s as a second wave of school reform. Principal advisory groups, instructional teams, and parent involvement teams were used to give teachers some input into the operation of the schools (Halinger & Richardson, 1998).

*Shared* and *distributed leadership* are used interchangeably by common definition in the literature. Both engage teachers in the leadership work in the building with the principal relinquishing some control of all building decisions but still leading the direction of the school. Collaborative leadership is not synonymous with shared or distributed leadership. Collaborative leadership implies that decisions made in a school (around instruction, organization, and policy) are inclusive of teachers, administrators, and at times, student voices. Each individual’s voice is heard, valued, and considered in all decisions; and all
decisions in a collaborative leadership model use student data and research as the foundation of those decisions.

Collaborative leadership is a dynamic process wherein “changes in levels of collaborative leadership in a given school will impact the school’s academic capacity. As the school builds its academic capacity over time, we would expect to see subsequent changes in teacher practices, student behavior and learning outcomes (Hallinger & Heck, 2010, p. 659). Collaborative Leadership can be linked to changes in student achievement while shared or distributed leadership have not been linked to changes in student achievement (Heck & Hallinger, 2010).

Collaboration is defined in the OIP, a research-based model of school improvement developed by the ODE (2012b), as the “highest level of functioning in a continuum of how information, knowledge, and working together operate in any organization” (p. 117). Through development and implementation of the OIP, the ODE has come to regard collaborative leadership as the most highly evolved form of shared or distributed leadership.

In the decades between the end of World War II and today, models of leadership have evolved from previous models of leadership. These early models failed to produce any model that reliably can describe, predict, or explain what makes a good leader—with one exception. The work of W. E. Deming has survived the last 70 years and is still being used, either in part or whole, by businesses and corporations (Deming Institute, 2015). Glasser’s quality school model, based on Deming’s work, continues to influence education leaders’ decision making processes and school structures worldwide (William
Glasser Institute, 2016). Leadership theories that produce desired outcomes are actively used, while, those theories that are not viable are not.

**Leadership Model(s) and Strategies Most Relevant for Principals**

When considering which strategies or models are most relevant for principals, it is tempting to use components from the various models of leadership that are familiar. Considering that 75 years of leadership research have failed to produce a sustainable theory of leadership (with the arguable exceptions of Deming’s and Glasser’s), and considering the daily activities and responsibilities of a building principal, perhaps it is best to adopt a “less is more” approach to applying leadership models and strategies to principal leadership behavior.

Accordingly, Halpin and Winer’s (1957) seminal studies focused on two primary characteristics of leadership—the degree to which a leader acts in a supportive manner towards their subordinates as well as structures the roles of the subordinates towards achieving the goals of the group—may be the most relevant to leading schools in 2016. Accepting the research of Sanders and Horn (1998) that teachers represent the most influential school factor on student learning, then the principal’s attention to the degree to which they support teachers is paramount. The more recent principal leadership studies support those concepts. Use of a collaborative model in a school with teacher teams responsible for student learning is linked to increased student achievement (Leithwood & Seashore-Louis, 2012; McNulty & Besser, 2011; Robinson, 2011; Wahlstrom et al., 2010). After 75 years of researchers exploring what defines a strong leader, it may come down to what Deming knew in the 1940s: It takes a team to produce the best results.
Since the mid-20th century, as each generation of researchers attempted to refine and redefine leadership, their models grew more complex and, consequently, less accessible to the people who are left to apply them. Principalship is hard, arguably the most difficult job in public education. Consequently, complex models and long lists of strategies are unlikely to be helpful to these leaders or the teachers they are to lead. However, a focused approach to supporting teachers in implementing clearly defined strategies to achieve shared goals can be of great help.

**Principal Leadership: Addressing Issues of Student Achievement and Equity**

The research on principal leadership strategies used in a collaborative leadership structure is not abundant. This type of research has developed over time, recently tying principal leadership strategies to student achievement. Up until the last 15 years little empirical evidence existed to support bold assertions that principal leadership directly and significantly influenced student achievement. Because student achievement has been shown to be largely a function of instructional quality (Sanders & Horn, 1998), it is not surprising that in a collaborative leadership structure the focus on instructional quality is considered key.

As discussed in Chapter 1, the four stages of a continual improvement cycle include steps to define instructional strategies that align with student needs and data, the implementation and monitoring of that instructional strategy, and some kind of evaluation of its effectiveness at increasing student achievement. In a way, collaborative leadership structures have not used the powerful components of research studies. Student achievement data are not the only data to consider in a collaborative leadership model.
Research has suggested indirect influence from principal leadership practices when measuring evidence of student satisfaction, school programming, school climate, and school vision. Strong administrative leadership was cited as one of five or six factors positively influencing schools in the effective schools research (Edmonds, 1982). However, the administrator’s influence was only effective as long as that administrator was leading the school. There was no systemic, continual improvement change when principals were considered as a key factor of effective schools. Student satisfaction, programming, school climate, and the school vision changed as the principal changed. Collaborative leadership structures work to systemize the practices in a school and make them less “principal dependent.”

**Educational Leadership and a Vulnerable Student Population**

Samuels (2015), in a post on the *Education Week* blog, reported that nationwide gaps still exist between the subgroup students with disabilities (SWD) and their nondisabled peers. Table 2 reports these gaps from 2006–2013, showing that the gaps have essentially stayed the same for the SWD subgroup over the reported time span.
Table 2

*Gaps Between Students With IEPs and Comparison Peer Group on General Assessments: Biannually From 2006–2007 to 2012–2013*

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*Note.* Adapted from Albus, Lazarus, and Thurlow (2014, p. 19). Data in parentheses include the unique states. Data including the unique states were available only for 2012–13. Prior analyses did not include the unique states (Samuels, 2015).

Samuels (2015) pointed out that states now focus on raising achievement levels for the subgroup, SWD. This effort represents a change of direction from compliance to “results driven accountability” as defined by the USDOE Office of Special Education Programs (OSEP). The achievement gap for SWD remains most resistant to closing. For this reason, my discussion will focus on the SWD subgroup and the principal strategies research shows to be likely to be effective in increasing achievement for this subgroup.
Programs and strategies in schools to close achievement gaps have proliferated in the last 50 years, beginning with ESEA Title I Reading in the mid-1960s. Frattura and Capper’s (2009) Program Model 1 (see Figure 2) depicts the general education service delivery model for students who may be at risk of low achievement but have not been identified in the SWD subgroup. For students who are at risk of not learning to read, achieve in math, graduate from high school, or who have family or individual drug and alcohol issues, programming in schools is provided to support those student needs.

*Figure 2. Program Model 1*
Frattura and Capper (2009) looked at the same type of model for those students who are identified in the subgroup SWD. Program Model 2 (see Figure 3) depicts programming provided for students who are on IEPs and whose education falls under the IDEA umbrella. The question that the two researchers make is simple: Why do the students with the most educational needs attend schools where they experience the most transition and the least continuity? (Frattura & Capper, 2009).

*Figure 3. Program Model 2*
In the past period of high accountability for schools, the “solution” to educating students with disabilities was to add more programs that take them out of the general education environment. Frattura and Capper (2009) developed the social equity audit to help districts take a hard look at how district resources are being used and what impact the programs (resources) are having on student achievement for all students, especially those students who are not achieving at levels of their nondisabled peers. The direction of their research has promoted a shift from programs to services, meeting all students needs without the many transitions SWD students are asked to make. This a radical change of direction for current practices in schools and districts. Consequently, the question for districts and schools should not be “Why change?” but “How fast can we change?” The results for the general education programs and the programs added to take care of the needs of other students in subgroups have not shown them to be effective in raising student achievement or closing gaps.

The social equity and justice argument has not been seriously considered in light of all the new programs that were intended to close achievement gaps for students with disabilities. An examination of Glasser’s (1992) quality school and choice theory, the foundation of his work, shows clearly that much of what Frattura and Capper (2009) advocated has a basis in that work.

Johnson and LaSalle (2010) discussed using data in schools to uncover social injustice among students. Considering such data is as important as considering the achievement data. Using all data sources in decision-making may uncover “the wallpaper effect,” i.e. the layers of policies and practices that allow or contribute to inequity in the schools (Johnson & LaSalle, 2010, p. 2). As Johnson and LaSalle noted, “Often schools
continue ineffective practices year after year. Without frequent monitoring, reflection and evaluation, a danger exists that unintended consequences may result from the evolution of those practices over time” (p. 46).

**Promising Leadership Strategies to Address Student Achievement and Equity**

Moving Your Numbers, a research project out of the National Center on Educational Outcomes (Telfer, 2011), looked at five school districts across the country that were making substantial gains in achievement in the SWD subgroup. The common practices in all five districts included “use data well, focus your goals, select and implement shared instructional practices, implement deeply, monitor and provide feedback and support, and inquire and learn” (Telfer, 2011, p. 5).

Unlike earlier leadership theories, studies of shared leadership, especially collaborative leadership, now constitute a promising body of research focused on closing the achievement gaps for students of all abilities. Case studies from districts that have successfully closed the SWD gaps show that these schools made a districtwide commitment (Telfer, 2011). Frattura and Capper (2009) suggested a districtwide commitment. Johnson and LaSalle (2010) discussed the need for leadership at the school or district level to challenge “normal.” The messages are clear. If there is a districtwide commitment to educate all children of all abilities, there are researched-based practices to achieve that goal.

What then do we need from principals in schools to make that commitment a reality? Hattie (2009, 2012) suggested that instructional strategies that demonstrate an effect size of over .40 have the capacity to increase achievement over and above what a student would get from being in a classroom for a year and from maturing one year. The
instructional strategies that do this offer a choice that is almost endless. The conclusion one may reach is that an effective instructional strategy chosen based on student data, implemented with fidelity, monitored with feedback, and evaluated for effectiveness will make a difference in student achievement for all students (ODE, 2012b). In this context, the ODE’s experiences with results of the OIP suggest that it is not what strategy is used, it is how that strategy is used. The factors in the five case studies in the Moving Your Numbers project (Telfer, 2011) mirror those steps. Frattura and Capper (2009), Johnson and LaSalle (2010), Robinson (2011), and McNulty and Besser (2011) all reported similar conclusions. Again, the question arises: What then do we need from principals in schools to achieve the goal of closed achievement gaps?

A Statewide Leadership Model: The Ohio Improvement Process

A model of leadership, such as that embodied in the OIP, that embraces the steps identified above and possesses a foundation derived from a social equity audit (Frattura & Capper, 2009) and a lens and decision filter derived from the work of Deming (1986) and Glasser (1992), comprises the dimensions necessary for a strong leadership model.

The components of this model work together extremely well. The social equity audit (Frattura & Capper, 2009) is the responsibility of the district leadership team composed of a representative of the central office, a representative group of principal and teacher members—unless the district is small, in which case all building principals could participate with a representative number of teachers. The OIP is engaged at every level of the district: district, building, and teacher teams.

The support to implement this process with fidelity is a huge responsibility for the principal, even with support from the district to provide the time and professional
development needed at each building. The Deming (1986) and Glasser (1992) work is the lens and filter to insure that the needs of all members of the organization are being valued, respected and supported: the 14 points from Deming and the five needs from Glasser i.e. survival, love and belonging, power, freedom and fun (Glasser, 1992).

Deming and Glasser work would help a principal guide decisions in a way that promotes inclusiveness, trust, and loyalty within the organization from all members (staff, faculty, students, administrators, parents, and community). Each member of the organization would need to reflect on Deming’s 14 points and Glasser’s 5 needs before engaging in interactions with others. This model addresses all the factors in the *Moving Your Numbers* (Telfer, 2011) study, which considered districts that had already established a trend of achievement for all students.

The OIP model is certainly not based on new school improvement ideas. The foundation of the model is the same as in improvement models across many disciplines: plan, do, review, revise. Earlier leadership models that theorized organizational outcomes may have been both too narrow, in focusing on only the leader (Bass, 1985; Halper & Winer, 1957; Yuki, 2002), and too complex, in trying to reconcile leadership traits with various situations (DuFour, 2004; NIST, 2015; Waters & Cameron 2007). The major difference between the OIP and other models is the focus on “consistent structures,” “a culture of shared accountability,” and “a redefinition of leadership “as a set of essential practices that are supported consistently within a statewide system (Barr, 2012, p. 3). The OIP is steeped in statewide support, resources and protocols that are updated on a consistent basis (OLAC) and consultation services by the regional state support teams funded by the ODE.
The Ohio Improvement Process: an Organizational Structure of Leadership

In the No Child Left Behind Act (NCLB) of 2001, one of the requirements for each state education agency (SEA) was to provide an SSOS for use back and forth for districts and their schools to meet the Adequate Yearly Progress (AYP) measures in each subgroup identified with an achievement gap (Lloyd et al., 2009). Forced to confront the subgroup achievement gaps in Ohio’s schools, the ODE and Superintendent Susan Zelman established a team of educators to collaborate with the Great Lakes East Comprehensive Center (Learning Point, at that time) to build Ohio’s SSOS, which included the development of a leadership framework and a statewide school improvement process (BASA, 2013).

A promising body of research on shared leadership practices to improve student achievement (BASA, 2013) was initially used to shape the Ohio Leadership Framework and the OIP in Ohio. This framework and process bring to life a districtwide structure that embeds the responsibility for improved student achievement in all levels of the school district. Leaders in high performing districts engage school staff in collaborative inquiry about student learning and teacher performance in their schools; they then tailor the district’s support for improvement to the school’s specific needs (Leithwood & Seashore-Louis, 2012). Decisions are based on student achievement data. This cornerstone of shared leadership is the foundation of this study.

Seashore (2009) suggested that for a district to be high performing, a districtwide structure was imperative, along with personalizing academic work based on student needs in a building. Seashore promoted the concept of a collaborative districtwide organization. This simple concept is not practiced in the vast majority of Ohio districts and community
schools. We have yet to see significant gains in subgroup data results (ODE, 2015), although certainly there are some districts that are exceptional in understanding and implementing the OIP. A key missing component of continual and sustainable improvement is the lack of the monitoring of initiatives, interventions, and work of teachers and administrators (ODE, 2008). Monitoring is most effective when accompanied by frequent and specific feedback to teachers and administrators (Robinson, 2011). Planning, sharing ideas and then not monitoring the implementation of the plan does not hold teachers, administrators, or central office staff accountable for doing their work with fidelity (Reeves & Hattie, 2011).

Classrooms are part of a larger education system and are not stand-alone units inside a building. Until principals can verify that classroom practice is done with fidelity and based on student needs, there will not be the increase in student achievement that is desired (Blasé & Fixsen, 2009). Similarly, buildings are not stand-alone units within a district. All entities are accountable to one another and most importantly accountable to their students and families. Fullan (2011) suggested, “An organization cannot flourish—at least not for long—on the actions of the top leader alone. Schools and districts need many leaders at many levels. Learning in context helps produce such leaders” (p. 20). Part of that learning in context is in the form of social capital interaction. Social capital interaction builds on the idea that learning as a team is the work in a school. Using social interactions to facilitate the work of the team strengthens the human capital to be more productive (Fullan, 2013). This progressive thinking in Fullan’s work supports the notion that there needs to be a collaborative leadership structure for improvement. The OIP uses DLTs, BLTs, and TBTs to accomplish what Leithwood and Seashore-Louis (2012),
Fullan (2013), and Reeves and Hattie (2011) suggested is necessary for increased student achievement outcomes. The challenge is how to convince educational leaders that shared leadership and a building improvement structure are necessary to better meet all students’ needs and increase student achievement across subgroups. Reeves (2010) suggested that the most salient variable in improving student achievement is not the brand name of any program but the degree to which the process is implemented.

**Fidelity of Implementation**

OIP Fidelity of Implementation and Improvement Cycles are at the core of this leadership study. The term *fidelity*, as defined in Stage 4 by the Center for Substance Abuse Prevention (2016), “describes the degree to which a program or practice is implemented as intended.” This definition aligns with the work of the OIP organizational structure and processes and is synonymous with the OIP definition provided in Chapter 1 of this dissertation.

Assessing fidelity is essential to understanding program impact, and a careful account of how a program was adapted is essential in guiding successful implementation in the future. Experience from field trials (Brownstein 2003, Durlak 1998, Botvin, Baker, Dusenbury, Botvin, & Diaz, 1995) indicates “adaptations in the form of additions, deletions, and modifications are likely to occur, with potential for either positive or negative consequences” (Cummins, Goddard, Formica, Cohen, & Harding, 2002, p. 2). Over time, the innovation becomes “standard practice” and a new operationalization of “business as usual” takes its place in the setting (e.g., Faggin, 1985). It is important to monitor fidelity of implementation to ensure that adaptations having negative effects do not become a part of business as usual. Fidelity measures are developed and used to
improve the competency of implementation teams, offering support for teacher and staff learning and use of innovations. During full implementation vigilance over site practices and data reviews continue as more staff members participate, turnover occurs, and improvement cycles continue (Blasé et al., 2016).

