2015

The Design, Implementation, and Evaluation of a Professional Development Program

Ellen Riina Hirsch
Walden University

Walden University

College of Education

This is to certify that the doctoral study by

Ellen Riina Hirsch

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

Review Committee
Dr. James Laspina, Committee Chairperson, Education Faculty
Dr. Patricia Anderson, Committee Member, Education Faculty
Dr. Michael Brophy, University Reviewer, Education Faculty

Chief Academic Officer
Eric Riedel, Ph.D.

Walden University
2015

Abstract

The Design, Implementation, and Evaluation of a Professional Development Program

by

Ellen Riina Hirsch

MAT, Brown University, 2001

BA, Earlham College, 2000

Doctoral Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Education

Walden University

November 2015

Abstract

Ineffective professional development is a longstanding problem in education. Locally, the school district in the study lacked a comprehensive system for evaluating their secondary level professional development programs. The purpose of this case study was to investigate the district's professional development program, specifically examining its perceived strengths and weaknesses. The conceptual framework of the study was systems theory and the adaptive schools reform model. The research questions examined the perceptions of various school personnel on their experiences with the current professional development program at the study district's high school. Individual interviews were conducted with a purposeful sample of 3 teachers, 4 teacher-facilitators, 1 professional development committee member, and 1 school administrator. Interview data were concurrently analyzed using inductive analysis and typologies derived from the literature. The results were used to create a project consisting of a comprehensive policy proposal that provides detailed guidance and procedures for every stage of the school's professional development program cycle. The study project was designed to assist educators, administrators, and school districts in conceptualizing, designing, and implementing professional development programs that are tailored to meet the needs of local educators. This study promotes positive social change through facilitating the development of improved professional development programs that increase teacher quality and student achievement.

The Design, Implementation, and Evaluation of a Professional Development Program

by

Ellen Riina Hirsch

MAT, Brown University, 2001

BA, Earlham College, 2000

Doctoral Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Education

Walden University

November 2015

Table of Contents

Section 1: The Problem

Introduction

Former U.S. President Clinton (1994) stated, "If our world is to meet the challenges of the twenty-first century, we must harness the energy and creativity of all our citizens" (p. 1). Clinton's statement highlighted the widespread acceptance of the importance of education for growth and prosperity, yet large numbers of students have failed to develop adequate academic skills. Teachers are the prime agents in the education of students in the U.S. public education system, with the greatest potential to increase student achievement (Marzano, 2001). Although teacher quality is one of the most important factors in student achievement, there is little agreement on how to ensure that teachers are well qualified and effective throughout their careers (Colbert, Brown, Choi & Thomas, 2008; Gallimore, Ermeling, Saunders & Goldenberg, 2009; Guskey, 1991; Lee, 2010).

This study addressed a problem at a local high school that lacked a comprehensive, ongoing system for evaluating the effect of the professional development program, an omission that can significantly influence teacher quality and student achievement. The purpose of this study was to examine the process by which professional development training for teachers was conceptualized, designed, and implemented in a public high school located in the Midwest. It used a case study design focused on interviews with teachers and administrators at the study site, hereafter referred to as ABC High School (pseudonym), to discover factors relevant to the structuring and

promotion of professional development, its intended impact, and its perceived strengths and weaknesses.

A number of professional development training sessions and initiatives to increase student achievement have been implemented at ABC High School over the past several years. In each case, the school's central administration implemented an initiative, but did not share clear program design or evaluative procedures with teaching staff. At the time of this study, professional development at the study site was largely limited to one-day, large-group seminars with limited oversight or continued learning opportunities, or activities that focused on only a small group of teachers (Ms. Q, personal communication, September 3, 2010). This is typical of the experiences of teachers across the country because the requirement for professional development is wide spread; however, teachers are rarely invited to participate in selecting or planning activities that are aligned to classroom practices (Colbert, Brown, Choi & Thomas, 2008, p. 142).

Based on state-reported student achievement data, ABC High School has continued to fall short of Adequate Yearly Progress (AYP) on student achievement measures (DESE, 2014). Accreditation data collected by the Missouri School Improvement Program (MSIP) demonstrated that professional development in this district has shown improved quality and relevance since the last five year accreditation review, but could have been more effective at impacting instruction (DESE, 2014). The local school district has created an administrative team dedicated to the support of effective, innovative approaches to teaching and learning according to school records in an effort to improve in these areas and others,.

The administrative team at ABC High School has been striving to meet local, state, national, and business sector demands to prepare students for postsecondary pursuits by implementing systematic changes to increase student achievement. In 2011, the school's parent district officially adopted new vision and mission statements and uploaded them to its website. The new statements emphasized creating productive graduates who would also lead lives of personal integrity and fulfillment. These statements were reinforced by specific directives to guide systemic change, emphasizing critical thinking, problem solving, and acquiring the necessary knowledge and skills to succeed in a diverse, global society.

This study was designed to produce valuable insights about how to improve the professional development program to positively impact teachers and thus increase student success. It was specifically designed to do so by exploring the development, functioning, and impact of ABC High School's differentiated professional development program. This study sought to determine whether or not current research on effective instruction and teacher growth were being utilized in a system designed to respect teacher interests, needs, strengths, and weaknesses. It also helped determine areas of effectiveness and need. Finally, this investigation added to the body of knowledge demonstrating how professional growth can be supported, how the support of professional growth can be systemized, and how teacher and student learning are related.

Definition of the Problem

The study problem investigated at ABC High School was that it lacked a comprehensive, ongoing system for evaluating the effect of the professional development

program. This was an important omission, because evaluation systems have the potential to influence teacher quality and student achievement (Killion, 2009). A system of professional learning opportunities designed to meet teacher needs, by providing ongoing support, including time for reflection and refinement, and respecting the differences among teachers has been shown to help teachers effectively support student learning (Flannagan & Kelly, 2009; Fogarty & Pete, 2010; Hutson, 1979; Lee, 2010;Wilson & Demetriou, 2007). At the time of the study, ABC High School had implemented a professional development program based on small-group, teacher-facilitated, self-selected, differentiated learning teams. Its parent district, ABC School District (pseudonym), had also established several professional development priorities based on student achievement data and worked to provide relevant professional development in these areas (School Improvement Plan, 2014). The current professional development program was also based on these priorities. However, the school did not have adequate documentation of how and why the program was implemented or what its intended impact was, and had not established clear measures for evaluating the impact of this program over time (personal knowledge).

Students benefit greatly when they receive consistent, effective instruction to improve their academic skills across the curriculum (Ahlfeld, 2010; Tomlinson, 2005; Vacca & Vacca, 2002). Teachers demonstrate improved practice when they are supported in their efforts to provide safe and innovative learning experiences through district and building professional development opportunities (Albers, 2008; Aubusson, Steele, Dinham & Brady, 2007; Baggett, 2009; Boydell & Blantern, 2007; Gallimore,

Ermeling, Saunders & Goldenberg, 2009; LomBombard, 2009). In the long term, designing appropriate procedures provides the opportunity to help a school critically examine programmatic choices and make more intentional programming decisions (Cato, Chen & Corbett-Perez, 1998; Killion, 2008; Thurston, Graham & Hatfield, 2003).

Teachers are negatively affected when there is no system in place to select appropriate learning experiences or to determine if they are receiving consistent, meaningful professional development. Without an evaluative component, a program cannot be assessed for specific strengths, weaknesses, or effects on teachers and students (Baggett, 2009; Bond, Boyd, Rapp, Raphael & Sizemore, 1997; Kellogg Foundation, 2004; LaBombard, 2009; Westat, Frierson, Hood & Hughes, 2002). Teachers also benefit in their learning when given a voice in the design, implementation, and evaluation of their learning experiences (Fogarty & Pete, 2010; Guskey, 1991; Lee, 2010). The role that reflection plays in continuous instructional improvement for individual teachers is analogous to the role systematic, comprehensive procedures can play in designing, implementing, and refining institutional programming (Colbert, Brown, Choi & Thomas, 2008; Guskey & Yoon, 2009; Hutson, 1979; Wetherill, Burton, Calhoun & Thomas, 2002; Westat, Frierson, Hood & Hughes, 2002). The ABC School District's School Improvement Plan has stated goals that include: increase communication and trust among all stakeholders, increase measurable accountability, increase the use of research-based instructional practices, and increase student achievement.

Administrators are more accurate evaluators when they have consistent procedures to grow and evaluate programs tailored to local needs, and when they move

beyond general school data such as attendance and graduation rates, standardized test results, local assessment results, and student failure rates (Donaldson,2006; Schmoker, 2006). In the past, general data have helped identify areas in need of improvement at the study site, but have not supported viable conclusions about which specific programs contributed to teacher and student success. As a result, it has been impossible to disaggregate the impact each program or initiative has had on teachers and students (Donaldson, 2006; Kee, Anderson, Dearing, Harris & Schuster, 2010). More specific mechanisms that support the design, tracking, and assessment of individual programs have the potential to increase program effectiveness and student achievement (Baggett, 2009; Desimone, 2009; Fazio & Gallagher, 2009; Guskey, 2003; Guskey & Yoon, 2009; Knight, 2011; LomBombard, 2009). When applied appropriately, consistent programmatic procedures provide opportunities to help link specific activities to the desired outcomes in program conceptualization, design, implementation and assessment (Savaya & Waysman, 2005; Thurston, Graham & Hatfield, 2003; Trevisan, 2007).

Rationale

A thorough understanding of how programs are conceptualized, developed, and implemented is needed in order to select and implement appropriate procedures. The local school has made initial efforts to implement data-driven decision making (a form of program assessment); however, few teachers or administrators have been trained in program design, implementation, or assessment (personal knowledge). Well-communicated, systematic procedures that concern all aspects of program design help illuminate the varied teacher learning needs, interests, strengths and weaknesses, teacher

instructional practices, teacher perceptions of student needs, teacher knowledge or lack thereof, and school expectations (Baggett, 2009; Desimone, 2009; LomBombard, 2009). This new data is intended to supplement general data already in use to improve the local school's professional development program. This additional data will also help build knowledge and capacity in procedures that can help determine if the program can be used as a model for other schools. In addition, this data helps the district build leadership capacity to implement consistent, effective procedures in the conceptualization, design, implementation and evaluation of programs tailored to the local setting.

Evidence of the Problem at the Local Level

ABC School District is one of several school districts that serve the needs of a large suburban area in Missouri that has a diverse, multiethnic, multiracial, multicultural, and socioeconomically mixed population. The problem in the local high school that this study addressed was a lack of a comprehensive, ongoing system for evaluating the effect of the professional development program designed to improve teacher quality and student achievement. This district has expanded from a one-room schoolhouse in 1846 to include over 800 employees, more than 6,300 students, 9 schools, and several support programs in 2014. At the time of the study, ABC High School served a student population that was approximately 38.5% White, 43% Black, 15% Hispanic, and approximately 3.5% other minorities; more than half the student population qualified for a free or reduced-price lunch (DESE, Missouri, 2014).

ABC School District has experienced a significant shift in local demographics in recent decades from a largely white, working-class community to an economically,

racially, and culturally diverse community. Current graduation rates have remained below 90% between 2007 and 2014and less than 30% of students matriculated to 4-year colleges, well short of the state target of 100% matriculation to postsecondary education or professional training (DESE, Missouri, 2014). In recent years, this district has barely met or failed to meet AYP on state standardized tests. Seven district schools failed to meet AYP standards in 2007 (DESE, Missouri, 2014). Because the district has struggled to meet state and federally mandated expectations, ABC High School has faced increased pressure to positively influence student achievement to help the district maintain its accreditation (DESE, Missouri, 2014).

ABC School District underwent an accreditation review by the Missouri School Improvement Program in 2010 and faces renewal in 2015 (DESE, Missouri, 2010). The 2010 data gathered by MSIP determined that the local district remained accredited, but with areas of concern (DESE, Missouri, 2011). The local school has needed to improve in several areas including student achievement and use of research-based best instructional practices by teachers to maintain status as a fully accredited school district.

ABC School District created a publically available school improvement plan focused on goals to address the concerns revealed by MSIP in 2009. Despite state and district requirements, however, ABC High School did not have an up-to-date and publically available school improvement plan on its web page at the time of this study: The most recently published district improvement plan dated from 2012 and the most recently published school improvement plan dated from 2009. However, the principal of ABC High School claimed that the school had provided the district with new materials,

but the district had not made those publically available on the website (Mr. Prin, personal communication, December, 14, 2010).

The last published district plan included three major goals:

- increasing student achievement,
- increasing communication and trust, and
- increasing parent and community involvement in the district.

Each goal for each school had a separate plan that listed specific sub-goals, action steps, process checks, and persons responsible. There was also space for completed action steps and evidence of impact, but these columns remained blank. The plan included a list of specific measures to be used to track progress towards the three major goals. It did not include any details about data collection, analysis, use, or the report of results. This lack indicates that the district either did not have specific evaluative procedures and tools or that these procedures and tools were not communicated. The principal at ABC High School expressed uncertainty about why parts of the plan were not fully articulated and stated at the time that "we are working on it" (Mr. Prin, personal communication, December, 14, 2010).

One of the overall goals of ABC School District is to employ the best personnel, motivate them, and provide excellent learning opportunities to ensure their continued growth and improvement. (ABC High School Improvement Plan, 2012). The professional development program at ABC High School has been aligned with this goal because the program is an ongoing professional development structure based on small group, teacher-facilitated, self-selected, differentiated learning teams. According to the

former co chair of the professional development committee (PDC) at ABC High School, the current program was suggested by a member of the PDC in the spring of 2009 and the committee was "making it up as we go along" in implementing the program in its first year (Ms. Amerson, personal communication, February, 18, 2011). They further stated that as far as they were aware, no specific plan for data collection was in place, but certain activities were being used because the district administration requested data (Ms. Amerson, personal communication, February, 18, 2011). This was consistent with information that shows that the district has worked to increase data-driven decision-making. It was also consistent with evidence that the district has not used specific, systematic, procedures in program design, implementation, or assessment (personal knowledge).

Both effective communication and well-designed professional development have emerged in the research literature as significant factors to improve student achievement through effective teacher learning (Clarke & Hollingsworth, 2002; Conderman, Johnston-Rodriguez & Hartman, 2009; DuFour, 2004; Guskey & Peterson, 1996; Guskey & Yoon, 2009; Lipton & Wellman, 2007; Watson, 2005). Clear procedures for all stages of a program has the capacity to address both these factors by creating structures that establish and communicate the expected goals, outcomes, and implementation.

Evidence of the Problem in the Larger Educational Setting

There is a body of research that has explored issues related to professional development, teacher quality, and student achievement. The problem in the local high school is that it lacks a comprehensive, ongoing system for evaluating the effect of the

professional development program, which can influence teacher quality and student achievement. In the literature focused on effective professional development, a consensus has begun to emerge that teachers need multiple paths to improve, job-embedded opportunities for practice, opportunities for reflection, supportive collaboration, access to knowledge, trusting relationships, communicative communities, and environments that respect their individual strengths and weaknesses, (Albers, 2008; Barnett & O'Mahoney, 2006; Fazio & Gallagher, 2009; Flannagan & Kelly, 2009; Fogarty & Pete, 2010; Glassett, 2009.; Hutson, 1979; Johnson, Kahle & Fargo, 2007; Lee, 2010; Nelson, Deuel, Slavit & Kennedy, 2010; Wilson & Demetriou, 2007). Moreover, evidence has accumulated that adult learners have unique attributes that are best accommodated through differentiated professional development opportunities (Ahlfred, 2010; Flannagan & Kelly, 2009; Kose, 2007; Tomlinson, 2005). If teachers have received this type of professional development, it is likely they will develop more positive affect towards the challenges they face each day.

Teacher attitudes and confidence substantially influence the successful implementation of new instructional strategies (Cantrell, Burns & Callaway, 2009; Fisher & Frey, 2008; Guskey, 1982, 1985; Jerald, 2007). Teachers need sustained opportunities to take risks as they experiment with instructional strategies in safe, collegial, reflective communities (Albers, 2008; Buysse, Sparkman & Wesley, 2003; Farmer, Hauk & Neumann, 2005; Johnson et al., 2007; NCTE, 2006; Nelson & Slavit, 2008; Talbert & McLaughlin, 2002). These elements have frequently been missing or underprovided in existing professional development programs and workshops (Knight, 2011). In programs

that have shown positive results, little concrete information about the logistics of effective creation and implementation of locally developed, sustainable, school wide, teacher supported programming has been explicitly provided (Ahlfeld, 2010; Aubusson, Steele, Dinham & Brady, 2007; Fisher, 2001; Fisher & Frey, 2008; Fisher, Frey & Williams, 2002; Flannagan & Kelly, 2009; Glassett,2009; Manzo, 2006; Pardini, 2005; Richardson, 2005; Rose, 2000). These limitations have made it difficult for other locales to replicate these programs. A full exploration of how a program evolved from conceptualization through design to implementation and beyond is needed to help address this difficulty.

Despite the general consensus on the elements that constitute effective professional development, there remains limited and contradictory research that demonstrates a direct causal link between professional development and student achievement (Guskey, 1991, 2003). According to Guskey and Yoon, "only nine of the original list of 1,343 studies met the standards of credible evidence set by the What Works Clearinghouse" (2009, p. 496) in their summary of a review of exigent research on this issue. While the standard used to evaluate this research was very strict and favored quantitative measures over qualitative measures, the conclusions still demonstrates that research on the impact of professional development on student achievement has remained emergent, rather than established (Guskey & Yoon, 2009). In addition to the uncertainty generated by ambiguous research support, other researchers have argued that professional development literature has focused on the conditions of effective teacher learning, but has not fully embraced the contextual influences of varied educational settings, the

importance of developing effective interactional dynamics, or the role of leadership to support or inhibit teacher learning (Hindin, Morocco, Mott & Aguilar, 2007; Nelson, Deuel, Slavit & Kennedy, 2010; Rimanoczy & Brown, 2008; Smyth, 2007).

To address these perceived weaknesses in exigent research, additional theories have been developed or applied to professional development; these have included activity theory, teacher professional growth theory, complexity theory, cultural relevance, and artisan communities (Clarke & Hollingsworth, 2002; Farmer et al., 2005; Fazio & Gallagher, 2009; Guskey, 2003; Levine, 2010; Talbert & McLaughlin, 2002). While these new avenues of research have added depth to current understandings of teacher learning, they are still in their infancy. More research is needed to identify mechanisms for effectively implementing professional development that will lead to substantive, sustained instructional improvement and student achievement. The incorporation of consistent procedures throughout a program based on a thorough investigation of how programs evolve could move research on the impact of professional development and student achievement forward towards a more comprehensive understanding of the link between the two.

Definitions

Differentiated instruction: A conceptualization of instruction focused on who and where teachers teach, "such that each student will have access to and support for success" in meeting achievement objectives (Tomlinson & McTighe, 2006, p. 2). Also referred to as differentiation.

Differentiated professional development: A term referring to professional development for teachers that is "responsive to their needs" and "designed to engage, challenge, and meet each teacher where he or she is, then move the teacher forward" where "the goal becomes to support and provide feedback" (Tomlinson, 2005, p. 29). This creates teachers who are reflective practitioners devoted to improving student achievement (Flannagan & Kelly, 2009; Kose, 2007; Tomlinson, 2005).

Evaluation: A term referring to project-level evaluations that include "consistent, ongoing collection and analysis of information used in decision making" where data is collected "from multiple sources and perspectives, and [uses] a variety of methods for collecting information" throughout the life of a program to improve and strengthen it (Kellogg Foundation, 2004, p. 14-15). Also referred to as evaluative procedures, evaluative mechanisms, program assessment and evaluative structures.

Self-selected professional development: A term referring to professional development opportunities where individual teachers select experiences that meet their needs, interests, and content areas (Flannagan & Kelly, 2009; Kose, 2007; Tomlinson, 2005).

Significance

Extensive research has been conducted to identify best instructional practices and how to support teacher implementation of such strategies (Attard, 2007; Beers, 2003; Bernhardt, 2009; Boardman, Roberts, Vaughn, Wexler, Murray & Kisanovich, 2008; Compton-Lilly, 2008; Dymock, 2007; Gill, 2008; Graves, 1999; Irvin, Meltzer & Duke, 2007; Lawrence, Rabinowitz & Perna, 2009; Liang & Dole, 2006; Marzano, 2003; Ness,

2008; Pope, 2008). Research on best instructional practices and their implementation has spanned all grade levels, contexts, and types of weaknesses and included specific instructional strategies, intervention practices, conceptual frameworks, remediation programs, and locally-developed professional development programs. Researchers have created a strong knowledge base and provided a deeper understanding of teacher growth. In contrast, limited agreement has been established on the connection between professional growth and student achievement.

It is clear that teachers need significant support to fulfill their complex and vital role in student learning, but such support has often been lacking. Professional development has the potential to create conditions to improve instructional practices and student achievement. Investigating how the local differentiated professional development program was conceptualized, designed, implemented, and evaluated has provided insights into what processes support teachers effectively. Data collected about how the local program was conceptualized, designed, implemented, and evaluated has the potential to establish what processes support the development of effective programs.

The needs of adolescent learners with weak academic skills underscore the complex and vitally important role of teachers at ABC High School. The importance of the role of teachers has been another point of consensus in research (Irvin, Meltzer, & Duke, 2007; Marzano, 2003; Reeves, 2001). Few secondary teachers have received significant, quality pre-service or in-service training on how to address student needs in their content areas (Guskey, 2003; Hutson, 1979; Irvin, Meltzer & Duke, 2007). Yet, "students whose teachers focus on writing, thinking, and reasoning have not only more

engaging and interesting classrooms, but also have higher test scores" (Reeves, 2001, p. 11). When teachers feel confident and valued as they implement new strategies, there seems to be a corollary increase in positive student achievement results (Cantrell, Burns & Callaway, 2009; Guskey, 1982, 1985; Jerald, 2007). It is essential to meet the educational and affective needs of teachers so that they are engaged, self-reflective practitioners who are able to address the needs of struggling adolescent learners.

The most common method of meeting teacher needs in schools has been professional development. According to the National Council of Teachers of English (NCTE), to be effective, professional development must be sustained, engaging, include evaluation, create a professional community, and result in increased student learning (2014). Other organizations have delineated similar lists of the qualities needed to promote teacher learning (DuFour, 2004; Fogarty & Pete, 2010; Guskey, 1991, 2003; Hutson, 1979; Lee, 2010). Teachers, like students, need opportunities for situated, sustained learning in an environment that fosters high expectations under leadership that respects and promotes teacher growth (Ahlfeld, 2010; Aubusson et al., 2007; Guskey & Peterson, 1996; Hindin et al., 2007; Kose, 2007; Lambert et al., 2002; Lipton & Wellman, 2007; Nelson & Slavit, 2008). Addressing the needs of teachers to support improved instruction across the curriculum is therefore the linchpin for improved student achievement.

Several models have emerged that honor the components of effective professional development. Differentiated professional development opportunities that are reflective, informed, diagnostic, connective, application-oriented, problem-focused, quality-

concerned, collaborative, supportive, and sustained give teachers "the will and the skill to study, chart, and respond to students' learning needs" (Muhammad, 2011; Tomlinson, 2005, p. 12). Effective professional learning creates a potential avenue for sustained, positive impact on student achievement across the curriculum. Insights provided by studying the history of the differentiated professional development program at ABC High School help illuminate how best to support teacher growth and student achievement in locally developed educational initiatives.

Guiding/Research Question

There is a body of research that has provided insight into how teachers learn effectively. Teachers need multiple opportunities to explore, construct, practice, and reflect on new knowledge and practices in communities where their professional expertise is honored (Tomlinson, 2005). Research has not yet adequately articulated how to fully integrate teacher growth into traditional professional development structures and promote lasting instructional improvement; this has a profound effect on the day-to-day processes of ABC High School. ABC High School has struggled with large numbers of students who have serious academic weaknesses. This problem has been compounded by changing student demographics, administrative instability, and other factors.

The local district had previously implemented initiatives that were not well-designed, systematically implemented, consistently supported, or monitored for effectiveness. The current professional development program was conceived as the district shifted to a stable commitment to research-based best practices. The local school conceptualized, designed, and implemented a program based on small-group, teacher-

facilitated, self-selected, differentiated professional development. Though the program was based on research-based best practices for adult learning in educational settings, documentation of how it was conceptualized, designed, or implemented is lacking. It is not clear whether or not the school used research-based program planning best practices to conceptualize, design, or implement the current professional development program. In addition, the purposes and goals of the program are obscured by a lack of clear documentation of the intended impact and how such impact would be monitored. The research undertaken here will seek to explore the evolution and intended impact of the program. The overarching question is:

> What is the history and intended impact of the current professional development program at ABC High School?

Sub questions include:

a. What factors are relevant to how the current professional development program was structured and promoted?
b. What was the process followed by the current professional development program to move from conceptualization to design to implementation?
c. What was the intended impact of the current professional development program?
d. What are participant perceptions of the strengths and weaknesses of the current professional development program?
e. What structures were put in place to track the impact of the program?

These questions investigated the evolution of the current professional development structure being implemented at ABC High School. The local district has the opportunity to build capacity for conceptualizing, developing and implementing programs, and develop procedures to be used with other programs and initiatives. It has the potential to contribute to the body of knowledge investigating how to replicate successful programs. It will also contribute to the body of knowledge about the relationship between teacher learning and student achievement.

Review of the Literature

A literature review was conducted to understand the program planning cycle as it relates to how school professional development programs evolve in an attempt to reach intended outcomes. The systems thinking and adaptive schools theoretical constructs, and their associated components, were reviewed with an emphasis on the influence these constructs have on professional development programs in schools. Systems thinking did not originate in the educational field. Since its inception, it has been utilized and refined across a wide variety of fields. Adaptive schools, on the other hand, pulls research from a large variety of other disciplines to create a methodology specific to educational contexts. To fully explore the implications and uses of both systems thinking and adaptive schools, sources have been gathered from multiple areas of study such as adult learning, evaluation, program planning, staff development, student achievement, health, behavioral science, coaching, management, and higher education. (Garmston & Wellman, 2009; Hummelbrunner, 2011; Hyerle & Alper, 2011; Kee, Anderson, Dearing, Harris, & Shuster, 2010; Senge, 2000). Many texts and research related to both these

ideas are found in publications aimed at members of specific communities, such as educators, principals, managers, social service workers etc. because these constructs are grounded in practical applications. A synthesis of this breadth of sources is needed to capture the relevance both systems thinking and adaptive schools have to aspects of professional development programs and the program planning cycle.

The review will be organized into three sections: systems thinking, adaptive schools, and the intersection between systems thinking and adaptive schools. The systems thinking section is organized to reflect deep understanding of the history, theory, tools, and application of the construct. The adaptive schools section is organized to reflect the theory, components, and application of the construct. The final section demonstrates the relationship between systems thinking, adaptive schools, and professional development programs in schools. This organization was created to provide a rich description of the wide variety of factors pertinent to the process of program planning for adult learning in school settings. In order to provide saturation of the literature, internet searches were conducted using databases entered through the Walden University Library such as EBSCOhost, Proquest, Academic Search Premier, Thoreau and ERIC. Multiple Boolean operators and search terms were used to locate relevant sources including: program theory, professional learning, leadership, school improvement, systems thinking, adaptive schools, organizational learning, and organizational planning. Other terms and sources were derived from research gathered in these initial searches.