Several meta-analytic studies contain information on the impact of implementation on improvement outcomes. As with most meta-analyses, the primary studies vary in how they report on implementation, but they offer support for monitoring. For example, in a review of 59 mentoring studies, DuBois, Holloway, Valentine, and Cooper (2002) found programs that monitored implementation obtained effect sizes 3 times larger than programs that reported no monitoring of implementation (mean effects of 0.18 vs. 0.06 respectively) (Durlak & DuPre, 2008). Similarly, Smith, Schneider, Smith, and Ananiadou (2004) reported that although 14 whole-school antibullying programs obtained modest effects overall, those that monitored implementation obtained twice the mean effects on self-reported rates of bullying and victimization than those that did not monitor implementation. Findings from programs improperly implemented and comparisons disclose that well-implemented programs achieved effect sizes 0.34 greater than poorly implemented programs. In the largest relevant meta-analysis, Wilson, Lipsey, and Derzon, (2003) reviewed 221 school-based prevention programs targeting aggressive behaviors. “Regression analysis indicated that implementation [of the prevention program] was the second most important variable overall, and the most important program feature that influenced outcome” (Durlak & DuPre, 2008, p. 4). The findings of the meta-analyses studies support a claim that implementation of a research based program such as the OIP influences outcomes.
The need for monitoring fidelity of implementation has been established by other studies as well. Finding a part of a larger system that uses implementation science to effect change is a starting point for initiating the change for the rest of the system. Finding that part of a larger system to begin a system wide change is referred to a transformation zone (Nord & Tucker, 1987).

A transformation zone approach focusing implementation of the new program or practice in a geographic or demographic area may offer support in other geographic (i.e. rural, suburban, or urban) or demographic areas (e.g. communities of color, immigrants, socioeconomic diversity) and can be identified, and if initial stage efforts result in buy-in, counties can serve as transformation zones that facilitate adoption by other locales and communities in the state (Bertram et al., 2011, p. 42). Improved results in student achievement are critical for districts expected to make student achievement gains on an annual reporting basis.

Bertram et al. (2011) acknowledged that leaders at each level of the system (federal, state, local, and building) must do their best to remove obstacles and barriers in the organization that interfere with full implementation. It is critical then to use common frameworks, processes, and protocols across all levels of program implementation and to monitor their use. Leadership is important for full implementation of any research based program:

Factors such as workload, remuneration, documentation, clear communication and feedback must be proactively and continuously considered and addressed by administrators to the satisfaction of staff and
ultimately to the benefit of program participants. (Blasé & Fixsen, 2009, p. 2)

In order to support this leadership responsibility effectively, monitoring all aspects of program implementation is crucial: Data that reflect the quality of specific implementation drivers must provide feedback to the implementation team members responsible for it so that they can make suitable adjustments, such as professional development or coaching, etc. Such feedback demonstrates commitment to quality improvement in processes that “demand continuous cycles of planning, doing, studying, acting, and evaluating” (Bertram et al., 2011 p. 33). Alignment of all levels of implementation in the system must be a priority in order to insure positive changes in expected outcomes, and systemic alignment requires monitoring and feedback (Bertram et al., 2011).

Stages of implementation can be identified differently. The stages in the model align with research based improvement processes: “Should we do it?”, “Work to do it right,” and “The stages in the model below align with any research based improvement process: “Should we do it?” “Work to do it right” and “Work to do it better” (Goodman, 2013).
According to Goodman (2013), a major goal of implementation is for practitioners to use innovations effectively. He noted that high-fidelity practice is both created and supported by certain essential implementation components: staff selection, professional development, coaching and consultation, performance evaluation, decision-support data systems, facilitative administrative supports, and system interventions. To maximize their influence, these interactive processes must be integrated. Consequently, one core interactive implementation component can compensate for another, i.e., “a
weakness in one component can be countered and overcome by strengths in one or more other components” (Blasé & Fixsen, 2009, p.).

This approach does not negate the need for intensive professional development and technical assistance. The implementation of any complex research-based program may not mesh with the skill set of educators. More extensive and novel changes in education typically require new knowledge, skills, and abilities among educators and require related changes in school, district, state, and federal education systems to support educators. Systems need to be aligned to support the new educational methods. Intensive TA includes all elements of basic technical assistance, but adds considerable on-site direction, collaboration, coaching, and evaluation strategies needed to achieve systemic changes” (Blasé & Fixsen, 2009).

The USDOE established regional comprehensive centers to support SEAs in the development of SSOSs that would assist districts to meet the aggressive achievement goals of NCLB. The Great Lakes East Comprehensive Center, which supported Ohio, was an integral part of the development of OLAC and the subsequent development of the OIP, which was derived from the leadership practices embodied in the OLAC Leadership Framework. The Great Lakes East Comprehensive Center provided consultants assigned to this project from 2004 to 2012 as well as the financial support needed for the development of the research-based OLAC Leadership Framework, The OIP model, the tools that were developed for districts and schools to support effective training and implementation of the OIP, and the editing and vetting process by their research team prior to publication of this work.
At that time, leadership at the ODE invested heavily in the work of developing the unified Ohio SSOS (see Appendix D) with the Buckeye Association of School Administrators (BASA, 2013) to create the OLAC. Their two-pronged approach—which took 4 years to envision, develop, and implement—evolved over time to be a model for the country.

Ohio’s unified SSOS was used as a model by regional comprehensive centers nationally, who requested help from Ohio’s work in this area. In my professional work at the ODE from 2010 to 2014 I shared this systemic model of support with the Great Lakes West Comprehensive Center for their work in Wisconsin and Illinois. There were several additional states, from 2010 to 2014, that through a memorandum of understanding, were provided the computer programming codes to replicate the improvement process work in Ohio (CCIP). Follow-up work with those states supported improvements in their state system of support, which I noted in my role as director at the OII in the Ohio Department of Education.

Ohio’s commitment to the implementation of a state system of support directly focused on improving the academic achievement of all students not on limiting this work to the NCLB subgroups. The OIP beliefs embodied the following premises:

1. Improvement is everyone’s responsibility—at all levels of the district and in all districts, but especially those in corrective action or improvement status;
2. State-developed products and tools, including professional development, need to be designed for universal accessibility and applicability to/for every district in the state;
(3) A unified statewide system of support requires the intentional use of a consistent set of tools and protocols by all state-supported regional providers, rather than allowing for multiple approaches across the state, based on preference; and

(4) Improvement efforts should be focused on improving instructional practice and performance at all levels in the system (BASA, 2013).

“Shifts in Practice Promoted by OIP” (Figure 1) defines the expected shifts in practice expected to evolve from the implementation of the OIP and structuring school practices on the basis of those four premises. The unified SSOS in Ohio was given the responsibility of training internal facilitators (district leaders) to implement the OIP in their district.

The OLAC Leadership Framework, which formed the foundation of the OIP, was based on collaborative and improvement research including DuFour (2004); Elmore (2006), Fullan (2006), Leithwood and Jantzi (2008), Marzano et al. (2001), Marzano et al. (2005), Reeves (2000, 2006, 2008), and Schmoker (2001). The project continued to develop using findings from newly published research studies from researchers whose work laid the foundation for the OLAC Leadership Framework as well as from other researchers in the field of shared leadership models. The latest research continues to update the OIP tools and OLAC website for their users. The commitment to keeping the most updated research in the forefront of this school improvement work is a strength of this project and, ultimately, a strength of the OIP. Once the foundation for the OIP was developed, further research in collaborative leadership and school improvement strengthened the model as the newer research provided evidence of how collaborative

Monitoring Fidelity of Implementation

Monitoring fidelity of implementation can determine to what degree the practices and structures of the improvement model change student outcomes. Tools to assess the fidelity of implementation are also important to implementers in that monitoring and assessment of fidelity identify needed changes and assist in evaluating such changes (Center for Substance Abuse Prevention, 2001). Assessing fidelity seems essential to understanding the impact of implementation of a program, and an account of how implementation practices have been adapted can guide future efforts toward successful implementation” (Botvin et al., 1995; Brounstein, 2003; Durlak 1998). To be useful, fidelity assessment tools must capture all major program components and the changes in implementation over time (Cummins et al. 2002).

The OIP and the CLOPS together meet those criteria. Consider the OIP as the framework and the CLOPS as the assessment tool. The fidelity of implementation of all implementation groups (OIP teams) and the responsibilities of those teams to impact adult behaviors and student achievement outcomes are identified, monitored and evaluated on a continual cycle.

Collaborative Structure: Teams as Information Gatherers and Decision-Makers

The use of a professional collaborative structure with data teams at the district, building, and instructional (teacher) levels is key to an effective improvement framework. Teachers using common formative assessments to examine student work and progress in
the academic content standards are the foundation of this important work. Effective teacher-leaders are crucial to ensuring fidelity in the improvement framework resulting in increased student achievement (McNulty & Besser, 2011). Goddard, Sweetland, and Hoy (2000) explored the impact of academic emphasis in schools and found a relationship between academic emphasis and student achievement in middle and high schools. “In such schools, teachers set high but achievable goals, they believe in the capability of their students to achieve, the school environment is orderly and serious, and students, as well as teachers and principals, pursue and respect academic success” (Goddard et al., 2000, p. 686). Their study used elementary schools as the basis for research, and their findings were consistent with previous studies in the impact of academic emphasis in middle and high schools. “The results offer evidence that the academic emphasis of the school is systematically related to student achievement in urban elementary schools” (Goddard et al., 2000, p. 698). A key concept in this research lies in the words *is systematically related*. Again, student achievement is impacted by a collective belief or property that is internalized by a group of people, not individuals.

An integral piece of shared leadership is the role of teacher-leaders. Teacher-leaders are used in many ways across school districts. Their roles include instructional coaches, teacher team leaders, resident educator mentors, data coaches, and professional development leaders (Katzenmeyer & Moller, 2009). The roles may vary in different school settings, but the structure of shared leadership and collaboration using teacher-leaders can increase the effectiveness of public schools (Katzenmeyer & Moller, 2009). Goddard et al. (2007) studied teacher collaboration as it relates to student achievement, with preliminary findings that students in schools where collaborative leadership was
employed at the teacher level achieved at a higher level. Collaborative leadership was defined as teachers working together on “curriculum, instruction and professional development” (Goddard et al., 2007, p. 882). Goddard et al. produced one of the first studies to investigate the relationship between teacher collaborative leadership and student achievement.

The OIP is a four-stage process (see Figure 2) with the most important part of the process for increasing student achievement occurring in the Ohio 5-Step Process in Stage 3. The process is a recurring one that the DLTs, BLTs, and TBTs cycle through several times during an academic school year. Available resources and tools found on the ODE and OLAC websites aid teams in the implementation of this process. Coaching districts and schools to implement the process at a level that will result in increased student achievement and reducing subgroup gaps is the responsibility of the 16 regions making up the unified SSOS, which are funded and work under a performance agreement with the Office of Exceptional Children and the OII at the ODE. Since the goals of ESEA and OSEP (both offices at USDOE) are to increase student achievement for all students and close student subgroup achievement gaps, the funds for all of this work are provided through IDEA discretionary dollars and ESEA Title I special project dollars.

The OIP is can be summarized by seven principles:

1. Aligns vision, mission, and philosophy. Every step of the continual improvement planning process should always be addressed in light of the vision, mission, and philosophy or beliefs of the district and community school. The questions should be “Do the strategies, actions, and resource allocations support our vision, mission, beliefs, and goals?” and “Are our
behaviors and decisions congruent with our vision, mission, beliefs, and goals?"

2. Is continual and recursive. Districts fully committed to high performance do not view continual improvement as a process that occurs in addition to what they do. Continual improvement is the core work at every level of the organization and by nature repeats itself.

3. Relies on quality data interpretation. An effective planning process is predicated on the ability of the district or community school, buildings, and classrooms to use (collect, organize, analyze) data to identify critical problems, develop a focused plan, monitor progress, and evaluate plan impact.

4. Is collaborative and collegial. Every plan gets its strength from the people who are committed to it. To make sure the plan will yield positive results, organizers must engage the community in understanding the plan, helping to make it stronger, and ultimately becoming invested in making it work. Business and community representatives, students, parents, teachers, administrators, and district or community school staff should be included in the planning process, and the draft plan should be available for input from the entire community. The plan must reflect the combined thinking and planning of collaborative teams who support plan development, implementation, monitoring, and evaluation.

5. Ensures communication with those who are affected by the success of the district or community school at each stage. District or community school priority needs and causes may be related to the issues communities and
schools are seeing, and their thoughts may help the planning team(s) better understand the situation. Multiple opportunities for communication and feedback should be included throughout the process.

6. Produces one focused, integrated plan that directs all district or community school work and resources. Heretofore, districts and community schools have had many plans (e.g., technology, professional development, Title 1, Title 2, special education, career and technical education) for many reasons (e.g., basis of funding applications, federal or state requirements). Multiple plans diminish a district’s or community school’s ability to respond to the most critical needs. By developing one integrated, focused plan that responds to the most critical needs, the district or community school will leverage resources to achieve lasting success.

7. Establishes the expectation for substantive changes in student performance and adult practices. The purpose of having a well-conceived planning process is to produce a plan that, if implemented with fidelity, will change student and adult behaviors that lead to improved instructional practice and student performance. (OIP Facilitator’s Guide, ODE, 2012)

The strengths of this model are found in the research that provided the foundation of the OLAC Leadership Framework. Using that framework, the actual improvement process was developed from research connecting leadership practices in DBTs, SBTs, and TBTs to student achievement. The most important factor that the OIP brings to professional development for school district staff is the breadth of the research in the field of education leadership that forms an integral part of the foundation of the Framework.
and the OIP. This strength brings a level of acceptance by districts using the OIP. For example, a number of districts over the years used Marzano et al.’s (2005) and DuFour’s (2004) research to develop their faculty. Because both of these researchers are key contributors to the Leadership Framework and the OIP, it is a smaller leap for those districts to take in adopting the OIP as their district organizational structure.

A major weakness of the OIP is the required level of discipline that is needed to implement the process in a way that will consistently increase student achievement. However, in education, governed by local control legislation within the Ohio Revised Code (33 Ohio Rev. Code, 2015), the freedom to choose how to teach one’s students does not, as yet, require protocols to make sure that the instructional strategy one chooses will positively impact student achievement. Local control legislation supersedes federal and state requirements if a district is willing to forego the state and federal funding that is attached to the requirements. For those districts that are identified as not meeting federal benchmarks and requirements for improvement are delineated (ESEA) and that accept the federal Title dollars and IDEA dollars, the requirement of implementation of the OIP is seen as a compliance activity. Consequently, the OIP is somewhat unknown to educators as a professional responsibility. The OIP implemented out of a sense of compliance is akin to the kind of behavior that leads to the old saying, “You can lead a horse to water, but you can’t make it drink.” Hence, the most common criticism of the OIP is that changes in student achievement do not result from the work.

Robinson (2011) looked at two practices that change student achievement. The first is TBTs and the second is classroom observations to monitor instructional implementation. Both are critical in the effective implementation of the OIP. If the
process is not done well, particularly at the TBT level and feedback on classroom instruction implementation, there will not be gains in student achievement. This TBT and feedback on classroom instruction implementation work is centered in Step 3 and Step 4 of the Ohio 5-Step Process. These two steps are where the SSOS can engage with schools and districts to guide them through these critical processes (ODE, 2012b).

A second major problem or weakness, referred to previously, is created when the OIP is forced on principals and teachers without adequate training and a collaborative organizational structure to support it. The weaknesses defined also illuminate the lack of systemic practices in many districts and schools (Seashore, 2009). John Hattie wrote that “collaborative leadership embodies the instructional focus, the deep and mastery notion, and the self-learning notion but centers on enhanced learning” for teachers, leaders and students in the district organization (as cited in Dewitt, 2016, p. ix). The structured protocols and practices of the OIP support the notion of learning for all as a systemic district process.

Collaborative leadership also builds on “collective teacher efficacy” and “trust” as a concept. Goddard (2001) explored the impact of levels of collective teacher efficacy on student achievement on state-mandated tests. He used Bandura’s research on teacher self-efficacy and collective efficacy to extend his own research to look at impact on student achievement. According to Bandura (1997), “Collective efficacy is concerned with the performance capability of a social system as a whole” (p. 469). The research of both Bandura and Goddard point to the importance of a systemic district process to improve student achievement. In the Bandura and Goddard studies the level of teacher collective efficacy was found to be a significant factor in increased student achievement.
Research on building trust between teachers and administrators (Tschannen-Moran & Gareis, 2015) concluded that collective efficacy in teachers can be built on a foundation of trust, which is a necessity for a collaborative leadership process to flourish. Trust, collective efficacy, and systemic process are integral to the sustainability of collaborative leadership in education.

**The Human Factor: The Impact of the Proliferation of Federal and State Policies**

Seashore (2009) commented, “At this point I am convinced that until educational researchers and policy makers find the levers for change that already exist within schools and district as organizations, school improvement will continue to be a haphazard affair” (p. 136) and lamented the state of leadership and change in schools over the last 30 years. Her reflection mirrors my own observations in the field over the last 30 years: Federal policies beget state policies, which beget local district policies.

Even though, constitutionally speaking, states are responsible for education, the USDOE provides billions of dollars to states for use in meeting federal special education requirements, augmented programming for reading and math students in poverty, career education opportunities, and educator professional development. Large federal grants like the recent $400 million RttT grant to Ohio (USDOE, 2010) offer much-needed dollars to train teachers in Common Core standards, develop teacher and principal evaluation systems, turn around the lowest performing schools, and look to innovation in schools as a means to raise achievement levels for all students. This work has been thrust upon our education profession by federal regulations, which have in turn been passed into state law. Ohio now has laws on the books that define standards and testing, school closure or takeover for poor performance, the Ohio Principal and Teacher evaluation, and Science,
Technology, Engineering and Mathematics (STEM) school standards—all the direct result of the federal education agenda that defined RttT grants to states. Smaller yet lucrative grants to states, like the School Improvement Grant, support poorly performing schools in raising achievement for all students.

In each case, the SEA in each state applies for these dollars by developing a plan for how the dollars will be used for the purpose the dollars were made available. With the growth of state laws passed to meet USDOE guidelines—e.g. state testing, teacher and principal evaluation systems, and the issuing of local report cards—state education policy is developed in response to the requirements of state and federal laws. The policy for the SEAs is simply their implementation plan for enacting the state laws and federal guidelines and regulations. Examining an Ohio State Board of Education meeting agenda or attending a meeting makes clear that policy is not set by the Board; it is only approving and specifying how federal and state policies will be implemented in the schools and districts in Ohio (see Appendix D).

The last bastion of control for districts is the “local control” clause in the Ohio Revised Code (33 Ohio Rev. Code, 2015) and Ohio Administrative Code (33 Ohio Admin. Code, 2015). To help districts respond to all of the mandates, the Ohio School Boards Association (OSBA, 2015) developed a model policy book for local districts to use as they fulfill requirements to write and adopt local policy aligned with federal and state regulations pursuant to implementing those laws. Examples of recent policies required to be adopted by local boards of education are open enrollment, bullying and harassment mitigation policies, and Ohio’s adoption of Common Core standards. These policies are not necessarily what local boards of education want to adopt, but what they
are required to adopt. The work of OSBA model policies saves local districts the time, legal fees, and other financial costs of developing these policies on their own. An area of local control still remains when a board of education negotiates with unions that represent the employees in their districts. The relationships between the boards and the unions can determine a contract that serves the education needs of all students or a contract that is settled with contentiousness in which employees abide by the contract and the specifications. In contentious situations, rarely is the working relationship between employer and employee collaborative and focused on the education needs of all students. It is at this level that implementation of the OIP hits the biggest obstacles. Local control at the district level can build the capacity of collaborative leadership if a district chooses to do so. It is at this level that federal and state guidelines can be interpreted as “compliance driven” and are checked off a list but not truly embraced as part of professional practice to improve student achievement. This is the crossroad at which the implementation of the OIP finds itself.

The OIP is required in districts and schools identified by ESEA guidelines as being at improvement status for schools and accountability status for districts. The State Board of Education approves the processes that the ODE uses to manage the districts and schools that fall under federal improvement status once the Ohio ESEA Waiver is approved by USDOE (ODE, 2012a); and local boards of education are essentially required to engage in work that meets the criteria assigned to them through federal and state policies.

The OIP is a process for all districts, with the capacity to be an individualized process based on district or school needs. High performing districts are not required to
implement OIP, however, and therefore, many of them do not. If the OIP had been introduced outside of compliance requirements, the challenges of fidelity to implementation may not have been so difficult. The OLAC website and professional development opportunities represent the state’s attempt to increase understanding that the OIP is designed for all districts, regardless of student achievement level. Workshops for superintendents, colleges of education faculty, principals, and state support team consultants are offered to support this effort. The OLAC Forum is the annual event open to all educators to interact and meet with district teams who are implementing the OIP with fidelity and have experienced increased achievement for their students (OLAC, 2016).

The federal policies are generally written with the intent of bettering the education outcome of students. Examining the ESEA and OSEP guidance documents provides ample evidence of this intent (USDOE, 2013, 2015). OSEP and ESEA guidelines make sense in theory. It is the state agency interpretation of those guidelines that must make sense of them in practical terms and inform all districts on how to meet the federal requirements. The roadmap is designed at the federal and state levels. Dollars are attached for districts to engage in this work. Nevertheless, the local control level faces meet the biggest challenges.

With such a small span of control at the local level remaining, pushback is not an unexpected human reaction from local board members, superintendents, principals, and teachers. Above I describe a disciplined process that defines fidelity of implementation of the OIP. The example I provided was of a surgeon who wanted to “wing” the surgery instead of following established protocol. Coming full circle, policy on so much of
education has been dictated to insure a level of accountability for the public and acceptable outcomes for all students, which was not previously expected in the profession. More than ever, local boards of education, administrative teams, and teachers need to work together to establish disciplined protocols that will meet accountability standards while increasing student achievement for all students. That will and can only happen on the local control level (Seashore, 2009). Federal and state policies, laws, and regulations are very much in alignment. The freedom to stray from those policies with impunity is essentially gone. Local districts have little choice but to embrace the policies from the federal and state agencies.

**Conclusion: Collaborative Leadership and School Improvement**

Recommendations to districts to improve collaborative leadership structures for increased student achievement are relatively simple, based on current research and practice. The local boards of education, the administrative team, and the teachers and their unions need to work together and base all decisions on student needs and formative assessment data. This may be a change in culture from past practice, but it needs to be embraced to increase achievement for all students. Educators need to stop replicating past practices that do not meet all student needs and use a disciplined protocol to meet student needs and produce students better prepared for life after high school graduation. This professional, high accountability approach can be found in the OIP’s research-based collaborative organizational structure. Commitment to using that type of model and implementing it with fidelity will produce the results expected by the public and deserved by the students.
The Ohio Leadership Framework and the OIP were developed as a result of interweaving research on collaborative leadership practices with requirements and accountability measures introduced in the NCLB Act (ESEA) in 2001. The development of a collaborative leadership organization structure for all districts, a unified SSOS, and the resources and tools to help districts and schools meet the NCLB accountability measure were Ohio’s response to the NCLB challenge. The research-based Ohio Leadership Framework, the OIP, and the unified SSOS have served as a model for other states. ESSA requirements are the next generation of NCLB work. A focus on professional learning communities, collaborative leadership training, and the identification of more finite student subgroups will find the OIP relevant to meeting ESSA requirements (ODE, 2017). However, there is still work to be done. Federal and state regulations are generally viewed by educational personnel in local districts as compliance requirements, rather than a roadmap toward the goal of improving student achievement. This perspective reduces the likelihood of increasing student achievement. Promoting the use of protocols of the OIP as a part of professional practice may reduce the self-imposed resistance to compliance and allow for fidelity and discipline of implementation to increase achievement for all students.

This current study explored whether the level of implementation of the OIP in a school impacts the level of school achievement. The OIP structure was developed as a collaborative improvement process for school districts. Research has provided connections between collaboration between teachers and student achievement (Goddard et al., 2007), principal leadership, and student achievement (Wahlstrom et al., 2008), trust, collective efficacy, and academic emphasis and student achievement (Goddard,
There were significant findings for these connections. Examining the relationship between implementation of a collaborative leadership improvement process and impact on student achievement is a logical step to take in furthering this research.

The research questions that drove this study have not previously been explored by other researchers, either with the OIP or with other collaborative leadership protocols connected to school improvement:

Is there a difference in student achievement predicted by OIP degrees of implementation after controlling for poverty, subgroup status, and ethnicity of students in the school? If so,

Which, if any, OIP practices have a greater relationship with student achievement in reading and mathematics formative assessment trends in schools included in the study?

Which, if any, principal leadership practices that allow for implementation of the OIP model account for greater levels of student achievement in reading and mathematics?

Exploring whether specific research-based collaborative leadership protocols identified in the OIP can predict changes in student outcomes was an outgrowth of research looking at properties (academic emphasis) or concepts of trust and collective efficacy to research looking at the practices of collaborative leadership impact on student achievement and principal leadership impacting student achievement.

The moderate, but significant outcomes of previous research lead to the questions that I have asked in this research. Previous research recommended additional research that may link collaborative practices in a school to increased student achievement. If significant findings emerge from identifying specific operationalized practices related to
collaborative leadership and school improvement this research will contribute to the body of research investigating this link between collaborative leadership and student achievement. The current study focused on the degree to which collaborative leadership practices are implemented at a school level, and the impact of student achievement over time. As this body of research on collaborative leadership and its links to student achievement emerges over time, it may be possible to create a sense of urgency in the profession to engage in collaborative leadership practices that do increase student achievement.

This chapter explored several aspects of leadership. The historical perspective of leadership theories that contributed to the development of current leadership theory relevant to the current study is described. The OLAC and OIP provide the background for the development of the CLOPS survey and its application in the current study. Chapter 3 describes why and how the development of the CLOPS survey was developed, and the methodology of this current study.
A nonexperimental longitudinal survey research design was employed to examine
the impact of level of OIP implementation on student achievement. I obtained
institutional review board (IRB) approval and followed all requirements. Districts using
the OIP as their improvement model used NWEA MAP as their district assessments, and
had a minimum of 10 buildings serving Grade 6 were recruited for participation in the
study. All protocols required by the districts for permission to conduct research were
completed.

This chapter outlines the methods used in this study, including the development of
the CLOPS survey, the sample description; the instrumentation, its nature, development,
and validation; the data collection process, and the process used for analyzing the data.

Development of the Collaborative Leadership Organizational Practices Survey

A promising body of research on shared leadership practices to improve student
achievement (BASA, 2013) initially shaped the Ohio Leadership Framework and the
OIP. The leadership framework and processes of the OIP bring to life a districtwide
structure that embeds the responsibility for improved student achievement at all levels of
the school district. Decisions are based on student achievement data. Leaders in high
performing districts engage school staff in collaborative inquiry about student learning
and teacher performance in their schools. Then they tailor the district’s support for improvement to the school’s specific needs (Leithwood & Seashore-Louis, 2012).

The OIPIR was designed to guide districts, schools, and TBTs in their collaborative efforts to effectively implement the OIP (ODE, 2012b). However, the OIPIR is a time-consuming rubric that may delay the development of school improvement plans and customized professional development for school personnel. VanHorn and VanHorn (2014) developed CLOPS to measure the fidelity and degree of implementation of the OIP in a timelier, efficient manner.

Based on the OIPIR, the CLOPS instrument allows school and district staff to readily identify areas of strength and weakness in their OIP implementation, thereby allowing them to tailor an effective, individualized professional development plan to their needs earlier in the school year than they could have had they used the OIPIR itself. The CLOPS streamlines the rubric rating of district, building, and teacher teams’ fidelity of OIP implementation, i.e. the degree to which the building and teacher teams implement the improvement process.

By 2014, analyses of OIPIR data by school personnel and state support team staff assigned to those schools suggested student achievement gains were aligned with OIP implementation levels. The OII closely followed three districts with large increases in achievement scores in one school year. The three districts continued receiving support from the state support teams based on their ESEA school identification. At the end of the 2013–2014 academic school year, changes in degrees of fidelity implementation of the OIP reflected changes in student achievement. The strength of this relationship is not defined. The data analysis was completed as part of data reported to USDOE as evidence
of Ohio’s support of schools identified as not making progress. It was not designed as a research study. However, the pattern of changes in degree of fidelity in implementation and resulting changes in student achievement introduced a possible research question to study this relationship.

Since patterns of improvement indicated a possible relationship with the degree of fidelity of implementation of the OIP, finding a more streamlined and efficient way to identify gaps in implementation of the OIP emerged as a good “next step” in supporting the work of school improvement. A tool that could condense the time frame for a district or school to complete their annual continual improvement plans would allow for earlier plan implementation and increased efficacy. The CLOPS survey is a tool that allows schools and districts to quickly identify gaps in their collaborative leadership and organizational practices that inhibit the effectiveness of the OIP.

The time-consuming nature of the OIPIR resulted in the delay of continual improvement in plan development until October or November of each year (ODE, 2013). Consequently, the OII at ODE sought the development of a more efficient way to collect the same data. In fall 2013, the CLOPS pilot instrument was completed by 12 principals in a large urban district. The pilot survey was used to examine whether the survey design measured the intended outcomes. In order to assess the degree to which the CLOPS accurately reflected the degree of implementation reported by principals, a pilot study was conducted. Responses by principals in the pilot study sample were compared directly with the degree of implementation that was reported by the use of the OIP rubric in those same schools.
The rubrics are completed using three data points: the BLT team’s evaluation, the principal’s evaluation of the BLT, and the OII consultant’s evaluation of the BLT. In 2014, a second version of the survey was designed, making more extensive use of language from the OIPIR and including all of the district and school collaborative leadership practices and organizational structures that were components of the OIP.

In April 2015, a panel of experts convened to review the second version of the survey (CLOPS) for the purpose of establishing content validity. The SME panel protocol (Appendix B) was suggested by Dr. Dorinda Gallant (personal communication, April 2, 2015), associate professor at The Ohio State University. The panel consisted of 25 education professionals who worked across Ohio consulting with 417 districts that had successfully applied for and received a Race to the Top (RttT) grant. RttT incorporated the OIP in each of these districts, and the 25 consultants had a high level of expertise in the implementation process at both district and school levels. The OII trained these consultants in the OIP and provided recalibrations once a year for the duration of the grants. The survey developers, VanHorn and VanHorn (2014), incorporated feedback (Appendix E) from the panel and made adjustments to the survey that reflected the experts’ recommendations. This process ensured that each component of the survey represented the practices necessary for fidelity of implementation of the OIP. The survey developers also took into consideration overlapping or missing content components identified by the expert panel. This third version of the survey, the version used in this study, reflects all suggestions that were consistent with the content and primary goals of the survey.
Validity and Reliability of the CLOPS Survey

This section describes the data collection, construct and concurrent validity of the scales within the CLOPS, the primary measure used for the current study.

Data Collection for the Pilot Study

The Ohio State University IRB board approved the request to conduct a study to establish the validity and reliability of the CLOPS. Ohio principal addresses were obtained and downloaded from the ODE O-Eds directory. Although this principal database is the most current available, it should not be considered completely accurate for several reasons. First, the database includes a large number of principals who were predicted to retire between May and July 2015 based on changes in the state retirement system and the transitions occurring in principal assignments during those same months. Also, the O-Eds database is updated by districts when school improvement plans are approved by the principal. This generally occurs in October of each year, and O-Eds is usually not updated when principal changes occur during the year. Despite these limitations, this database is still the most accurate listing of principals available.

The database was prepared by deleting those principals in buildings whose schools do not generate data for a Local Report Card (LRC) from the 2012–2013 and 2013–2014 school years. The data file included 2,733 principal emails. The actual survey, with questions from the Wallace Foundation Survey (Wahlstrom et al., 2010) included as a test of concurrent validity, was then uploaded into the Qualtrics survey tool. After emails were sent, 65 were returned as undeliverable, which reduced the possible respondents to 2,668. Of those emails 1,228 were opened, and 675 responded. The response rate, based on total of emails sent, was 25.3%. The response rate based on
open emails was 54.9%. Because there is no available information indicating why
emails were not opened, both response rates are reported.

**Factor Analysis for the Pilot Study**

As previously discussed, a panel of experts critiqued a previous version of the
CLOPS instrument to ensure content validity. The CLOPS survey was measuring the
degree of implementation of practices and specific organizational features; therefore, the
next step was to establish concurrent validity. I analyzed the data validity using SPSS
statistical software.

After closing the Qualtrics survey, I prepared SPSS data and variable views for
analysis. I omitted those respondents who answered *no* to their current role as a building-
level administrator. I also omitted those respondents who answered only the demographic
questions. The remaining respondents accounted for 651 of the 675 who participated in
the survey (*n* = 651). I do not know how many of the 1,228 emails were opened by
addressees who did not proceed with the survey because they were not principals at the
time the survey was distributed. This circumstance may account for some downward bias
on response rates.

Each item of the Survey Questions 6 through 16 and 18 had three to six choices
representing a variety of levels of implementation of the improvement process. Several
survey items were not included in the analysis (1–5 and 17) as the items provided
demographic information (Appendix C). For example, a principal who answered *yes* to
four of the five would have a score of 4. I computed scores for Scale Questions 6 through
18. I computed scores by counting the number of *yes* responses in each subset of items. I
then divided each score by the number of response choices selected in that question. To
continue with the example above, this principal would have a proportioned score of .8. Proportioned scores allow for comparison across items for different numbers of response statements.

The design of the survey questions is such that higher respondent scores reflect a higher degree of implementation of collaborative leadership practices. The survey was designed using a Guttman style survey. Guttman survey design is typically done in a yes/no dichotomous format. It is also possible to use a Likert scale, although this is less commonly used. Questions in a Guttman scale gradually increase in specificity. The “intent of the scale is that the person will agree with all statements up to a point and then will stop agreeing” (Straker, 2008, p. 1). The CLOPS response choices were developed with increased levels of specificity and asked the respondents to identify the response that is most representative of the collaborative practices in the school. In order to create a single composite score for each item cluster, a basic proportion of items endorsed was calculated. This allowed a fair comparison of different items with different numbers of statements. These scores, known from this point forward as “implementation scores,” represent the respondents’ perceived levels of collaborative leadership practices and organizational structures in their school or district.

An exploratory factor analysis of the implementation scores examined the underlying scale’s factor structure. Implementation scores are the proportioned scores discussed above. I selected factor analysis in order to ensure there was a single factor underlying the items in the CLOPS. A principal components analysis was conducted using Direct Oblimin Rotation. The number of factors to be retained was based on scree plot evidence and Eigen values of greater than 1.0. The data from the survey instrument
reveal a one-factor solution, identified as Collaborative Leadership Practices. There were no substantial factor loadings that fell outside the one factor structure. All items loaded strongly on the single factor, with the lowest item loading being .681. Item level statistics and factor loadings for each item can be found in Table 3.