Theoretical Constructs

Two theoretical constructs were selected that support the exploration of how professional development programs in schools evolve from conception through evaluation. These two constructs emphasize the cyclical nature of programming, human interactional dynamics, and the complex nature of systems including public education institutions. Systems thinking focuses on surface and below surface relationships between elements in a given system. These elements are examined by members of an organization to determine the reasons for current, status quo, actions to determine what changes could or should be made for institutional improvement. Adaptive schools focuses on the role of relationships and core beliefs in shared leadership situations to promote student achievement in educational systems. The adaptive schools conceptual framework represents the practical application of systems thinking through a focus on interactional dynamics. This review will concentrate on the history, theory, and utilization of systems thinking using the adaptive schools framework and how both theoretical views can support professional development program evolution in school settings.

Systems Thinking. Systems thinking is a philosophical paradigm that has existed in some form for many years (Ashmos & Huber, 1987; Skarzauskiene, 2009). It is a way to systematically analyze and observe the world (Martin, Brannigan, & Hall, 2005; Mella, 2008; Senge, 2000). In systems thinking, linkages are uncovered, assumptions are surfaced, learning is examined, and tools are utilized with the goal of an improved organization (Mella, 2008; Senge, 2000; Skarzauskiene, 2008, 2009). Systems thinking

has evolved into a theoretical construct and set of tools uniquely suited to promote positive change in schools because of its potential to represent complexity (Kensler, Reames, Murray, & Patrick, 2011; Senge, 2000; Skarzauskiene, 2009). To understand systems thinking and its implications for education, a review of the history, theory, application, and utilization/tools of this construct has been provided.

History. A brief history of how systems thinking has developed is useful to understand its relevance to the modern educational system (Senge, 2000). Management researchers initially derived systems thinking from a biological context (Ashmos & Huber, 1987; Johnson, 2008). The biological context provided the foundational ideas that the world operated on logical systems even when they were not readily apparent. When applied to business and industry, systems thinking helped managers fully consider logistical aspects of how institutions functioned to produce a given outcome (Ashmos & Huber, 1987; Flood, 2010; Waldman, 2007). As practitioners implemented systems thinking in real world contexts, different schools of thought arose and were expanded.

The area of systems thinking that dealt with physical systems made up of discrete and independent parts has been labeled hard systems thinking. Hard systems thinking deals primarily with the organizational logistics of materials and machines in an institution (Johnson, 2008; Zexian & Xuhui, 2010). Without hard systems thinking, management researchers lacked a strong theoretical basis for how physical parts of a system interacted, yet hard systems thinking lacked the fluidity needed to accommodate human interactional dynamics as an aspect of organizational logistics (Ashmos & Huber, 1987; Johnson, 2008; Zexian & Xuhui, 2010). The type of systems thinking that deals

with both novel and predictable human perceptions of systems is called soft systems thinking (Ashmos & Huber, 1987; Johnson, 2008; Zexian & Xuhui, 2010). It has begun to explore how different individuals, especially leaders, perceive, construct, and influence an organization (Kee, Anderson, Dearing, Harris, & Shuster, 2010; Kenlser, Reames, Murray & Patrick, 2011; Skarzauskiene, 2008, 2009). The practical application of systems thinking principles to complex human contexts is called applied systems thinking (Flood, 2010). Applied systems thinking is based on subjective reality, phenomenology, and relativism, which allows it to accommodate the continuous state of flux organizations experience (Flood, 2010). In applied systems thinking, systems are viewed through the lens of continuous improvement because users believed there is always more to learn about how and why a system functioned (Flood, 2010; Hummelbrunner, 2011; Garmston & Wellman, 2009).

Theory. The basic premise of the systems thinking paradigm is a holistic view that every event, action, and individual is linked in complex interdependent relationships. Many authors have written and researched about the application of these various conceptions of systems thinking to specific fields such as engineering, management, and public services (Boardman & Sauser, 2008; Fullan, 2005; Hyerle & Alper, 2011; Kim a & b, 2000; Richmond, 2010; Senge, 2000). For the purposes of this review, the focus was on ideas relevant to professional development in schools. In his book *A Fifth Discipline: Schools that Learn,* Peter Senge stated that "A system is any perceived whole whose elements 'hang together' because they continually affect each other over time" and "The discipline of systems thinking is the study of system structure and behavior."

(Senge, 2000, p.78). This definition could be seen as the foundational idea of all theories related to the systems thinking paradigm.

Many schools of thought and practice have evolved based on this fundamental understanding of systems thinking. These have included not only the previously discussed concepts of hard, soft, and applied systems thinking, but also open systems thinking, system-wide thinking, human systems thinking, feedback-related systems thinking, system dynamics simulation, process systems thinking, and living systems thinking (Fullan, 2005; Senge, 2000). All these conceptions of systems thinking together can be seen as "a viable continuum of systems thinking practices, all with different degrees of rigor, different approaches, and different views of the nature of a 'system'" (Senge, 2000, p. 79). In each of these practices, the goal has been to move from a reactive stance to a stance based on knowledge of what structures support or interfere with desired organizational behaviors and beliefs (Kim a, 2000; Kim b, 2000).

Several thinkers have specifically addressed how school organizations have improved through the use of systems thinking and systems thinking tools. Barry Richmond (2010), for example, defined the purpose of systems thinking as the possibility "to evolve our thinking, learning and communicating capacities" (p. 3). He continued with an analysis of traditional schooling that demonstrated the lack of connection between desired skills/beliefs and current practices. His conception of systems thinking in schools was based on eight skills that he felt were essential. Those skills were 10,000-meter thinking, system-as-cause thinking, dynamic thinking, operational thinking, closed-loop thinking, scientific thinking, empathic thinking, and generic thinking (Richmond,

2010, p. 4). These skills encompassed a variety of ways to view the world, analyze systems, and solve complex real world problems that include the complexities of real world settings that traditional thinking lacked (Skarzauskiene, 2008).

In *Leadership & Sustainability: System Thinkers In Action*, Michael Fullan (2005) focused on leadership for improved systems. He stated that "the key to changing systems is to produce greater numbers of 'system thinkers.'" (p. 40). Systems thinkers pay attention to the mental models of individuals and how they could be altered (Karaman, 2009; Fullan 2005). Fullan (2005) stated that

> It will be 'systems thinkers in action' who count. They may not have the best elaborate theories of how systems evolve over the long run, but they will be in the midst of the action with a system perspective. And they will interact with others to promote system awareness through their actions and conversations. . . . (p. 43).

His statement shows systems thinking as a point of view with guiding principles that focus on continuous improvement, positive mental models, and holistic thinking. In school environments, the focus on these guiding principles places organizational and individual learning at the center of improvement efforts (Fullan, 2005; Johnson, 2008; Karaman, 2009; Senge, 2000). Individuals who practice systems thinking help organizations build holistic models of systems for continuous improvement through the identification of areas of need, leverage points, key stakeholders, specific actions, and hidden assumptions (Bierema, 2003; Flood, 2010; Hummelbrunner, 2011; Martin, Brannigan, & Hall, 2005; Waldman, 2007). Without a systems thinking theoretical base, decision-makers risk making hierarchical decisions and impose programs based on an

incomplete understanding of a system (Onsman, 2010). Systems thinking has provided a paradigm to support meaning making from large amounts of undifferentiated data. The implementation of this paradigm has been accomplished through the use of specific tools that support the process of collaborative continuous improvement.

Systems Thinking tools. Through research and practice, systems thinkers have developed numerous practical tools to examine how a system functions, what changes are needed, where changes will have the most impact, and where patterns of behaviors need to be modified (Bierema, 2003; Hummelbrunner, 2011; Mella, 2008; Zexian & Xuhui, 2010). The systems thinking tools were designed to promote individual capacity to think from a systems perspective to support the intellectually challenging endeavor of continuous improvements in a specific context (Hung, 2008; Senge, 2000; Skarzauskiene, 2009). The tools reviewed here, causal loops, icebergs, behavior over time graphs, and stock and flow diagrams, were selected because of their ubiquity, utility, and relevancy for educational settings.

Causal Loop. "Causal Loop" is a systems term used to refer to situations where behaviors or actions reinforce other behaviors or actions, which in turn reinforce the first behavior or action with or without the influence of outside factors (Flood, 2010; Mella, 2008). Causal loops are either negative, and reinforce unproductive practices, or positive, and promoted productive practices (Mella, 2008; Waldman, 2007). There are two types of causal loops: balancing loops that have reached sustainable equilibrium and reinforcing loops that perpetually increase or decrease (Mella, 2008; Waldman, 2007).

By using systems thinking to study how a school functions, both positive and negative causal loops can be isolated and examined (Garmston & Wellman, 2009). Another tool, called a connection circle, helps members of an organization visualize interrelationships in terms of these causal loops. This reveals leverage points (the components within a system that have the greatest influence on the largest number of other components within the same system) with the greatest potential impact (Garmston & Wellman, 2009). Organizational change can be reached when causal loops are identified so that positive causal loops can be sustained while negative causal loops might be dismantled or transformed (Bierema, 2003; Martin, Brannigan & Hall, 2005; Waldman, 2007).

Iceberg. The Iceberg tool is a graphic organizer centered on a specific analogy. The analogy visually demonstrates that what is on the surface is a small fraction of what supports a system, just as the bulk of an iceberg exists beneath the surface of the sea (Kensler, Reames, Murray, & Patrick, 2011; Senge, 2000). The iceberg tool, in sum, is based on the idea that systems are multi-leveled and underlying thought patterns are more important than surface structures (Senge, 2000). The process of inquiring into assumptions could be very difficult, but is supported by utilizing the iceberg tool (Kensler, Reames, Murray, & Patrick, 2011; Senge, 2000).

The iceberg graphic is divided into multiple levels and shaped roughly like a pyramid. The top portion is the place where the visible, surface portions of a single event or action are placed. The middle section of the pyramid contains representations of trends and patterns relevant to the event or action under study. Below the patterns and

trends sections is a section for underlying structures. In this section, the policies, rules, or physical structures that supported the listed patterns and trends are examined (Senge, 2000). The bottom level is called mental models. Mental models include values, beliefs, and assumptions held about the event or action under study (Senge, 2000). The mental models portion of the iceberg forces group members to examine different perspectives that created a particular action or event. By drilling down to the fundamental thinking an event or action is based on, a group consciously develops new, shared mental models of both the visible and the invisible portions of the iceberg.

To support full articulation of the Iceberg, other tools can be incorporated. The first tool integrated into the Iceberg in the middle section is called a behavior over time graph. Behavior over time graphs are a simple X and Y axis graphic organizer that help members of an organization see how a system functions (Hyerle & Alper, 2011; Senge, 2000). They are used as a mechanism for tracking how or if a certain behavior changes over time (Hyerle & Alper, 2011; Senge, 2000). They also clarify the expected results of a particular program or process through rigorous thought about anticipated changes (Bierema, 2003). These graphs were approximations of the trends in behavior over a given period of time. Group members used them to create collaborative ideas about a pattern of change (Bierema, 2003; Flood, 2010; Waldman, 2007). Behavior over time graphs alone are useful as a thinking and planning tool, but are also highly effective when used in conjunction with the iceberg tool (Martin, Brannigan, & Hall, 2005).

The other tool commonly integrated into the bottom levels of the iceberg is called a stock and glow diagram. A stock and flow diagram is a visual representation of how

factors in a system are increased or decreased. It explicitly demonstrates how certain tangible or intangible commodities are increased or decreased. The stock and flow tool demonstrates the influence of interdependencies on the system as a whole. The typical image used to visualize a stock and flow format is a bathtub. The stock is the basin, the flows are the faucet and drain, and the hot water tank and pipes are the converter and connectors. When the stock and flow diagram is used with the iceberg tool, it supports the identification of an underlying structure and what the leverage points in the system might have been. Finally, the stock and flow diagram provides conceptual understanding that supports group comprehension and use of complex computer modeling.

Application. The efficacy of an organization increases when the process of systematic self-examination becomes natural to its members (Cantrell, Burns, & Calloway, 2009; Garmston & Wellman, 2009; Jerald, 2007; Mella, 2008). Systems thinking has provided the theoretical underpinnings and tools for self-examination of this type (Garmston & Wellman, 2009). The integration of systems thinking into the culture of an organization or program fundamentally changes the program planning cycle because the infusion of systems thinking demonstrates the implications of programmatic choices more clearly (Flood, 2010; Garmston & Wellman, 2009; Mella, 2008). The systems thinking paradigm helps program planners to conceptualize, design, implement, and evaluate effective programs (Kee, Anderson, Dearing, Harris, & Shuster, 2010). Systems thinking, does not, however, provide mechanisms to help group members interact effectively in negative organizational cultures. The theoretical construct and visualization tools of systems thinking provide a way for an organization to know what to

do to improve. It does not help organizational leaders and members interact effectively to use this process or to instigate desired changes.

Adaptive Schools. While systems thinking provides theory and visual representation to support program conception, adaptive schools is uniquely suited to the support of interactions between potential program planners, key decision-makers, stakeholders, and other relevant individuals (Garmston & Wellman, 2009; Hanson & Mott, 2001; Kee, Anderson, Dearing, Harris, & Shuster, 2010). It is also an application of systems thinking that has been developed for educational contexts with an emphasis on teachers as learners, leaders, and group members (Garmston, & Wellman, 2009). The construct of adaptive schools is a conceptual framework based on research and theory related to interactional dynamics in groups from multiple fields of study such as biology, psychology, physics, and ecology (Garmston & Wellston, 2009). It incorporates protocols for group interactions, mechanisms for the development of professional communities, and a set of meaningful actions for both group facilitators and group members (Garmston & Wellman, 2009). These unique components work together to help organizations form strong, effective, productive groups to improve schools (Garmston & Wellman, 2009; Kee, Anderson, Dearing, Harris, & Shuster, 2010; Knight, 2011). Adaptive schools was selected as an underlying conceptual framework for this review because it is designed specifically to help schools improve through structured collaborative inquiry based on systems thinking. This review will focus on the theory, application, and components of the adaptive schools construct.

Theory. Adaptivity is the theoretical concept underlying all aspects of adaptive schools. It also represents the goal behind the use of adaptive schools. According to the adaptive schools model, schools that become supportive, self-sustaining, and continuously learning communities of professionals become adaptive. When a school has become adaptive, its members have consciously acknowledged they must create a living system that continuously improves rather than a reactive, static system that cannot adapt (Beaty-O'Ferrall, & Johnson, 2009; Garmston & Wellman, 2009; Page, Parker, & Renger, 2007; Sandman, Kelly & Greiner, 2009).

The concept of adaptivity originated from systems thinking and has been applied specifically and extensively to school settings. In adaptive schools, "to be adaptive means to change form in concert with clarifying identity" so that "adaptivity consists of flexible responses interacting with changing environmental conditions." (Garmston & Wellman, 2009, pp. 5, 8). By using the adaptive schools model, adaptivity can be achieved by disassembling negative causal loops and establishing positive causal loops (Garmston & Wellman, 2009; Kee, Anderson, Dearing, Harris, & Shuster, 2010; Knight, 2011). The adaptive schools model focuses on research-based elements needed to establish and support effective relationships. Relationships are the basis of this construct because collaborative work is considered the foundation of organizational change. Within the adaptive schools construct, relationships are broken down between intrapersonal and interpersonal. Relationships are also considered to establish high functioning, self-sustaining systems committed to continuous improvement. The most

pervasive elements of relationships are reflection, efficacy, and interdependence. These elements are deeply intertwined.

Components. The basic components of the adaptive schools construct include research-based best practices, collaborative norms, professional community, dialogue and discussion, trained facilitators, conflict as a resource, and consensus (Garmston & Wellman, 2009). Each of these aspects contributes to a unique perspective on school reform focused on sustainable, continuous improvement.

Research-based best practices. Research-based best practices is a term that refers to instructional strategies that have been formally researched and determined to have significant, consistent impact on student achievement (Bartholomew, 2007; Boardman et al., 2008; Guskey, 1985; Marzano, 2003, 2007; Scammacca et al., 2007). This term also refers to the adult learning principles and strategies when used in reference to professional development (Fixen, Blasé, Wallace & Wallace, 2009; Hutson, 1979; Illback et al. 2010; Patton, 2001; Reeves, 2010; Sparks, 2005). Adaptive schools has taken seriously new and deeper understandings of how the brain works and how effective learning occurs and incorporated them into professional practice.

Research-based best practices are the fundamental building blocks of lesson design and as such are not quick fix solutions that could be implemented instantaneously. Rather, best practices represent a fundamental shift in learning, teaching, and assessment design. To nurture the implementation of best practices requires a long-term commitment to professional development because teachers had to shift their thinking and practices (Ahlfeld, 2010; Amau, 2009; Barnett & O'Mahoney, 2006; Garmston &

Wallace, 2009); Reeves, 2010). This is a gradual, continuous process that is most successful when it is intrinsically motivated, collaborative, respectful, and integrated into every aspect of school culture (Garmston & Wellman, 2009; Lambert, et al., 2002). Adaptive schools provides mechanisms to support the implementation of best practices to reach the goal of adaptivity through a systems thinking perspective.

Collaborative norms. One mechanism that has proven to support the implementation of best practices is the use of collaborative norms (Garmston & Wellman, 2009; Lipton & Wellman, 2007; Little & Houston, 2003; Nelson & Slavit, 2008; Santamarina & Thousand, 2004). Collaborative norms are explicit, detailed statements of how working together should function (Hord, 2004; Lieberman & Miller, 2001). They are the contract between group members that creates a clear understanding of the expectations for collaborative work. In the adaptive schools construct, these norms are negotiated when a group formed and are written down (Garmston & Wellman, 2009). Collaborative norms are the basis of professional communities. A professional community is defined as a group that functions effectively through mutual respect, professionalism, positivity, and the use of other adaptive schools concepts (Garmston & Wellman, 2009; Levine, 2010; Servage, 2008; Tobia, Chauvin, Lewis, & Hammel, 2011). Professional communities are essential to continuous improvement because they are the foundation of a school culture that values continuous improvement and learning (Hindin, Morocco, Mott & Aguilar, 2007; Levine, 2010, Servage, 2008; Tobia, Chauvin, Lewis, & Hammel, 2011; Watson, 2005). When groups function in this way, they are more

effective, more thoughtful, and more open to innovative ideas (Garmston & Wellman, 2009; Lieberman & Miller, 2001; Weinbaum, et al., 2004).

Dialogue and discussion. The ability to capitalize on the openness established in professional communities often resides in the ways group members talk. Adaptive schools has identified two essential but distinct forms of talk in professional communities: dialogue and discussion (Garmston & Wellman, 2009). Dialogue is a group form of intellectual investigation. In dialogue, group members share ideas, thoughts, and information without judgment or criticism. In addition to building respect and promoting active listening, dialogue also establishes shared understandings and explores potential solutions to a problem (Boydell & Blantern, 2007; Davies & Dunnill, 2008; Garmston & Wellman, 2009; Hirsh & Killion, 2009; Knight, 2011; Mullen & Huntinger, 2008; Nelson, Deuel, Slavit & Kennedy, 2010; Servage, 2008). The view that systems are layered and that layers must be peeled away and examined to create lasting change is fundamental to the dialogue process because it represents the process of fully understanding and listening to one another (Bierema, 2003; Garmston & Wellman, 2009; Mella, 2008). Adaptive schools has posited that dialogue should be used extensively and comprise most of the talk groups engaged in together (Gramston & Wellman, 2009).

Unlike dialogue, discussion focuses on decision-making. It is results-oriented. The goal of discussion is to establish consensus on the course of action the group will take (Garmston & Wellman, 2009). Most school talk is discussion. Because educators are doers, there has been a tendency to jump straight into discussion without adequate dialogue (Garmston & Wellman, 2009). Discussion is most effective when dialogue has

been utilized to create shared understandings and explore novel ideas (Garmston & Wellman, 2009; Servage, 2008; Smyth, 2007; Socol, 2007). If groups have successfully dialogued about an issue, discussion is much easier.

As dialogue progresses, communication improves (Boydell & Blantern, 2007; Garmston & Wellman, 2009; Hirsh & Killion, 2009; Knight, 2011; Madaus & Stufflebeam, 1984; Nelson, Deuel, Slavit & Kennedy, 2010; Servage, 2008). Using dialogue, organizations create system thinking based visual images that demonstrate the interconnectedness of various components of the system (Garmston & Wellman, 2009; Senge, 2000) This further surfaces hidden assumptions, built common understanding, reveals themes, and generates new insights (Garmston & Wellman, 2009; Hirsh & Killion, 2009; Lambert et al, 2002). This process has allowed organizations to make fundamental paradigm shifts to new ways of thinking about a system and a problem (Garmston & Wellman, 2009; Lambert et al, 2002; Servage, 2008; Socol, 2007). In addition, the development of a deep understanding of an organizational problem increases the likelihood that the eventual program will have significant impact and will be sustainable (Grimmett, Rickard, & Gill, 2010; Knight, 2011; Martin, Brannigan, & Hall, 2005; Westerheijden, Hulapiau & Waeytens, 2007).

Trained facilitators. The creator of effective dialogue and discussion as it is described above is called a facilitator. Facilitators are essential in adaptive schools. A facilitator is a trained individual who is able to lead a group by using protocols and facilitation moves effectively. Facilitators are trained to lead large groups or poorly functioning groups effectively. The use of a facilitator has promoted change in stagnant

environments and helped alter the culture of schools. Adaptive schools provides this training as well as interactional protocols and facilitator moves (Garmston & Wellman, 2009). A protocol can be defined as a set of directions for structured conversation (Fogarty & Pete, 2010; Gallimore, Ermling, Saunders, & Goldenberg, 2009; Gramston & Wellman, 2009).

Facilitators use protocols with new, contentious, or changing groups because the protocols provide structure, reduce emotional responses, and create space for equitable contributions by all group members (Gallimore, Ermeling, Saunders, & Goldenberg, 2009). Adaptive schools has provided over 500 protocols. A facilitator's use of protocols helps groups establish and follow collaborative norms as well as practice the habits of listening, pausing, and paraphrasing needed to communicate effectively (Gramston & Wellman, 2009; Hindin, Morocco, Mott & Aguilar, 2007; Kee, Anderson, Dearing, Harris, Shuster, 2010). Trained facilitators support collaborative inquiry and problem solving through the effective implementation of appropriate protocols. The combination of skilled facilitators and structured protocols best supports the adaptive schools goal to create self-sustaining, adaptive schools.

Conflict as a resource. One of the reasons that both protocols and facilitators are so powerful is because in adaptive schools, conflict is reframed as a resource. Difference of opinion is valued as an opportunity to explore ideas and generate innovative alternatives to current practices. Ideas are separated from individuals (Gramston & Wellman, 2009). When this separation is successful, group members are able to set aside emotional, personal responses and focus on the quality and validity of ideas that are

generated (Colburn & Talbert, 2006; Fazio & Gallagher, 2009). Further, structured conversation allows conflict of opinion to become an opportunity to explore ideas more deeply, uncover hidden assumptions, discover unanticipated consequences, develop fuller understanding, and promote consensus (Fazio & Gallagher, 2009; Gramston & Wellman, 2009; Hanson & Mott, 2001). Conflicting opinions become an opportunity to strengthen intellectual examination of ideas and promote thoughtful innovation and application of best practices (Gramston & Wellman, 2009; Hindin, Morocco, Mott & Aguilar, 2007; Talbert & McLaughlin, 2002).

The goal of the adaptive schools framework is to reach consensus in decision-making to sustain an adaptive educational institution (Gramston & Wellman, 2009). Consensus means that all group members are fully committed to a selected course of action and genuinely agreed with the decision. Consensus is developed through positive, constructive conflict throughout the process of dialogue and discussion. True consensus, where every member of a group agrees completely is often impossible because of different opinions based in genuinely different perspectives. These differences are respected while still reaching positive decisions through sufficient consensus. Sufficient consensus means that approximately 80% of a group agreed and those who respectfully disagreed accept the decision and committed to supporting the decision. This means that those who disagree make a conscious choice not to sabotage the decision through speech, inaction, or contrary action (Gramston & Wellman, 2009; Hord, 2004).

Application. To be an adaptive system, schools must embrace the messy process of examining deeply held routines, assumptions, and beliefs (Garmston & Wellman,

2009). This process is often threatening and uncomfortable for many individuals without support, practice, and commitment (Braken, 2011; Garmston & Wellman, 2009; Levine, 2010; Maurer, 2010). Adaptive schools moves beyond the identification of feedback loops and leverage points in a school community. It draws from numerous other areas of research including cognitive coaching, modern psychology, student achievement, professional development, leadership, and continuing education (Garmston & Wellman, 2009). From these areas, adaptive schools has brought together a set of deceptively simple principles, protocols, roles, and ideas to guide the development of adaptive professional school communities.

Intersection of Systems Thinking and Adaptive Schools. Systems thinking has been applied through adaptive schools to deepen thinking and structured conversation, to promote constructive conflict, and to support full exploration of all ideas. Systems thinking provides the methods used to sustain higher level thinking skills to understand and improve organizations. It does not, however, include practical strategies for movement from individual thought to group action. Adaptive schools can revolutionized the interactions of groups in schools and instigate sustainable change in practice and culture by providing school leaders and group members with the ability to use protocols, dialogue, discussion, facilitator moves, and themselves as resources for effective change (Gramston & Wellman, 2009; Hawley, 2007; Kee, Anderson, Dearing, Harris, & Shuster, 2010). It provides concrete actions and strategies that are well-aligned with systems thinking and specifically oriented towards educational environments. Program planning has been one area where the intertwined use of systems thinking theories and adaptive

schools strategies generate continuous improvement in schools (Kensler, Reames, Murray, & Patrick, 2011).

Use of systems thinking and adaptive schools has been especially impactful in professional development programs because of the power to influence how teachers communicate (Gramston & Wellman, 2009; Senge, 2000). Effective communication is important to support teacher use of best practices, technology, and formative and summative assessment data (Hawley, 2007; Kee, Anderson, Dearing, Harris, & Shuster, 2010; Knight, 2011). Systems thinking provides the ability of teachers to analyze their own teaching, the system they work within, and leverage points for improvement (Kensler, Reames, Murray, & Patrick, 2011; Senge, 2000; Skarzauskiene, 2009). Adaptive schools provides the tools to communicate for effective collaboration and instructional improvement (Hummelbrunner 2011; Kee, Anderson, Dearing, Harris, & Shuster, 2010). Combined, these two theories constitute the basis for the development, implementation, and evaluation of effective professional development programs designed to meet the needs of individual teachers to promote increased student achievement (Fullan, 2005; Karamar, 2009; Kee, Anderson, Dearing, Harris, & Shuster, 2010; Mella, 2008; Richmond, 2010).