Table 3

*Item-Level Statistics and Factor Loadings*

<table>
<thead>
<tr>
<th>Collaborative Leadership Practices</th>
<th>Mean Implementation Score</th>
<th>SD</th>
<th>Factor 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q11—Assessment data</td>
<td>0.265</td>
<td>0.217</td>
<td>0.854</td>
</tr>
<tr>
<td>Q7—Building level teams communication structure</td>
<td>0.284</td>
<td>0.248</td>
<td>0.853</td>
</tr>
<tr>
<td>Q6—Teacher-based team agendas</td>
<td>0.202</td>
<td>0.169</td>
<td>0.848</td>
</tr>
<tr>
<td>Q8—Implementations of inclusive instructional practices</td>
<td>0.348</td>
<td>0.282</td>
<td>0.845</td>
</tr>
<tr>
<td>Q13—Identifying and implementing instructional practices</td>
<td>0.314</td>
<td>0.26</td>
<td>0.84</td>
</tr>
<tr>
<td>Q3—Building leadership team agendas</td>
<td>0.234</td>
<td>0.181</td>
<td>0.826</td>
</tr>
<tr>
<td>Q12—Analyzing student work</td>
<td>0.236</td>
<td>0.23</td>
<td>0.825</td>
</tr>
<tr>
<td>Q16—Instructional practice implementation</td>
<td>0.274</td>
<td>0.234</td>
<td>0.814</td>
</tr>
<tr>
<td>Q18—District/State assessment data</td>
<td>0.461</td>
<td>0.362</td>
<td>0.813</td>
</tr>
<tr>
<td>Q2—Building leadership team membership in my building</td>
<td>0.385</td>
<td>0.306</td>
<td>0.805</td>
</tr>
<tr>
<td>Q4—Building planning</td>
<td>0.383</td>
<td>0.327</td>
<td>0.803</td>
</tr>
<tr>
<td>Q15—Common posttest results</td>
<td>0.181</td>
<td>0.16</td>
<td>0.785</td>
</tr>
<tr>
<td>Q1e—Staff and faculty teams in my building</td>
<td>0.295</td>
<td>0.224</td>
<td>0.776</td>
</tr>
<tr>
<td>Q14—Teachers on a team</td>
<td>0.18</td>
<td>0.184</td>
<td>0.736</td>
</tr>
<tr>
<td>Q9—Managing agreed upon adult implementation of instructional strategies</td>
<td>0.316</td>
<td>0.355</td>
<td>0.732</td>
</tr>
<tr>
<td>Q10—District level team organization plan and resource allocation</td>
<td>0.22</td>
<td>0.27</td>
<td>0.681</td>
</tr>
</tbody>
</table>

*Note. n = 651.*
After identifying one factor, collaborative leadership practices, I calculated an overall scale score for each participant by averaging the 16 implementation scores. Collaborative leadership practices are defined in this study as building and teacher-team practices that are identified in the OIPIR (ODE, 2012b).

**Assessing concurrent validity.** There were no other instruments that this researcher could find that measured levels of implementation of collaborative leadership practices and organizational structures. After investigating the questions used in a principal surveys to measure leadership, I decided to use a modified version of the survey used in the Wallace Foundation *Learning for Leadership Project: Investigating the Links to Improved Student Learning: Final Report of Research Findings* (Wahlstrom et al., 2010). This instrument provided leadership survey questions that formed the baseline for assessing concurrent validity of the CLOPS survey. The Wallace items have been linked to student achievement and therefore have some conceptual relationship to the CLOPS. The Wallace Foundation study is the largest principal leadership study to date that links principal leadership practices to student achievement. The decision to use the Wallace Foundation study results was based on two factors: First, the study findings linked collaborative leadership among teams to increased student achievement, and second, a modified version of the Wallace Foundation study survey, a subset of questions focused on collaborative teams had been used for the Ohio Leadership for Inclusion, Implementation, and Instructional Improvement (OLi$^{4}$) project. The Wallace Foundation study used selected principal survey questions from previously established principal leadership surveys. The questions selected for use in the *Learning for Leadership*
Project: Investigating the Links to Improved Student Learning exhibited similar or related content to the collaborative principal leadership practices in the CLOPS.

The Wallace Foundation (Wahlstrom et al., 2010) questions used to establish concurrent validity were grouped into three subscales (Leadership, Teacher Access and Support, and Goals and Improvement) based on item content and the grouping of items in previous studies (see Appendix F). Items were reverse scored as appropriate, and responses were adapted to reflect the reverse scored responses. The final data set included all individual item responses. The scale scores were used to establish the validity and reliability for Wallace Foundation survey questions. Scale scores and alpha reliabilities for both CLOPS and Wallace Foundation items can be found in Table 4. An exploratory factor analysis of the Wallace Foundation scores examined the underlying scale’s factor structure. I selected factor analysis in order to establish the number of possible constructs represented in the Wallace Foundation selected questions. This allowed analysis of principal components using Direct Oblimin Rotation. The number of factors to be retained was based on scree plot evidence and Eigen values of higher than 1.0. The data from the survey instrument reveal a three-factor solution, identified as Leadership, Teacher Access and Support, and Goals and Improvement. All items loaded in one of the three factors. Item level statistics and factor loadings for each item can be found in Table 4.

The reliability measures for the Wallace Foundation scales were weaker (.54 and .50) for two of the scales and stronger (.74) for the third scale. Two of the three Wallace Foundation scales failed to meet the conventional .70 threshold for reliability. This is compared to the CLOPS overall reliability of .96 (acceptable range). Additionally,
one item loaded negatively on one factor and again as moderate loading on a second factor. This was another indicator of underlying problems with the Wallace Foundation.

In sum, content validity for CLOPS was established using a panel of experts. Factor analysis showed strong support for a single factor solution, with the resulting scale having strong reliability (.96).

Table 4

*Scale Scores and Alpha Reliabilities for Scales and Subscales*

<table>
<thead>
<tr>
<th>Scale</th>
<th>n</th>
<th># of items</th>
<th>M</th>
<th>SD</th>
<th>alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLOPS</td>
<td>651</td>
<td>16</td>
<td>.286</td>
<td>.201</td>
<td>.96</td>
</tr>
<tr>
<td>WF leadership</td>
<td>439</td>
<td>4</td>
<td>17.44</td>
<td>3.61</td>
<td>.54</td>
</tr>
<tr>
<td>WF teacher access and support</td>
<td>442</td>
<td>5</td>
<td>17.58</td>
<td>3.21</td>
<td>.50</td>
</tr>
<tr>
<td>WF goals and improvement</td>
<td>442</td>
<td>6</td>
<td>22.98</td>
<td>2.59</td>
<td>.74</td>
</tr>
</tbody>
</table>

Pearson correlations were calculated between Wallace Foundation and the CLOPS scale in order to establish concurrent validity. Correlation coefficients can be found in Table 5. A weak relationship between the three Wallace Foundation scales and the Collaborative Leadership Practice scale did not satisfactorily establish concurrent validity. Moreover, inconclusive and less than desirable psychometrics (Reliability is a prerequisite for validity) did not provide evidence of what the Wallace Foundation items were measuring. Establishing concurrent validity for CLOPS will be a focus of future research.
Table 5

*Pearson Correlations Between CLOPS Scales and Wallace Foundation Scales*

<table>
<thead>
<tr>
<th>CLOPS Scale</th>
<th>Wallace Foundation Scales</th>
<th>Teacher Access and Support</th>
<th>Goals and Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collaborative Leadership Practices</td>
<td>Leadership ($n = 651$)</td>
<td>Teacher Access and Support ($n = 437$)</td>
<td>Goals and Improvement ($n = 448$)</td>
</tr>
<tr>
<td></td>
<td>-0.239**</td>
<td>0.264**</td>
<td>0.299**</td>
</tr>
</tbody>
</table>

*Note.* *p*<.05, **p*<.01

**Data Collection**

After districts and schools agreed to participate in the sample, I emailed principals in the participating schools, inviting them to take the CLOPS survey. This mailing to principals included a web link that directed them to the online survey supported through the Qualtrics Survey tool. Protocols for administration of the survey included an overall description of the study and explained to the participants why responses to the survey questions needed to reflect accurately the practices and structures in their schools.

On acceptance of the invitation to take the survey, each principal was sent a presurvey email; this mailing included an explanation of the importance of accurate responses to the survey. The explanation sought to provide safeguards addressing the basic reasons respondents report events with less-than-perfect accuracy: not understanding the question, not knowing the answer to the question, not recalling the answer, and not wanting to report the answer in the interview context (Fowler, 2014). This presurvey email was especially intended to guard against inaccuracies associated with social desirability error (Fowler, 2014). One of the biggest threats to survey
research—and clearly a possibility in this study which asks questions so closely associated with the principal’s role in school improvement—social desirability error is introduced when survey respondents choose responses aligned with what they perceive to be the most socially desirable choice, rather than the most accurate one.

This effort was critically important, as the possibility of inaccurate reporting is one of the major limitations of this study. The principals’ responses represent the level of OIP implementation in their building, which is the basis for making the links to student achievement. The electronic explanations, in addition to the requirement that all schools participating in the survey have at least a minimal level of knowledge about the OIP, contributed to the overall effort to minimize error that could affect the generalizability of the findings. Additionally, the survey was completed online, which tends to increase survey response accuracy, though it is also associated with a lower response return rate (Fowler, 2014).

Because the research design demands identifying individual responses to link to school formative assessment data and sixth-grade specific school-level data on SES, ethnicity/race, gender, and subgroup populations included in the study, confidentiality, not anonymity, was guaranteed and explained to the principals; and they were assured that results of the regression analysis would be reported using aggregated data with no individual school data used in the reporting of results.

The CLOPS was emailed to 116 principals in schools that contain Grade 6 whose districts used MAP assessments in reading and math. The survey has 16 multiple-choice questions and five demographic questions (see Appendix C). Completion time for the survey was estimated to be about 15 to 30 minutes, based on survey pilot test data. The
questions in the subscales are generally designed in a Guttman style (Markson & Levitz, 1973; Niemi & Weisberg, 1974) to identify the degree of implementation in each of the 16 practices reflected in the OIPIR.

The data set obtained from each school through the district office included the average reading and math scores for students in the sixth grade. Additional sixth-grade demographics, such as ethnicity, selected subgroup membership (SWD), and socioeconomic status (SES) were obtained from the public reports in the 2015–2016 LRC’s on the ODE website.

Data collection took place between December 2015 and March 2016, using Qualtrics to deploy the CLOPS to principals in participating schools. Fall and winter student formative assessment data and school demographic data were collected after the survey completion and the winter formative assessment data were available in the participating schools. Demographic data were collected from ODE LRC in September 2016 when the 2015–2016 LRCs were released. The survey was taken after the two assessment data points were completed. This chronology constitutes a limitation of the study, as discussed in Chapter 5.

Data Analysis for CLOPS

The data set was prepared using Excel spreadsheets and Qualtrics survey software and then imported into SPSS software. All data collected from a school were linked to the principal’s survey responses for that school. No identifiable information was in the data set. Numerical codes replaced all identifiable data. School-level testing data, student characteristics, and principal survey responses were loaded into SPSS to create a data file that included the dependent and independent variables used in this study. The newly
created SPSS file was used to generate descriptive statistics, bivariate correlations, and linear regression analysis. Forward, backward, and hierarchical linear regression was utilized to analyze the results of the study. Through the use of linear regression analysis, the study sought to determine whether levels of implementation of the OIP account for any variance of changes in student achievement scores for winter assessment in reading and math in the sixth grade. In addition to using the fall assessment scores in sixth grade the model controlled for factors that are generally used in studies linking student achievement to an independent variable: SES, ethnicity, and subgroup membership (O’Connor & Fernandez DeLuca, 2006).

The primary analysis was a linear regression analysis identifying predictive relationships between subscales of the CLOPS and differences in student achievement in sixth-grade reading and math scores on MAPS administered during the 2015–2016 academic year. Subscales are defined by collaborative leadership practices in DLTs, BLTs, and TBTs measured by the survey questions.

The first level of analysis was conducted controlling for poverty, subgroup membership, ethnicity, and fall sixth-grade assessment scores in reading and mathematics, exploring whether and to what degree these variables accounted for a significant amount of variation in the model. The second level of analysis used principals’ CLOPS responses and the student achievement data points from the winter formative assessment administration. This level of analysis explored the remaining variance that the OIP accounted for in changes in winter grade-level achievement. Only aggregated responses were reported. The second level of analysis looked at the change in scores from fall to winter and what factors of the CLOPs scales predicted those changes.
The change variable in both reading and math produced significant findings in several factors of OIP implementation. Using the fall score and demographic variables on level one and the responses to the CLOPS on Level 2 to predict winter scores resulted in over 90% of the variance coming from the fall score. Therefore, the change variables in reading and math were the focus of the analysis.

The OIPIR basis of the CLOPS indicates its construct validity; its piloted history and review by experts establishes its content validity; and statistical analysis indicates its reliability. Taken together this evidence recommends the CLOPS as an appropriate instrument to use in answering the following research question.

Are there differences in student achievement predicted by OIP levels of implementation after controlling for poverty, subgroup status, and ethnicity of students in the school? If so

1. Which, if any, OIP practices have a greater relationship with student achievement in reading and mathematics formative assessment trends in buildings included in the study?

2. Which, if any, principal leadership practices that allow for implementation of the OIP model account for greater levels of student achievement in reading and mathematics?

After the CLOPS survey was piloted to establish reliability and validity it was ready to be used as the survey for the current study. The methods used for the current study are described below.
Sample

The sample used in this research was composed of 57 schools out of a possible 116 from four local school districts. To be included in the sample, schools and their districts had to be implementing the OIP and have a Local Report Card (LRC) issued by the state for the 2014–2015 school year. In order to obtain comparable student data for analysis, only districts that used NWEA MAP, a state-approved formative assessment instrument, as their formative assessment tool were recruited. In order to maximize the number of eligible schools, sixth-grade assessment data were selected for this research. Using sixth-grade classes maximized the number of eligible schools who could participate because this grade level is part of the configuration of elementary schools in some cases and part of middle school in others, thereby expanding the pool of qualified schools in districts. For this study, four districts were identified with at least 10 schools that provided a sample size that met the statistical requirements of this study. Limiting the sample to four districts, only one level of classroom (Grade 6) each of which was administered the NWEA MAP, allowed us to reduce variability outside the study constructs. Formative assessment data from the participating schools’ sixth-grade Reading and Mathematics MAP were targeted for analysis, as these two subtests assess the academic subjects identified by USDOE Title I for school improvement work. The sample was drawn from four midwestern districts in the same state, but with varying demographic characteristics.

Principals in each school were identified and asked to respond to the survey. Approximately 116 email invitations to participate were distributed, and 57 usable
responses (49%) were returned. Demographic characteristics of the schools and the principals who responded to the survey are summarized in Tables 6 and 7.

Descriptive data for the principal sample focused on principals’ years of experience, how long they have served in their current school, and what collaborative teams they serve on in their respective district and school. The mean (3.32) for the number of years served as principal fell in the 4–6 years of experience range (50th percentile), while the mean (2.26) for the number of years served in their current school fell in the 1–3 year range (50th percentile). The sample represented principals whose experience ranged from serving their first year as a principal to serving more than 10 years as a principal. The number of years in a current school was skewed toward the lower range, indicating that many of the principals had been reassigned or chose to change schools during their tenure as a principal (see Table 6). Seventy-four percent of the principals were male, and 26% were female.

Table 6

*Overall Principal Experience*

<table>
<thead>
<tr>
<th>Years’ Experience</th>
<th>Overall Experience Frequency</th>
<th>Overall Experience Percentage</th>
<th>Experience at Current School Frequency</th>
<th>Experience at Current School Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st year</td>
<td>7</td>
<td>12.30</td>
<td>9</td>
<td>15.80</td>
</tr>
<tr>
<td>1–3</td>
<td>13</td>
<td>22.80</td>
<td>31</td>
<td>54.40</td>
</tr>
<tr>
<td>4–6</td>
<td>10</td>
<td>17.50</td>
<td>11</td>
<td>19.30</td>
</tr>
<tr>
<td>7–10</td>
<td>9</td>
<td>15.80</td>
<td>5</td>
<td>8.80</td>
</tr>
<tr>
<td>&gt;10</td>
<td>18</td>
<td>31.60</td>
<td>1</td>
<td>1.80</td>
</tr>
<tr>
<td>Total</td>
<td>57</td>
<td>100.00</td>
<td>57</td>
<td>100.00</td>
</tr>
</tbody>
</table>

*Note. (N = 57)*
The percentage of principals participating in their BLT was 98%, with one missing response. Only four principals participated on the DLT (7%), and a little more than half participated on TBTs (52%; see Table 7).

Table 7

Principal Membership in DLT, BLT and TBTs

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>District-Level Teams</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>52</td>
<td>92.90</td>
</tr>
<tr>
<td>Yes</td>
<td>4</td>
<td>7.10</td>
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<tr>
<td><strong>Total</strong></td>
<td>56</td>
<td>100.00</td>
</tr>
<tr>
<td><strong>Building-Level Teams</strong></td>
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<td></td>
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<td>0</td>
<td>0.00</td>
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<tr>
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<td>56</td>
<td>100.00</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>56</td>
<td>100.00</td>
</tr>
<tr>
<td><strong>Teacher-Based Teams</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>27</td>
<td>48.20</td>
</tr>
<tr>
<td>Yes</td>
<td>29</td>
<td>51.80</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>56</td>
<td>100.00</td>
</tr>
</tbody>
</table>

*Note. (N = 56)*

Demographics of the sixth graders in the schools that participated in this study were diverse. Fifty of the 57 schools contain primary grades and are considered elementary schools. Twenty eight of those that contain primary grades also house students through eighth grade. The remaining seven schools are middle schools that house from fourth through eighth grade. The mean percentages of the schools’ racial and ethnic population include 24% White students, 48% Black students, and 8% Hispanic
students, with other racial/ethnic subgroups making up the remaining percentage of students. The percentage of students who are identified as receiving special education is about 13%, which is close to the USDOE OSEP’s incidence figure of 12% of students expected to receive services under IDEA. English language learners make up around 4.5% of the total number of students in the sample, while 85% are identified as students whose families are economically disadvantaged. The large number of students in the economically disadvantaged subgroup may be due to the sample’s including three urban and one suburban district.