Implications

This study used the constructs of systems thinking and adaptive schools to explore the conceptualization, design, implementation and intended impact of small-group, self-selected, teacher-facilitated, professional development at ABC High School. This research has generated details often omitted in research calling for extensive professional

development. It focused on the details of how to create and sustain effective structures devoted to professional growth and student achievement using differentiation as a vehicle for teacher learning. These details inform the creation of consistent procedures for conceptualizing, designing, implementing and evaluating programs in the district. They also add to the body of knowledge demonstrating a link between teacher learning and student achievement. In addition, these details help other institutions replicate the process to successfully conceptualize, design, implement, and evaluate programs tailored to meet local needs.

Summary

Two theoretical constructs, systems thinking and adaptive schools, were reviewed. It has been established that the theoretical, philosophical, and methodological aspects of both these constructs support an emphasis on continuous improvement (Ashmos & Huber, 1987; Fullan, 2005; Garmston & Wellman, 2009; Hyerle & Alper. 2011; Reeves, 2010). Systems thinking addresses the complexity of change and the importance of personal perceptions (Hummelbrunner, 2011; Hyerle & Alper, 2011). Adaptive schools addresses the dynamics of interpersonal relationships and the need to focus on building positive, trusting relationships (Garmston & Wellman, 2009). Systems thinking and adaptive schools are highly compatible (Garmston & Wellman, 2009; Kee, Anderson, Dearing, Harris, & Shuster, 2010). The use of these constructs effectively supports program planning as an iterative process, especially when applied to professional development programs for teachers (Garmston & Wellman, Hummelbrunner, 2011).

Many students do not possess adequately sophisticated academic skills to engage in secondary level content learning when they enter the high school (DESE, 2009). Increased pressure to improve standardized student achievement scores has created an impetus for supporting teacher learning through differentiated professional development. This research provides valuable information about how a program can be successfully conceptualized, designed, implemented and evaluated.

Section 2: The Methodology

Introduction

This project study used a qualitative, case study design to explore how the professional development program currently being implemented in the local setting was conceptualized, designed, and implemented The flexible, responsive, and participatory nature of the case study makes it ideal to explore ill-defined, evolving, or new programs and initiatives at any stage in the iterative cycle of a learning organization (Benseman, 2006; GAO, 1990; Naccarella, et al., 2007; Patton, 1994; Pierre, 2007). At ABC High School, a case study was selected to develop rich, thick description of a bounded system while being respectful of participants to elicit a deep understanding of the professional development program under study.

The professional development program at the high school under study, hereafter referred to as ABC High School (pseudonym) was in a position to benefit from this type of project study for several reasons: the district was focused on continuous improvement and building capacity, and the professional development program at the high school was not fully articulated at the time of the study. The district in question, hereafter referred to as ABC School District (pseudonym) had begun implementing data-driven decision-making as a form of evaluation and was working to increase leadership and data-driven decision making capacity throughout the district. The current professional development program was a district-approved, school-based effort to provide responsive programming to teachers as part of this imperative. In an effort to initiate professional development that reflects research on effectiveness, is responsive to teacher needs, and incorporates

continuous improvement, ABC High School implemented a small-group, teacher-facilitated, self-selected, differentiated professional development program in 2009. However, multiple, specific goals or outcomes for the program were not then formally identified as part of development and implementation (Mr. Prin personal communication, April 20, 2011).

This case study explored the nuances of program conceptualization, design, implementation, and intended impact by gathering qualitative data to determine various stakeholder perceptions. The case study design allowed for a variety of data to be combined to support findings about the program (Embury, 2010; Koenig, 2009; LomBombard, 2009; Pierre, 2007). These findings provided insights into the "multiple kinds of learning possible" provided to teachers by the program and from the program itself, as suggested by Sridharan and Nakaima (2011, p. 140). This case study also provided insights into how the program was developed, implemented, and sustained that supported program growth, as suggested by Desimone (2009), Embury (2010), Hoole and Patterson (2008), LomBombard (2009), and Pierre (2007). I concurrently analyzed the study's qualitative data using inductive analysis and typologies derived from the research questions. Afterwards, I used this information to create a policy proposal detailing a specific procedure to support the conceptualization, design, implementation, and evaluation of future programs. Findings will be shared with key stakeholders as part of a policy recommendation project. The policy recommendation was designed as a set of interconnected templates that guide members of the community through every stage of

programming in a consistent and effective manner. The policy recommendation includes a compilation of relevant research and additional sources of information.

Design of the Study

I selected a combination of the constructivist and pragmatic paradigms for this study. Constructivism can be defined as a worldview where a single, absolute reality does not exist; instead the focus is on inquiring into the complex, subjective realities created by individuals (Creswell, 2007; Hatch, 2002). Using a constructivist stance allowed key participants to be included in meaningful research because they were invited to share their individual and collective perspectives, as suggested by Creswell (2007, 2009). According to Sherwood (2010), "Validating the opinions of stakeholders and integrating their needs into programs helps to guarantee that the program is comprehensive in nature and will increase buy-in for the program" (p. 17), so this study was designed with these principles in mind.

Balancing this constructivist approach, pragmatism is a focus on achieving specific results using the most logical means to help solve real world problems (Creswell, 2007, 2009). Using a pragmatic stance allowed the study to focus on exploring this program's conceptualization, design, implementation, and intended impact to provide practical insights and information relevant for the current program or in future programs. These paradigms together formed a hybrid approach to this case study that combined respect for individual perceptions with a focus on practical results.

This project study used case study methodology to explore the conception, design, implementation, and intended impact of a specific program using qualitative data. Based

on my understanding of Creswell (2207), led me to determine that quantitative data and methodologies were not suitable for this study because the study focused on subjective data such as personal opinions and experiences. Subjective experiences and opinions are difficult to quantify and doing so might not have yielded results which addressed the research questions. Instead, qualitative data allowed for subjectivity and allowed for rich, thick description that provided a full picture of the case under study, in accordance with Creswell (2007).

Creswell (2007) identified five primarily qualitative research traditions: ethnography, narrative research, grounded theory, phenomenology, and case studies. Case study is a methodology that "investigates a conceptualized contemporary phenomenon within specific boundaries" (Hatch, 2002, p. 30) and is distinguished by the limited size of the study, the focus on a bounded system, and the holistic, in-depth description (Creswell, 2007, 2009; Hatch, 2002; Merriam et.al, 2002; Yin & Davis, 2007). A case study was the best choice for this research because it provided the opportunity to develop depth in the inquiry (Creswell, 2009; GAO, 1990; Hatch, 2002; Merriam et al. 2002; Yin, 1994).

Case study methodology was most appropriate for the current project because the individual programs being studied functioned as bounded systems located within specific contexts, and because these systems were best explored through in-depth study based on long-term engagement in the local setting with subjects who are representative of the case. Further, there has been a strong tradition within case study methodology of combining different forms of data to both deepen the understanding of the case and help

generate useful findings (Gallimore, Ermeling, Saunders, & Goldenberg, 2009; Goldie, 2006; Hodkinson & Hodkinson, 2003; Lachat & Smith, 2009; Yin & Davis, 2007). A case study design allowed flexibility, promoted depth, and was well-aligned with the constructivist, pragmatic paradigm that I chose. Because the program at ABC High School can be seen as a bounded system within the local context and is in a district focused on data-driven decision making, a case study methodology met the needs of the program and local setting.

The ultimate goal of any school program is to positively impact students (Killion, 2008; Sanders & Sullins, 2006). A case study was appropriate for this study in part because it explored how the program was conceptualized, designed, and implemented based on stakeholder perceptions of the program. It was also appropriate because case studies often provide insights into programmatic and instructional improvements posited to lead to improved student achievement (Colbert, Brown, Choi, & Thomas, 2002; Guskey, 2002; Johnson, Kahle, & Fargo, 2007; Killion, 2008; Lee, 2010). At the initiation of the program there was only limited documentation of the goals of the program (Ms. Amerson, personal communication, May 16, 2011). This research explored how the program was conceptualized, designed, and implemented as well as uncovered the intended impact and perceived strengths and weaknesses of the program. Case study was the most appropriate methodology for this project study because it allowed for in-depth exploration of how this specific program was conceptualized, designed, and implemented with a focus on intended impacts and teacher perceptions of strengths and weaknesses.

Participants

Case study methodology focuses on a bounded system in which a small number of participants provide in-depth information about a case (Creswell, 2007; Hatch, 2002; Rubin & Rubin, 2005). The number of participants is usually limited, but the primary consideration is not the number; it is that the number of participants "provide ample opportunity to identify themes of the cases as well as conduct cross-case theme analysis" (Creswell, 2007, p. 128). Participants were selected based on their knowledge of or role in the program. Interviews were conducted with one member of the professional development committee, one administrator and three teacher participants in the program. A focus group of four teacher-facilitators was also conducted. Participants for interviews and focus groups were not restricted by other factors such as subject taught, years teaching, or personal demographic factors; however, an effort was made to ensure that the diversity of the staff in the local setting was reflected in the participants.

As part of IRB approval, permission to conduct the project study was granted by the relevant district and building personnel. Once IRB approval had been granted, access to the participants was gained through prolonged engagement in the setting as a member of the staff, the researcher's role as a teacher-facilitator and current PDC co chair, and by creating a database of teachers based on their roles in concert with other members of the professional development committee. Relationships were established via email, friendly questions, and the use of a comfortable and private environment. Consent forms were delivered electronically to all participants selected for the study before any data collection took place. Potential benefits and risks were shared with participants at this time.

Benefits included opportunities to voice opinions and suggestions about the professional development program, learn about the program development process within the district, and potentially contribute to improvements in this process. Risks included unintentional breach of confidentiality and possible feelings of anxiety or negativity as different perspectives on professional development are shared. Participants were periodically reminded that they were able to leave the study at any time, and also retain the ability to verify data collected through review of session transcripts and member checking of initial conclusions.

Purposeful sampling was used to select one member of the professional development committee of approximately 15 teachers and one building or district level administrator of approximately 10 administrators (Creswell, 2007). A purposeful sample is the selection of participants based on their appropriateness for the case under study (Creswell, 2007). There were a very limited number of individuals who would have detailed knowledge about the program in question; therefore, purposeful sampling was the most appropriate method of selecting them. This strategy was also appropriate because previously established relationships between potential participants and the researcher impacted willingness to participate (Briggs & Coleman, 2007; Creswell, 2007; Merriam et al., 2002).The selection of these participants reflected multiple levels of administration that have a direct stake and decision-making power for some aspect of the program. Participants for both the PDC and district level administrator interviews were selected by name in concert with administrators to select the most knowledgeable individuals. The focus group of teacher facilitators used random purposeful sampling

(Briggs & Coleman, 2007; Creswell, 2007; Fink, 2006; Merriam, et al. 2002). The focus group of teacher participants also used random purposeful sampling (Briggs & Coleman, 2007; Creswell, 2007; Fink, 2006; Merriam, et al. 2002). Random purposeful sampling means that the potential purposeful sample is too large to fully employ (Creswell, 2007). In this instance, teacher-facilitators and teacher participants were selected as part of the case because they represent two groups of stakeholders who are impacted by and participate in the program. These two groups are most directly affected by the program and are thus the best purposeful groups from which to randomly select participants.

The pool of current and previous teacher-facilitators was approximately 30 teachers. The focus group included four teachers. With the help of the school's professional development committee, a list of current and previous teacher-facilitators was generated. Teacher-facilitators are those who have been engaged in the current program as learning team facilitators and who have participated in ongoing training and session planning. Because the pool of potential participants was small and relatively homogenous, demographic criteria was not used. Instead, it was assumed that any group of four or more adequately represented the diversity of the pool because the pool was limited to those who volunteered to facilitate the learning of others. To select participants, names were replaced with numbers and randomly selected until four teacher-facilitators agreed to participate in the focus group. As part of informed consent, participants acknowledged that they knew one another and agreed to keep confidential the names of other participants.

The potential pool of teacher participants was much larger than that of teacher facilitators, consisting of over 100 teachers spanning all high school subject areas and grade levels. The same process was used with teacher participants as was used for teacher facilitators to select two teacher participants. A list of teacher participants was generated with the help of the school's professional development committee. Teacher participants were defined as certified teachers who were assigned to a learning team and attended district mandated professional development sessions. As with teacher facilitators, demographic criteria was not used in the participant selection process because of the relatively homogenous participant pool. Names were replaced with numbers and randomly selected until three teacher participants agreed to be interviewed. These samples were random purposeful samples because participants were selected based solely on participation in the program (Briggs & Coleman, 2007; Creswell, 2007; Merriam et al., 2002).

Potential participants were contacted individually via email explaining the research, its purposes, confidentiality, and the voluntary nature of participation. I also explained other issues related to informed consent, described what participation entailed and asked if those selected were willing to participate (Appendix B). An informed consent letter was attached to the email and those interested were asked to print it, sign it, and return it in a sealed envelope via interoffice mail. If preferred, a participant might also have chosen to return the informed consent letter with an electronic signature or deliver it in person. If any of those selected declined to participate, additional individuals

from the relevant pool of participants were randomly selected and contacted. This process continued until enough individuals agreed to participate for the study to proceed.

Since the researcher is a member of the teaching staff, existing professional relationships facilitated establishing positive study relationships (Rubin & Rubin, 2005). In addition, those who agreed to participate received a follow-up email or face-to-face visit to thank them for agreeing to participate, review the items covered in the email, and set up times and locations for interviews or the focus group meeting to take place. To further facilitate the participant-researcher relationship, several steps were taken. Interviews and the focus group took place at the school site in a private meeting room which was reserved and locked to prevent interruptions and ensure privacy. Times were scheduled at the convenience of the participants to accommodate teaching and personal obligations. Light refreshments of soda and cookies were available. The first question of the interview was designed to allow participants to speak freely about past experiences to build comfort and confidence. Participants retained the right to withdraw from the study, review transcripts, and participate in member checking of initial conclusions and were reminded of these rights in each contact and before each session began.

Ethical Protection

All participation was strictly voluntary and any participant could withdraw at any time. At all stages of the project study, every effort was made to keep participants informed about the progress of the study and its purposes. As the researcher, I needed to take extra precautions to ensure that potential participants did not feel pressured to agree to be in the study because of my role in the professional development committee. Last

year, I was elected as the Professional Development Committee co chair. That means I am responsible for planning and providing materials for professional development sessions; however I have absolutely no authority to enforce or evaluate participation in those sessions. It was especially important to ensure that participants were aware that I have no formal authority or influence over them.

Prior to agreeing to participate, all potential participants received an email explaining informed consent procedures including the voluntary nature of participation and confidentiality. A statement that the researcher's position as co chair of the professional development committee should not influence one's decision to participate and would have no repercussions or consequences whether or not one chooses to participate was also included. An informed consent letter was provided, reviewed, and signed before beginning any interview or focus group session. The letter also included notice that a research assistant would participate in the transcription of the audio that was recorded. In addition, each participant in interviews was assigned a random number in the transcripts so his/her name would not be associated with audio recordings or transcripts. All other potentially identifying information was removed or changed in each interview transcript. Pseudonyms or titles were used if any specific names or titles were mentioned or needed for sense in the transcripts. Participants in individual interviews were also asked not to mention specific names in responding to interview questions. Focus group participants were asked to keep confidential the other members of the group and the discussion rather than removing names so that discussion could flow naturally and individual transcripts could be identified.

After the interview and focus group sessions were transcribed, participants were provided with copies of transcripts to review for accuracy. Each participant was asked to ensure that the transcript reflected his/her intended meaning, point out any omissions, and request retractions. If a participant had wanted to make extensive changes, a private conversation would have been scheduled to address concerns and come to a consensus about the content of the transcript; however, no participants requested such changes. Specific permission was requested before direct quotes were used. Member checking was used once coding was completed via individually sent emails so that participants could comment on conclusions, make suggestions for improvement, and/or point out errors prior to the completion of the project study and dissemination of results.

The researcher was responsible for ensuring that all data is kept confidential. A paid research assistant assisted with transcription of audio recordings after signing a confidentiality agreement. All data was and will be stored in a secure location at the home of the researcher in a locked cabinet. Paper copies of interview notes, codes, and other documents will be kept for five years and then destroyed to meet with standard research practices (Creswell, 2007). Electronic data will be stored on a removable flash drive under a coded folder name. It will also be kept in a locked cabinet for five years and then destroyed (Creswell, 2007). Destruction of data will be witnessed by the research assistant.

Throughout the data collection process, every effort has been made to accommodate the needs of participants and protect them from harm. Potential harm was minimal and included perceived coercion to participate based on a previous relationship

with the researcher, breached confidentiality, negative reactions from staff or administration if confidentially should be breached, or discomfort during an interview or focus group session. To reduce perceived coercion to participate, formal emails and informed consent documents requesting participation emphasized the voluntary nature of the study. Confidentiality was protected through selecting a private location for sessions, coding participant names for data collection and storage (where appropriate), and removal of potential identifiers from final stored copies of transcripts. Finally, if any participant had become agitated or felt uncomfortable with any question during an interview or focus group session, the participant had the option to move on to another topic or question or to halt the interview if necessary. These measures protected the participants from any potential harm.

Data Collection Stages

In this design, the data collection method was qualitative. The setting of this case study was a large urban high school in eastern Missouri with a socioeconomically, racially, and culturally diverse student population. The population for this study was limited to certified teachers and administrators. Before data collection took place, the University Institutional Review Board (IRB) provided approval verifying that the case study plan met ethical standards. As part of this process, a community partner agreement and a data use agreement were created and signed. By signing these documents, the district allowed this case study to be conducted and committed to participating in the research. In addition, the research assistant working on the study signed a confidentiality

agreement guaranteeing that identities would be protected even if they were unintentionally revealed in the transcription process.

This case study investigated the conceptualization, design, implementation, and intended impact of the current professional development program using the perspectives of various stakeholders. In searching the website of the ABC School District, it was discovered that information about the program that provided "a clear definition of the population, problems and outcomes that are the focus of any program, a clear presentation of theoretical assumptions that guide the choice of intervention, and systematic assessment of effectiveness" was not available (Savaya & Waysman, 2005, p. 85). To verify this information, a building administrator was questioned about the existence of formal goals and outcomes for the program and acknowledged that goals and outcomes of the program had been established ad hoc during initial implementation of the program and that these elements had not been consistently, publically documented on the district website (Mr. Prin, personal communication, April 20, 2011). The design of this case study reflected the need for exploration of how the program was conceptualized, designed, implemented, and what its intended impact was.

This case study used a concurrent qualitative design to collect and analyze data (Creswell, 2007, 2009; Leech & Onwuegbuzie, 2007). A case study design fit the goals of the study because it elicited rich descriptive data from a variety of perspectives while remaining responsive to local needs (Creswell, 2007, 2009; Hatch, 2002). The concurrent qualitative design allowed the collection of multiple types of qualitative data in a timely fashion and strengthened the analysis (Creswell, 2007, 2009). This collection

took two forms: individual interviews and a focus group session. Altering the format of investigation allowed the study design to reflect the particular stakeholders' strengths and protect against potential harms involving privacy or comfort within a group setting.

Individual interviews were conducted with one administrator, one member of the professional development committee and two teacher participants. The interview questions were determined by the literature review and were designed to elicit detailed and thoughtful responses. Interview questions were designed to allow participants to provide detailed descriptions of the program, its inception, and/or its intended impact from his/her unique perspective. All interviews were scheduled to last 45-60 minutes and took place at the school site in a private meeting room at a time convenient for each participant. Each participant was interviewed once, which yielded four interviews for analysis. A total of four interviews yielded enough data to provide a deep and rich description of the case while still providing diverse, representative perspectives within the population of the local setting (Creswell, 2007; Hatch, 2002; Rubin & Rubin, 2005). By limiting the number of interviews, it was also possible to ensure that the interviews were of significant duration. As part of the informed consent process, the interviewees agreed to be digitally audio-taped and notes were taken during the session (Janesick, 2004; Rubin & Rubin, 2005). Notes and tapes have been and will be stored in a locked cabinet in the researcher's home in coded files to help protect privacy.

Individual interviews were an appropriate choice for teacher participants, administrators and members of the professional development committee for several reasons. First, this group represented a wide variety of teachers and administrators, some

of whom may not have previous relationships or training in collaboration. In addition, teacher participants were mandated to participate in the program, but might not have felt comfortable having others know about their participation in the study. Further, participants of the program may have felt more comfortable speaking frankly if privacy could be guaranteed. Individual interviews provide this additional confidentiality and increased the comfort level of participants. Both administrators and members of the professional development committee were also more comfortable expressing honest opinions in a confidential setting. Interview questions were crafted to elicit detailed descriptions of the history and intended impact of the program. Such questions focused on how members of the community interact in the program and what the program was intended to accomplish.

Teacher-facilitator data collection took the form of a focus group meeting. The focus group questions were determined by the literature review and were designed to allow participants to interact as they built thorough responses. The focus group was scheduled to last 45-60 minutes and took place at the school site in a private meeting room at a time convenient for the members of the focus group by using an internet survey tool. The location provided both privacy and a familiar, informal environment to help participants feel comfortable, so a private meeting room was appropriate as it could be reserved and locked (Rubin & Rubin, 2005). As part of the informed consent process, the members of the focus group agreed to be digitally audio-taped and notes were taken during the session (Janesick, 2004; Rubin & Rubin, 2005). Notes and tapes have been and will be stored in a locked cabinet in the researcher's home in coded files.

A focus group, rather than individual interviews, was selected for teacher-facilitators for several reasons. First, teacher-facilitators volunteered for their role and have had multiple training sessions together. Because of this, these individuals were likely to be more open to sharing and were likely to be invested in the program. In addition, because these individuals facilitate learning teams, but were still mandated to participate in professional development, they were doubly impacted by the program. Teacher-facilitators also have had specific training to improve their collaborative skills, making a focus group an appropriate choice for this population (Creswell, 2007; Hatch, 2002; Janesick, 2004). Finally, teacher-facilitators work in groups of two or three to facilitate learning teams and have repeatedly requested additional opportunities to share their experiences as facilitators. A focus group met the needs of the research and this group of participants.

Both the individual interviews and the focus group used a semistructured format with approximately 10 open-ended questions and prompts. The interviews began with questions and prompts about previous professional development experiences, in accordance with Janesick's (2004) suggestion to create a friendly, open environment and establish the conversational nature of the interviews. These were:

1) "Please describe previous professional development experiences provided by the school or district," and
2) "How effective were those professional development experiences at impacting instructional practices and/or student achievement?" (see Appendices A-D).

Once rapport had been established by allowing participants to share their perceptions of previous professional development, the transition question "How is the current professional development program different from previous professional development provided by the school or district?" was used to move the conversation to the primary purpose of the interview. This purpose was to discover information related to how the current program was conceptualized, designed, and implemented, and to identify the intended impact of the program. The order of the interviews and the focus group was determined by the needs of interviewees. Because data analysis was concurrent, I modified the questions during interviews and between interviews to reflect emerging trends and build the most thorough description of the case throughout the interview process.

Some questions differed depending on the participant. For example, an administrator in an individual interview was queried about how the program came into existence: "Who or what inspired this program?" and "How was this program developed?" (Appendix D). Teacher participants in individual interviews were asked more subjective questions about their perceptions regarding the program: "How, if at all, has the current professional development program influenced your thinking, your relationships with colleagues and/or your instruction?" (Appendix F). The professional development coordinator member in an individual interview was asked "Who was involved in the process of conceptualizing, creating, and implementing this program?" (Appendix G) because the committee was privy to this type of information. Teacher-facilitators in the focus group were asked, "How did you become a facilitator in the

program?" (Appendix E). Follow-up questions were used to allow participants to elaborate on ideas and provide the rich, thick description that is characteristic of case study methodology (Rubin & Rubin, 2005). For each group, the sequence of questions illuminated details of how the program evolved, how it was implemented, and how various stakeholders perceive the program and its intended impact. The interviews provided data that was compared to discern differences of perception among various stakeholder groups (Creswell, 2007, 2009).

Throughout the study, an electronic database was used to manage coded files containing interview and focus group data and transcripts. This database contained the codes used to store the data as well as information detailing the contents of each file. It was password protected and given a code name to protect confidentiality. All electronic documents were kept on a designated removable flash drive. A record was also kept of when and how each piece of data was collected. Finally, throughout the project, the researcher kept a reflective journal containing emerging understandings, insights, observations, and questions. This journal will be an electronic file saved under a coded name and recorded in the research database. At the end of five years, all data will be destroyed and this process will be witnessed by the research assistant.

Data Analysis and Validation

Case studies strive to create thick description and in-depth understanding of a bounded system (Creswell, 2007, 2009; Hatch, 2002). The data analysis for this case study was designed to formulate findings that provide deep understanding of how the program was conceptualized, designed and implemented as well as various stakeholder

perceptions of the program's intended impact. In order to ensure that the analysis met the needs of the local setting, relevant district representatives approved the research and provided any feedback they deemed necessary. I also recorded emerging understandings I developed as a researcher concerning the program and program generation. These memos were later used to help develop codes for analysis of data.

Interview and focus group questions were derived from the literature review by the researcher and then shared with one expert as a form of member-checking (Braverman & Arnold, 2008; Bryman, 2006; Hatch, 2002; Janesick, 2004; Johnson & Onwuegbuzie, 2004; Mason, 2006). The form of the interview guides was designed to generate comparable data among administrators, teacher-facilitators, and teacher participants while still distilling data unique to the various participants. Several questions were closely related across groups. Only those changes that were needed to reflect the unique perspective of each group were made (Appendix D-G). Differing questions were based on relative experiences as they related to the program under study.

Qualitative data was collected in the form of interview and focus group recordings and notes. Data analysis was begun as data was collected. A combination of deductive and inductive strategies were used to code the qualitative data. Interview and focus group sessions were digitally recorded. These sessions were loosely directed by an interview guide held by the researcher, intended to allow participants to speak freely without being led into specific answers and to allowed me, as the researcher, to record notes on nonverbal communication, generate and record follow-up questions, make notes about initial impressions, and record key quotations (Janesick, 2004; Rubin & Rubin,

2005). Immediately after each interview or focus group, bracketed notes were added of impressions that were not recorded during the sessions (Janesick, 2004; Rubin & Rubin, 2005). Each audio recording was played back to ensure that the recording equipment functioned properly. Recordings were numbered to protect confidentiality and transcribed into a word processing program as soon as possible after each session by the research assistant. These documents were stored electronically on a password protected designated flash drive. Since member-checking can confirm accuracy of the recording copies of transcripts were provided to participants for verification (Janesick, 2004; Rubin & Rubin, 2005).

The design of this study increases the likelihood that a deep, rich understanding of how the program was conceptualized, designed, implemented and intended to impact the local setting was generated. Finally, the data analysis was validated through triangulation and member checking to further increase stakeholder participation and strengthen the relevance and usefulness of the results.

Role of Researcher

There was only one researcher for this study, though a paid research assistant helped with session transcription, organization, and editing to expedite the research process. The researcher has been a teacher for eleven years and has spent time as a teacher-facilitator in the local setting. In addition, the researcher has recently been elected as Professional Development Committee co chairperson; the individuals holding this position are responsible for coordinating resources and planning professional learning experiences in the school with the help of a volunteer committee. This presented

advantages and disadvantages. Being a member of the local setting made it easier to spend extensive time in the setting and allowed the researcher to build on existing relationships with colleagues. In addition, getting approval for the project study was easier, due to prior contact with administration and familiarity with school processes. In interview situations, the existing relationships and familiarity between the researcher and participants created more comfortable interview dynamics. Unlike an outside interviewer, the researcher was familiar with specific vocabulary and events within the local setting. On the other hand, extensive self-monitoring and reflection was needed to protect against personal bias regarding the program. Member checking addressed this, ensuring an unbiased final product that accurately reflected the meaning intended by the participants.

My past and current roles in the professional community have had a potentially significant impact on participation in this study. I have acted as a teacher-facilitator in the program, been a member of the PDC, and was recently elected co chair of the PDC. This role required even greater diligence in self-monitoring and reflection to prevent bias because I now have a vested interest in the program and will be responsible for implementing it in the future. The position of PDC will also grant me access to information, documents, and conversations that are not open to the school community or the public. I have kept careful records to avoid making assumptions or conflating various data. In addition, I have also avoided discussing the study with members of the professional community outside of interviews etc. to retain the purity of my thinking

during analysis and coding. Record keeping, confidentiality, and careful self-monitoring have allowed me to conduct this research and fulfill my new role.

The variety of roles I have played has the potential to cause some members of the community to question my ability to conduct this research without bias. In addition, though none of these roles provide actual institutional authority over others, there was a potential for perceived authority to interfere with participants' willingness to confide in me. This problem was most likely to occur with teacher participants because they were more likely to perceive me as an authority in the program because their participation has been mandated by the district. In negative scenarios, participants might have felt uncomfortable confiding in me for fear of job-related consequences. No negative scenarios occurred during data collection. In positive scenarios, participants might have believed that I have the authority to make changes to the program that benefit them or influence their advancement in some way. These participants might have shared too much information, may have used the interview to advocate for their opinions, or may have made statements based solely on hearsay and assumptions to try and make a positive impression on me. To the best of my knowledge, no scenarios of this type occurred during data collection. To mitigate this type of interference, I explicitly explained the limits of my authority and directly stated that I am forbidden by the state to participate formally or informally in the evaluation of any teacher. I also clearly explained the confidentiality measures, member checking processes, and option to withdraw from the study at any time. Finally, I explained that the study is investigating the history of the program and interview responses should focus on past experiences. My goal as the

researcher was to ensure that participants feel comfortable providing honest, descriptive interviews without personal agendas or fear of repercussions.

Research Findings

Research findings for this study were developed from administrator, professional development committee chair, teacher-participant, and teacher-facilitator interviews. Before beginning to code the data, significant principles from the literature review were used to establish typological categories (Creswell, 2007; Hatch, 2002; Leech & Onwuegbuzie, 2007). Categories included program conceptualization, design, implementation, perceived intended impact, relevant district or building history, and any information related to tracking the impact of the program. Categories also included interpersonal communication, professional growth as individuals and groups, or the role of leadership. General impressions of the data determined which categories were initially included. These broad categories helped ensure that the data was analyzed for themes relevant to the research questions and stake holders. Coding took place using symbols, colors, and numbers to represent pre-established typologies, emerging codes, and sub-codes by hand as preferred by the researcher. An Excel spreadsheet was used to track symbols, colors, and numbers within data documents. The database was also used to keep track of exceptional quotations and the emergence of new themes, categories, codes, and sub-codes throughout analysis.

After each session was transcribed, each transcript was read in its entirety to get a sense of the whole (Janesick, 2004). By reading the entire transcript, a general impression of the respondent's feelings, attitudes, and beliefs was constructed.

Appropriate typological categories were selected before examining the transcripts for data relevant to those pre-established codes. The general impression was also compared to notes taken by the researcher to ensure consistent interpretation of tone or attitude. Reviewing the entire transcript was also be the first step in developing inductive codes as key phrases or ideas were repeated. The interviews were coded using the established typologies while sub-codes and unanticipated codes were added where they emerged inductively. All coded data was integrated to form the basis of study findings.

Codes were examined and compared to develop findings. The data was analyzed to determine what it revealed about how the program was conceptualized, designed, implemented as well as its perceived intended impact. Rather than using code counts, which is a more quantitative measure, the data was examined for important themes using the coding process and searched for representative quotations that were used to develop thick description (Creswell, 2007; Janesick, 2004; Rubin & Rubin, 2005). Similarities and differences of perception and experience amongst groups of stakeholders were examined as well. The findings that were generated were organized into a preliminary memo and provided to all the participants for member checking (Creswell, 2007; Rubin & Rubin, 2005). Participants were asked to verify that the findings were representative of the data and make suggestions for improvement and dissemination. Member checking increased validity because participants verified the veracity of findings and coconstructed the format that will be used for dissemination.

The findings are organized and presented by the research sub-questions with a discussion of how the findings relate to the conceptual framework with a concluding

statement of how the findings address the overarching question of the study. An explanation of how each finding relates to the design of the project and the larger problem the study addresses will also be provided.

Research Question 1: What factors are relevant to how the current professional development program was structured and promoted?

Finding 1: The most significant factor that emerged as relevant to the emergence of the current professional development program is a lack of engagement among teachers with previous professional development offered by the district.

All interviewees were asked to describe professional development they experienced prior to the current program. Each participant described the previous professional development using similar terms such as "scatterbrained," "very 'one-shot,'" "not connected at all." The building principal at the time stated that when they came to the high school in question they felt that professional development efforts "weren't catching much ground where it was making much of an impact." The director of professional development for the district described previous professional development, saying "at the high school, the teachers would come, they would grade papers, they would look very disgusted, and they weren't interested or engaged." Before significant improvement in teacher practice or student achievement can occur, teachers must be engaged as adult learners (Killion, 2008; Knight, 2011). The need for change was recognized by both the principal and the district director of professional development because of the evident lack of engagement. The district director of professional development went on to say that after the current program was initiated "You could

drastically see the difference in the participation if the learners and engagement as people were walking through."

Finding 2: Another factor that emerged as significant to how the current professional development program was structured and promoted was the opportunity for teachers to participate in selecting the learning most appropriate for their individual needs.

Several interviewees mentioned the importance of choice in the success of the new program. One teacher participant was particularly articulate when they explained:

> We should know what are weak areas are. We're professionals. So professional development shouldn't just be like here's a broken thing for everybody. Everybody doesn't need the same thing. You know. So, I feel like the options, the choices are great. I feel like the process is good now, and we get a chance to go around and mingle with the different departments.

The opportunity to self-select learning is well-documented as a factor in successful adult learning (Killion, 2008; Knight 2011; Marzano, 2003). As a structure, this aspect of the current professional development program is valued by stakeholders at all levels of the school district.

Finding 3: Another factor that emerged as significant to how the current professional development program was structured and promoted was the use of choice within limits.

Though the aspect of choice is clearly important, the limits of the choices to those ideas aligned with building goals also helped increase engagement. According to one

teacher-facilitator "Teams were created on, like, how it would help us reach those goals that we had set as a building." When asked how teams were created, the building principal at the time confirmed that teams "were determined based on district initiatives that were going on in district offices and then on some things that we identified building-wide." The teacher participants also recognized the importance of alignment. One teacher participant explained that their understanding of the team choices was a process where building leaders said "let's look at our building goals, look at our district goals, and we need to do these things." They went on to say "there's a set sort of standard that we need to meet and develop and it's gotta link in there." The alignment of the program to articulated goals helped provide purpose to the choices teachers were offered. Purposefulness is another factor supported by research as important to teacher engagement in learning (Garman & Wellman, 2008; Muhammad, 2009).

This research demonstrates that engagement is an important aspect of programs that successfully support adult learning. In the policy recommendation for the conceptualization, design, implementation, and evaluation of new programs, I will include items designed to ensure that engagement in learning is adequately considered.

Research Question 2: What was the process followed by the current professional development program to move from conceptualization to design to implementation?

Finding 1: There was no clearly articulated procedure followed to move the current program from conceptualization to design to implementation.

Interviewees were questioned about their knowledge concerning the how the program moved from conceptualization, to design, to implementation. The answers were

widely variable, with multiple interviewees using terms such as "I guess," "I assume," or "I'm not sure." Each group of stakeholders had different perspectives on how the program came into being and none expressed consistent knowledge of an articulated procedure for starting new programs.

The teacher participants were the least clear about how the program came into existence. A representative explanation was:

> I don't know a lot about that, but I assume . . .that some people probably go together and sat down, had a nice long brainstorm, I'm pretty sure it was well thought out, I think, uh, before it was implemented people had a vision in mind.

All three teacher participants expressed similar sentiments. An unnamed "they" had an idea because the need for a change was understood and the program grew from that need.

The teacher facilitators expressed a corollary idea about how the program evolved, but were also unaware of the exact protocols used in creating the program. In the focus group, the recognition that the program was aligned to building and district priorities was clear. The teachers expressed this in different ways such as "I think topics where chosen based on our, ah, building improvement plan," "that year was based on school improvement," and "the one I was. . .was something that was a district-wise initiative, so it was implemented in the building, building level as well." These comments indicate that the teacher facilitators had a higher level of awareness, though still limited, about the evolution of the program than the teacher participants.

Beyond this recognition, they had very little idea how the program had emerged or how they had been selected as teacher facilitators. One facilitator reported "I was

asked by people who used to be in charge of the building professional development. . .” Another facilitator stated “I was told, oh, there’s this meeting you need to go to about professional development, and I went to it, and I was told ‘Thank you for volunteering to be a facilitator!’ And I was like ‘what?’ A third facilitator said “they told me I was recommended but I don’t know who recommended me.” The understanding of the how the program came into existence was severely limited for this group of stakeholders as well.

The director of professional development was equally unaware of the exact process by which the program emerged. The explanation was that the program “percolated” through an awareness of the need for change. They stated:

> I just kept sprinkling resources and ideas and saying it needs to change and, um, this is why, here’s the song, and you design what’s going to work. There’s lots of examples. You design what works, and how can I support you on that? So they had autonomy, but I think that need came from, was so strong from everybody.

They went on to say “You know, I don’t know about who carried it out” and that “it was very organic.” Their explanation indicates that they did not have knowledge of or expect a specific set of procedures for a new program to move from conceptualization to development to implementation.

The only stakeholder interviewed who had specific knowledge of how the program came into existence was the building principal at the time. They explained:

> it was a teacher. . .[who] came in. . .she just came in and said ‘okay, we gotta do something: PD is killing me’ kinda were her words. ‘And it’s not helpful to us in

> the building.' And I said, 'alright, so I agree. What do you have in mind?' And, um, she threw out some ideas, and I was just like 'Put it on paper. Give me a proposal. Bring it back to me." I love this, because this is everybody: 'well, I don't want to do the work if it won't really happen.' I asked her 'How do you know it won't really happen? You still have to risk in developing it and bring it back to me. I can't just imagine stuff out of thin air, you gotta put it on paper.' I think I have the original proposal. So, she came up with that program for that structure, and then we threw different things in the topic areas.

This quotation indicates that the building principal felt there was a process in place for new programs; however, no other stakeholders shared this knowledge. This description of how the program emerged also implied that those with program ideas were unclear about how to proceed and hesitated to pursue ideas without assurances that implementation was possible.

When asked if there was a consistent process for bringing initiatives to fruition, they responded "A consistent process maybe in my head!" They went on to describe some consistencies in their expectations including a project proposal, revision and refinement with administrative input, some Systems Thinking tools, and attempted buy-in from stakeholders. The process they described is supported by research on program development (Aderu & Shariff, 2010; Fixsen, Blasé, Wallace, & Wallace, 2009; He, Rohr, Miller, Levin, & Mercier, 2010). It is significant that though the steps taken to conceptualize, develop, and implement this program reflect research on program development no other stakeholders were aware of these steps. The lack of clarity about

the procedures being used reduces the effectiveness of those procedures (Daugherty, 2009; Hummelbrunner, 2011; Lenthall, Wakerman, & Knowght, 2009).

Research Question 3: What was the intended impact of the current professional development program?

Finding 1: The development of leadership skills among teachers was perceived as an intended impact of the current professional development program.

All stakeholders interviewed expressed some degree of belief that teacher leadership was an intended impact of the current professional development program. The teacher participants varied in their responses. One teacher participant focused on their own growth and the style of leadership they experienced as a participant. They stated that the program changed their relationships with their peers because "now I feel more comfortable going to anybody on the staff, asking, hey, you know, I've tried this in my classroom but this really isn't working, do you have any other suggestions?" This statement implies that they are better able to recognize teacher leaders and approaching them for help. They also explained that they had been in the program two years and had two very different experiences. When asked to elaborate, they stated the difference was one of "expectation and then the attitude." Another teacher participant also discussed their growth by saying "I think about getting my colleagues to better themselves so they can make their relationships better, and learning better." Their words echo those of the other teacher participant.

The third teacher participant more directly and explicitly discussed leadership as an intended component of the program. They discussed the role of control and empowerment before stating:

> And so what we've done in terms of sort of decentralizing that is to create leaders among our teachers, and also, to give that implicit and I think maybe even explicit message that we acknowledge that there are people in our building who know a lot and who do great things, and we don't need to bring in someone that you've never heard of and that you're never gonna see again, and there's an immediate acknowledgement that you, teacher-leader, learning team leader, are someone who has significant to present to the school.

Her description of leadership in the program speaks directly to the perception that leadership was an intended impact of the program. The fact that leaders were internally cultivated and that doing so promoted respect and collaboration among teachers reflects research on both educational leadership and school culture (Lindsey, Robers, & CampbellJones, 2005; Muhammad, 2009).

The perception that leadership development was an intended impact of the program is further supported by both the building administrator at the time and the director of professional development. The building administrator talked extensively about the building of expertise and comfort among teachers to experiment concluding that "when they see their peers and learning from their peers, but there's also maybe a confidence thing, 'Wow, if they can do this, I can do this!'" These comments imply that

developing leadership capacity was one intended impact of the professional development program.

The director of professional development was much more direct in their assessment of the intended impact and role of teacher leadership:

> The capacity of the teacher leadership is getting stronger, where if they didn't have the learning teams, I think the learning team facilitators are more empowered, so ultimately the added benefit of this is better, it increases teacher leadership capacity. So instead of having an academy that people come to after school, where some big districts have meetings on how to develop teacher leaders, I think this way has organically increased teacher capacity of the leaders in that school. . .I believe the relationships with the administrative team have become stronger as partners in the professional learning because they're a part of it and they help it but its not like its top-down.

Her perception of teacher leadership as an intended and real impact of the program is clearly articulated. They draw explicit connections between the program and increased teacher leadership capacity. Their comments demonstrate that leadership was an intended impact of the professional development program in question.

The difference in level of awareness about leadership as an intended impact of the program amongst different stakeholders is an important discrepancy. The statements of the teacher facilitators support the importance of leadership in the professional development program. One facilitator stated that being an instructional leader "helps me understand my leaders, helps me be another reader." While another reiterated a similar

idea by saying “it definitely like helps develop more comfort in my leadership and stuff.” These statements are representative of the increased sense of comfort and confidence these teachers expressed in connection with their role in the professional development program.

Each group of stakeholders expressed an understanding that leadership was an intended and experienced impact of the professional development program. This finding is significant because it demonstrates that some impacts of the program emerged so naturally that an implicit consensus was reached. Research supports the importance of leadership in developing strong schools capable of raising student achievement (Killion, 2009; Senge, 2000).

Finding 2: Increased engagement among teachers was perceived as an intended impact of the current professional development program.

Increased engagement was the most universally expressed intended impact of the professional development program. Each group of stakeholders explicitly noted engagement as a benefit and intended impact of the program. For example, one teacher participant stated “It’s just different now and its more engaging, I think.” This statement is representative of what all three teacher participants expressed when discussing the differences between the former professional development offered and the current professional development program. One went so far as to state

> everything I’ve been learning here for the past five years has helped me tremendously with my relationship with the kids, how I teach, how I think about

> getting my colleagues to better themselves so they can make their relationships better, and learning better. . .

While the word engagement is not used, the speaker's clear connection between their experiences in the professional development program and their desire to improve themselves and their colleagues is evidence of the importance of engagement to this teacher participant.

Teacher facilitators also discussed engagement with comments such as "People are less cranky on PD days" and "they're more willing to participate during those days than otherwise, there's less complaining going on." Teacher facilitators mentioned factors such as small groups, choice, and collaboration as contributors to increased engagement. There statements were further supported by the statements made by both the building principal and the director of professional development. The building principal at the time stated "the level of participation, the level of engagement is higher than on previous models, um, and the people are actually trying these things." The director of professional development reiterated this statement by saying the building professional development committee chairs "were worried about engagement." They went on to say that the program was "kind of a kick start, and the kick start worked. You could drastically see the difference in the participation of the learners and engagement" suggesting that engagement was a primary motivation for the conceptualization, design, and implementation of the current professional development program.

Engagement was discussed by all stakeholders as both a reason for the initiation of the program and both an intended and actual impact of the program. Though

engagement was mentioned as an important aspect of the program, it was mentioned in the context of the need to continue to refine the program to move past engagement to change in instructional practice and increased student achievement.

Research Question 4: What are participant perceptions of the strengths and weaknesses of the current professional development program?

Finding 1: Participants perceived increased positive culture, climate, and cohesion as strengths of the program.

All stakeholders mentioned the program's positive impact on culture, climate, and cohesion as a perceived strength of the program with varying degrees of directness. The most direct mention of this element came from one of the teacher facilitators:

> one of the big important things that our professional development program, that the learning teams have done that we've talked about is the collaboration piece and the fact that it has changed our climate. . .I think there is an underlying element of, of our climate, our culture, of our students feeling comfortable here, feeling they're nurtured and respected and want to be here, and they were happy to be here, and that we care about them.

Other teacher facilitators made similar, though less elaborate statements such as "the connectivity is really important," "The strength is collaboration," and "connectivity all through the year." Positioned as both leaders and participants, this group of stakeholders identified with teacher participants and was cognizant of the need for instructional improvement among teachers. This group of stakeholders clearly recognized and valued positive culture, climate, and cohesion as a perceived impact of the program. One

teacher facilitator indicated this when they said “I’m sure that the professional development program has a role in that, in the change in climate and culture.” They elaborated with “But I think just the work all together, there’s the collaboration part that piece helps a lot with culture” and “I think in terms of that negativity that was going on when I first got here, I don’t see that from students as much anymore either.” These comments suggest that positive culture, climate, and cohesion were perceived as intended impacts of the program under study.

The director of professional development also directly and indirectly addressed culture, climate and cohesion. When discussing the emergence and evolution of the program, they explained that she provided many resources including “the professional learning standards of the National Professional Learning Standards” which “help to change the culture.” They elaborated on the role of reflection in professional development by stating “Six years ago, we didn’t do that. That is a part of our culture now, and people were thanking me and wanting more.” In addition, they spoke directly to the perceived value of culture, climate, and cohesion when she said

> And this is one of the strengths of the high school: that they have differentiated based on what the teacher wants, but it comes from a set of PD topics that meet what the school needs, where before it was just what the teachers thought they needed, now is the set of topics is what the school needs based on their student data, based on their teacher data, based on their walk through data. So we allowed you choice, but the choices we gave you are acceptable to us. . .

Their explanation shows that cohesion was an important element of how they perceived the professional development program in question. Combined with their previous comments, it is clear the director of professional development perceived culture, climate, and cohesion were intended as impacts of the program in question.

Teacher facilitators did not provide the detailed description provided by the building principal and director of professional development; however, they did directly address the role of culture, climate, and cohesion. One teacher facilitator indicated this when they said "I'm sure that the professional development program has a role in that, in the change in climate and culture." They elaborated with "But I think just the work all together, there's the collaboration part that piece helps a lot with culture" and "I think in terms of that negativity that was going on when I first got here, I don't see that from students as much anymore either." Other comments included "the connectivity is really important," "what makes it worthwhile, is teachers talking to each other," and "it still addresses our school improvement plan." These comments suggest that positive culture, climate, and cohesion were perceived as intended impacts of the program under study.

The teacher participants were less direct, but still mentioned culture, climate, and cohesion. For example, one participant stated "when it first started, there was a purpose, there was a mission, there were concise routes to get there." Another participant declared "because these groups are integrated, ah, you know that's helped a lot with relationships and I think that, that's a really positive thing." The third participant maintained "creating the school culture is to identify and address the needs of individuals" was important. Teacher participants perceived a strength of the program to be its impact on school

culture and climate. The findings align with recent research that has emphasized the importance of climate and culture on school success. (Lindsey, Roberts, & CampbellJones, 2005; Muhammad, 2009).

Finding 2: Participants perceived the structure of the program as a strength including choice and small groups.

Choice and small groups were structures consistently mentioned by most stakeholders as strengths of the professional development program. The director of professional development for the district indirectly spoke to choice and group size when they said that previous to this program the professional development was "not connected at all," "everything was whole faculty," and "it was just episodic." Though they did not list choice and small groups specifically as strengths of the program, those aspects correlate to the differences between the previous professional development and the program under study.

The teacher facilitators were more direct in stating the "positive thing that we've done is that it's now focused on adults, in that we now have a choice in what we want to do." Another teacher facilitator added "that having the smaller groups, as opposed to the whole staff" was an advantage because "you have a choice. You're 'forced,' it's nice to have a choice about what you take . . . ." A third teacher facilitator elaborated "And you're treated like adults. I think that's huge. And you get to talk to each other, and it's not like you get the evil eye if you're trying to work with somebody on something." These comments demonstrate the perception that both choice and small groups were strengths of the program.

Teacher participants were also vocal about the value of small groups and choice in the professional development program. One discussed the size of the groups stating "the ability to get to know them was huge. And to get a fresh perspective was huge, and to be able to work together." They went on to say of the professional development program "if it taught us anything, I think it has taught us that small groups work better." Another teacher participant expanded further: "because they're separated groups and you can kind of pick where you falter or you need more help, that helped a lot." They went on to say "it kind of broke me out of my bubble" and "I just like the process of there's ten to fifteen of us in a room." Both the size of the groups and the choices built into the program were important to teacher participants.

Choice and small groups were mentioned by numerous stakeholders as strengths of the program. These elements align with research related to professional learning communities, adult learning, and professional development (Killion, 2009; Senge, 2000).

Finding 3: Participants perceived the lack of accountability as a weakness of the program.

The ultimate goal of any professional development program is to support increased student achievement (Killion, 2009). The program in question was praised by all stakeholders for increased engagement among teachers, yet stakeholders also consistently identified accountability as a weakness of the program. One teacher participant stated that "everybody's overwhelmed! We're all taxed, but for a system to be effective you have to have checks and balances. And there's no checks and balances." They reiterated the same idea when they stated "I think if you don't inspect what you

expect, you can't—it tends to not get done." These comments indicate that this teacher participant felt the program is not providing adequate balance or accountability at this time. Teacher facilitators shared similar concerns. One teacher facilitator stated "things aren't well connected" and this comment was met with general agreement by the focus group members. Another teacher facilitator noted that "the sense of accountability has grown" within the learning teams based on peer pressure rather than effective accountability measures implemented throughout the program.

Both the building principal and director of professional development shared concerns about intended impacts that had not yet been reached. The building principal felt the programs weaknesses were the need "to have better monitoring and accountability" and went on to elaborate on the need for data, accountability, and other structures to ensure the implementation of new learning. They noted improved instruction should lead to improved student achievement and lower discipline for students:

> First you gotta see these things happening in the classroom, then it's about talking to staff about, 'okay, how is it impacting your kids?' How are your kids improving? How is it helping kids improve their performance? D & F rate. ACT scores. EOC scores. All these things should be impacted by everything else. Discipline. Classroom discipline in specific, because that's one of the highest categories we have, but we know great instruction and effective instruction lowers that discipline, as long as the kids don't feel the teacher completely hates them.

From this statement, it is clear that they perceived increased student achievement, lower discipline, and teacher accountability as intended impacts of the program that had not yet been fully reached.

The director of professional development reiterated the same ideas as other stakeholders. They stated that "ultimately, we want to see student achievement from the change in practice" but also acknowledged that "there's data out there to say that changing practice increases can affect student achievement and professional learning impacts a change in practice, but those things have not been connected yet through research" because "there's too many factors" to establish causation between the two. Despite the belief that a research base has not clearly connected professional development and student achievement they still felt accountability was an intended impact of the program that had not been reached. They stated "if you don't have requirements to make people learn you're always going to have people who choose not to learn."

Finding 4: Participants perceived the limited time as a weakness of the program.

One consistent factor that was mentioned by stakeholders as a weakness of the program was limited time. This included time to meet with teams, time between team meetings, and time to implement new learning. The director of professional development stated that "everyone was saying 'We need time! We need time!'" in reference to weaknesses of the program. They explained that they felt the desire for additional time indicated that the program was engaging, but that finding more opportunities for teams to meet was an area for improvement. One teacher facilitator expressed a similar sentiment

when they stated “another area of weakness is the amount of time between meetings of the learning team.” Another added “I mean to meet every other month, that’s better than three times a year.” The consensus among the facilitators was that time was a factor where there was room for improvement.

Teacher participants also mentioned time as a weakness of the program. One explained “The relative weaknesses I would say right now is that the people who are actually wanting it implemented, they don’t have time to actually take the data that’s being implemented.” They went on to say “We’re stretched” as part of the reason both teachers and administrators are not implementing new learning more consistently. The other teacher participants did not mention time explicitly, but made comments consistent with time as a weakness in expressing a desire to meet more often with teams, to increase accountability through additional interactions with leadership and/or feeling overwhelmed by competing responsibilities. The need to invest time in the program is expressed repeatedly and can therefore be considered a perceived weakness of the program.

Research Question 5: What structures were put in place to track the impact of the program?

Finding 1: No stakeholder group felt that there were adequate structures in place to track the impact of the program.

Stakeholders consistently expressed the sentiment that accountability was an area for improvement. The director of professional development had the widest perspective on the limitations for tracking the impact of the program when they stated “There’s too

many factors to factor it out. . .I can't factor it out to say it all came down to that one thing, or one person, that one teacher, that one book, that one strategy. We just don't have a way to measure that." Their explanation demonstrates that adequate structures for tracking the impact of the program might not be possible. They acknowledged that the only attempt was "based on . . . surveys . . . but that's all, you know?" The building principal was even more direct: "The weaknesses are just what we said: we have to have better monitoring and accountability." Those at the highest levels were certain that accountability was lacking in the program. If adequate structures were in place to track the impact of the program, it is unlikely both individuals would have expressed this weakness so clearly.

Teacher facilitators also questioned the role of accountability as a weakness of the program: "One of our weaknesses . . . one of our weaknesses may be that administrators are not part of the loop of using accountability in a positive way?" The other facilitators unanimously agreed with this tentative statement. Teacher participants concurred with the other stakeholders. As one teacher participant put it, "if you don't inspect what you expect, you can't –it tends to not get done." They went on to state "there's no checks and balances." These statements indicate that none of the stakeholders were aware of adequate structures to track the impact of the program.