The mean Math Winter RIT score from NWEA (2015) MAP for the schools participating in the study was 211.44, which was 5.7 points higher than the mean Reading Winter RIT score of 205.74 for the participating schools. A defines RIT scores as Rausch Units as “a stable equal-interval vertical scale” (NWEA, 2015, para. 1). Using MAP, educators can compare the performance of their students and school/district relative to national achievement and growth norms state standards, including the Common Core State Standards (CCSS). Renormed in 2015, MAP gives teachers information on each student’s instructional level as they prepare for state-mandated assessments. The mean Math Winter score of 211.44 was slightly below average, higher than the 31st and lower than the 50th percentile of Math Fall scores for sixth graders nationwide, and the Reading Winter score of 205.74 was also slightly below the 50th percentile but above the 31st percentile of Reading Fall for sixth graders nationwide (NWEA, 2016).
Table 8

Demographic Characteristics of Participating Schools

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Math Winter RIT score</td>
<td>211.44</td>
<td>11.59</td>
</tr>
<tr>
<td>Reading Winter RIT Score</td>
<td>205.74</td>
<td>11.24</td>
</tr>
<tr>
<td>Percentage of students on IEPs</td>
<td>.13</td>
<td>0.14</td>
</tr>
<tr>
<td>Percentage of English Language Learners</td>
<td>.04</td>
<td>0.16</td>
</tr>
<tr>
<td>Percentage of Emotionally Disturbed Students</td>
<td>.86</td>
<td>0.30</td>
</tr>
<tr>
<td>Black</td>
<td>.48</td>
<td>0.36</td>
</tr>
<tr>
<td>White</td>
<td>.24</td>
<td>0.28</td>
</tr>
<tr>
<td>Hispanic</td>
<td>.08</td>
<td>0.16</td>
</tr>
<tr>
<td>Asian</td>
<td>.01</td>
<td>0.04</td>
</tr>
<tr>
<td>Multiracial</td>
<td>.01</td>
<td>0.03</td>
</tr>
</tbody>
</table>

*Note. (N = 57)*

Instrumentation

For a principal, each school year presents the challenge of meeting a new group of students, new staff members, and a new cycle of school improvement. With new students and changes in personnel, the time needed for getting collaborative practices and the organizational structure effectively in place each year can take up to 2 or 3 months. There are tools to help reduce this time frame and adopt the most relevant research-based instructional practices, designed to meet students’ needs, earlier in the year. As such, the CLOPS was the tool used in this study.

Summary

The development of the CLOPS survey provided the tool for identifying the degree of implementation of the OIP through the principal’s responses. The Guttman
style survey was used to reduce the social bias that can impact the responses to survey responses. Districts that used NWEA MAP for their formative assessment and met additional criteria as discussed above, were identified and included in the study. The resulting sample size contained 166 schools representing four districts from a midwestern state with 57 schools completing the survey for use in this study. Possible predictor variables were entered into a backward multiple regression analysis to identify variables that accounted for the largest portion of variability in changes in student achievement. Several CLOPS items were significant predictors of change in achievement. These results are reported in the next chapter.

The Researcher

I am a graduate teaching assistant at The Ohio State University, where I am a 5th year doctoral student. In addition, I serve as the project coordinator for the Ohio Leadership for Inclusion, Implementation, and Instructional Improvement (OLi^4) project at the University of Dayton School of Education and Health Sciences Grant Center in Dublin, Ohio. This project works with principals in 57 districts statewide to improve outcomes for all students, including students with disabilities. Prior to work experiences at The Ohio State University and the University of Dayton, I served as the Director of the Ohio Network of Innovation and Improvement at the ODE. My staff and I supported the work of school improvement across the state through a network of 16 regional centers and also managed the RttT, STEM, and Innovation Grants. The office served over 400 Ohio districts whose academic progress was below the expected benchmark in student achievement. The RttT (USDOE, 2010) work included serving the Early College High School Association, the Ohio STEM Learning Network, and the Ohio Network for...
Education Transformation focusing on increasing postsecondary enrollment and persistence for first-generation college students.

I began my career as a special education teacher. After 6 years as a teacher, I accepted a position as a secondary school administrator, a position in which I served for 28 years in urban and suburban middle school and high school. In 2004, I was honored to be selected as the Ohio Middle School Principal of the Year while serving as principal of Kilbourne Middle School in Worthington, Ohio. In addition, my professional service included membership on the statewide Ohio Schools to Watch leadership team, identifying national and Ohio Schools to Watch—work sponsored by the National Forum to Accelerate Middle Grades Reform. The opportunity to serve as an adjunct educator at Ashland University and present at national and state conferences provided rich professional development opportunities. Both my bachelor and master’s degrees were earned from The Ohio State University. My postgraduate studies include work at The Ohio State University and Ashland University.

My role as a researcher for this study occurred after I resigned my position at the ODE. Although I maintain the experience and knowledge from that role, there were no links or connections from that role that influenced district participation or the data that I collected. The districts were chosen based on the number of schools that served sixth grade and administered NWEA as the district formative assessment and who were required to implement the OIP based on district and school local report card results outlined in the Ohio ESEA waiver. With the exception of NWEA MAP, the information I used was publically available information on the ODE website. MAP data were provided by the districts once the districts agreed to be part of the study. As a researcher I
complied with the protocols, paperwork, and agreements that each district required of me to participate in this study.
Chapter 4: Results

Chapter 4 outlines the results of the current study. The first section outlines the reliability of CLOPS in this study. Second is a discussion of the relationships of the demographics and the independent variables to the dependent variables. The third section of the chapter discusses the results in terms of the study research questions. A summary of the results of the current study is reported as the final section of this chapter.

Measuring the Impact of Collaborative Practices and Organizational Structures

The CLOPS data examined in the current study were augmented with publically available demographic data on the state website for Grade 6 of each school whose principal responded to the invitation to complete the survey. As delineated in Chapter 3, the CLOPS survey, developed over a 4-year period with a pilot study and a study that established its reliability and validity, is a measurement tool aligned with the practices and structures of the OIP. In this study, CLOPS was used with a specific sample of schools to explore, test, and examine the proposed relationships between collaborative leadership practices and organizational structures on student achievement in math and reading. The demographic data used from the state website included all student subgroups and the percentage of total students in the school who were members of the subgroups. The subgroups included race, gender, and economically disadvantaged as well as English language learners and students with disabilities.
The data from the responses to the CLOPS survey and the demographic data were merged based on a school identifier that became the data set for the current study. The survey was completed by 58 principals. If the principal response were incomplete, the response was not included in the data set. The final data set included responses from 57 schools. The descriptive statistics and the results reported in this chapter are based on this merged data set.

**Descriptive Statistics**

This section reports the descriptive statistics of the survey data used in the current study. The merged data set contained 57 principal records. The descriptive statistics provided important information regarding the characteristics of the respondents and their experience working with collaborative leadership teams. These data informed analytical strategies.

Descriptive data for the principal sample focused on principals’ years of experience, how long they have served in their current school, and what collaborative teams they serve on in their respective district and school. The mean (3.32) for the number of years served as principal fell in the 4–6 years of experience range (50th percentile), while the mean (2.26) for number of years served in their current school fell in the 1–3 year range (50th percentile; see Table 9). The sample represented principals whose experience ranged from serving their first year as a principal to serving more than 10 years as a principal. The number of years in a current school was skewed toward the lower range, indicating that many of the principals had been reassigned or chose to change schools during their tenure as a principal. In gender, the majority (74%) of this sample of principals were male; the minority (26%), female.
Table 9

*Overall Principal Experience*

<table>
<thead>
<tr>
<th>Years’ Experience</th>
<th>Overall Experience Frequency</th>
<th>Percentage</th>
<th>Experience at Current School Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st year</td>
<td>7</td>
<td>12.30</td>
<td>9</td>
<td>15.80</td>
</tr>
<tr>
<td>1–3</td>
<td>13</td>
<td>22.80</td>
<td>31</td>
<td>54.40</td>
</tr>
<tr>
<td>4–6</td>
<td>10</td>
<td>17.50</td>
<td>11</td>
<td>19.30</td>
</tr>
<tr>
<td>7–10</td>
<td>9</td>
<td>15.80</td>
<td>5</td>
<td>8.80</td>
</tr>
<tr>
<td>&gt;10</td>
<td>18</td>
<td>31.60</td>
<td>1</td>
<td>1.80</td>
</tr>
<tr>
<td>Total</td>
<td>57</td>
<td>100.00</td>
<td>57</td>
<td>100.00</td>
</tr>
</tbody>
</table>

*Note. (N = 57)*

The percentage of principals participating in their BLT was 98%, with one missing response. Only four principals participated on the DLT (7%), while a little more than half participated on TBTs (52%).

Table 10

*Principal Membership in DLT, BLT, and TBTs*

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>District-Level Teams</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>52</td>
<td>92.90</td>
</tr>
<tr>
<td>Yes</td>
<td>4</td>
<td>7.10</td>
</tr>
<tr>
<td>Total</td>
<td>56</td>
<td>100.00</td>
</tr>
<tr>
<td><strong>Building-Level Teams</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>Yes</td>
<td>56</td>
<td>100.00</td>
</tr>
<tr>
<td>Total</td>
<td>56</td>
<td>100.00</td>
</tr>
<tr>
<td><strong>Teacher-Based Teams</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>27</td>
<td>48.20</td>
</tr>
<tr>
<td>Yes</td>
<td>29</td>
<td>51.80</td>
</tr>
<tr>
<td>Total</td>
<td>56</td>
<td>100.00</td>
</tr>
</tbody>
</table>

*Note. (N = 56)*
As part of the analytical strategy, the impact of each survey question on the demographic data and the impact on the reliability of the current study were examined. Reliability from the summer 2015 administration of the CLOPS established a reliability of .96, as discussed in Chapter 3. Reliability is, however, different for each use of a tool. When the reliability for the current study came back with a .725 it was lower than expected. Looking at the item Total Statistics, the reliability increased to .78 when Question 9 was omitted from the analysis. That question focused on practices that buildings were engaged in with their DLT. In the principal demographics only four of the 57 principals identified themselves as members of the DLT. The question on engagement in the DLT lowered the reliability of the survey in this study, due to the fact that only four out of 57 principals served on their district’s DLT. Another reason for the lower reliability than expected is that, while the summer 2015 study had 651 useable responses; the current study had only 57 useable responses. Such differences in total number of respondents tend to have an impact on reliability. The target for a reliable instrument is .7 or higher, preferably higher. The decision to delete that question from the analysis was made. This decision resulted in the use of 15 questions, rather than 16, to analyze in regard to the impact of collaborative leadership practices and organizational structures on student achievement.

**Independent Variables**

This section is an analysis of the variables that were identified as possible independent variable. Demographic characteristics of the schools and a priori math and reading scores (Fall MAP Scores) were explored as possible independent variables for the study. Due to having 57 responses in the study, possible independent variables were
explored using backward and forward regression. Backward and forward regression was used to determine which possible independent variables were accounting for percentages of the variance to be used in level one of the hierarchical regression. The same evaluation and comparison of the demographics of the schools and a variable representing the change in achievement over time were used to examine what combination of independent variables was taking up percentages of the variance. The choice to use the change over time variable for the measurement of the collaborative leadership and organizational practices was clear when 95% of the variance for math winter achievement scores and 87% of the variance for reading winter scores (see Table 11) were predicted by using the a priori fall reading and math scores as a variable with the other demographics from the schools.

Table 11

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R²</th>
<th>Adjusted R²</th>
<th>Std. Error</th>
<th>Change Statistics</th>
<th>Sig. F</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>R Square Change</td>
<td>F</td>
</tr>
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<td>.95</td>
<td>.95</td>
<td>2.68</td>
<td>.95</td>
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<td>.93b</td>
<td>.87</td>
<td>.87</td>
<td>4.07</td>
<td>.87</td>
<td>371.96</td>
</tr>
</tbody>
</table>

Note. a. Predictors: (Constant), Math_Fall_RIT. b. Predictors: (Constant), Reading Fall RIT

When the a priori fall scores were removed from the regression, White students accounted for 46% of the variance; ELL, ED and IEP student groups added 7%, 7% and
4% of the variance respectively. Results predicting winter math achievement are found in Table 12.

Table 12

Winter Math Score Regressed on Demographic Variables

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R^2</th>
<th>Adjusted R^2</th>
<th>Std. Error</th>
<th>R^2 Change</th>
<th>F Change</th>
<th>df1</th>
<th>df2</th>
<th>Sig. F Change</th>
</tr>
</thead>
<tbody>
<tr>
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<td>.46</td>
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<td>.47</td>
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<td>1</td>
<td>55</td>
<td>.000</td>
</tr>
<tr>
<td>2</td>
<td>.74b</td>
<td>.55</td>
<td>.53</td>
<td>7.94</td>
<td>.08</td>
<td>9.11</td>
<td>1</td>
<td>54</td>
<td>.004</td>
</tr>
<tr>
<td>3</td>
<td>.79c</td>
<td>.62</td>
<td>.60</td>
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<td>6.16</td>
<td>1</td>
<td>52</td>
<td>.016</td>
</tr>
</tbody>
</table>

Note. a. Predictors: (Constant), White_Percentage; b. Predictors: (Constant), White_Percentage ELL_Percentage; c. Predictors: (Constant), White_Percentage ELL_Percentage ED_Percentage; d. Predictors: (Constant), White_Percentage ELL_Percentage ED_Percentage IEP_Percentage

When the a priori fall scores for reading were removed from the regression White students accounted for 42% of the variance; ELL, ED and IEP student groups added 9%, 4% and 3% of the variance respectively.

The results for identifying demographic variables for winter achievement in reading are found in Table 13.
Table 13

Winter Reading Score Regressed on Demographic Variables

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R²</th>
<th>Adjusted R²</th>
<th>Std. Error</th>
<th>R² Change</th>
<th>F Change</th>
<th>df1</th>
<th>df2</th>
<th>Sig. F Change</th>
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<td>1</td>
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<td>.42</td>
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<td>41.04</td>
<td>1</td>
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<td>.000</td>
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<tr>
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<td>.53</td>
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<td>54</td>
<td>.000</td>
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<td>.012</td>
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<td>.60</td>
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<td>4.70</td>
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<td>.035</td>
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</tbody>
</table>

Note. a. Predictors: (Constant), White_Percentage; b. Predictors: (Constant), White_Percentage ELL_Percentage; c. Predictors: (Constant), White_Percentage, ELL_Percentage, ED_Percentage; d. Predictors: (Constant), White_Percentage, ELL_Percentage, ED_Percentage, IEP_Percentage

In summation, the analysis of the demographic variables at the sixth-grade level in each school and the a priori fall score were examined with the winter score as the dependent variable. The amount of variance that was accounted for when all the demographic variables and the fall score were used in the analysis was 95% predicting the winter math score and 87% predicting the winter reading score. When the analysis was done omitting the fall scores and including only the demographic variables in the analysis a large percentage of the variance was accounted from the White subgroup: 46% for math and 42% for reading. The results of using the winter scores as dependent variables were not useful to this study.

Dependent Variable

The next step was to use the change score from fall to winter in both reading and math as the dependent variable. The change score was defined as the winter score minus the fall score and was calculated for both math and reading. This score was used to identify what possible independent variables as well as the fall score in reading and in
math would contribute to predicting the changes in student achievement from fall to winter. The results were very different from the previous results using just the winter scores as the dependent variable. There were no demographic variables or fall scores that were significant in predicting the change from fall to winter in student achievement. Therefore the use of demographics and fall scores as level one predictors in an hierarchical regression was not available for the study.

The next step in the study was to use the demographic variables minus the a priori math scores as predictors accounting for any variance in the analysis using the fall to winter score change variable as the dependent variable. As shown in Table 14, there were no demographic variables that were significant. See Table 14 for results pertaining to reading change; see Table 14 for results pertaining to math change. Therefore, the Level 1 independent variables were not available for this study.

Table 14

<table>
<thead>
<tr>
<th>Table 14</th>
<th>Fall-to-Winter Reading Change Score Regressed on Demographic Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Change Statistics</td>
</tr>
<tr>
<td>Model</td>
<td>R</td>
</tr>
<tr>
<td>1</td>
<td>.40</td>
</tr>
<tr>
<td>2</td>
<td>.40</td>
</tr>
<tr>
<td>3</td>
<td>.40</td>
</tr>
<tr>
<td>4</td>
<td>.39</td>
</tr>
<tr>
<td>5</td>
<td>.39</td>
</tr>
<tr>
<td>6</td>
<td>.38</td>
</tr>
<tr>
<td>7</td>
<td>.32</td>
</tr>
<tr>
<td>8</td>
<td>.25</td>
</tr>
</tbody>
</table>

Continued
Table 14 continued

*Note.* a. Predictors: (Constant), White Percentage, Asian Percentage, IEP Percentage, Hispanic Percentage, Multiracial Percentage, ELL Percentage, ED Percentage, Black Percentage. b. Predictors: (Constant), White Percentage, Asian Percentage, IEP Percentage, Hispanic Percentage, Multiracial Percentage, ED Percentage, Black Percentage; c. Predictors: (Constant), White Percentage, Asian Percentage, IEP Percentage, Hispanic Percentage, ED Percentage, Black Percentage; d. Predictors: (Constant), White Percentage, Asian Percentage, IEP Percentage, Hispanic Percentage, Multiracial Percentage, ED Percentage; e. Predictors: (Constant), White Percentage, Asian Percentage, IEP Percentage, ED Percentage; f. Predictors: (Constant), White Percentage, Asian Percentage, IEP Percentage; g. Predictors: (Constant), White Percentage, Asian Percentage; h. Predictors: (Constant), White Percentage

Results for demographic variables predicting fall to winter math change scores show no demographic variables that were significant (see Table 15). Therefore, the Level 1 independent variables were not available for this study.