In addition to these express statements concerning accountability, the lack of awareness of structures related to tracking the impact of the program are also indicative that such structures have been either missing or inadequate. No stakeholders articulated

knowledge of any formal structures beyond surveys being used to attempt to track the impact of the program.

Limitations

Several assumptions underpin the case study design. First, it was assumed that the district would not withdraw permission for the study to be conducted, and would help generate and disseminate findings in a meaningful format. It was assumed that there would be enough willing participants to conduct interviews and a focus group in a timely fashion. It was assumed that participants would be open and honest in the interviews and the focus group. It was also assumed that the case study would provide rich descriptions that adequately represent a variety of perspectives. In order to address these limitations, participants at different levels of the school system were involved in the study and reviewed its findings for accuracy (Briggs & Coleman, 2007; Gillies, 1995; Killion 2008; Merriam et al., 2002; Mertens, 2005).

Researcher bias was also a potential limitation as the study was conducted by a researcher participant (Creswell, 2007; Rubin & Rubin, 2005). It might have been difficult to maintain objectivity because of the researcher's role in the program as a past teacher-facilitator and current PDC co chair. It might also have been difficult to prevent previous professional development experiences in the local setting from influencing interpretation of the current program. To mitigate these limitations, triangulation of the document review, various interviews, and the focus group was used. Member checking was also used at several points to ensure that bias did not pollute interpretation of the data.

Another potential limitation of the project was that this case study is the investigation of an on-going, iterative process. The assumption that data, and conclusions will be valid over time is a potential limitation because this was an exploration of a process that is continuing. The program under study and its various stakeholders will continue to evolve making it difficult to draw lasting conclusions. It is assumed that findings will have ongoing relevancy despite the evolution of the program because the study will provide insights that can influence future program planning processes.

Conclusion

This case study used a qualitative, formative design to explore how the professional development program currently being implemented at ABC High School was conceptualized, designed and implemented as well as its intended impact and perceived strengths and weaknesses. Section 2 detailed the case study which used interviews with a variety of stakeholders, and a focus group to develop a policy proposal to address the stated problem. Inductive and deductive analysis was used to develop findings. The research produced three consistent themes: the program under study was perceived as largely successful, knowledge, and understanding of the program varied widely among the various stakeholders, and accountability was a perceived weakness at every level. The overarching question guiding this study was, "What is the history and intended impact of the current professional development program?" The findings revealed that various stakeholders have widely differing knowledge, and understanding of how the program was initiated, designed, implemented, and evaluated.

Section 3: The Project

Introduction

This section provides a description of the proposed policy recommendation, the goals and rationale of the project, and a relevant literature review. The qualitative case study this product is based upon was conducted July 2013–August 2013. It consisted of a series of semistructured interviews, and a focus group with a total of 9 stakeholders from a high school in the United States, hereafter referred to as ABC High School (pseudonym). All participants were employed by ABC School District (pseudonym) and either participated in or supervised the professional development program under study.

I used a combination of inductive and deductive analysis to generate findings from the data. Initial codes were derived from the literature review, and were supplemented by additional codes that emerged during data analysis. Three consistent themes emerged from the data:

1) The program under study was perceived as largely successful by stakeholders.
2) Knowledge and understanding of the program varied widely among the various stakeholders with significant inconsistencies that could indicate a lack of transparency.
3) Accountability was a perceived weakness at every level.

These themes were used to inform the project detailed here.

Brief Description of the Project

This study addressed a problem at ABC High School consisting of its lack of a comprehensive, ongoing system for evaluating the effect of its professional development

program. The project resulting from this research is a policy proposal entitled "Process for the Design, Implementation, and Evaluation of New Programs." This policy recommendation includes specific procedures and documents for each stage of program development, implementation, and tracking as well as instructions and questions for the consideration of all stakeholders (see Appendix A). The policy proposal will include the following elements:

- Policy statement
- Policy goals
- Handbook of policy related components including document templates
- Role of stakeholders
- Implementation plan
- Implementation timeline
- Expected outcomes
- Policy evaluation

These elements are consistent with research findings and literature concerning effective components of programs for adults in educational settings (Knight, 2007; Senge 2000).

The policy statement for this project provides specific language intended to articulate the policy to stakeholders and/or be adopted by the ABC School District. The goals of the policy state what the policy is expected to achieve. The policy content details the steps and processes required for the instigation of any new program. The expected outcomes define how the policy is anticipated to impact future program cycles. The role of stakeholders explains what responsibilities each stakeholder might potentially

incur. The implementation plan specifies how the policy can be implemented in the district in question. The implementation timeline defines how long it might take to put the new policy into action. Lastly, the evaluation component denotes mechanisms through which the success of the policy can be judged over time.

Project Goals

The policy proposal's long-term goal is to create a system for the program cycle that ensures the best possible programming for students and teachers. Its goals are to

1. create a consistent, transparent process for program initiation, design, implementation, and evaluation in the district in question;
2. ensure consideration of all stakeholders in all stages of district programming, especially professional development programming;
3. include evaluative mechanisms to ensure programs are relevant, beneficial, data-driven, and continuously improving; and
4. document the development of programs so that they could be replicated in other settings.

Data collected during the interviews and focus groups informed these goals.

Goal #1 was influenced by wide differences in participants' understanding and knowledge of how the high school's differentiated professional development program came into existence, and by their lack of understanding of the process itself. For example, the building principal at the time of the study stated, "A consistent process maybe in my head!" when asked if there was a procedure for new programs. By contrast, a teacher participant responded to the same question with, "I'm not really sure. Um, this

is just something that's passed down to us." Goal #2 was developed in response to the same types of comments, because consideration of stakeholder viewpoints is not feasible if stakeholders are not aware of and part of a process.

Goal #3 was written for several reasons. First, comments from stakeholders revealed a relative consensus that accountability was a current weakness of the program with interviewee statements such as "We're all taxed, but for a process or a system to really be effective, there have to be checks and balances. And there's no checks and balances." In addition to the theme of accountability in the research data, this goal also aligns with existing priorities established by the district in question. The district has made a significant commitment to being data-driven and focusing on continuous improvement. Third, this goal is supported by research on professional development, school improvement, and adult learning (Killion, 2008; Knight 2007; Senge, 2000).

Goal #4 was written to move beyond the program in question, and provide enough detail such that this program and policy process could potentially be replicated in other settings.

Rationale for Chosen Project Genre

A policy proposal was chosen as the project genre based on the findings detailed in Section 2. Analysis and triangulation of the interview and focus group data revealed a need for a consistent systematic, cyclic process for the conceptualization, design, implementation, and evaluation of professional development programs. The choice of a policy proposal as the project genre was substantiated by two major reasons: the widely

differing knowledge of the various stakeholders and the stakeholders' desire for accountability.

The first reason is that different stakeholders held widely variable knowledge and understanding of the process by which ABC High School's professional development program emerged. Teacher participants were unclear about how, why, by whom, and even when the program had developed. One teacher participant stated, "My guess is that somebody looked at it and said 'This isn't working.' Or I think there were probably a combination of factors, but Lord knows the order they happened in;" this comment is illustrative of the level of confusion and fuzzy understanding expressed by teacher participants in the program.

Teacher facilitators were even less clear about how the program was developed, especially with regards to their own role in the program. One facilitator recalled arriving at a meeting that their assistant principal had told then to attend when "The person next to me went, 'You were supposed to volunteer for this!'" Others were recruited by the professional development co chairs, leaders of other programs they participated in, or by their assistant principals. The principal had a clear conception of how this program emerged and how others emerged under their tenure; however, the district's director of professional development explained that though they encouraged change they also stated, "You know, I don't know who carried it out." This wide disparity in understanding indicated an under articulated process for program development. Without a clear, consistent process, maintaining a cycle of continuous improvement for this program or creating additional programs will not be feasible (Knight, 2011; Schmoker, 2006).

The second reason for selecting a policy proposal as the project genre was the need for accountability expressed by stakeholders. The district director of professional development summarized the need for additional accountability clearly when saying, "If you don't have requirements to make people learn, you're always going to have people that choose not to learn." The idea of accountability and the complexity of providing meaningful accountability was best expressed by the building principal at the time: "this work is too important for people just to go 'I'm done.' I think . . . there needs to be a level of follow-up from the administration." Teacher facilitators also communicated accountability as a weakness directly: "One of our weaknesses may be that administrators are not a part of the look of using accountability in a positive way." Accountability can be established by creating a transparent process for every stage of the program cycle. The policy proposal will provide the district with an opportunity to adopt such a process.

Rationale of How the Project Addresses the Problem

The project addresses the problem of the lack of clarity in the program cycle in several ways. First, the policy proposal will suggest a process for managing each stage of a program from conceptualization through evaluation. Second, the project will provide procedures and materials stakeholders can access to initiate a new program. Third, the project will support accountability through transparent and consistent practices. Additional details on how the project can address the problem will follow.

First, the project will address the lack of "why" and "how" in program development by detailing a process for managing each stage of the program including conceptualization, design, implementation, and evaluation. The policy proposal should

be adopted as a district policy and system to guide all stakeholders throughout the district. The series of steps outlined in the proposal will allow any stakeholder to initiate a program based on perceived need. It will establish clear procedures and requirements to ensure that programs meet the needs of stakeholders and use resources effectively. It will also foster shared leadership by encouraging stakeholders who do not hold administrative positions or other positions of authority to engage in the program development process. Finally, it will provide documentation of all aspects of the program ensuring that the program can be evaluated and/or replicated readily.

The project will also provide stakeholders all the materials and guidance needed to successfully engage in the program development process. The project will include step by step instructions and templates for each stage of the program cycle. By providing directions that are easy to understand and templates to ensure required information is submitted, the project will support shared leadership because it will allow stakeholders without program development expertise to participate in initiating programs based on perceived need. The proposal includes specific steps for each stage of program development to ensure that programs meet an identified need, have research support, have needed resources, and are adequately evaluated for continuous improvement.

Finally, the project addresses the problem by creating transparent and consistent processes for program development. Transparency enables all stakeholders to have a clear understanding of how and why programs come into existence, and how they will be evaluated. With this knowledge, stakeholders can feel ownership of programs in which they participate. Transparency also increases the opportunities for replicating programs.

Without transparent systems, replication is a guessing game rather than an identifiable process. Shared leadership is also supported by transparency because all stakeholders have access to the process and are able to participate in program development. Several stakeholders expressed confusion about how the current professional development program evolved. Consistency goes hand in hand with transparency and addresses the problem because a process that is consistent supports stakeholder access, replication, and understanding.

The policy recommendation has been designed to support perceived strengths, address perceived weaknesses, and ensure consistent, transparent procedures in the design, implementation, and evaluation of school programs. This supports the generalized findings reported in Section 2 because it address the themes that emerged from the data. The program was perceived as largely successful so the policy proposal is appropriate because it creates a system that will allow for continuation and replication of successful programs. The lack of clarity and differing knowledge among stakeholders indicates that the program was not implemented in a clear and consistent manner. The policy proposal addresses this theme by providing for and requiring transparency and consistency. Finally, stakeholders reported accountability as a weakness of the program. The policy proposal addresses this concern by creating a transparent, consistent process, and by ensuring that accountability measures are built into the design of future programs.

Review of the Literature

The research literature in this review was gathered using Boolean search terms such as *teacher learning, professional development, adult learning, differentiation.* The

policy recommendation is focused on providing effective supports for professional development programs. This review is focused on demonstrating the components of effective programs for adults in educational settings. It is organized to reflect the essential elements that need consideration in professional development programs. First there is a review of literature on how individuals best acquire new skills and knowledge. For professional development programs to be effective, they must be anchored in the needs of both students and adults as learners. This is followed by an examination of instructional effectiveness from the classroom to the system level. Professional Development programs must be able to help teachers translate their learning into effective instructional practices. Next, there is a discussion of professional development that details the components of effective professional development programs. Included are the elements of effective interaction and leadership associated with teacher professional change. Finally, the review concludes with a section on evaluation and its role in the program cycle of professional development programs. The goal of the project is to provide a policy recommendation that will provide procedures which ensure that all these components are included in every professional development program. These areas informed the development of recommended procedures and guiding questions for each stage of the program cycle included in the policy proposal.

A large body of research is emerging about how to promote differentiated professional development for teachers because "[p]rofessional development should respond to their needs as adult learners" (Flannagan & Kelly, 2009, p. 29). The principles that form the foundation of how students learn also inform effective instruction and

underlie emerging understandings of how adults, especially teachers, learn. To provide instruction that meets the needs of young learners, teachers need learning opportunities that allow them to develop theoretical, conceptual, and practical knowledge of how students learn. In professional development, the role of student is worn by teachers who have distinct learning attributes. They assume this role to promote increased student achievement, as teacher growth leads to student growth.

Learning Theory

The last century has produced a progressively deeper understanding of how learners acquire new knowledge, skills, and concepts. This understanding informs the project at each stage of the program cycle. Social constructivism forms the bedrock of modern conceptions of learning, standing in opposition to long-held beliefs that people are born as empty vessels waiting to be filled with knowledge. Constructivism is defined as the process of generating new knowledge through exposure, practice, and experience, leading to increasingly complex understandings of concepts developed in the context of previous knowledge and social interactions in the learning environment (Dewey, 1916; Lambert et al., 2002; Vygotsky, 1997). Because constructivism is based on varied, and relevant experience, learners need to be motivated, and engaged in this process of knowledge construction for it to be effective (Dewey, 1916). Learners learn best when the conditions of constructivism are honored in their learning environment. Constructivism also honors the affective dimensions of learning by attending to the emotional impact of learning experiences and the ways in which students seek to protect their sense of self (Lazarus & Lazarus, 1994; Marzano, 2003).

The concept of constructivism has been enhanced by Gardner's theory of multiple intelligences. Gardner (1991) expanded on the methods and paths an individual might take to construct new knowledge. He exploded the verbal-linguistic limitations of traditional learning and knowledge demonstration by arguing that new knowledge could be constructed through application using a variety of experiential methods ranging beyond written language. Multiple intelligence theory provided an enlarged vocabulary for designing learning tasks, organizing learning environments, and assessing learning (Gardner, 1991; Kossack, 2007; Sellars, 2008). As educators have implemented and researched multiple intelligences, Gardner's original concepts have been further articulated; this has resulted in new understandings of the role culture can play in influencing learner construction of knowledge (Compton-Lily, 2008; Fecho & Botzakis, 2007; Lindsey, Roberts & CampbellJones, 2005; McQuiston, O'Shea & McCollin, 2008).

Research on improving student achievement implicitly or explicitly includes an emphasis on student motivation. Vygotsky (1926) posited that interest is the preeminent ingredient to allow for significant learning. Dewey (1916) also placed predominant importance on interest as the motivating catalyst for learning. According to these theorists, learning begins with one fundamental question: "Is it important to me?" (Marzano, 2003). This aspect of the self-system focuses on whether the learner is motivated to invest in learning. If genuine interest can be aroused, motivation can overcome negative pattern behaviors developed to protect the sense of self (Lazarus & Lazarus, 1994; Marzano, 2003; Vygotsky, 1926). Other authors reinforce this idea by maintaining that interest must be grounded in authentic experiences and a desire to learn

(Bartholomew, 2007; Dewey, 1916; Freire, 1970). Both students and teachers must develop a vested desire to obtain new knowledge for deep, lasting learning to transpire.

In concert with the importance of motivation to generate willingness to learn new concepts, metacognition also strengthens learning. Metacognition is defined as an awareness of one's own thought processes (Chan, 1994; Desautel, 2009; Harmon, Wood, Hedrick & Gress, 2008). Several studies on student learning indicated that when explicit instruction in monitoring one's own learning is incorporated into classroom environments, student achievement increases (Boling & Evans, 2008; Pitcher et al., 2010; Scharlach, 2008; Schoenbach, Braunger, Greenleaf & Litman, 2003). These authors demonstrated the need for students to gain an understanding of their cognitive processes and be able to consciously select cognitive operations that will help them complete a given task. Students will construct new knowledge best if they know and are in control of the tools of construction. Learner awareness of their strengths and weaknesses points to a need for educators to be more honest with students and involve them in the process of addressing their weaknesses. When learners are made aware of learning goals and given multiple paths and opportunities to reach those goals, they demonstrate increased positive affect towards their learning environments (Fisher, Frey & Williams, 2002; Ironsmith & Eppler, 2007). All learners, students and teachers alike, learn best when they are involved in evaluating their process and progress.

Though teachers take the role of student in professional development settings, teachers have specific and varied needs, strengths, weaknesses, and preferences as adult learners that make them unique (Hawley & Rollie, 2007; Hindin, Morocco, Mott &

Anguilar, 2007; Hord, 2004). The need to involve individuals in their own learning and to provide learning that is practical, relevant, and immediately implementable is more pronounced when teachers are being taught. In order to achieve improved practice, teachers must experience professional growth that focuses on reflective practice. Teachers must feel that their professional knowledge and judgment is respected before risk-taking and sharing can take place (Chung & Higbee, 2005; Hodkinson & Hodkinson, 2003; Irvin, Meltzer, Mickler, Philips & Dean, 2009; Ness, 2008; Servage, 2008; Smyth, 2007a). They must have the opportunity to develop questions and themes to pursue to improve practice (Irvin, Meltzer & Dukes, 2007; Theriot & Tice, 2009; Vacca & Gove, 1984). They must be actively engaged in coconstructing knowledge situated in previous knowledge influenced by environmental and social factors (Desautel, 2009; Dewey, 1916; Dunston 2007; Fisher 2001; Vygotsky, 1997). This process must have an emphasis on data collection and analysis, as well as teacher research and collegial dialogue to ensure a focus on legitimate, definable local problems (Fisher & Frey, 2008; Lipton & Wellman, 2007; Marzano, 2003; Smyth, 2007b).

Because teachers are the primary agents of instruction for students, it is vitally important to understand how to promote effective, sustained teacher learning. Professional development is the primary mechanism used by schools to support teacher learning (Hutson, 1979). In recent research on best practices, there is a repeated call for extensive professional development, but details concerning what constitutes effective professional development are often defined only in general terms or are inadequately addressed (Clark & Graves, 2008; Dunston, 2007; Fisher, 2001; Fisher & Frey, 2008;

Gill, 2008; Triplett, 2007; Vacca & Gove, 1984). A deeper understanding of teacher learning, teacher growth, and sustainable instructional improvement is essential for increasing student achievement. The project policy recommendation will provide suggested guidelines and procedures to ensure that teacher learning is carefully considered in all professional development programs.

Instructional Effectiveness

Instructional effectiveness should be at the heart of any professional development initiative. The policy proposal is designed to ensure that professional development programs reflect this concept. Many modern conceptions of effective instruction implicitly or explicitly honor social constructivist principals. Differentiation focuses on tailoring instruction to individual student needs, interests, learning preferences, and developmental readiness (Casey, 2008; Douglas, 2004; Poole, 2008; Tomlinson & McTighe, 2007). Systems such as the gradual release of responsibility model also actively work to create opportunities for students to construct knowledge in meaningful contexts (Fisher & Frey, 2003, 2008b; Laud & Patel, 2008; Lloyd, 2004; Nichols, 2006). Learning systems that focus on measuring student progress toward mastery of specific objectives also use constructivist principals by focusing on student acquisition and use of concepts (Block & Burns, 1976; Fuchs, Fuchs & Tindal, 1986; Ironsmith & Eppler, 2007; McTighe & Brown, n.d.; Postlethwaite & Haggarty, 1998; Wiggins & McTighe, 2005). Models that focus on authentic activities, student choice, and individual needs are fundamentally constructivist in nature. To provide sophisticated, effective instruction, teachers must be supported in developing the ability to actively strive to create

opportunities for students to follow their interests while addressing their weaknesses and building on their strengths (Tomlinson & McTighe, 2006).

Marzano's instructional strategies. Many theories, including constructivism and multiple intelligences, have greatly increased understanding of how students learn. Recently, the work of Robert Marzano (2003) has expanded these ideas by drawing on educational research and providing more concrete frameworks for effective instruction. The use of educational research as a basis for selecting appropriate activities is also integrated into the policy proposal materials. Challenging goals and educative feedback reflect the constructivist focus on individual methods and increased achievement through successive experiences (Reeves, 2001). Marzano (2003) defined learning at the level of the individual who needs genuine interest and experience combined with guidance from educators. He then defined instructional strategies unbounded by disciplinary divisions for use by educators across the curriculum.

Marzano's work aligned with constructivist theory and multiple intelligences, but also provided more concrete assistance for educators to instruct students effectively. Because Marzano's research-based instructional strategies are generalized to the whole curriculum, these strategies provide a basis for designing meaningful and accessible instructional opportunities in every content area. These strategies implicitly require a high level of teacher knowledge and decision-making ability despite their concrete nature. In order for these strategies to be implemented effectively, teachers need extensive training, ongoing support, and opportunities for improvement because they must be able to assess

students, create multiple activities and assessments for objectives, and manage classroom environments where students are working on many different items.

Marzano's work aligned with constructivist theory and multiple intelligences, but also provided more concrete assistance for educators to instruct students effectively. Because Marzano's research-based instructional strategies are generalized to the whole curriculum, these strategies provide a basis for designing meaningful and accessible instructional opportunities in every content area. These strategies implicitly require a high level of teacher knowledge and decision-making ability despite their concrete nature. In order for these strategies to be implemented effectively, teachers need extensive training, ongoing support, and opportunities for improvement because they must be able to assess students, create multiple activities and assessments for objectives, and manage classroom environments where students are working on many different items.

Mastery learning. Mastery learning is another compelling idea because it encapsulates a method for conceptualizing and evaluating student learning by defining student achievement in a meaningful way. Mastery learning can be viewed as a method of lesson development based largely on independent student work where each child works through a series of learning activities until a high level of understanding has been developed (Postlethwaite & Haggarty, 1998). In other research, mastery has been expanded to focus on instruction where assessment is used to provide educative feedback rather than report failure (Ironsmith & Eppler, 2007; Zimmerman & Bandera, 1994). Educative feedback then forces the learner to take a more active role in the learning process and has implications for self-regulation and student attitudes towards learning

(Ironsmith & Eppler, 2007; Reeves, 2001; Zimmerman & Bandera, 1994). Mastery thus focuses on the connection between student understanding and meaningful continued instruction. It articulates a view of student achievement that focuses on the ability of students to understand and apply skills and concepts. To implement mastery learning successfully, teachers must have a deep understanding of objectives, training in providing educative feedback, and the ability to create multiple activities and assessments on objectives. Mastery is also a valuable lens for examining professional development programs because teachers must master new strategies to successfully and consistently implement them in individual classrooms. The policy proposal includes elements of feedback and recursive examination for continuous improvement reminiscent of the mastery learning cycle.

Content area strategies. Content area strategies can have a positive impact on student achievement when they are thoroughly integrated into instruction and used on a consistent basis (Ambe 2007; Brozo & Flynt, 2008; Schoenbach, Braunger, Greenleaf & Litman, 2003). These strategies are tailored to address specific learning needs. This specificity can support teachers who have identified a consistent weakness in the learning of a subgroup of students, and by targeting identified weaknesses, students are effectively supported in meeting learning objectives. For these strategies to be effective, teachers must have the skills to accurately assess student strengths and weaknesses, select appropriate strategies, and implement those strategies in a timely fashion. Research in individual strategy development and use can also provide proven research-based approaches teachers can add to their arsenal of responsive teaching (Alfassi, 2004;

Boardman et al., 2008; Dantonio & Beisenherz, 2001; Dymock, 2007; Lapp, Fisher & Grant, 2008; Schorzman & Cheek, 2004; Szabo, 2006; Wilhelm, 2002). These strategies can strengthen effective instruction by providing teachers with specific mechanisms for addressing student needs; however they have limited potential when implemented by individual teachers in isolated classrooms. To increase the impact of content-areas strategies, teachers need assessment training, opportunities to collaborate in the use of these strategies, and time to reflect on strategy use. Just as students need specific strategies and support in specific areas, so too do teachers. The policy proposal suggests procedures that focus on differentiation for teachers such that their specific needs are met through the design of programs for identified problems.

Conceptual frameworks. Conceptual frameworks expand upon the work of individual strategies by creating systems of interrelated strategies that can be used together across the curriculum. Gill (2008), for example, created a framework that divided the reading process into prereading, during reading, and postreading, while simultaneously addressing the reader, the text, and the situation (p. 107). In discussing teaching for understanding, Graves (1999) focused on the benefits of well-planned sequences of instruction that delve deeply into topics considered fundamental to a specific area. His premise was that overall student achievement benefited by deep engagement with these topics through significant reading and the development of strong skills.

Conceptual frameworks can provide an avenue for this type of instruction because teachers re-conceptualize instruction to focus on creating opportunities for meaningful

interactions with domain-specific knowledge, usually in the form of content text (Boling & Evans, 2008; Brown & Lockyer, 2005/2006; Dowhower, 1999; Harmon, Wood, Hedrick & Gress, 2008; Harpaz, 2007; Liang & Dole, 2006). Most conceptual frameworks require extensive professional development as teachers learn how and when to implement complex systems of strategies (Gill, 2008; Moore & Whitfield, 2009; Ness, 2008; Theriot & Tice, 2009). The depth of teacher understanding associated with effectively implementing conceptual frameworks means that using them is time consuming, especially in the initial stages of application. This need can jeopardize fidelity of implementation and potentially limit consistency of use in various classrooms. Teachers must receive appropriate, sustained professional development centered on their content knowledge and the framework being implemented to increase instructional effectiveness. Conceptual frameworks are relevant to the project because those who wish to implement professional development programs will have access to existing programs to verify conceptual consistency. In addition, the policy proposal contains elements that certify that proposed programs are grounded in relevant educational research.

School-wide strategy programming. In response to the isolationist aspects of individual strategies and the complexity of conceptual frameworks, school-wide strategy programming has attempted to address adolescent achievement by combining research-based strategy implementation with the needs of teachers as learners. School-wide programs focus on a small number of research-based strategies, usually literacy-related, that are implemented across the curriculum (Fisher & Frey, 2008; Fisher, Frey & Williams, 2002; Irvin, Meltzer & Duke, 2007; Rose, 2000). The most successful

documented programs begin with teacher input and data analysis and build gradually towards full implementation through extensive, long-term, site-based professional development. Because these programs use a small number of strategies, they can provide consistent implementation that promotes student transfer of skills. The strategies, however, can be prescriptive and limit instructional flexibility. To be effective, professional development must build teacher skill in the use of specific strategies to such a degree that teachers can seamlessly integrate them into their instructional routines. The policy proposal seeks to capitalize on the benefits of simple, wide-spread, high leverage instructional strategies as the basis for professional development programs.

Professional Development

Instructional effectiveness is dependent on teachers who have the conceptual and procedural knowledge to implement research-based strategies effectively. Teachers can acquire such knowledge from effective professional development. According to the NCTE (2006), to be effective, professional development must be sustained, engaging, include evaluation, create a professional community, and result in increased student learning. This description correlates with a constructivist view of learning focused on the interaction between the individual and his or her environment to create deep working knowledge based on relevant experiences (Ahlfeld, 2010; Buysse, Sparkman & Wesley, 2003; Colbert, Brown, Choi & Thomas, 2008; Dewey, 1916; Fazio & Gallagher, 2009; Levine, 2010; Talbert & McLaughlin, 2002; Watson, 2005). Teachers, like students, need opportunities for situated, sustained learning in an environment that fosters high expectations under leadership that respects and promotes teacher growth (Glassett, n.d.;

Kose, 2007; Lambert, et al., 2002; Nelson, Deuel, Slavit & Kennedy, 2010). The aim of the policy proposal is to make certain professional development programs meet the needs of teachers, have the highest rate of success, include valid measures of success, and are sustainable, manageable enterprises.

Too often, calls for accountability and innovative teaching neglect to adequately address professional development as a fundamental component of effective reform. Defining the concept of professional development as a multifaceted, in-depth, long-term program based on relevant research and customized to meet local needs can positively influence student achievement and allow the development of successful site-based innovations. The project uses this conceptualization of professional development as its basis. Additionally, each teacher, like each student, is unique and "staff development that models the beliefs, attitudes, and practices that differentiation commends for their students provides powerful images of what the practice looks like and how it benefits individual human beings" (Tomlinson, 2005, p. 12). Focusing on providing differentiated professional development opportunities for teachers ensures that the needs of teachers are met in a respectful manner that improves practice and promotes increased student achievement (Flannagan & Kelly, 2009; Kose, 2007; Tomlinson, 2005).

Professional growth. Before delving deeper into an exploration of the components of effective professional development, it is important to make a distinction about what is meant by the concept of professional growth. According to Clarke and Hollingsworth (2002) "professional growth is represented as an inevitable and continuing process of learning" (p. 947). Rather than taking a deficit approach to teacher learning,

notions of teacher change or growth are built around the constructivist principle that learning is an ongoing, situated process, though the exact conceptions of this process vary (Clarke & Hollingsworth, 2002; Dewey, 1916). In conjunction with the concept of growth, artisan communities elaborate on the connection between growth and relational interactions: "Teachers who collaborate on instruction are more likely to hold high expectations for students and for their colleagues, to innovate in their classrooms, and to have strong commitments to the teaching profession" (Talbert & McLaughlin, 2002, p. 327). The concept of professional growth in a strong community setting is at the heart of moving professional development to new levels of effectiveness. The policy proposal attempts to address the concept of professional growth by allowing all stakeholders the opportunity to propose programs that meet a perceived need. In addition, the underlying assumption of the proposal is that teachers continue learning over time and in collaboration with others.

Dialogue. Dialogue is a key element in successfully fostering positive change and teacher growth in any professional development structure (Boydell & Blantern; Buysse et al., 2003; Clarke & Hollingsworth, 2002; Conderman, Johnston, Rodriguez & Hartman, 2009; Levine, 2010; Lipton & Wellman, 2007; Nelson & Slavit, 2008; Nelson, Deuel, Slavit & Kennedy, 2010; Richardson, 2005). The policy proposal is a model built around continuous dialogue amongst stakeholders and between teachers. Dialogue can be defined as "the visible manifestation of constructivist leadership, thereby encompassing the reciprocal relationships that make meaning and community possible" because "the more we are together, the more we talk about what matters; and the more we follow

through on our commitments to each other; the more our capacity for truth is strengthened" (Lambert et al., 2002, p. 64-65). Through dialogue, members of the school community uncover and examine their underlying belief systems, create a culture of trust and safety, and encourage creative problem solving. Though not always explicit, the role of dialogue, or intentional conversation, seems to be a key factor in successful change initiatives and models of differentiated professional development (Hirsh & Killion, 2008; Hodkinson & Hodkinson, 2003; Lieberman & Miller, 2001, 2007; Mullen & Huntinger, 2008; Smyth, 2007b; Theriot & Tice, 2009).

Meaningful dialogue focused on teacher learning and school improvement should be characterized by "the penetrating use of data and evidence to discover problems of practice and make sense of the work of teaching and learning" (Lambert et al., 2002, p. 71). Information or training alone is unlikely to lead to transformed classroom practice (Guskey, 1982, 1985,1991; Laksov, Nikkola & Lonka, 2008); to transform classroom practice, teachers should be honored for their efforts and build strong relationships with each other (Smyth, 2007b). If teachers are not provided with follow-up opportunities for application, reflection, evaluation, and collegial dialogue, traditional professional development is unlikely to transform into improved instructional practice (Guskey, 1991; Hindin, Morocco, Mott & Anguilar, 2007; Laksov, Nikkola & Lonka, 2008; Theriot & Tice, 2009). By building the policy proposal on a program cycle nature, the project explicitly focuses on the recursive and continuous nature of effective teacher learning.

Servage (2008) posited that "to encourage communicative learning in teachers thus requires at least a partial change in the focus of collaborative time toward more

open-ended dialogue" (p. 70), thereby directly addressing the role of dialogue in teacher improvement. Servage (2008) goes on to explain the role of transformative learning theory in moving dialogue past the details of day-to-day teaching to address deeper issues of social justice in schools and society at large. Coulter (2001), in his discussion of Habermas, also elaborated on the vital need for dialogue in changing and sustaining views of ourselves, others, and society. Research and theory are converging to support the idea that dialogue is one essential catalyst for sustainable school transformation focused on offering each child and each teacher appropriate, engaging, rigorous, learning experiences (DuFour, 2004; Fogarty & Pete, 2010; Guskey, 1991; Guskey & Yoon, 2009; Hutson, 1979; Lee, 2010). The opportunity to dialogue is inherent in the policy proposal as stakeholders clarify perceived needs and develop unique mechanisms to address those needs.

Leadership. School leaders and teacher leaders can begin this process by listening, collaborating, consulting, and coaching based on the needs of the teachers involved (Lipton & Wellman, 2007). By taking a stance that silences inner talk to listen without bias (Lambert et al., 2002), school communities and leaders can develop an understanding of the primacy of positive relationships to effective learning for teachers and students (Ahlfeld, 2010; Boydell & Blantern, 2007; Greene, Kim & Marioni, 2007; Smyth, 2007b; Talbert & McLaughlin, 2002). This understanding can lead to a focus on how school leaders frame conversations and craft interactions with members of the school community (Albers, 2008; Conderman, Johnston-Rodriguez & Hartman, 2009; Lambert et al., 2002). Such an understanding can help school leaders develop

professional development structures that are differentiated to meet the needs of teachers at a variety of skill and knowledge levels (Ahlfeld, 2010; Flannagan & Kelly, 2009; Kose, 2007; Tomlinson, 2005).

In order to implement and sustain successful change initiatives, schools must establish a community of trust, risk taking, and innovation (Donaldson, 2006; Hord, 2004; Lieberman & Miller, 2001; Smyth, 2007b). A strong school community is based on networks of respectful relationships that can be maintained even as members confront difficult truths (Donaldson, 2006; Smyth, 2007a). Establishing a positive school culture requires strong relationships amongst community members, where every community member is seen as collectively responsible for the learning success of each student (Deal & Peterson, 1999; Donaldson, 2006; Hawley, 2007; Hord, 2004). Where this does not happen, the learning community often suffers, and student success also suffers as a result. Principals are prime agents in rehabilitating damaged school cultures and establishing trust by sharing leadership and decision-making responsibilities in meaningful ways (Deal & Peterson, 1999; Hirsh & Killion, 2008; Hord, 2004; Kose, 2007; Mullen & Huntinger, 2008;). Teacher leaders can also support this process by carefully crafting conversations that facilitate student and teacher learning by encouraging active participation in school reform (Lambert et al., 2002; Little & Houston, 2003; Mullen & Huntinger, 2008). One mechanism for fostering positive relationships and learning opportunities among teachers is to offer professional development opportunities that are differentiated to meet their needs (Ahlfeld, 2010; Flannagan & Kelly, 2009; Tomlinson, 2005). Several models of collaborative professional development can be used by school

leaders to design responsive, collegial instruction for teachers. The policy proposal focuses on the potential contribution of any stakeholder. This focus supports shared leadership, shared decision-making, trust, and respect of all stakeholders in the school community.

Professional learning communities. Teachers need to feel safe and supported to attempt implementation of new teaching strategies, as "creating trusting and respectful relationships in schools and classrooms is the indispensable and single most crucial element to learning" (Smyth, 2007a, p. 228). One structure that begins to provide an organizational structure for teachers to develop relationships with other teachers that are supportive, challenging, and promote risk taking are professional learning communities (PLCs). PLCs are small groups that foster relationships and allow different groups of teachers to pursue improved practice using unique, self-described paths (Hawley, 2007; Hord, 2004; Theriot & Tice, 2009). The PLC structure focuses learning and teaching as a collaborative effort based on reflection, practice, and data-driven decision-making (Hawley, 2007; Hord, 2004; Theriot & Tice, 2009). However, if PLCs are not encouraged to move past management and curricular tasks, they cannot reach their potential as a model of significant collegial interaction (Aubusson, Steele, Dinham & Brady, 2007; Conderman et al., 2009; Hindin, Morocco, Mott & Aguilar, 2007; Nelson, Deuel, Slavit &Kennedy, 2010; Servage, 2008; Smyth, 2007a). Because of pressing time constraints, a narrow focus on immediate curricular concerns, and the assigned nature of membership, PLCs are often constrained in their potential to foster deep and meaningful learning for teachers (Aubusson, Steele, Dinham & Brady, 2007). Though not explicitly addressed in

the policy proposal, the need for teachers to work together is supported by the program cycle components of the proposal.

Teacher inquiry. Integrating collaborative inquiry or action research into PLCs or other existing collaborative structures can move past some PLC limitations by providing a vehicle for teachers to examine their instructional practices and experiment with innovative practices (Albers, 2008; Gallimore, Ermeling, Saunders & Goldenberg, 2009; Nelson & Slavit, 2008; Rimanoczy & Brown, 2008; Talbert & McLaughlin, 2002). Inquiry fosters the development and investigation of important questions that impact student learning because "collaborative inquiry is the process by which colleagues gather in groups to pursue, over time, the questions about teaching and learning that the group members identify as important" (Weinbaum et al., 2004, p. 72) . The structure of teacher inquiry allows teachers to investigate these questions in a systematic way focused on improvement of practice throughout the school community (Cole & Knowles, 2000; Dana & Yendol-Hoppy, 2009; Lieberman & Miller, 2001; Mohr et al., 2004). Teacher inquiry can be integrated into the PLC model to develop and share skills and knowledge embedded effectively into the daily life of a school (Fogarty & Pete, 2010; Hawley, 2007; Hodkinson & Hodkinson, 2003; Lieberman & Miller, 2001). The project supports inquiry by focusing on stakeholder initiated professional development programs that are constantly self-monitoring progress towards established goals.

One form of inquiry that has great potential for teachers is action research. Action research uses an inquiry cycle to investigate important questions, attempt implementation of new instructional techniques, and share the results to build successively improved

instruction (Albers, 2008; Aubusson, Steele, Dinham & Brady, 2007; Boydell & Blantern, 2007; Rimanoczy & Brown, 2008). Action research allows teachers to experience autonomy in a supportive and collaborative environment, yet teachers are often untrained or unprepared to engage in inquiry effectively. Protocols such as the critical friends and tuning protocols can support teachers in learning to manage the intricacies of inquiry. Both protocols include systematic forms of interaction that help teachers ask for and receive specific feedback on lessons, student work, and other instruction-related issues. These protocols help teachers engage in supportive dialogue because teachers are given a safe format for presenting ideas, asking questions, responding to new ideas, and making suggestions for improvement (Hudson & Gray, handout, n. d.). This allows schools to build communities that promote risk-taking and mutual learning, two factors crucial to effective professional development.

By integrating PLCs and teacher inquiry, schools can take steps towards creating a system of differentiated professional development that underpin relational networks and shared leadership responsibilities (Albers, 2008; Flannagan & Kelly, 2009; Gallimore, Ermeling, Saunders & Goldenberg, 2009; Kose, 2007; Nelson & Slavit, 2008; Tomlinson, 2005). Without this step, PLCs can become trapped in a limited conception of the collaborative process that fails to explore deep questions of purpose and effectiveness. Servage (2008) contended that "professional learning communities focus their efforts on the means of teaching and not its ends" (p. 65). The phenomenon of learning together while failing to delve below surface concerns has been documented by research and prompted exploration of how to deepen professional development (Hindin,

Morocco, Mott & Aguilar, 2007; Servage, 2008; Smyth, 2007a, 2007b). Despite its value, adding a component of inquiry is not enough to mitigate the limitations of the PLC model without additional support.

PLCs can, however, serve as a structure for fostering inquiry. Teacher research fosters meaningful teacher learning when it is supported by structures like PLCs with differentiated learning opportunities, adequate time, shared leadership, and the development of cultural proficiency (Aubusson, Steele, Dinham & Brady, 2007; Mohr et al., 2004; Wilson & Demetriou, 2007). Without adequate time to move past relational interactions and curricular concerns, teachers will have limited opportunities to find personally meaningful ways to integrate research and practice effectively (Davies & Dunhill, 2008; Little & Houston, 2003; Meo, 2008; Mullen & Huntinger, 2008). On the other hand, without the opportunity to develop strong interpersonal relationships, teachers will often engage in superficial collegiality rather than meaningful dialogue (Aubusson, Steele, Dinham & Brady, 2007; Nelson, Deuel, Slavit & Kennedy, 2010).

Communities of practice. Communities of practice encompass many of the components demonstrated by research to support teacher learning effectively by providing self-directed, safe, differentiated professional development opportunities (Buysse, Sparkman & Wesley, 2003). A community of practice devoted to improving specific aspects of instructional practice is situated to discover how specific instructional strategies can "serve as a lever for school reform" so that "the ultimate goal of literacy improvement is student motivation, engagement, and achievement" (Irvin, Meltzer & Dukes, 2007, p. 25). Communities of practice, however, are conceived without the level

of detail that would make explicitly replicating their functioning possible (Levine, 2010). Though the conceptual basis of communities of practice seems to move forward towards a structure that adequately supports teacher learning, more explication of the functioning of these groups would be needed for implementation in other settings (Levine, 2010).

Shared leadership. Shared leadership is one method of increasing ownership that allows teachers to collaboratively determine avenues of exploration that can replace one-shot seminars given by experts as the primary vehicle of professional development (Ahlfeld, 2010; Colbert, Brown, Choi & Thomas, 2008; Guskey & Peterson, 1996). School administrators, formal teacher leaders, and informal teacher leaders all play important roles in changing the cultures of schools to value genuine learning and promote an inquiry stance (Lipton & Wellman, 2007; Mullen & Huntinger, 2008; Smyth, 2007a, 2007b; Spencer & Guillaume, 2006). Teachers and other school leaders, however, often need explicit training in how to act as leaders, coaches, facilitators, collaborators, and consultants in appropriate and responsive ways (DuFour, 2004; Guskey & Peterson, 1996; Lee, 2010; Levine, 2010; Lipton & Wellman, 2007; Maurer, 2010; Nelson, Deuel, Slavit & Kennedy, 2010). Differentiating professional development can build an expectation that teachers will also function as leaders and that it is the responsibility of the school to provide meaningful learning experiences to promote and sustain leadership capacity within the school (Flannagan & Kelly, 2009; Johnson, Kahle & Fargo, 2007; Kose, 2007; Tomlinson, 2005; Watson, 2005).

Some promising results have been obtained in programs that are locally developed and implemented, beginning with volunteer teachers in the school building

(Fisher, 2001; Fisher & Frey, 2008; Fisher, Frey & Williams, 2002; Manzo, 2006; Rose, 2000). By allowing teachers to volunteer or self-select their learning opportunities, trust and empowerment are built into the experience. Further, teachers are granted the professional respect to identify areas of weakness and select appropriate learning opportunities to improve in those areas. By addressing the varied needs of teachers, students, and other constituents, school communities strengthen their ability to effectively improve many aspects of the educational community by fostering continuous improvement. Conceptualizing professional development as a set of differentiated opportunities to develop instructional expertise can help schools improve teacher and student learning. Shared leadership is an important philosophical component of the policy proposal because it allows all stakeholders equal opportunity to participate in the conceptualization, design, initiation, implementation, and evaluation of professional development programs.

Evaluation. Evaluation in educational settings can be defined as "a systematic, purposeful process of studying, reviewing, and analyzing data gathered from multiple sources in order to make informed decisions about a program" (Killion, 2008, p. 8). There is a growing body of research literature supporting the importance of effective evaluation as part of program design and implementation in educational settings to support clear articulation of program elements and assumptions, as well as ensuring that a program is evaluable (Bernhardt, 2009; Gillies, 1995; Goldie, 2006; Killion, 2008; Lachat & Smith, 2005; Sanders & Sullins, 2006). According to Sanders and Sullins (2006), "evaluation is an essential part of the improvement of school programs" (p. 2)

because “Data alone are not useful unless they are placed within the context of a systematic investigation of programs and processes” (Killion, 2008, p. 1). In addition, evidence exists suggesting that evaluations produce more reliable and valid data, and are more likely to be utilized when stakeholders have a significant role in evaluative activities (Bryson, Patton, & Bowman, 2011; Poth & Shulha, 2008; Ryan, 1987; Sherwood, 2010).

Incorporating evaluative mechanisms into schools as part of data-driven decision-making is gaining traction as an appropriate strategy to drive school improvement (Baggett, 2009; Gillies, 1995; Goldie, 2006; Hoole & Patterson, 2008; Killion, 2008; Sanders & Sullins, 2006). Staff development is an area with growing support for the use of evaluative procedures to focus programming on meaningful results, but the benefits of such evaluative strategies on staff development programs are still emerging (Baggett, 2009; Desimone, 2009; Hoole & Patterson, 2008; Killion, 2008; McDonald, 2009). The cyclical nature of the program cycle includes evaluative measures as an essential component necessary for professional development program. The policy proposal supports this through an evaluative component requirement for all professional development programs.

Though the overall goal of any school related program is student-oriented, evaluation of professional development provided to teachers has historically been limited to measures of teacher satisfaction (Bernhardt, 2009; Killion, 2008). Professional development in this district and elsewhere has centered on individual workshops with limited opportunities for practice or follow-up (Ahlfeld, 2010; Desimone, 2009; DuFour,

2004; Hirsh & Killion, 2008; Hutson, 1979). Recent research has begun to identify components of professional development that are most likely to impact teacher beliefs, attitudes, and behaviors that lead to increased student achievement; these components include sustained professional development (at least 40 hours), collaboration, relevance, ongoing support, and opportunities differentiated or responsive to individual teacher needs (Amau, 2009; Cantrell, Burns, & Callaway, 2009; Fisher, 2001; Fleming, Shire, Jones, Pill, & McNamee, 2004; Fogarty & Pete, 2010; Kose, 2007; Lee, 2010; Little & Houston, 2003; Theriot & Tice, 2009). (Bernhardt, 2009; Killion 2008).

Conclusion

Developing an understanding of the needs of learners is fundamental to developing effective instruction; this understanding applies to both students and teachers. Just as classrooms are the primary environment for formal student learning, professional development is the primary mechanism for formal teacher learning. Effective instruction for students and teachers includes opportunities to collaboratively construct knowledge, multiple paths to demonstrate learning, opportunities to metacognitively practice new learning, safe and respectful environments, supportive leadership, ownership of relevant and meaningful learning experiences, opportunities to reflect on new learning, and a strong system of assessment to pinpoint and address strengths and weaknesses. To increase the success of students, teachers must also experience effective instruction through professional development. The policy proposal is designed to support the creation of professional development programs that support research-based best practices for learners, professional development programs, and school improvement.

In order to ascertain the exact relationship between student achievement and professional development, schools must begin integrating evaluative procedures into professional development programs. Beyond exploring the impact of professional development programs on student achievement, evaluation can function as an assessment tool and as a tool for ongoing reflection; aspects of evaluation might be used to assess student and teacher strengths and weaknesses, thus allowing for targeted learning experiences. It might also be used to create ongoing assessment procedures to determine teacher growth and continuing needs. It might be used to explore the impact of professional development programs on teacher perceptions, attitudes, and beliefs, especially in schools with a history of negativity towards traditional professional development. In an age of increased accountability, integrating evaluative procedures into all aspects of professional development programs is one way to generate meaningful data to drive decision-making and positively impact school cultures and student achievement.

Description of the Policy Recommendation

The policy recommendation is designed as a systematic process for the conceptualization, design, implementation, and evaluation of professional development programs in schools. The recommendation provides protocols and documents for all stages of program development. If utilized, any stakeholder could use the proposed process to propose, initiate, and monitor a program. Included are documents to conduct a needs assessment, determine feasibility, identify resources needed, create timelines for implementation and create mechanisms for on-going evaluation (Appendix A). The documents could be made available through the district website.

Supports and Barriers

In order to access the documents, stakeholders would need a computer with internet access and a printer. Stakeholders would also need to be familiar with district resources and have access to relevant district personnel. The district website, email, and interoffice mail are structures in place and would support implementation of the policy recommendation. Existing policy, which outlines state requirements for professional development, would also support stakeholders in understanding how and why professional development must be conducted in the district. Barriers to implementation of this process include lack of knowledge or skill about various aspects of programming on the part of stakeholders interested in initiating programs and limited access to technology or district personnel. The first barrier can be addressed by using the documents included in the policy recommendation as well as links to additional information about effective professional development. The second barrier can be addressed by including clear articulation of the roles and responsibilities in the hierarchy of personnel for the district in question. The existing policies are non-specific and do not include specific roles and responsibilities, functions or procedures guiding the establishment of new professional development initiatives. Any individual interested in creating a program to address a perceived need would have to take responsibility for undergoing the process outlined in the policy recommendation.

Policy Proposal Components

The policy proposal consists of eight sections. The entirety of the proposal can be formatted as a paper or electronic manual or as a website, depending on district

preferences. A detailed description of the policy proposal follows. Each of the eight sections is based on the research presented in the literature review so that professional development programs support the needs of adult learners, are focused on instruction and student achievement, are built around research-based best practices, are grounded in research on effective professional development, and include adequate evaluative measures.

Policy statement. This policy statement is composed of specific language that articulates the policy using formal language consistent with the language used in other district policies. This policy could augment the existing district policies regarding staff development and professional development programs. It adds the component of systematic accountability and clear documentation of all programs. The statement would provide the district's view of the purpose of the policy as well as how it should be administered and implemented. The suggested policy statement reads:

> The program policy contained herein outlines the procedure for adopting new programs and for administering continuing programs the district has already adopted. The District is committed to continuous improvement based on research-based best practices, student achievement, and professional learning. The District is responsible for creating and maintaining appropriate systems to oversee the creation, replication, and continuation of successful educational programs for students and teachers. Likewise, the District is responsible for clarifying the program development process to ensure stakeholders equitable opportunities to propose programs based on perceived need. The District accepts

> responsibility for reviewing submitted program proposals in a reasonable timeframe (not to exceed six months). The District will dedicate appropriate resources and supports to accepted program proposals within budgetary constraints and is responsible for supporting such programs that meet stated goals and outcomes.

This statement provides an overview of the district's position towards new programs that can be used to guide decision-making throughout the program proposal process.

Policy goals. The goals of the policy section states the broad achievements the policy is designed to support. Goals are defined as broad statements of intent and can be used to guide decision making processes (Killion, 2008). The suggested goals of the policy are (a) to provide a consistent, transparent process for program initiation, development, implementation, and evaluation throughout the district; (b) to provide equitable access to the program proposal process to all stakeholders; (c) to ensure programs are well-developed and have adequate support before implementation; (d) to provide documentation of programs over time; and (e) to support data-driven decision-making and shared leadership throughout the district. These goals align with the themes that emerged from the research and the expressed priorities of the district in question. They also align with research-based best practices in organizational and adult learning (Aderu & Shariff, 2010; Fixson, Blasé, Wallace, & Wallace 2009; Killion, 2008; Knight, 2011; Nelson, Deuel, Slavit, & Kennedy, 2010).

Policy implementation. The section identifies each step required for new program proposals. The implementation phase of the policy contains eight sections and

will include guiding questions and document templates where appropriate. This section provides the portions of the policy proposal that would be used by stakeholders.

1. ***Problem Statement.*** This section articulates the perceived problem. It will include guiding questions.

2. Needs Assessment. In this section, a detailed account of data relevant to the problem is gathered, analyzed, and presented to demonstrate the significance of the problem. A template with guiding questions will be provided for this section.

3. Feasibility. This section delineates the existing supports and potential barriers to the proposed program. Guiding questions will be supplied.

4. Resources. Here, the needed resources including personnel, time, supplies, and budget for the proposed program will be outlined. A template and guiding questions will be included for this section.

5. Goals and Outcomes. This section will include both goals and expected outcomes. Goals will be defined as broad statements of intended purpose while expected outcomes will be determined by specific, measurable objectives. Potential benefits should also be explored in this section. A template will be provided for this section.

6. Program Details. This section will detail the overall program. Here, the day to day functioning of the program will be specified. The functioning of the proposed program will be outlined such that its impact on existing structures is clear.

7. Timeline. An implementation timeline should indicate how long and in what stages implementation will occur, when outcomes can be expected to appear, and how long the program will run. Guiding questions and a template will be provided.

8. Evaluation. The final section will explicate how the program will be monitored and assessed over time. This will include evaluation materials and identify who will evaluate the program and when the program will be evaluated. Guiding questions and suggested websites that provide guidance in this area will be provided.

Expected outcomes. How the policy is anticipated to impact future program cycles will be explicated. Expected outcomes are defined as specific, measurable outcomes anticipated as a result of the program (Killion, 2008). For this policy proposal, the criteria for measuring the expected outcomes must be specified by the district as part of adopting the policy. Recommended criteria for stating outcomes include but are not limited to:

- Clear documentation of program components will be available to stakeholders for all future programs.
- Programs will have clear criteria and mechanisms for evaluation over time.
- Programs will identify and secure required resources prior to implementation.
- Subsequent to adoption of this policy, more programs will be initiated by stakeholders who do not hold positions of authority.
- The number of programs with documented successes will be greater than before adoption of this policy.

Other outcomes and additional specificity may be established at the discretion of the district.

Implementation plan. Adoption of the policy will include implementation steps as follows. It is anticipated that the policy will initially be implemented with new

programs and then later be applied to existing programs. Before implementation, materials will need to be made available on the district website. The duty of reviewing submitted proposals and determining if resources can be secured must be assigned to one or more individuals. In addition, a district staff member will conduct introductory sessions explaining the policy to various stakeholders. These sessions would most likely take place during existing professional development times or during building faculty meetings. Sessions for other stakeholders would be voluntary and held in the evening. After the policy has been introduced to the district, anyone who has suggestions for new programming will be asked to complete the process outlined in the proposal. Once the policy is in place for new programs, components of the policy can be retroactively applied to existing programs. Additional sessions about specific portions of the process will be scheduled on an as needed basis. Beginning with programs in individual schools, programs will be required to establish evaluative activities and submit analyzed data for program continuation. Once existing programs have implemented an evaluation cycle, those programs will also document the other portions of the program cycle for future reference. When the policy has been fully implemented, every program in the district will have, retroactively or at the time of initiation, completed documentation of all aspects of the program cycle and will be using the policy components for continuous improvement.