Table 15

*Fall to Winter Math Change Score Regressed on Demographic Variables*

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R²</th>
<th>Adjusted R²</th>
<th>Std. Error</th>
<th>R² Change</th>
<th>F Change</th>
<th>df1</th>
<th>df2</th>
<th>Sig. F Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.282&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.080</td>
<td>-.084</td>
<td>2.77469</td>
<td>.080</td>
<td>.488</td>
<td>8</td>
<td>45</td>
<td>.858</td>
</tr>
<tr>
<td>2</td>
<td>.281&lt;sup&gt;b&lt;/sup&gt;</td>
<td>.079</td>
<td>-.061</td>
<td>2.74559</td>
<td>-.001</td>
<td>.040</td>
<td>1</td>
<td>45</td>
<td>.842</td>
</tr>
<tr>
<td>3</td>
<td>.278&lt;sup&gt;c&lt;/sup&gt;</td>
<td>.077</td>
<td>-.040</td>
<td>2.71848</td>
<td>-.002</td>
<td>.077</td>
<td>1</td>
<td>46</td>
<td>.783</td>
</tr>
<tr>
<td>4</td>
<td>.273&lt;sup&gt;d&lt;/sup&gt;</td>
<td>.075</td>
<td>-.022</td>
<td>2.69414</td>
<td>-.003</td>
<td>.144</td>
<td>1</td>
<td>47</td>
<td>.706</td>
</tr>
<tr>
<td>5</td>
<td>.267&lt;sup&gt;e&lt;/sup&gt;</td>
<td>.071</td>
<td>-.005</td>
<td>2.67160</td>
<td>-.004</td>
<td>.184</td>
<td>1</td>
<td>48</td>
<td>.670</td>
</tr>
<tr>
<td>6</td>
<td>.254&lt;sup&gt;f&lt;/sup&gt;</td>
<td>.064</td>
<td>.008</td>
<td>2.65415</td>
<td>-.007</td>
<td>.349</td>
<td>1</td>
<td>49</td>
<td>.558</td>
</tr>
<tr>
<td>7</td>
<td>.219&lt;sup&gt;g&lt;/sup&gt;</td>
<td>.048</td>
<td>.011</td>
<td>2.65079</td>
<td>-.016</td>
<td>.871</td>
<td>1</td>
<td>50</td>
<td>.355</td>
</tr>
<tr>
<td>8</td>
<td>.157&lt;sup&gt;h&lt;/sup&gt;</td>
<td>.025</td>
<td>.006</td>
<td>2.65730</td>
<td>-.023</td>
<td>1.256</td>
<td>1</td>
<td>51</td>
<td>.268</td>
</tr>
<tr>
<td>9</td>
<td>.000&lt;sup&gt;i&lt;/sup&gt;</td>
<td>.000</td>
<td>.000</td>
<td>2.66526</td>
<td>-.025</td>
<td>1.318</td>
<td>1</td>
<td>52</td>
<td>.256</td>
</tr>
</tbody>
</table>

Continued
Table 15 continued

Note. a. Predictors: (Constant), White_Percentage Asian_Percentage IEP_Percentage Hispanic_Percentage Multiracial_Percentage ELL_Percentage ED_Percentage Black_Percentage; b. Predictors: (Constant), White_Percentage Asian_Percentage IEP_Percentage Hispanic_Percentage Multiracial_Percentage ELL_Percentage ED_Percentage; c. Predictors: (Constant), White_Percentage Asian_Percentage IEP_Percentage Hispanic_Percentage Multiracial_Percentage ELL_Percentage ED_Percentage; d. Predictors: (Constant), White_Percentage Asian_Percentage IEP_Percentage Multiracial_Percentage ELL_Percentage; e. Predictors: (Constant), White_Percentage Asian_Percentage IEP_Percentage ELL_Percentage; f. Predictors: (Constant), Asian_Percentage IEP_Percentage ELL_Percentage; g. Predictors: (Constant), Asian_Percentage ELL_Percent; h. Predictors: (Constant), Asian_Percentage; i. Predictor: (constant)

Because no independent variables were significant and, therefore, did not account for any of the variance in the fall to winter change variables for math or for reading, Level 1 analysis was not available for this study. Investigating the impact of the responses to the CLOPS survey on the change variables in math and reading using multiple regression analysis was the next possible step. The survey responses represented the principals’ perception of the level of implementation and organizational structures from the OIP being practiced in the school. Linear regression was used for this analysis, a departure from the planned hierarchical regression, since there were no significant variables found in the level one regression of a priori scores and demographic variables.

Linear regression was used with the change in math score and change in reading score as dependent variables in separate analyses. The independent variables were the principals’ responses to each of the CLOPS Survey Questions 1 through 8 and 10 through 16, omitting Question 9.

Practices Predicting Changes in Student Achievement

The results of each of the linear regression analyses for math and for reading identified practices that were significant in predicting changes in scores from fall to
winter assessments. For the change in math achievement there were two practices from the CLOPS survey that were significant.

The first practice was the response to “teachers on a team.” This practice accounted for 8% of the variance in the math change score. The question asked principals to identify types of staff that were regular participants on TBTs in their schools. Having a special education intervention specialist on a team did not result in changes from fall to winter math scores. This finding might appear counterintuitive, and, indeed, may be a function of the study methodology or its limitations. The change scores reflect all students and were not disaggregated by subgroups. However, the finding raises the possibility that having intervention specialists on a team assigned to the special education subgroup of students may not be helpful to changing the outcomes for all students or even for the special education subgroup.

The second practice, “Implementation of inclusive instructional practices,” is one of the functions of a TBT in the OIP. The practice happens in Step 4 (implement changes consistently) of the five-step process used in the OIP. Teachers on the same team examine results of their student’s performance on formative assessments. The team then explores what research-based inclusive instructional practices may best meet where the students are. Once the instructional practice is identified, learned, and practiced by the teachers, new formative assessments are used to document changes in student learning and what changes in the agreed-upon instructional strategy may be needed to meet the needs of a greater percentage of learners, and then the implementation is repeated. This practice accounted for 7% of the variance in the change in math score variable. The total
variance for both practices was 15% (see Table 16). The remaining variance is not accounted for in this study.

Table 16

*Regression Coefficients Showing Change in Math Score From Fall to Winter*

<table>
<thead>
<tr>
<th>Model</th>
<th>R² (sig)</th>
<th>ΔR² (sig)</th>
<th>B</th>
<th>Std. Error</th>
<th>Beta</th>
<th>T</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>.08 (.038)</td>
<td>2.18</td>
<td>1.69</td>
<td>1.29</td>
<td>.204</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Teachers on a team</td>
<td>4.38</td>
<td>2.056</td>
<td>.28</td>
<td>2.13</td>
<td>.038</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>(Constant)</td>
<td>.15 (.013)</td>
<td>.07 (.037)</td>
<td>-.17</td>
<td>1.97</td>
<td>-0.8</td>
<td>.933</td>
</tr>
<tr>
<td></td>
<td>Teachers on a team</td>
<td>5.00</td>
<td>2.01</td>
<td>.32</td>
<td>2.49</td>
<td>.016</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Implementation of inclusive instructional practices</td>
<td>3.82</td>
<td>1.79</td>
<td>2.13</td>
<td>.037</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In the regression analysis of the change score in reading, one practice was significant as predicting the change in reading from fall to winter. This practice, “common posttest results,” is another function of the TBT. The practice happens in Step 5 (collect, chart, and analyze data) of the five-step process. Teachers on the same team examine where their students are using common formative assessments, which are generally graded on a rubric. The team then explores the results of the common assessments and determines what research-based inclusive instructional practices may best meet where the students are. Once the instructional practice is identified, learned, and practiced by the teachers, the instructional strategy is implemented. Following implementation, common assessments are then used by the team again to chart growth from the previous common assessment, to document changes in student learning, and to
determine what instruction will be needed to get all students to a performance level to meet the standard. This practice accounted for 7% of the variance in the change in reading (see Table 17).

Table 17

*Regression Coefficients Showing Change in Reading Score From Fall to Winter*

<table>
<thead>
<tr>
<th>Model</th>
<th>$R^2$(sig)</th>
<th>$\Delta R^2$(sig)</th>
<th>B</th>
<th>Std. Error</th>
<th>Beta</th>
<th>T</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>(.07)</td>
<td>N/A</td>
<td>-.32</td>
<td>2.71</td>
<td>-.1</td>
<td>.905</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(Constant)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Common posttest results</td>
<td></td>
<td>6.73</td>
<td>3.23</td>
<td>.27</td>
<td>2.09</td>
<td>.042</td>
</tr>
</tbody>
</table>

The practices identified as significant and accounting for some variance in the changes in student achievement in math and reading over time are embedded in the OIP. Teacher teams function as a result of the organizational structure that is in place and the scaffolding of that structure and the collaborative practices that lead to the practices identified in this research. Based on the results from this analysis, the critical findings and practical implications of this study are discussed in Chapter 5.
Chapter 5: Discussion

In this chapter, the findings of the current study are summarized and discussed. The discussion includes an assessment of the measurement of changes in student achievement when schools implement the practices and organizational structures of the OIP, the lack of influence of the demographic variables in the change of student achievement over time, and the influence of the OIP as it relates to those practices identified as significant in this study. The theoretical and practical implications of the findings, as well as the limitations of the current study, are presented. Suggestions for future research based on the current study close the chapter.

Summary of Findings

1. The reliability of CLOPS was satisfactory for use in this study.
2. A priori fall test scores in math were the strongest influence on the winter score and without the a priori fall test scores used as a variable, the next biggest influence of the winter score was being in the White student subgroup.
3. There were no school demographic variables or a priori scores that affected the change over time in student achievement from fall to winter.
4. Three collaborative leadership practices were significant and accounted for part of the variance in the change in math and reading student achievement from fall to
winter: teachers on a team, implementation of inclusive instructional practices, and analysis of common assessment results.

5. Linear regression analysis demonstrated that collaborative leadership practices were related to change in math achievement from fall to winter, accounting for 15% of the variance. Demographic variables were not significant and were not used in the analysis as control variables.

6. Linear regression analysis demonstrated that one collaborative practice was related to change in reading achievement from fall to winter, accounting for 7% of the variance. Demographic variables were not significant and were not used in the analysis as control variables.

7. Separate linear regression analysis in math and reading demonstrated that each of the three collaborative practices independently contributed between 7%–8% of the variance.

8. Two of the three significant practices occur in Steps 4 and 5 in the OIP five-step process, suggesting that the collaborative teams and structure of the protocols preceding Steps 4 and 5 may contribute to the implementation of those practices. Teachers on a team, the third significant practice would be considered a practice that precedes Steps 4 and 5.

**Impact of School Level Collaborative Leadership Practices and Organizational Structures**

This section addresses the school degree of implementation of the OIP and its relationship to changes in student achievement in math and reading from over the course of an academic year. The discussion also includes the effect of the sixth-grade
demographics at the school level on the change in student achievement in math and reading. Principal demographics are discussed to explore characteristics of the survey respondents.

The focus of the current study was to find out which, if any, collaborative leadership practices or organizational structures that constitute the OIP impact on sixth-grade students’ math and/or reading scores while controlling for demographic variables and a priori scores. A major rationale for conducting the study was the current interest in expanding understanding of the effects of specific practices of collaborative leadership, which in recent years has been found promising in its impact on student achievement (Goddard et al., 2007; Heck & Halinger, 2011; McNulty & Bessie, 2009; Telfer, 2011; Wahlstrom et al., 2011). This study isolated specific practices and structures identified in the OIPIR and explored whether levels of implementation in each of 15 areas of collaborative practice were significantly related to increases in student achievement.

**Implications for Scholars**

**Collaborative Leadership**

Research studies such as those reported in BASA (2012), Heck and Halinger (2011), Leithwood and Seashore-Louis (2012), and Goddard et al. (2007) provided insight into the power of collaborative leadership model in a school. The OIP (ODE 2012b) operationalizes the theory of collaborative leadership in a systemic way—with “systemic” referring to leadership from the state level to the level where critical instructional decisions are made by teacher teams for their students (Barr, 2010; ODE, 2012; Telfer, 2011). According to McNulty and Besser (2010) and Robinson (2011), leadership through school level teams is a primary component in increasing student
achievement for all students; both reports discuss these teams’ connections to each other, to the rest of the school, and to student assessment data as the basis on which effective instructional decisions are made.

The CLOPS survey looked for relationships between practices and structures in which these teams operate using the OIP as a model for improvement. The current study sought to learn whether there were particular practices or structures that had direct influence over increased student achievement. The research effort could identify no previous studies that had identified specific collaborative practices or structures to focus in on to discover what directly impacted student achievement and to open the discussion on what practices and structures had a tangential, though perhaps essential, impact on student achievement.

The sample for the current study was selected from districts and schools that confirmed they were using the OIP model. After those districts were identified, a common standardized formative assessment (NWEA’s Measures of Academic Progress) used in Grade 6 was the next criterion for inclusion in the sample. The commonalities of the improvement model structures and formative assessment used allowed for the CLOPS survey to identify, through the principal’s perception, the levels of schoolwide implementation of the specific practices and structures identified by the OIPIR. By identifying specific components of the improvement process that are related to increased student achievement, this research may enable collaborative leadership theory to focus more on what connections in the theory are tied to changes for student achievement. As Nord and Tucker (1987) noted, the appeal of those direct connections to
student achievement in some schools will likely to stimulate practitioners’ interest in exploring the use of collaborative leadership models in their schools and districts.

**Practical Implications for the Field**

Applying findings from research studies in a school setting is not always seen as a clear path with the details needed for practical implementation. This study is not an exception. The theory used to develop the OIP was drawn from the OLAC Leadership Framework (BASA, 2012). The development Leadership Framework considered the work of many highly visible and recognized researchers in the field of education leadership. Once the Leadership Framework was developed, the need to operationalize the theory, if this framework was going to be helpful to districts and schools, became apparent. The OIP, the processes and protocols developed from the Leadership Framework, were still steeped in theory, though they were somewhat more practical. Since 2008, the OIP has continued to adapt processes and protocols attempting to make the model more practical and sensible for schools and districts to use.

While working at the ODE in the OII, I interacted first hand with over 400 districts that were working to use the OIP and increase student achievement in their district. The struggle in using the OIP came from not fully understanding the theory behind the model and what steps were necessary at the district and school level to implement the improvement process effectively. The next struggle came in districts and schools when the formal leadership had to work with the staff to explain the value of the improvement model when the value of the model was not clear to the formal leaders themselves. Lastly, collaborative leadership effectively means that one person (superintendent, principal) is not making the decisions for the organization but, rather, a
leadership model that is inclusive of the staff of the organization is making the decisions as they relate to student achievement. Failing to give up the perceived power of being the decision-maker can impair the success of a collaborative leadership model like the OIP.

When considering the interactions with leaders across the state and the struggles that were interfering with the implementation of the state-supported OIP, focus toward diminishing the struggles led toward the development of the OIPR in 2012 at ODE. VanHorn and VanHorn (2014) refined the rubric one more time by developing the CLOPS. By identifying the practice and structures in clear practical terms, the districts may be able to decrease the amount of time to implement the model and focus on the practices and structures that will help increase student achievement sooner. The practical implementation of clear, concise collaborative practices that result in increased student achievement in the same school year may serve as an incentive to keep improving on all aspects of the model. The deeper the implementation of the model, the more the theory is understood to the users, and the more focused and committed the users, the better the results for their students. Future research may investigate use of the CLOPS as a measure that identifies opportunities for improvement of a collaborative leadership structure in a school or district.

There were three practices (“teachers on a team,” “implementing inclusive instructional practices,” and “analyzing common assessment results as a team”) that contributed to predicting change in student achievement. “Teachers on a team” would be considered a practice that precedes Steps 4 and 5. Two of the three practices occur in Steps 4 and 5 of the OIP five-step process, suggesting that the collaborative teams and structure of the protocols preceding Steps 4 and 5 may contribute to the implementation
of those practices. Consequently, there are structures and protocols that need to be in place before those steps can actually occur (see Figure 1).

The OIP consists of four stages: Identify Needs, Develop a Focused Plan, Implement and Monitor the Plan, and Evaluate the Plan. Within Stage 3, which implements and monitors the plan, is the five-step process that is used with the DLT, the BLT and the TBTs. The TBTS are where significant practices that impacted student achievement were identified in the current study. The graphic shows the infrastructure that surrounds the five-step process where increases in student achievement occur. The structures that surround the five-step process visually show that the work of TBTs does not occur in isolation. This is important. Although the work of the BLT and DLT did not indicate impact on student achievement, the work of the TBTs where those practices were identified cannot happen without the infrastructure surrounding these teams of teachers.

The findings in the current study are consistent with collaborative leadership findings in the literature. The instructional strategies that are used by a teacher team based on data can impact student achievement. As a contrast to those findings, a study by USDOE in 2015, found that the efforts of School Improvement Grants (SIG) from 2009 to 2013 in schools did not show changes in math, reading, or graduation rates different from non-SIG schools. The study explored the three SIG models (Transformation, Restart, and Turnaround). According to Dragoset et al. (2017), the SIG models were based on a school only, not connected to any district work, and the structures within the models were not clearly defined and did not focus on collaborative leadership characteristics. Based on the research behind the OIP, an explanation of the SIG models’ failure to demonstrate improvement may be the lack of district ownership, the lack of
structure in how to implement and monitor the instructional strategies, and the lack of requirement for collaborative leadership processes. In the ESSA guidelines, a focus on professional learning communities and the development of principal leadership in a collaborative environment may indicate lessons learned from the SIG effort.