Implementation timeline. This section outlines the anticipated timeline needed to fully implement the procedures delineated by the policy should the district choose to adopt it. The overall timeline from adoption to complete implementation of all the

procedures encompassed by the policy is approximately three years. Making materials available and assigning associated duties is estimated to take no more than two months. This would best be conducted over a summer vacation in June and July. Introductory sessions to promote awareness of the policy would take place over the course of a semester to ensure that sessions were held during existing contracted hours and did not require extra meetings. Sessions for other stakeholders could be held simultaneously in the evenings and after school. During the second semester, all new programs would be subject to the policy guidelines, and persons responsible for existing programs would begin developing and implementing evaluative activities. At the same time, additional in depth sessions would be held as needed for stakeholders. It is anticipated it would take at least a year for all existing programs, beginning with those at the building level, to successfully develop evaluative activities and implement an evaluation cycle. During the next year and a half, documentation of all aspects of the program cycle for each program would be required before renewal is approved.

Policy evaluation. The final section of the policy proposal details how the policy's procedures can be evaluated over time. These procedures will be evaluated using formative measures on an on-going basis and summative measures as a formal annual review by the Board of Education for renewal. Several formative measures will be used routinely including surveys of stakeholders at the end of information sessions, reflection on the process surveys completed by stakeholders who use the policy procedures to initiate a new program and those involved in evaluating or documenting existing programs, and additional stakeholder feedback on programs and the program

process. The formal annual review will be a summative evaluation. The summative evaluation will attempt to determine how well the goals and outcomes of the policy procedures have been met, and will also include a review of evaluation results of programs throughout the district. The policy is a set of procedures and guidelines that provide more explicit direction for the initiation, design, development, implementation, and evaluation of professional development programming in the local district.

Formative evaluation is designed to allow programs to self-assess for continuous improvement (Lenthall, Wakerman, & Knowght, 2009). The policy's procedures can be evaluated using the same strategies as those applied to specific programs because it is a set of actions with intended outcomes that can be judged over time. Using surveys at the end of each informational session will allow immediate adjustments to better serve the stakeholders. Reflection on the process surveys will provide additional information about how the policy components and procedures are functioning, and whether the policy is meeting its intended goals. While bias is a challenge in the wording of any survey, the advantages are immediate feedback, low cost, anonymity, and comparable longitudinal data (Fink, 2006). Additional feedback from stakeholders will triangulate survey data to ensure that any concerns are surfaced an addressed. The formative evaluation process used to assess the policy's procedures will also serve as model to specific professional development programs in the local district.

By contrast, summative evaluation is designed to determine the overall effectiveness of a program by comparing results to stated goals and outcomes. Again, because the policy is comprised of a series of procedures that guide a program from

inception to evaluation, the same evaluative measures can be used to determine its success as are used with individual programs. In this case, the summative evaluation will have two components. The first component will be a meta-analysis of all formative measures and submitted documentation related to the functioning of the policy's procedures. This component will provide a summary of the on-going formative assessment to determine overall alignment with stated goals and outcomes. The second component will be a review of all professional development programs in the district and the evaluation documentation provided by each. Each program will have its own evaluative measures, but this review will provide a comparative view of all current professional development programs. By reviewing the results of all district programs, the district can identify positive or negative trends in program performance. The district can also assess how effectively programs are being conceptualized, designed, implemented and evaluated. This summative data will allow the district to make a decision about whether to renew, modify, or discontinue the policy and its procedures.

The overall evaluation goals are to determine if the policy's procedures have had the intended impact on program process, to identify strengths and weaknesses to increase the effectiveness of the policy's procedures, and to verify the results of the project with data. The annual review combined with ongoing formative measures should provide evidence to determine if the policy proposal addressed the needs revealed by the data. If this project is successful, new programs should be successfully conceptualized, designed, implemented, and evaluated using the policy procedures. The programs using the policy procedures should be engaged in the program cycle with more transparency, stakeholder

involvement, and evaluative data than was previously available. Rather than the haphazard and often unclear mechanisms currently in place, professional development programs should have clear guidelines for all stages of the program cycle. The second goal of the evaluation is to identify strengths and weaknesses of the policy procedures. Identifying strengths and weaknesses of policy components will allow adjustments to be made to improve the procedures which support the district's commitment to continuous improvement. The third evaluation goal is to use data to verify the results of this project and provide that data to stakeholders. Making formative and summative data available to stakeholders will enable them to participate in determining how to improve the policy procedures in the future.

Strategy for Stakeholder Inclusion

Several groups of stakeholders will be impacted by the project. Those directly impacted as participants include the district board of education and administrators, building level administrators, and teachers. Adoption of the policy's procedures will change how new programs come into existence and how existing programs are continued and evaluated. In addition, those who are responsible for overseeing programs or who are assigned to monitor portions of the policy's procedures will potentially experience additional work load, altered expectations, or modified paperwork. Indirectly, parents, community members and students will also be impacted by the project because they have a vested interest in the success of all programs implemented to positively impact student achievement. These stakeholders will have more access to information about

professional development programs and will have clear documentation of the strengths and weaknesses of specific professional development programs.

Stakeholders will be informed of the evaluation results of specific professional development programs and of the policy's procedures in two ways. First, evaluation results for individual programs using the policy procedures will be publicly available through the district website. This will ensure transparency for programs throughout the district and provide an opportunity for all stakeholders to review program results. Second, an annual policy review will be prepared for the Board of Education. This policy review will include a meta-analysis of all summative and formative evaluation results. The policy review will be presented to the Board of Education at a public meeting with the opportunity for public comment. It will include an executive summary with an explanation of the project's goals, an overview of the data, and recommendations for improvement. This report will be posted on the district website as well as presented to the board. It will be used by the board to determine if the policy and/or specific professional development programs should be continued, modified, or discontinued.

Project Implications

Social Change Implications

The implications for social change for this project include a policy with step by step procedures for each stage of the professional development program cycle from conceptualization to evaluation that can impact program quality and transparency in schools. Through this policy, all stakeholders will have the opportunity to identify areas of need, create programs, implement programs, and evaluate programs. The project can

be used for new programs and existing programs. It promotes quality programming by ensuring transparency, continuous improvement, and appropriate evaluation. This project can positively impact instructional quality, student achievement, transparency, and consistency.

The proposed policy proposal could potentially improve a variety of programs throughout the district through detailed procedures for all stages of the program cycle. It could improve program quality through an emphasis on needs assessment, effective program design, appropriate resource allocation, fidelitous implementation, transparent evaluation, and continuous improvement. The goal of all school improvement is to provide students with quality education. School improvement is accomplished largely through the implementation of professional development, and other programs that address specific student needs and ensure teacher effectiveness. Many programs implemented in schools lack clarity, resources, fidelity, and effective evaluation. They also suffer from a phenomenon referred to as the "black box" where so much of the program cycle is obscured, a program can neither be evaluated nor replicated. The proposed policy proposal will clarify the program cycle to alleviate these problems. A potential result of this project is that there will be better professional development programs in schools which can lead to increased student achievement.

Importance of the Project to Local Stakeholders and the Larger Context

This project is important to local stakeholders and the larger context. It is important to local stakeholders because it will address the problem supported by the research findings outlined in Section 2. Local stakeholders, including administrators at

all levels, teacher, parents, and other community members could benefit from the project because it creates a consistent, transparent program cycle. This is a benefit because all stakeholders can have the opportunity to participate in the program process to meet the needs of students. Programs can be more effective with a clear and consistent process that supports stakeholder involvement, fidelitous implementation, effective evaluation, and continuous improvement.

Through there is considerable research identifying the components of effective programs and determining what effective evaluation looks like, there is limited research on how to create systems that implement components of effective programs and evaluation effectively. Results from this study could influence how programs in schools are conceptualized, designed, implemented and evaluated. The project details procedures for each stage of the program cycle that districts could use to ensure that programs in schools are effective. Studies such as this can help districts and organizations implement systems that promote effective programming. Districts could create long-lasting improvement in student achievement through more effective programs.

Conclusion

Section 3 began with an overview of the project, the project goals, and a relevant literature review. The project was designed to address the research findings by creating a system to ensure transparent, consistent, effective program conceptualization, design, implementation, and evaluation. The project goals were composed in response to the research findings presented in Section 2. The literature review provides support for the policy proposal by examining research on effective adult learning, professional

development, and evaluation. Included in this section were needed resources, existing supports, potential barriers, time line, roles and responsibilities, evaluation plan, and implications for social change.

Section 4: Reflections and Conclusions

Introduction

The purpose of this study was to investigate the history and intended impact of a differentiated professional development program on teachers and students at a public high school in the United States. This section is focused on my process, growth, and the potential of this project to have lasting social change. First, I will explore the strengths and limitations of the project, and delineate alternate ways to address the problem. I will then discuss the learning, scholarship, and project development I engaged in, as well as how this doctoral process might influence leadership and change. This will be followed by a three-part self-reflection about myself as a scholar, practitioner, and project developer. Next, I will discuss the potential impact and social change that might be derived from this doctoral study and the resulting project. The section will conclude with an overview of the implications, applications, and directions for future research.

Project Strengths

Professional development programs that are systematically initiated, developed, implemented and evaluated have an increased likelihood of success, sustainability, and replication (Crowther, 2009; Killion, 2008; Schmocker, 2006). In addition, a clear process for instigating new programs allows all stakeholders to participate in the development of programs tailored to meet local needs (Donaldson, 2006; Hord, 2004; Senge, 2001). Uncovering the details of how a program emerged can inform the development of a process that supports the creation of effective professional development programs. This project study had several strengths: it addresses a lack of clarity about

professional development at the study site, it is based on a solid research foundation, and it can be applied to new and existing programs.

One strength of the project study is that it addresses a lack of clarity about how professional development programs in the parent school district of the study site, hereafter referred to as ABC School District and ABC High School (pseudonyms), respectively. This lack of clarity emerged in the interviews and focus group, in which teacher participants, teacher facilitators, and administrators all expressed different understandings of how the program was developed. Teachers at ABC High School stated that they wanted to continue the program and improve it, but were unsure how to engage in the process. This revealed a need for additional information about program function. The lack of clarity was also discernible through many teachers stating a need for more time in learning teams, and through their stating that they were uncertain about how leaders or topics were selected and expressed a desire to participate more actively in the decision-making process. The project addresses this lack of clarity by providing a clear process for program initiation, development, implementation, and evaluation that can be applied to new and existing programs. If the district chooses to adopt the project proposal, the project materials are available to clarify aspects of ABC High School's professional development program. The project is also designed to clarify how various stakeholders can participate in program improvement.

Another strength of the project is that is it based on a solid foundation of research in program development, program evaluation, and teacher leadership. Research in all three areas was used to ensure that the project aligns with research-based best practices as

well as allowing the active participation of all stakeholders. Each of the eight stages of the project were created using research on best practices in professional development for teachers (Knight, 2011; Schmoker, 2006; Senge, 2005). This approach was designed to provide transparency and enable programs to improve over time.

Program development research has shown a need for participation of all stakeholders, the need for adequate planning, and flexibility to meet local needs (Daugherty, 2009; Kee, Anderson, Dearing, Harris, & Shuster, 2010). Research on program evaluation consistently reveals the difficulty of adequately assessing program impact on student achievement and thus stresses the importance of multiple formative and summative measures to determine program progress towards established goals (Brainard, 1996; Caracelli, 2006; Gillies, 1995; Poth & Shulha, 2008; Sherwood, 2010). Teacher leadership research has focused on shared decision-making, transparency, and differentiation as components of effective programs (Donaldson, 2006; Hord, 2004; Schmoker, 2006). The project is designed to reflect the research base.

An additional strength of the project is that it can be applied to both new and existing programs. The policy can be applied to existing programs as a tool for clarifying, evaluating, and improving existing programs. Any program can benefit from ensuring that it will address an established problem through feasible goals and outcomes that can be reached within a reasonable timeframe. The data gathered from the research indicated a clear lack of procedures for programs; by providing clear procedures for all aspects of program development, the project enables stakeholders at every level to understand and can participate. New programs will also benefit from clear procedures

throughout the program life cycle. No matter the age or stage of a program, the procedures specified in the project will enhance the program's continued development and clarity. Implementing the project procedures will allow for systematic evaluative data collection over time that could strengthen the evidence supporting the link between effective professional development programs and increased student achievement.

Project Limitations

The policy procedures recommended in the project have several limitations that may impact implementation in the local district or outside districts it is intended to serve. These limitations are the requirement of long-term staff commitments, the need for support and training for stakeholders to participate effectively, and a perspective limited to a secondary school environment.

One limitation is that the proposed policy outlines procedures that need significant long-term staff commitments in order to have the consistent oversight necessary for success. The project outlines a series of procedures that cover all stages of program development from conception through evaluation. For each stage, oversight and input from district and/or school administration will be needed to ascertain that the program in question meets the needs of the district and/or school in question. Oversight will also be needed to ensure a faithful program implementation, appropriate evaluative measures, and data analysis to interpret program success. This is especially important because research on effective professional development programs has identified sustained support over time as an important component (Crowther, 2009; Killion 2008; Knight, 2011).

The project is designed to address this component by creating mechanisms for ensuring stakeholders at various levels are involved in all stages of program development. If ABC School District does not already have personnel with expertise in program development, such an individual or individuals will need to be trained. In addition, the project specifies that programs must publish multiple components over time to ensure transparency and both oversight and expertise will be needed to support this process. The project does not address the overwhelming job requirements that school personnel already have, so the district in question will probably need to shift job responsibilities or acquire additional personnel to manage the policy procedures so it can be used with all relevant current and future programs. This has the potential to impact the likelihood of adopting the project because the district is facing some financial hardships due to the changing demographic.

Another limitation of the project is the need for substantial support or training to ensure it can be fully accessible to all stakeholders. These procedures are specifically designed for ease of use, but still require a certain level of knowledge about programming and public schooling. Stakeholders such as administrators, teachers, and other school personnel are likely to have the requisite knowledge to utilize the policy's procedures effectively. However, other stakeholders such as parents and community members are less likely to possess the background knowledge or academic capacity to effectively participate in the program cycle without support. These necessary competencies include: literacy, basic computer skills, ready computer access, ability to comprehend data and data collection procedures, and research based best practices for both student instruction

and teacher professional development. The project does not provide mechanisms to address supporting stakeholders without the requisite skills and knowledge. Stakeholders who need help to participate will need to seek that help from volunteers in the district or personally available outsiders. The expected impact of this is that it has the potential to reduce the effective participation of stakeholders who are uncomfortable asking for help, have limited time available to participate, or who are unable to locate the help they need.

Finally, the project has been designed for the district, but from a secondary perspective. It is possible that the realities and needs of elementary and middle schools differ substantively from those of secondary schools and are therefore not adequately addressed by the project. The size and complexity of the high school environment have impacted the design of the project. Since this is the case, it is possible that the project may not apply to programming at other levels. To address this limitation, the district in questions would need to have the procedures outlined in the project reviewed, and potentially modified to meet the needs of other levels. The district would also need to ensure that personnel at all schools have equitable access and knowledge of the project procedures. This might be accomplished through professional development opportunities or having an individual highly trained available to each school to support the project.

Alternate Ways to Address the Problem

One challenge in many schools is how to develop and sustain effective professional development that leads to increased student achievement (Killion, 2008; Knight, 2011; Schmoker, 2006). This qualitative case study was designed to explore how the current professional development program evolved from a variety of perspectives.

The results of the interviews and focus groups showed a distinct lack of clarity in understanding how programs evolved and how it was evaluated over time. Clear procedures for all stages of the program cycle emerged repeatedly as an area for improvement. The project was designed to focus on procedural clarity and consistent evaluative procedures in response to the research results.

One alternative to a policy proposal would be to create a handbook of procedures that could be recommended for adoption in the district. This model would require the creation of a written tool that provided background and instructions on how to effectively conceive, develop, implement, sustain, and evaluate effective programs. It could be provided once to members of the district and then referred to by individuals on an as needed basis year after year.

A second alternative to the policy proposal would be the creation of a professional development series on how to design effective professional development programs. A series of sessions that would train various stakeholders on the program cycle, and how to create and maintain effective programs could be implemented. Individuals and groups would receive in depth training on program development so they could participate more actively in all stages of the program cycle. Real time training might be effective because it would ensure continuity of understanding.

A third alternative to the policy proposal would be to design its components to be part of an interactive website. An interactive website would allow any stakeholder to participate in the program cycle by completing the initial components electronically. This system would eliminate the need for personal contact and might create a shorter

turnaround time for feedback from designated district personnel. Accessibility would be increased by handling the program process electronically. Lack of transparency was an issue identified by several stakeholders directly and indirectly. An interactive website could also increase transparency by publically documenting the program cycle and its requirements.

Analysis of Learning

Academic research is a rich and complex field with which I had very limited experience prior to my tenure as a doctoral student at Walden University. I earned a Bachelor's degree in English which focused on scholarship of a contemplative nature almost exclusively based on previous writings and personal responses to literature. My Master's program was a Master's in the Arts of Teaching and as such focused on the practical aspects of becoming an effective teacher and did not require me to conduct substantive independent academic research. It was not until I began my course work at Walden University that I began to understand the complex knowledge and skills needed to undertake a doctoral study. My coursework provided me with an opportunity to practice implementing skills and knowledge to become a competent researcher. Exploring various topics of interest and then writing my proposal helped me hone my ability to conduct academic research. The feedback from my committee allowed me to grow through continuous reflection and improvement.

My course work provided me the opportunity to explore real educational problems that mattered to me and my local setting. I was allowed to pursue literature on topics that intrigued me to determine the direction of my eventual doctoral inquiry. The

requirements to read deeply in a variety of areas, to learn about different types of research, to understand the value of different data collection and analysis methods, to create an annotated bibliography all helped me grow my capacity to complete a doctoral study. In addition to learning how to research and why to pursue research, I also learned to persevere when I got stuck and approach my courses with both patience and persistence. I learned the process of academic research. I learned how to conduct academic research. I also learned to consider the value and purpose of academic research. Ultimately, the value of a doctoral study lies in the contribution it makes to field of study or professional community to which it is relevant. I feel confident that my contribution of a systematic method of initiation, development, implementation and evaluation for professional development programs will positively impact both teachers and students.

Scholarship

When I began my doctoral journey, my primary goal was personal and professional growth. I wanted to engage in research that would increase my effectiveness as a teacher. As I underwent my Walden coursework and engaged in self-reflection, I began to recognize that my true interests related to professional development rather than direct instruction of students. Walden provided the circumstances that allowed me to develop my interested in professional development and hence my project study on the professional development program in my local school. The eventual doctoral study qualifies as an example of scholarship because it has the potential to actively contribute

to improved professional development program in schools which can lead to increased teacher effectiveness and thus student achievement.

During my tenure as a Walden student, I reviewed an enormous quantity of peer-reviewed literature with publication dates primarily between 2006-2010 and supported by earlier relevant scholarship. The study was built on a foundation of supportive literature that revealed the elements of effective professional development. The qualitative data that I collected supported the concerns identified by current academic research in providing teachers with professional development that improves teaching. In order to justify the study and subsequent project, saturation of relevant peer-reviewed literature was required.

The standard for scholarly work requires that the work be applicable beyond the local setting. This project was designed to address the perceived need for increased clarity and consistency at all stages of the program cycle. Interviewees at all levels from district administration to classroom teachers concurred on the need for consistent procedures for the initiation, design, implementation, and evaluation of professional development programs. In response to this theme a policy recommendation was created to establish procedures for each stage of program development. The use of the policy and its procedures is not limited to the district under study. Creating and sustaining effective professional development programs for teachers that positively impact student achievement is a common concern (Killion, 2008; Knight, 2011; Schmoker, 2006; Senge, 2001).

Project Development

This project emerged from personal observations and concerns about professional development in the local setting, to extensive reading of professional development and adult learning theory, to formal scholarly qualitative research, to a policy recommendation project with potential ramifications for professional development programs and other programs. The policy recommendation project developed from interviews conducted with a variety of stakeholders including district and building administrators, teacher facilitators, and teacher participants. I discovered that elements of effective programming, adult learning theory, and professional development needed to be incorporated to service and improve how programs are initiated, conceptualized, developed, implemented and evaluated. After a thorough literature review, multiple interviews, and relevant feedback, the project: Policy and Procedures for the Program Cycle, was developed. The project encompassed the following components:

- A clear and concise policy statement aligned with existing policies.
- Step by step instructions for program initiation, conceptualization, development, implementation, and evaluation.
- Guiding instructions, forms, and/or external resources to support each stage in the process.
- Designated district approvals to ensure programs are feasible and necessary.
- Opportunities for stakeholder participation.

These elements were supported by the research findings derived from the interview and focus group data as well as the literature review that addresses how programs can be conceptualized, initiated, designed, implemented, and evaluated by a variety of stakeholders to produce relevant, sustainable programs designed to meet specific, locally identified needs (Kee, Anderson, Dearing, Harris & Shuster 2010; Killion, 2008; Knight, 2011; Schmoker, 2006; Senge, 2001).

I have realized I enjoy creating policies and procedures to assist stakeholders in participating effectively in the program cycle to support teacher learning and student achievement. The opportunity to create this project has strengthened my desire to pursue career opportunities focused on professional development for teachers such Instructional Facilitator or Subject Area Coordinator or Professional Development Director. I relish the challenge of school improvement through effective professional development and other targeted school programs. As a Systems Thinker, I have learned to recognize the need for more effective, coordinated efforts to improve schools in my local setting at the individual, classroom, building, and district level. This process has helped me recognize my strengths and weaknesses, pursue additional leadership opportunities, and seek career moves that will allow me to focus on professional development full time.

Leadership and Change

As I have pursued my doctorate, my awareness of leadership in education as a multi-faceted, complex challenge has increased significantly. Educational leaders must be knowledgeable, innovative, realistic, focused, and determined to implement change that leads to demonstrable improvement in student achievement (Schmoker, 2006). To

be an effective leader, the needs and best interests of students must be unswervingly preserved as the primary goal of every effort, program, reform, change and challenge. In my career, and in my doctoral studies, I have focused heavily on professional development. Keeping the focus on students when working primarily with adults can be challenging, but this dichotomy is necessary because proactive adult choices lead to student achievement. My continued growth as a leader will depend on my ability to keep students at the center of every effort. I will need to continue to grow my capacity to work with adults. I will also need to educate members of my local district and support efforts to implement the policy proposal for program development I created as a result of my doctoral research. Though not a member of the administrative team, I will strive to support implementation of all stages of program development through the policy proposal by acting as a mentor to both those who want to initiate new programs and those who are tasked with approving new programs. As the policy is implemented and becomes a part of district culture, change will be achieved because all district programs will be clearly conceived, designed, initiated, implemented, and evaluated with a focus on student achievement and student needs. True social change will be achieved when the district culture has embraced the program cycle with a focus on students and has fully integrated the policy proposal into the functioning of the district.

My role as a project developer will be that of implementer, problem solver, mentor, and consultant in the adoption of the policy proposal. All stakeholders will be able to depend on me for support. I will also be available to answer questions about how and why the policy proposal was established. In addition, I will spearhead the evaluation

of the policy and any revisions that are needed to improve its functioning. As time goes on, my goal is to ensure other district leaders will develop the capacity to facilitate various aspects of the program cycle.

Self-Reflection

The doctoral process is inherently a learning process. To truly take advantage of that learning, self-reflection concerning how I have grown personally and professionally is essential. Through introspection, I have examined how I have matured as a scholar, practitioner, and project developer.

Analysis of Self as a Scholar

When I began my doctoral journey, I was extremely nervous about my ability to conduct scholarly research because I had no previous experience. I expected to learn a great deal and to find the work challenging. I was not fully prepared for how thoroughly unprepared I really was. I discovered that perseverance, confidence, commitment, and a willingness to ask for help were as valuable as my initial research skills. Teaching is an extremely rewarding and difficult profession. It is easy to lose sight of how challenging it is to be a student. Pursuing scholarship through the doctoral process afforded me the opportunity to be a teacher and a student simultaneously. This process has helped me refocus on the challenges my students face. In addition to reconnecting to the experience of being a student, developing my own scholarship has also improved my teaching by helping to more effectively connect research to my instructional decision making process. To me, scholarship is defined by proactively discovering ways to work smarter, not

harder to ensure that students and teachers find joy in learning (Silver, Berckemeyer & Baenen, 2015).

I have learned to identify leverage points where my scholarship can have the greatest impact. I have learned to grapple with the complexities of applying research to real life settings. I have discovered the joy of understanding a problem well enough to identify potential solutions. I have recognized how I can share my scholarship effectively with others. I have become a more impactful, strategic leader and teacher. I am now confident in my ability to identify a problem, address it in a scholarly way, and help both propose and implement viable solutions.

Analysis of Self as a Practitioner

In my 14 years as an educational practitioner, I have had the opportunity to teach a variety of age groups in a variety of settings. I have also had the privilege to serve as an informal and formal leader in multiple capacities. I have taught middle and high school English classes. I have taught in traditional schools and charter schools. I have taught in financially stable school districts and distressed school districts. I have taught established curriculums and written my own from nothing. I have served as a professional learning community leader, a professional development leader, a member and/or chair of numerous committees, and a mentor for new and struggling teachers. Currently, I teach English to 9th graders in a traditional high school where I also serve as the professional development committee chair. In my practice I strive to see the best in every child and every adult every day. I have discovered that positivity and optimism are the best tools I possess to both utilize and share the knowledge I have gained. Teachers

experience growth as instructional practitioners when they feel valued and appreciated. Students experience growth as learners when they feel valued and appreciated (Silver, Berckemeyer & Baenen, 2015). When I can practice in such a way that my colleagues and students feel I value and appreciate them, we all have the best opportunities for achievement and new learning.

I am constantly seeking opportunities to grow into a more effective practitioner. I try to conscientiously reflect on my practice to surface strengths and weaknesses and formulate specific goals for improvement. I strive to practice new skills and model best practices for others. I am relentlessly focused on the needs of students and the teachers who serve them. I recognize that I am exceptional in my scholarship, dedication, desire to improve, and willingness to learn. It is my desire to move into professional positions that allow me to leverage my strengths to impact a larger number of teachers and thus students. New professional challenges will allow me to continue my own growth and support the growth of other educators.

Analysis of Self as a Project Developer

Creating the policy proposal project for this doctoral research has been a rewarding, challenging experience. Though I have worked to improve school policies and procedures through committee work and informally in the past, this was my first foray into formal, comprehensive policy revision. I persevered through numerous unexpected challenges and setbacks. Successfully completing the project has been a huge, meaningful accomplishment for me. I learned to rethink the project to ensure it was manageable, reasonable, and effective. Through my research, I discovered that the

development of the current professional development in the local setting was unclear to a variety of stakeholders. In order to increase transparency, accountability, and program effectiveness, I developed a policy proposal that will permit all stakeholders to effectively participate in the program cycle. The project is intended to ensure that current and future programs avoid the concerns the research revealed. The greatest challenge for me was to keep it simple and not let my desire to address every aspect of every potential pitfall clutter the creation of a meaningful policy proposal.