The three practices in this discussion occur at the TBT level. The teacher teams have regularly scheduled time at least once a week to examine instructional strategies, student work, and current student data from multiple sources. As the graphic shows, the TBT work is done in Stage 2 of the OIP. The five-step process leads teacher teams through recursive cycles of the five steps. The structure of the teams, the time necessary to engage in the improvement model processes, and the monitoring of the TBT work by the BLT (including the principal) are necessary for the teams of teachers to engage effectively in the five-step process. Based on OIPIR data collected annually by the ODE OII (R. Draghi, personal communication, October 14, 2016; H. Kantola, personal communication, October 14, 2016), it appears that generally, when looking at implementation levels of the TBT’s across the state, work never progresses much into Stage 3.

Based on the definition of “teachers on a team,” this current study did not find that intervention specialists were helpful in increasing student achievement. A consideration for discussion might include the development of IEP goals for students developed around the grade level standards and objectives for their students. IDEA required that IEP goals need to be developed according to the individualized needs of their learners. This has been a discussion that Office of Special Education Programs (OSEP) has put into the forefront with the current focus on results driven accountabilities
and an increased impetus for early literacy. The Office of Special Education Programs is moving away from IDEA compliance standards as expected protocols, not the focus of the work of intervention specialists. The focus on results-driven accountability for all students revolves around state grade level standards. The transition from intervention specialists working on individual needs to students having individual needs met in the context of learning state grade level standards is in progress. A recent study looking at categories of students identified in IDEA found that students who were not categorized (labeled and received services through IDEA) fared academically better than their IDEA identified counterparts when similar student characteristics were examined (Balu et al., 2015). The study also states that when Tier 1 instruction is strong, Tier 2 and Tier 3 instruction becomes less necessary. Tier 1 instruction is defined as core curriculum instruction aligned with state standards. Tier 2 and Tier 3 instruction are defined as group intervention and intensive intervention respectively. If Tier 2 and Tier 3 instruction happen outside the Tier 1 instruction for categorized students, those students tend to achieve at lower levels than if they remain in the Tier 1 instructional setting. Balu et al.’s (2015) study may explain, at least in part, the finding of this current study that Intervention Specialists on a team were not helpful in increasing student achievement.

The two practices that impact student achievement are implemented during Steps 4 and 5 of the five-step process. This is a critical point in terms of the importance of the degree of implementation of the OIP. If most teacher teams are not working through the process to Steps 4 and 5, the improvement of student achievement will not be evident. The second critical point is that if the structures and practices are not implemented at the
earlier stages of the improvement model, the chance of getting to the point of impacting student achievement may not occur.

**Recommendations**

Recommendations of this study are considerations of the scholarly and practical implications that may be helpful to principal and teacher preparation programs, school districts and continued professional development focuses for education practitioners. School improvement processes and collaboration within a district, school and teacher teams need to be explicitly taught in preparation programs. The understanding of the universal improvement steps (Plan, Do, Check, Act) need to be embedded throughout principal and teacher preparation programs. Understanding of collaborative leadership practices need to be embedded throughout the principal and teacher preparation programs. Without a skill set of implementing improvement processes in a collaborative environment, principals and teachers enter the field underprepared to meet the challenges of increasing student achievement for all students.

Developing leadership skills and expectations for all personnel in the school environment to be genuine leaders in school improvement work, decreases the likelihood that a top down leadership model can stay in place. The current study supports that decision about instruction at the teacher team level account for some of the variance responsible for increasing student achievement. Looking at the teacher team responsibilities that result in these changes, it is clear that understanding the improvement process and taking responsibility for decisions about instruction is a key to understanding how to impact student achievement. The decisions made at a teacher team level suggest that a collaborative leadership model and not a top down leadership model may support
positive changes for students. Therefore, preparation programs for all educators need to include explicit instruction and practical opportunities to practice the skills needed for a school improvement model in a collaborative leadership structure.

This recommendation has many implications for the current education preparation programs. No longer can a student teacher placement or a principal internship project rely on the professionals that preparation students are assigned to for their practical experiences. Teachers cannot learn from practicing teachers who do not have knowledge of either the school improvement process or collaborative leadership models. Future principals and superintendents cannot learn from internship mentors who do not understand or practice collaborative leadership.

The standard for placement must include an overarching commitment for students to engage with practitioners who are engaged in both effective school improvement practices and invested in a collaborative leadership model. Universities, SEAs, and local districts will necessarily need to collaborate on ensuring this major shift in adult practices in the education institution to displace the current adult practices that interfere with increased achievement for all students. The modeling of collaboration across education entities may be the initial step to change outcomes for students.

Changes in adult practices in schools cannot happen school by school without a systemic process to support the changes. In addition to commitments from universities and state education agencies, each district will need to commit to a districtwide process to support school improvement through a collaborative leadership model. Teacher teams are at the core of impacting student achievement. In order for teacher teams to effectively operate, the support from the district and the building is imperative. The basic structure of
time and professional development needed for teacher teams is essential for students to achieve at higher levels. Districts will need to provide dedicated time for teacher teamwork. BLTs will need to identify professional development needs of each team and secure the resources to provide the individualized team professional development. The BLT secures those resources through the relationship for the building team with the district leadership team. The interconnectedness of this work is steeped in collaborative leadership theory. Genuine leaders are given important work to do and the resources to get the work done effectively. This cannot happen in isolation. Therefore the need to displace current leadership practices with collaborative leadership practices in all districts is needed.

The culture that exists in the institution of education runs counter to the research on school improvement models and collaborative leadership theory. It is imperative to disrupt the current culture and focus on practices that have suggested better outcomes for all students. It is the responsibility of all entities impacting this institution to work together to insure that happens.

**Limitations**

Limitations of this study are considerations for the implications of the findings. As with most research, there are a number of limitations of this study that require caution when generalizing its findings. One limitation is that the actual CLOPS survey was administered in the spring of the year, after the fall and winter assessments were completed in the schools. Administration of the survey between the fall and winter assessments would have been preferable. Discussions with OII consultants who work in districts and schools using the OIP and measure the change of implementation of the
model from fall to spring find there is minimal movement on the rubric throughout the school year. Changes on the rubric occur from fall to fall as work in the summer, training, and updated improvement plans for districts and schools impact the use of processes, protocols, and structures (R. Draghi, personal communication, October 14, 2016; H. Kantola, personal communication, October 14, 2016).

Secondly, the sample drew heavily from urban districts and a first ring suburban district. As demographic data presented in the methods and results chapters showed, the sample was not representative of schools using the OIP. The use of sixth-grade NWEA MAP assessment data and the implementation of the OIP limited the available districts to secure a larger sample size. Future research should include a more global assessment to mitigate this limitation.

Third, the responses to the CLOPS were completed by the principal only. Future studies could address this limitation by triangulating survey responses, for example having each school’s principal, BLT members, and district-assigned consultant from the ODE, complete the survey.

Fourth, using a HLM methodology where individual student scores, nested in teacher scores and nested into school scores could result in increased percentages of variance identified with certain practices. This methodology was used in the study (Goddard et al., 2007) where the variance accounted for more moderate results.

Finally, this study included relatively small number of schools, given the number of schools implementing the OIP. A larger sample should be tested before generalizing the results to another sample or populations.
Suggestions for Future Research

The implementation of collaborative practices and organizational structures of the OIP is open to many other paths of investigation than the one taken in this current study. The OIP is a research-based model, and the change over time of student math and reading achievement in schools using this model, as measured by the CLOPS, was found to move student achievement regardless of prior achievement scores, membership in subgroups including IEP, ELL, and SES as well as racial subgroups. Although the variance was small, it raises the possibility that further research may find more moderate levels of variance tied to collaborative leadership practices. Given the limitations of the research, this is a powerful result in view of the importance of finding ways to improve achievement for all students.

One of the recurring concerns of framers of the OIP is how schools and district choose which components they use. Research that looks at relationships between collective efficacy, trust, and academic emphasis in regard to the implementation of the OIP might identify characteristics of schools that achieve at higher levels. Making connections to collective efficacy, trust, and academic emphasis and higher achieving implementers of the OIP could create that needed sense of urgency in local districts and schools to pay closer attention to the entirety of the process.

Suggestions for future studies:

1. Use organizational structures as mediators of the collaborative leadership practices to predict student achievement. The degree of implementation of the structures of teams in the district as mediators may identify higher levels of variance when considering the teacher practices as the independent variables.
predicting changes in student achievement. Including a 360° survey of the degree of implementation of identified collaborative teacher practices and team structures may increase the percentage of variance for some practices.

2. Use the CLOPS with respondents from the BLT, the OIP consultant or coach, and the principal and create a combined score to use in a regression analysis predicting student achievement.

3. Use the same model for the research with different formative assessment results and compare differences in significant variables, if any.

4. Use mediators like academic optimism and teacher efficacy to see if they increase the variance of the collaborative leadership practices predicting gains in student achievement.

The research effort to identify collaborative leadership practices and organizational structures that predict student achievement is in the beginning stages. More research to find connections between teacher practices associated with collaborative leadership and student achievement is needed. Practical application of this line of research will be useful in the field to close the gap between collaborative leadership theory and increased achievement for all students.
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Appendix A: Deming’s 14 Points

1. **Create a constant purpose toward improvement.**
   - Plan for quality in the long term.
   - Resist reacting with short-term solutions.
   - Don’t just do the same things better—find better things to do.
   - Predict and prepare for future challenges, and always have the goal of getting better.

2. **Adopt the new philosophy.**
   - Embrace quality throughout the organization.
   - Put your customers’ needs first, rather than react to competitive pressure—and design products and services to meet those needs.
   - Be prepared for a major change in the way business is done. It’s about leading, not simply managing.
   - Create your quality vision, and implement it.

3. **Stop depending on inspections.**
   - Inspections are costly and unreliable—and they don’t improve quality, they merely find a lack of quality.
   - Build quality into the process from start to finish.
   - Don’t just find what you did wrong—eliminate the “wrongs” altogether.
• Use statistical control methods—not physical inspections alone—to prove that the process is working.

4. **Use a single supplier for any one item.**

5. **Improve constantly and forever.**
   • Continuously improve your systems and processes. Deming promoted the **Plan-Do-Check-Act** approach to process analysis and improvement.
   • Emphasize training and education so everyone can do their jobs better.
   • Use **kaizen** as a model to reduce waste and to improve productivity, effectiveness, and safety.

6. **Use training on the job.**
   • Train for consistency to help reduce variation.
   • Build a foundation of common knowledge.
   • Allow workers to understand their roles in the “big picture.”
   • Encourage staff to learn from one another, and provide a culture and environment for effective teamwork.

7. **Implement leadership.**
   • Expect your supervisors and managers to understand their workers and the processes they use.
   • Don’t simply supervise—provide support and resources so that each staff member can do his or her best. Be a coach instead of a policeman.
   • Figure out what each person actually needs to do his or her best.
   • Emphasize the importance of participative management and transformational leadership.
• Find ways to reach full potential, and don’t just focus on meeting targets and quotas.

8. **Eliminate fear.**

• Allow people to perform at their best by ensuring that they’re not afraid to express ideas or concerns.
• Let everyone know that the goal is to achieve high quality by doing more things right—and that you’re not interested in blaming people when mistakes happen.
• Make workers feel valued, and encourage them to look for better ways to do things.
• Ensure that your leaders are approachable and that they work with teams to act in the company’s best interests.
• Use open and honest communication to remove fear from the organization.

9. **Break down barriers between departments.**

• Build the “internal customer” concept—recognize that each department or function serves other departments that use their output.
• Build a shared vision.
• Use cross-functional teamwork to build understanding and reduce adversarial relationships.
• Focus on collaboration and consensus instead of compromise.
10. **Get rid of unclear slogans.**
   - Let people know exactly what you want—don’t make them guess.
     “Excellence in service” is short and memorable, but what does it mean?
     How is it achieved? The message is clearer in a slogan like “You can do better if you try.”
   - Don’t let words and nice-sounding phrases replace effective leadership.
     Outline your expectations, and then praise people face-to-face for doing good work.

11. **Eliminate management by objectives.**
    - Look at how the process is carried out, not just numerical targets. Deming said that production targets encourage high output and low quality.
    - Provide support and resources so that production levels and quality are high and achievable.
    - Measure the process rather than the people behind the process.

12. **Remove barriers to pride of workmanship.**
    - Allow everyone to take pride in their work without being rated or compared.
    - Treat workers the same, and don’t make them compete with other workers for monetary or other rewards. Over time, the quality system will naturally raise the level of everyone’s work to an equally high level.

13. **Implement education and self-improvement.**
    - Improve the current skills of workers.
• Encourage people to learn new skills to prepare for future changes and challenges.

• Build skills to make your workforce more adaptable to change, and better able to find and achieve improvements.

14. **Make “transformation” everyone’s job.**

• Improve your overall organization by having each person take a step toward quality.

• Analyze each small step, and understand how it fits into the larger picture.

• Use effective change management principles to introduce the new philosophy and ideas in Deming’s 14 points.
Appendix B: Subject Matter Expert Protocol
The Effects of Leadership Behaviors on Student Achievement in Collaborative Environments
Questionnaire Review

The Collaborative Leadership Organization and Practices Survey (CLOPS) is a self-administered questionnaire that will be delivered electronically to principals. Thus, it is important that directions and questions are clear and understandable to participants. To this end, your assistance is critical to ensuring that the directions are self-explanatory and questions (a) contain adequate wording, (b) mean the same thing to all respondents, (c) ask only one question at a time, and (d) can be answered.

For the review, please read the introduction, directions, and each item on the questionnaire. Then, provide a response to each of the questions located in the Review Questions column in the Reviewer's Comments column.

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<th>Review Questions</th>
<th>Reviewer's Comments</th>
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<tbody>
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<td>4. Are there any items that are unclear or difficult to understand as written? If yes, provide the item number(s) and suggest a different wording for the item(s).</td>
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<td>5. Are the response options appropriate for each item? If no, provide the item number(s) and suggest response options that are appropriate for the item(s).</td>
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<td>6. Are there any items that you could not provide a response to? If yes, provide the item number(s) and the reason(s) you could not provide a response to the item.</td>
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<td>Question</td>
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<td>7. Are there any additional items that should be included on the</td>
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<td>questionnaire? If yes, provide the item(s).</td>
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<td>clear, in order to fit the section they are in.</td>
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<td>10. Is the estimated time of no more than 30 minutes to complete the</td>
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<td>questionnaire accurate? If no, indicate the actual time to complete the</td>
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<td>questionnaire.</td>
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Appendix C: Collaborative Leadership and Organizational Practices Survey
Introduction and Survey Instructions

How long have you served as a principal in your current building?

- 2015-2016 was my first year
- 1-3 years
- 4-6 years
- 7-10 years
- More than 10 years

What is your gender?

- Female
- Male
Introduction

Some of the questions will refer to District Leadership Teams (DLT), Building Leadership Teams (BLT) and Teacher-Based Teams (TBT). You may refer to teams by different names in your district, such as data teams or a Professional Learning Community (PLC), yet they fulfill the same roles and responsibilities as those identified in this survey. The definitions provided below will help develop a common understanding of the work of these teams increasing the validity of the survey responses.

Please note that each question throughout the survey has specific directions.

District Leadership Team (DLT) - Uses district, building and classroom level data to develop goals, strategies and action steps to address the needs of all students with a focus on increasing academic achievement. Membership includes the superintendent, key central office personnel, representation of principals and teachers. The DLT supports the work of BLTs and TBTs by providing resources that are deemed appropriate based on student data.

Building Leadership Team (BLT) - Uses building and classroom level data to develop goals, strategies and action steps to address the needs of the building students with a focus on increasing student achievement aligned with district goals. Membership includes the principal, a representation of grade level or subject area teachers, and other key student services personnel. The BLT data is shared with the DLT.

Teacher-Based Team (TBT) - Uses classroom and student level data to make decisions about the implementation of instructional strategies based on data. The impact of the implementation of instructional strategies is monitored often and regularly. TBTs evaluate the changes in student data based on the implementation of selected instructional strategies. The work of TBTs align with BLT goals, strategies and action steps. TBT data is shared with the BLT.

In your current role as a principal, on which collaborative leadership teams do you currently serve? (Check all that apply)

- DLT - District Leadership Team (DLT) - Uses district, building and classroom level data to develop goals, strategies and action steps to address the needs of all students with a focus on increasing academic achievement. Membership includes the superintendent, key central office personnel, representation of principals and teachers. The DLT supports the work of BLTs and TBTs by providing resources that are deemed appropriate based on student data.

- BLT - Building Leadership Team (BLT) - Uses building and classroom level data to develop goals, strategies and action steps to address the needs of the building students with a focus on increasing student achievement aligned with district goals. Membership includes the principal, a representation of grade level or subject area teachers, and other key student services personnel. The BLT data is shared with the DLT.

- TBT - Teacher-Based Team (TBT) - Uses classroom and student level data to make decisions about the implementation of instructional strategies based on data. The impact of the implementation of instructional strategies is monitored often and regularly. TBTs evaluate the changes in student data based on the implementation of selected instructional strategies. The work of the TBT needs to be aligned with BLT goals, strategies and action steps. TBT data is shared with the BLT.
Introduction and Survey Instructions

How long have you served as a principal r?

☑ 2015-16 was my first year
☑ 1-3 years
☑ 4-6 years
☑ 7-10 years
☑ More than 10 years

How long have you served as a principal in your current building?

☑ 2015-2016 was my first year
☑ 1-3 years
☑ 4-6 years
☑ 7-10 years
☑ More than 10 years

What is your gender?

☑ Female
☑ Male
Please check the statement that best describes your school organization and established practices.

4. Building planning

○ A building level team (BLT) does not exist in my building

○ The BLT uses goals, strategies, and action steps based on qualitative and quantitative data

○ The BLT utilizes student data with goals, strategies, and action steps for the building plan

○ The BLT utilizes goals, strategies, and action steps choosing research based strategies to fit the prioritized needs of the students

○ The BLT uses limited goals (3 or less), strategies (2 or less for each goal), and action steps with research based strategies based on prioritized needs of the students

Please check the statement that best describes your school organization and established practices.

5. Teacher Based Team agendas

○ Teacher Based Teams (TBT) are not organized in my building

○ agendas are not used and meeting items are brought to the table by team members at the meeting

○ agendas are used, however, agenda topics are not aligned to the school plan

○ agendas are completed prior to the meeting and agenda topics are aligned to the school plan

○ agendas are completed prior to the meeting, topics are aligned and focused to meet goals of the school plan and the monitoring of goals is included as part of the agenda
Please check the statement that best describes your school organization and established practices.

6. Building Level Teams Communication Structure

○ BLT's and TBT's do not communicate their work within and across the school

○ BLT's and TBT's informally communicate with each other

○ BLT's and TBT's communicate within their own teams using meeting minutes, forms, and procedures consistently

○ BLT's and TBT's communicate within and across teams using meeting minutes, forms, and procedures consistently

Please check the statement that best describes your school organization and established practices.

7. Implementation of Inclusive Instructional Practices

○ Special Education staff attends teacher based and building team meetings and provide input into the plans

○ Special Education staff attend teacher based and building team meetings and are fully engaged in the improvement process

○ Special Education staff are generally not available to attend or participate in teacher based and building team meetings

Please check the statement that best describes your school organization and established practices.

8. Managing Agreed Upon Adult Implementation of Instructional Strategies

○ BLT's and TBT's have plans that include adult implementation indicators that are monitored by teacher leaders and/or the principal.
BLT's and TBT's have plans that include adult implementation indicators that are monitored by teacher leaders and/or the principal. Data is provided to the teams for discussion of the effectiveness of the agreed upon adult implementation indicators.
Please check the statement that best describes your school organization and established practices.

9. District Level Team Organization Plan and Resource Allocation

○ There is vertical articulation between the District Leadership Team (DLT) and the Building Leadership Team (BLT) on how resources are allocated for building and team plan implementation.

○ The DLT has multiple discreet plans that are aligned. Resources are allocated for each discreet plan that may or may not support building and Teacher team plans.

○ The DLT and BLTs have chosen to support and align resources for just a few discreet plans.

○ The DLT and BLTs have chosen to support and allocate resources for implementation where there is one plan for the district.

Please check the statement that best describes your school organization and established practices.

10. Assessment Data

○ Teams do not collect and chart assessment data to discuss in team meetings.

○ Some teachers bring assessment data to teacher team meetings using agreed upon protocols, rubrics and scoring guides.

○ Most teachers bring assessment data to teacher team meetings using agreed upon protocols, rubrics and scoring guides.

○ All teachers bring assessment data to teacher team meetings using agreed upon protocols, rubrics and scoring guides.

○ Assessments are given to ALL students.

Please check the statement that best describes your school organization and established practices.

11. Analyzing Student Work

○ Teacher teams do not analyze student work specific to formative assessment data.

○ Student work is analyzed on a student-by-student basis with connections between data being analyzed and building/district goals.

○ Student work is analyzed for most groups of students with connections between data being analyzed and building/district goals.

○ Student work is analyzed for all groups of students with connections between data being analyzed and building/district goals.
Student work is analyzed for all groups of students, with consistent connections between data being analyzed and building/district goals.

Please check the statement that best describes your school organization and established practices.

**12. Identifying and Implementing Instructional Practices**

- are identified for classroom implementation but are not based on common assessment data
- are identified for classroom implementation and are based on common assessment data
- are research based and identified for classroom implementation based on common assessment data.
- are based on monitoring data with less than 50% teachers on a team implementing agreed upon instructional practices
- are based on monitoring data with more than 50% of teachers on a team implementing agreed upon instructional practices

Please check the statement that best describes your school organization and established practices.

**13. Teachers on a team**

- implement agreed upon instructional practices with a few identified student groups.
- implement agreed upon instructional practices with some identified student groups.
- implement agreed upon instructional practices with most identified student groups.
- implement agreed upon instructional practices with all identified student groups.

- My building does not have teacher teams as described above.

Please check the statement that best describes your school organization and established practices.

**14. Common Posttest Results**

- Common post-test results are not analyzed by teacher teams.
Common post-test results are sometimes analyzed by teacher teams
Common post-test results are often analyzed by teacher teams
Common post-test results are analyzed relative to learning targets and instructional practices by teacher teams
Teacher based teams are not active in my building

Please check the statement that best describes your school organization and established practices.

15. Instructional Practice Implementation

- Based on student formative assessment data, modification of instructional practice implementation is not discussed in teacher teams
- Based on student formative assessment data, modification of instructional practice implementation is discussed in teacher teams
- Based on student formative assessment data, modification of instructional practice implementation is discussed in teacher teams and documented
- Based on student formative assessment data, modification of instructional practice implementation is discussed, implemented, and documented in a defined and timely manner (2-4 week cycle)
- Student formative assessment data is not used to modify instructional practice in my building

Please check the statement that best describes your school organization and established practices.

16. District/State Assessment Data

- District/state assessments are distributed to ALL staff members for use in lesson planning, tiered instructional delivery, and differentiated instruction at the discretion of the staff member
District/state assessments are distributed and analyzed two to four times a year to ALL staff for use in lesson planning, tiered instructional delivery, and differentiated instruction within the context of teacher based teams.

The benchmarking of student progress occurs at least quarterly or at the end of units. Most staff utilize common grade level or subject tests that include item analysis. Formative common assessments are analyzed one to four times a month.

Formative classroom assessments for learning are occurring daily/weekly in MOST classrooms.

Assessment is used to formally record student growth and inform instructional decisions.
Appendix D: State System of Support Performance Agreement

Ohio’s Statewide System of Support: Building State, Regional and Local Capacity to Improve Instructional Practice and Student Achievement

The goal of the State System of Support (SSoS) is to build the capacity of local and related education agencies to engage in systemic and sustainable improvement that impacts educational outcomes for students. State Support Teams (SSTs) are integral to implementing and achieving this goal. By providing high quality technical assistance and professional development, SSTs support districts in developing the capacity to fully implement research-based processes and educational practices that result in data based decisions, learning across all levels of the system, and sustained implementation. Through collaboration within and across regions, SSTs access national, state, regional and local agencies and resources to support districts and families.
State Support Team Deliverables

The deliverables described below identify and prioritize work critical to achieving the SSoS goal and are to be performed as set forth by the ODE—Offices: Exceptional Children (OEC), Early Learning and School Readiness (OELSR), and OII).

Deliverables

1. Provide differentated and tiered information, professional development and technical assistance as outlined in the regional Comprehensive Continual Improvement Plan (CCIP), based on
a. The needs of priority districts/programs identified by OII, OELSR and OEC; and

b. Prioritized regional needs.

2. Implement the **Ohio Improvement Process** (OIP) to focus on improved student achievement and changes in adult practices/behavior, as documented through closing of achievement gaps for students with disabilities and other underperforming student groups.

   a. Build the capacity of district internal facilitators, Educational Service Center (ESC) consultants and SST consultants to deliver technical assistance and coaching to deepen the knowledge, skills and effectiveness of the Teacher Based Teams (TBTs), Building Level Teams (BLTs) and District Level Teams (DLTs) through professional training and coaching of facilitators.

      i. Provide technical assistance to priority districts, schools and community schools to increase the effective use of all aspects of the OIP.

      ii. Focus on fidelity of implementation of the five-step process at the district and building levels.

   b. Assist districts through high quality technical assistance and professional development in the development and/or refinement and implementation of **improvement/corrective action plans based on results of district, state and federally required reviews**, including Individuals with Disabilities Education Act (IDEA) Monitoring and State Performance Plan (SPP) indicator reviews, School Improvement Diagnostic Review, Step Up to Quality and other OEC, OELSR and OII prescribed monitoring and improvement processes.
c. Provide high quality technical assistance and professional development on the design and implementation of **Multi-tiered Systems of Support (MTSS)** including academic/instruction and Positive Behavior Interventions and Supports (PBIS) systematically designed to meet the needs of all learners; including students with disabilities ages 3 through 22.
Appendix E: Subject Matter Expert Panel Feedback
The Effects of Leadership Behaviors on Student Achievement in Collaborative Environments
Questionnaire Review

The Collaborative Leadership Organization and Practices Survey (CLOPS) is a self-administered questionnaire that will be delivered electronically to principals. Thus, it is important that directions and questions are clear and understandable to participants. To this end, your assistance is critical to ensuring that the directions are self-explanatory and questions (a) contain adequate wording, (b) mean the same thing to all respondents, (c) ask only one question at a time, and (d) can be answered.

For the review, please read the introduction, directions, and each item on the questionnaire. Then, provide a response to each of the questions located in the Review Questions column in the Reviewer’s Comment column.

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<td>1. Is the introduction provided at the beginning of questionnaire clear? If no, indicate how the introduction can be changed to be clear.</td>
<td>No, really be more setup why is missing</td>
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<tr>
<td>2. Is there additional information that should be included in the introduction of the questionnaire that would be useful to participants? If yes, indicate what information should be included.</td>
<td>Yes, similar to how there isn’t sufficient information as to why this questionnaire is being administered, also the survey didn’t provide enough background</td>
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<td>3. Are the questions for each section on the questionnaire clear? If no, indicate how the questions can be changed to make them clear.</td>
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<td>4. Are there any items that are unclear or difficult to understand as written? If yes, provide the item number(s) and suggest a different wording for the item(s).</td>
<td>Select answer that doesn’t describe</td>
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<td>5. Are the response options appropriate for each item? If no, provide the item number(s) and suggest response options that are appropriate for the item(s).</td>
<td>Yes - yes or no forces a choice</td>
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<tr>
<td>6. Are there any items that you could not provide a response to? If yes, provide the item number(s) and the reason(s) you could not provide a response to the item.</td>
<td>Somewhat organizational strength seemed unclear. Most items build on previous items - least four are more “stand alone.”</td>
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<tr>
<td>Question</td>
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<td>7. Are there any additional items that should be included on the</td>
<td>Yes, but survey is already too long - is evaluation area that needs</td>
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<td>questionnaire? If yes, provide the item(s).</td>
<td>considered?</td>
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<td>8. Are there any items that should be deleted from the questionnaire?</td>
<td>Yes - instructors practices - reduce 5% response some responses are</td>
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<td>If yes, indicate the item number(s) and a rationale for deleting the</td>
<td>addressed in other question</td>
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<td>as there is need to process the data - perhaps that is expected as a separate activity once survey data is collected.</td>
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Fidelity & implementation?
Introduction and Survey Instructions

Are you currently serving as a building level administrator (e.g. principal, assistant principal, dean)?

Yes
No

Introduction - Some of the questions will refer to District Leadership Teams (DLT), Building Leadership Teams (BLT) and Teacher-Based Teams (TBT). You may refer to teams by different names in your district, such as, data teams or a Professional Learning Community (PLC), yet they fulfill the same roles and responsibilities as those identified in this survey. The definitions provided below will help develop a common understanding of the work of these teams increasing the validity of the survey responses.

District Leadership Team (DLT) - Uses district, building and classroom level data to develop goals, strategies and action steps to address the needs of all students with a focus on increasing academic achievement. Membership includes the superintendent, key central office personnel, representation of principals and teachers. The DLT supports the work of BLTs and TBTs by providing resources that are deemed appropriate based on student data.

Building Leadership Team (BLT) - Uses building and classroom level data to develop goals, strategies and action steps to address the needs of the building students with a focus on increasing student achievement aligned with district goals. Membership includes the principal, a representation of grade level or subject area teachers, and other key student services personnel. The BLT data is shared with the DLT.

Teacher-Based Team (TBT) - Uses classroom and student level data to make decisions about the implementation of instructional strategies based on data. The impact of the implementation of instructional strategies is monitored often and regularly. TBTs evaluate the changes in student data based on the implementation of selected instructional strategies. The work of the TBT's needs to be aligned with BLT goals, strategies and action steps. TBT data is shared with the BLT.

Please respond to each statement as it applies to your school organization and established practices.

Begin Survey

On which collaboration teams do you currently serve? (Check all that apply)

- DLT
- BLT
- TBT

Staff and faculty teams in my building

- Are active teams that make decisions using student formative assessment data with clearly defined responsibilities and roles at each meeting. (Yes) (No)
- Are active teams that are making decisions using student formative assessment data
are forming in our school with roles and responsibilities being defined with the goal of making decisions using student formative assessment data

are in the planning stages in my building at this time with the goal of making decisions using student formative assessment data

are not organized in our school at this time (with the goal of making decisions using student formative assessment data)

Building Leadership Team membership in my building

Yes

No

is not organized in our school at this time

is composed of the principal(s) and selected teachers

is composed of the principal(s) and teacher representation of all grade levels and/or departments

is composed of the principal(s), representation of all grade levels or departments including teachers working with identified subgroups in your schools (ELL, SWD, etc)

is composed of the principal(s), representation of all grade levels or dept’s including teachers working with identified subgroups in your schools (ELL, SWD, etc.) and non-administrative staff who serve in leadership positions, e.g. literacy coach, program coordinator, parent liaison, central office liaison, or ad hoc members and non-certified staff

Building Leadership Team agendas

Yes

No

are not utilized due to the absence of a building team

are not used and meeting items are brought to the table by team members at the meeting

are used; however, agenda topics are not aligned to the school plan

are completed prior to the meeting and agenda topics are aligned to the school plan

are completed prior to the meeting; topics are aligned and focused to meet goals of the school plan; and monitoring of goals is included as part of the agenda

Building planning

Yes

No

A building level team (BLT) does not exist in my building
Appendix F: Factor Loadings for Wallace Foundation Items
### Factor loadings for Wallace Foundation items

<table>
<thead>
<tr>
<th>Goals and Improvement (alpha = .74)</th>
<th>Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>21_3 Thinking about the same school improvement initiative, how often do you … - Enable teachers</td>
<td>1.00</td>
</tr>
<tr>
<td>with assigned instructional leadership roles to train and assist other teachers. (e.g., literacy</td>
<td>1.00</td>
</tr>
<tr>
<td>coach, grade team leader)?</td>
<td>1.00</td>
</tr>
<tr>
<td>21_5 Thinking about the same school improvement initiative, how often do you … - Provide training</td>
<td>1.00</td>
</tr>
<tr>
<td>and assistance for teachers myself?</td>
<td>1.00</td>
</tr>
<tr>
<td>21_4 Thinking about the same school improvement initiative, how often do you … - Enable teachers</td>
<td>1.00</td>
</tr>
<tr>
<td>to support the development of each other’s expertise?</td>
<td>1.00</td>
</tr>
<tr>
<td>21_2 Thinking about the same school improvement initiative, how often do you … - Facilitate</td>
<td>1.00</td>
</tr>
<tr>
<td>teacher access to professional expertise external to the district (e.g., education service</td>
<td>1.00</td>
</tr>
<tr>
<td>center, university, consultants)?</td>
<td>1.00</td>
</tr>
<tr>
<td>21_1 Thinking about the same school improvement initiative, how often do you … - Facilitate</td>
<td>1.00</td>
</tr>
<tr>
<td>teacher access to professional expertise at the district office?</td>
<td>1.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Leadership (alpha = .54)</th>
<th>Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>40_2 To what extent do you agree that … - Most good decisions are based on gut feelings.</td>
<td>1.00</td>
</tr>
<tr>
<td>20_2 Thinking about the school improvement initiative(s) that you consider your highest priority</td>
<td>1.00</td>
</tr>
<tr>
<td>now, … - The distribution of leadership tasks for this initiative is “spontaneous.” It is not</td>
<td>1.00</td>
</tr>
<tr>
<td>planned but it usually works out well.</td>
<td>1.00</td>
</tr>
<tr>
<td>20_3 Thinking about the school improvement initiative(s) that you consider your highest priority</td>
<td>1.00</td>
</tr>
<tr>
<td>now, … - The distribution of leadership tasks for this initiative is “spontaneous.” It is not</td>
<td>1.00</td>
</tr>
<tr>
<td>planned and it often leads to conflict and confusion.</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Continued
Appendix F continued

| 20_4 Thinking about the school improvement initiative(s) that you consider your highest priority now,...-Leaders within individual divisions or departments coordinate their work carefully but this is not done across the school as a whole. | .455 |
| 40_6 To what extent do you agree that …-Competition is more productive than cooperation as an incentive for improving our practices. | .307 |

Teacher Access and Support (alpha = .50)

| 40_3 To what extent do you agree that …-I trust the competence of my staff. | .85 |
| 40_5 To what extent do you agree that …-There is strong commitment in this school to a common set of shared goals. | .77 |
| 40_1 To what extent do you agree that …-My teachers and I generally believe that reflection and dialog are essential for good decision making. | .62 |
| 40_4 To what extent do you agree that …-People in this school have unrealistic beliefs about the leadership capacities of their colleagues. | .389 .58 |
| 20_1 Thinking about the school improvement initiative(s) that you consider your highest priority now,...-We collectively plan who will provide leadership for our initiative and how they will provide it. | .30 .7 |