Potential Impact on Social Change

The potential impact on social change of this project includes improvement in local professional development programs, local level improvement in the program cycle for other programs, and improved programs in other educational settings. Adaptive Schools and Systems Thinking were used as a basis for understanding professional development in schools and additional research on adult learning theory further informed the project to increase the potential impact. The goal of the project is to provide a systemic method of effectively and transparently initiating, conceptualizing, designing, implementing, and evaluating programs in educational settings. It will benefit all stakeholders by allowing all stakeholders to participate in the program cycle. It will benefit teachers by improving professional development and other programs that promote instructional best practices. It will also benefit students by improving the quality of instruction they receive from teachers who are better equipped to meet individual student needs. It should also guarantee increased fidelity of program implementation as program purposes are clearer and evaluative measures are more consistent. This project will

promote positive social change through the use of research based best practices in professional development programming to increase the use of research based instructional best practices.

Implications, Applications, and Directions for Future Research

The implications of this study are related to improved program cycle implementation and transparency. I suggest that the policy be evaluated annually and adjustments made based on this assessment as well as stakeholder feedback. All programs should be based on identified teacher and student needs and should be implemented under a system of continuous improvement. Initially, training and support for use of the policy proposal components will need to be provided on a continuous basis such that all staff and other local stakeholders are able to access the program cycle equitably. As the district increases the capacity of a variety of stakeholders to effectively participate in all aspects of the program cycle, the policy can be updated and/or oversight and training for the policy proposal components could be reduced. Revisions should be made based on annual evaluations, stakeholder needs, and emerging research on program development.

The policy proposal project can be used in several ways. It can be applied to new professional development programs and existing professional development programs. The components of the policy proposal can be applied, extended, and/or revised based on the needs of the local district. This project can serve as the guiding document for implementing professional development programs as part of a larger district commitment

to teacher and student achievement. This policy proposal can ideally be used as a model for managing the program cycle of future professional development efforts.

The goal of professional development programming is to ensure teachers use instructional best practices to support increased student achievement. Professional development programs that are conceptualized, designed, implemented, and evaluated using best practices of adult learning in educational settings and specific local needs have the greatest influence on teacher practice. The components of effective professional development programs and the effective implementation of the program cycle are essential to creating effective future programs. Identifying, understanding, and systematizing the components of the professional development program cycle was the goal of this project study. The importance of the policy proposal to local stakeholders will be through the improvement of professional development programming and management of professional development programs. Anticipated positive effects include better programming, more responsive programs, programs that improve teacher instruction, and stakeholder voice in professional development programming. These effects should in turn positively impact student academic achievement.

The project I developed is indicative of how exploration of a local problem can lead to potential solutions that meet the needs of stakeholders. Future research has the potential to utilize the policy proposal to improve professional development programs throughout the local district. It could also be used in other settings with similar concerns about how professional development programs are initiated, designed, implemented and evaluated. With future research, it could be revised to improve the professional

development program cycle further. The design of the policy, which includes procedures to ensure that every step of the program cycle is fully developed, transparent, and based on research based best practice, could be use used as a model to replicate procedures for any type of educational program.

Conclusion

This project study culminated in a policy proposal with procedural components for all elements of the professional development program cycle. It derived from research on adult learning theory, professional development programming, and program cycle management. Findings from the research in the local setting suggested transparency, stakeholder involvement, respect for the needs of adult learners, adequate time, leadership, accountability, and evaluation were essential elements in effective professional development programs. Section 4 pondered the strengths, limitations, and researcher recommendations of this project study. I also engaged in a self-analysis of my learning as a scholar, a project developer, and a practitioner. Lastly, a reflection on my doctoral journey from novice researcher to my successful completion of a project study is included. In all my future endeavors, I will strive to apply what I learned from this journey to be an agent of positive social change by combining scholarly research, practice, and inquiry.

References

Aderu, R., & Shariff, A. (2010). Development, validation, and implementation of continuous professional development programmes for community pharmacists. *Indian Journal of Pharmaceutical Sciences*, 557-562.

Ahlfeld, K. (2010). Hands-on learning with a hands-off approach for professional development. *School Library Monthly*, *26*(6), 16-18.

Albers, C. (2008). Improving pedagogy through action learning and scholarship of teaching and learning. *Teaching Sociology*, *36*, 79-86.

Alfassi, M. (2004). Reading to learn: Effects of combined strategy instruction on high school students. *The Journal of Educational Research*, *97*(4), 171-184.

Amau, L. (2009). Review the essential ingredients for adult learning. *Journal of Staff Development*, *30*(1), 69-70.

Ambe, E. B. (2007). Inviting reluctant adolescent readers into the literacy club: Some comprehension strategies to tutor individuals or small groups of reluctant readers. *Journal of Adolescent and Adult Literacy*, *50*(8), 632-639.

Ashmos, D. P., & Huber, G. P. (1987). The systems paradigm in organization theory: Correcting the record and suggesting the future. *Academy of Management Review*, *12*(4), 607-621.

Attard, K. (2007). Habitual practice vs. the struggle for change: Can informal teacher learning promote ongoing change to professional practice? *International Studies in Sociology of Education*, *17*(1/2), 147-162.

Aubusson, P., Steele, F., Dinham, S., & Brady, L. (2007). Action learning in teacher

learning community formation: Informative or transformative? *Teacher Development*, *11*(2), 133-148. doi:10.1080/13664530701414746

Baggett, B. (2009). *Improving mandatory tutoring: A mixed-methods program evaluation* (unpublished doctoral dissertation). Walden University, Minnesota.

Barnett, B. G., & O'Mahoney, G. R. (2006). Developing a culture of reflection: implications for school improvement. *Reflective Practice*, *7*(4), 499-523.

Bartholomew, B. (2007). Why we can't always get what we want. *Phi Delta Kappan*, *88*(8), 593-598.

Beaty-O'Ferrall, M. E., & Johnson, F. W. (2009). Using supportive team building to promote improved instruction, student achievement, and collaboration in an urban professional development school. *School-University Partnerships*, *4*(1), 56-64.

Beers, K. (2003). *When kids can't read what teachers can do.* Portsmouth, NH: Heinemann.

Benseman, J. (2006). Effective programmes for NEET young people: A case study evaluation. *School Work Review*, *XVIII*(3) 43-60.

Bernhardt, V. L. (2009). Data use. *Journal of Staff Development*, *30*(1), 24-27.

Bierema, L. L. (2003). Systems thinking: A new lens for old problems. *The Journal of Continuing Education in the Health*, 23, s27-s33.

Block, J. H., & Burns, R. B. (1976). Mastery learning. *Review of Research in Education*, *4*(1), 3-49.

Boardman, A. G., Roberts, G., Vaugn, S., Wexler, J., Murray, C.S., & Kosanovich, M. (2008). *Effective instruction for adolescent struggling readers: A practice brief.*

Boardman, J., & Sauser, B. (2008). *Systems thinking: Coping with 21st century problems*. Boca Raton, LA: CRC Press.

Boling, C.J., & Evans, W.H. (2008). Reading success in the secondary classroom. *Preventing School Failure*, *52*(2), 59-66. Portsmouth, NH: RMC Research Corporation, Center on Instruction.

Bond, S. L., Boyd, S. E., & Rapp, K. A. (1997). *Taking stock: A practical guide to evaluating your own programs.* Chapel Hill, NC: Horizon Research, Inc.

Boydell, T., & Blantern, C. (2007). Action learning as relational practice. *Action Learning: Research and Practice*, *4*(1), 95-104.

Braverman, M. T., & Arnold, M. E. (2008). An evaluator's balancing act: Making decisions about methodological rigor. In M. T. Braverman, M. Engle, M. E. Arnold, & R. A. Rennekamp (Eds.) Program evaluation in a complex organizational system: Lessons from Cooperative Extension. *New Directions for Evaluation*, *120*, 71-86.

Briggs, A. R. J., & Coleman, M. (2007). *Research methods in educational leadership and management.* Los Angeles, CA: SAGE publications.

Brown, I., & Lockyer, L. (2005/2006). Exploring a learning design to operationalise new pedagogical frameworks using multi-literacies. *International Journal of Learning*, *12*(10), 175-178.

Brozo, W. G., & Flynt, E. S. (2008). Motivating students to read in the content classroom: Six evidence-based principles. *The Reading Teacher*, *62*(9). doi:10.1598/RT.62.2.9

Bryman, A. (2006). Integrating quantitative and qualitative research: How is it done? *Qualitative Research*, *6*(1), 97-113. doi:10.1177/1468794106058877

Bryson, J. M., Patton, M. Q., & Bowman, R. A. (2011). Working with evaluation stakeholders: A rationale, step-wise approach and toolkit. *Evaluation and Program Planning*, *34*, 1-12. doi:10.1016/j.evalprogplan.2010.07.001

Buysse, V., Sparkman, K. L., & Wesley, P. W. (2003). Communities of practice: Connecting what we know with what we do. *Council for Exceptional Children*, *69*(3), 263-277.

Cantrell, S. C., Burns, L. D., & Callaway, P. (2009). Middle- and high-school content area teachers' perceptions and literacy teaching and learning. *Literacy Research and Instruction*, *48*, 76-94.

Casey, H. K. (2009). Engaging the disengaged: Using learning clubs to motivate struggling adolescent readers and writers. *Journal of Adolescent and Adult Literacy*, *52*(4), 284-294. doi:10.1598/JAAL.52.4.2

Cato, B., Chen, W., & Corbett-Perez, S. (1998). Logic model: A tool for planning and evaluating health and recreation prevention projects. *Journal of Physical Education, Recreation & Dance, 69*(8), 57-61.

Chan, L. (1994). Relationship of motivation, strategic learning, and reading achievement in grades 5, 7, and 9. *Journal of Experimental Education*, *62*(4), 319-339.

Chung, C. J., & Higbee, J. L. (2005). Addressing the "theory crisis" in developmental education: Ideas from practitioners in the field. *Research and Teaching in Developmental Education*, *22*(1), 5-26.

Clark, K. F., & Graves, M. F. (2008). Open and directed text mediation in literature instruction: Effects on comprehension and attitudes. *Australian Journal of Language and Literacy*, *31*(1), 9-29.

Clarke, D., & Hollingsworth, H. (2002). Elaborating a model of professional growth. *Teaching and Teacher Education*, *18*, 947-967.

Clinton, W. J. (1994, August). Statement on the observance of International Literacy Day. *Public Papers of the Presidents of the United States: William J. Clinton, 30*(34)*,* 1693—1719. Retrieved from http://www.presidency.ucsb.edu/ws/?pid=49016

Colbert, J. A., Brown, R. S., Choi, S., & Thomas, S. (2008). An investigation of the impacts of teacher-driven professional development on pedagogy and student learning. *Teacher Education Quarterly*, 135-154.

Cole, A. L., & Knowles, J. G. (2000). *Researching teaching: Exploring teacher development through reflexive inquiry.* Boston, MA: Allyn & Bacon.

Compton-Lilly, C. (2008). Teaching struggling readers: Capitalizing on diversity for effective learning. *The Reading Teacher*, *61*(8). doi:10.1598/RT.61.8.10.

Conderman, G., Johnston-Rodriguez, S., & Hartman, P. (2009). Communicating and collaborating in co-taught classrooms. *Teaching Exceptional Children Plus*, *5*(5), n5.

Coulter, D. (2001). Teaching as communicative action: Habermas and education. In V. Richardson (Ed.), *Handbook of research on teaching* (4th ed., pp. 90-98). Washington, DC: American Educational Research Association.

Creswell, J. W. (2007). *Qualitative inquiry & research design: Choosing among five approaches.* Thousand Oaks, CA: SAGE Publications.

Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches.* Los Angeles, CA: SAGE Publications.

Dana N. F., & Yendol-Hoppey, D. (2009). *The reflective educator's guide to classroom research: Learning to teach and teaching to learn through practitioner inquiry* (2nd ed.) Thousand Oaks, CA: Corwin Press.

Dantonio, M., & Beisenherz, P. C. (2001). *Learning to question, questioning to learn.* Boston, MA: Pearson Custom Publishing.

Davies, P., & Dunnill, R. (2008). 'Learning Study' as a model of collaborative practice in initial teacher education. *Journal of Education for Teaching*, *31*(1), 3-16.

Deal, T. E., & Peterson K. D. (1999). *Shaping school culture: The heart of leadership*. San Francisco: Jossey-Bass.

Desautel, D. (2009). Becoming a thinking thinker: Metacognition, self-reflection, and classroom practice. *Teachers College Record, 111*(8), 1-20.

Desimone, L. M. (2009). Improving impact studies of teachers' professional development: Toward better conceptualizations and measures. *Educational Researcher*, *38*(3), 181-199. doi:10.3102/0013189X08331140

Department of Elementary and Secondary Education [DESE] (2011). *2011 Annual Performance Report (APR) and Adequate Yearly Progress*. DESE (2010). Missouri School Improvement Program Review Advanced Questionnaire Report.

Dewey, J. (1916). *Democracy and education: An introduction to the philosophy of*

education. New York, NY: Free Press.

Donaldson, G. A. Jr. (2006). *Cultivating leadership in schools: Connecting people, purpose, and practice* (2nd ed.). New York: Teachers College Press.

Douglas, D. (2004). Self-advocacy: Encouraging students to become partners in differentiation. *Roeper Review*, *26*(4), 223-228.

Dowhower, S. L. (1999). Supporting a strategic stance in the classroom: A comprehension framework for helping teachers help students to be strategic. *The Reading Teacher*, *52*(7), 672-688.

DuFour, R. (2004). The best staff development is in the workplace, not in the workshop. *Journal of Staff Development*, *25*(2), 63-64.

Dunston, P. J. (2007). Instructional practices, struggling readers, and a university-based reading clinic. *Journal of Adolescent & Adult Literacy*, *50*(5), 328-335.

Dymock, S. J. (2007). Comprehension strategy instruction: Teaching narrative text structure awareness. *The Reading Teacher*, *61*(2), 161-167. doi:10.1598/RT.61.2.6

Embury, D. C. (2010). *Does coteaching work? A mixed methods case study evaluation of coteaching as an intervention* (Doctoral Dissertation). Retrieved from http://library.waldenu.edu/784.htm

Farmer, J., Hauk, S., & Neumann, A. M. (2005). Negotiating reform: Implementing process standards in culturally responsive professional development. *The High School Journal*, *88*(4), 59-71.

Fazio, X., & Gallagher, T. L. (2009). Supporting learning: An examination of two teacher

development collectives. *Complicity: An International Journal of Complexity and Education*, *6*(1), 1-19.

Fecho, B., & Botzakis, S. (2007). Feasts of becoming: Imagining a literacy classroom based on dialogic beliefs. *Journal of Adolescent and Adult Literacy*, *50*(7), 548-558. doi:10.1598/JAAL.50.7.4

Fink, A. (2006). *How to conduct surveys: A step-by-step guide.* Thousand Oaks, CA: SAGE publications.

Fisher, D. (2001). "We're moving on up": Creating a schoolwide literacy effort in an urban high school. *Journal of Adolescent and Adult Literacy*, *45*(2), 92-101.

Fisher, D., & Frey, N. (2008a). Student and teacher perspectives on the usefulness of content literacy strategies. *Literacy Research and Instruction*, *47,* 246-263. doi:10.1080/19388070802300330

Fisher, D., & Frey, N. (2008b). *Better learning through structured teaching.* Alexandria, VA: Association for Supervision and Curriculum Development.

Fisher, D., & Frey, N. (2003). Writing instruction for struggling adolescent readers: A gradual release model. *Journal of Adolescent and Adult Literacy*, *46*(5), 396-405.

Fisher, D., Frey, N., & Williams, D. (2002). Seven literacy strategies that work. *Educational Leadership*, *60*(3), 1-5.

Fixsen, D. L., Blasé, S. F., Wallace, N., & Wallace, F. (2009). Core implementation components. *Research on Social Work Practice*, *19*(5), 531-540.

Flannagan, J. S., & Kelly, M. (2009). Differentiated support. *Principal Leadership*, *9*(7), 28-30.

Fleming, S., Shire, K., Jones, D., Pill, A., & McNamee, M. (2004). Continuing professional development: suggestions for effective practice. *Journal of Further and Higher Education*, *28*(2)*,* 165-177.

Flood, R. L. (2010). The relationship of 'Systems Thinking' to action research. *Systemic Practice and Action Research*, *23*(4), 269284.

Fogarty, R., & Pete, B. (2010). Professional learning 101: A syllabus of seven protocols. *Phi Delta Kappan*, 32-34.

Freire, P. (1970). *Pedagogy of the oppressed.* New York: Continuum.

Fuchs, S. L., Fuchs, D., & Tindal G. (1986). Effects of mastery learning procedures on student achievement. *Journal of Educational Research*, *79*(5), 286-291.

Fullan, M. (2005). *Leadership and sustainability.* Corwin Press: Thousand Oaks, CA.

Gallimore, R., Ermeling, B. A., Saunders, W. M., & Goldenberg, C. (2009). Moving the learning of teaching closer to practice: Teacher education. Implications of school-based inquiry teams. *The Elementary School Journal*, *109*(5), 537-553.

Gardner, H. (1991). *The unschooled mind: How children think and how schools should teach.* New York: BasicBooks.

Garmston, R. J., & Wellman, B. M., (2009). *The adaptive school: A source book for developing collaborative groups.* Christopher-Gordon Publishers: Norwood, MA.

Gill, S. R. (2008). The comprehension matrix: A tool for designing comprehension instruction. *The Reading Teacher*, *62*(2), 106-113. doi:10.1598/RT.62.2.2

Gillies, W. D. (1995). Program evaluation for school improvement: Guidelines for school administrators. *National Association of Secondary School Principals: NASSP*

Bulletin, *79*(575), 76-80.

Glassett, K. (2009). A comparison of two types of professional development for content area teachers. *Southeastern Teacher Education Journal*, *2*(4), 17-23.

Goldie, J. (2006). AMEE education guide no. 29: Evaluating educational programmes. *Medical Teacher*, *28*(3), 210-224.

Graves, M. F. (1999). Fostering high levels of reading and learning in secondary students: An invited commentary. *International Reading Association*. Retrieved from http://www.readingonline.org/articles/graves1/annotated.html

Greene, W. L., Kim, Y. M., & Marioni, J. L. (2007). The reflective trio: A model for collaborative self-study in teacher education. *Korean Journal of Educational Policy*, *4*(1), 41-58.

Grimmett, H., Rickard, N., & Gill, A., (2010). The perilous path from proposal to practice: A qualitative program evaluation of a regional music program. *Australian journal of music education*, 2, 52-65.

Guskey, T. R. (2003). What makes professional development effective? *Phi Delta Kappan*, 748-750.

Guskey, T. R. (2002). Professional development and teacher change. *Teachers and Teaching: theory and practice*, *8*(3/4), 381-391.

Guskey, T. R. (1991). Enhancing the effectiveness of professional development programs. *Journal of Educational and Psychological Consultation*, (2)3, 239-247.

Guskey, T. R. (1985). The effects of staff development on teachers' perceptions about effective teaching. *Journal of Educational Research*, *78*(6), 378-381.

Guskey, T. R. (1982). The effects of change in instructional effectiveness on the relationship of teacher expectations and student achievement. *Journal of Educational Research*, *75*(6), 345-349.

Guskey, T. R., & Peterson, K. D. (1996). The road to classroom change. *Educational Leadership,* 10-14.

Guskey, T. R., & Yoon, K. S. (2009). What works in professional development? *Phi Delta Kappan,* 495-500.

Hanson, C. A., & Mott, V. W. (2001). Philosophy, dynamics, and context: Program planning in practice. *Adult Learning,* 14-16.

Harmon, J. M., Wood, K. D., Hedrick, W. B., & Gress, M. (2008). "Pick a word—Not just any word": Using vocabulary self-selection with expository texts. *Middle School Journal*, 43-52.

Harpaz, Y. (2007). Approaches to teaching thinking: Toward a conceptual mapping of the field. *Teaching College Record*, *109*(8), 1845-1745.

Hatch, J. A. (2002). *Doing qualitative research in education settings.* Albany, NY: State University of New York Press.

Hawley, W., & Rollie, D. L. (Eds.) (2007). *The keys to effective schools: Educational reform as continuous improvement* (2nd ed.) Thousand Oaks, CA: Corwin Press.

Hindin, A., Morocco, C. C., Mott, E. A., & Aguilar, C. M. (2007). More than just a group: Teacher collaboration and learning in the workplace. *Teachers and Teaching: theory and practice*, *13*(4), 349-376.

Hirsh, S., & Killion, J. (2009). When educators learn, students learn. *Phi delta*

kappan, *90*(7), 464-469.

Hodkinson, P., & Hodkinson, H. (2003). Individuals, communities of practice and the policy context: School teachers' learning in their workplace. *Studies in Continuing Education, 25*(1), 3-21.

Hoole, E., & Patterson, T. E. (2008). Voices from the field: Evaluation as part of a learning culture. In J. G. Carmen & K. A. Fredericks (Eds.), *Nonprofits and evaluation. New Directions for Evaluation*, *119*, 93-113.

Hord, S. M. (Ed.) (2004). *Learning together, leading together: Changing schools through professional learning communities.* New York: Teachers College Press.

Hudson, J., & Gray, J. (n. d.). Renewal through collaborative inquiry: The critical friends group process. Hand out. Professional development at X high school, fall 2010.

Hummelbrunner, R. (2011). Systems thinking and evaluation. *Evaluation*, *17*(4), 395-403. doi:10.1177/1356389011421935

Hung, W. (2008). Enhancing systems-thinking skills with modeling. *British Journal of Educational Technology*, *39*(6), 1099-1120. doi:10.1111/j.1467-8535.2007.00791.x

Hutson, H. (1979). In-service best practices: The learning of general education. *National In-service Network,* 2-26.

Hyerle, D. N., & Alper, L. (2011). *Student Successes with Thinking Maps: School-Based Research, Results, and Models for Achievement Using Visual Tools.* Corwin: Thousand Oaks, CA.

Illback, R., Bates, T., Hodges, C. Galligan, K., Smith, P., Sanders, D. III, & Dooley, B.,

(2010). Jigsaw: Engaging communities in the development and implementation of youth mental health services and supports in the Republic of Ireland. *Journal of Mental Health*, *19*(5), 422-435. doi:10.3109/096823100372

Ironsmith, M., & Eppler, M. (2007). Mastery learning benefits low aptitude students.

Irvin, J. L., Meltzer, J., & Dukes, M. (2007). *Taking Action on Adolescent Literacy.* Alexandria, VA: Association for Supervision and Curriculum Development.

Irvin, J. L., Meltzer, J., Mickler, M., Phillips, M., & Dean, N. (2009). What can literacy leaders do to improve student engagement with reading and writing? *Meeting the challenges of adolescent literacy: Practical ideas for literacy leaders* (pp. 13-25). Newark, DE: International Reading Association.

Janesick, V. J. (2004). *"Stretching" exercises for qualitative researchers.* Thousand Oaks, CA: SAGE Publications.

Jerald, C. D. (2007). Believing and achieving. *The Center for Comprehensive School Reform and Improvement,* 1-7.

Johnson, C. C., Kahle, J. B., & Fargo, J. D. (2007). A study of the effect of sustained, whole-school professional development on student achievement in science. *Journal of Research in Science Teaching*, *00*(0), 1-12.

Johnson, G. M. (2008). Firm systems thinking: Unifying educational problem solving. *Systems Research and Behavioral Science*, *25*, 797-805. doi:10.1002/sres.869

Johnson, R. B., & Onwuegbuzie, A. J. (2004). Mixed methods research: A research paradigm whose time has come. *Educational Researcher*, *33*(7), 14-26.

Karaman, A. C. (2010). Systems thinking for studying international professional program

participants' thoughts. *Systems Practice and Action Research*, 23, 203-220. doi:10.1007/s11213-009-9156-6

Kee, K., Anderson, K., Dearing, V., Harris, E., & Shuster, F. (2010). *Results coaching: The new essential for school leaders.* Corwin Press: Thousand Oaks, CA.

Kellogg Foundation, (2004). *W. K. Kellogg foundation evaluation handbook.*

Kensler, A. W., Reames, E., Murray, J., & Patrick, L. (2011). Systems thinking tools for improving evidence-based practice: A cross-case analysis of two high school leadership teams. *The High School Journal,* 32-53.

Killion, J. (2008). *Assessing impact: Evaluating staff development.* Thousand Oaks, CA: Corwin Press.

Kim, D. H. (2000a). *Systems Archetypes I: Using Systems Archetypes to Take Effective Aim.* Pegasus Communications: Waltham, MA: Pegasus Communications.

Kim, D. H. (2000b). *Systems Archetypes II: Using Systems Archetypes to Take Effective Aim.* Waltham, MA: Pegasus Communications.

Knight, J. (2011). *Unmistakable impact: A partnership approach to dramatically improving instruction.* Thousand Oaks, CA: Corwin Press.

Koenig, G. (2009). Realistic evaluation and case studies: Stretching the potential. *Evaluation*, *15*(9), 9-30. doi:10.1177/1356389008097869

Kose, B. W. (2007). One Principal's Influence on Sustained, Systemic, and Differentiated Professional Development for Social Justice. *Middle School Journal (J1)*, *39*(2), 34-42.

Kossack, S. (2007). Comparing the effects of high and low learning pathway instructional

approaches on vocabulary mastery of middle school at-risk learners. *The International Journal of Learning, 14*(6), 199-206.

Lachat, M. A., & Smith, S. (2005). Practices that support data use in urban high schools. *Journal of Education for Students Placed at Risk*, *10*(3), 333-349.

Laksov, K. B., Nikkola, M., & Lonka, K. (2008). Does teacher thinking match teaching practices? A study of basic science teachers. *Medical Education*, *42*, 143-151.

Lambert, L., Walker, D., Zimmerman, D. P., Cooper, J. E., Lambert, M. D., Gardner, M. E., et al. (2002). *The constructivist leader* (2nd ed.). New York: Teachers College Press.

Lapp, D., Fisher, D., & Grant M. (2008). "You can read this text—I'll show you how": Interactive comprehension instruction. *Journal of Adolescent and Adult Literacy, 51*(5), 372-383.

Laud, L. E., & Patel, P. (2008). Teaching struggling writers to unite their paragraphs. *Teaching Exceptional Children Plus*, *5*(1), 1-15.

Lawrence, S. A., Rabinowitz, R., & Perna, H. (2009). Reading instruction in secondary English language arts classrooms. *Literacy Research and Instruction, 48*, 39-64. doi:10.1080/19388070802226279

Lazarus, R. S., & Lazarus, B. N. (1994). *Passion and reason: Making sense of our emotions.* New York: Oxford University Press.

Lee, M. H. (2010). 7 principles of highly collaborative PD. *Science and Children,* 28-31.

Leech, N. L., & Onwuegbuzie, A. J. (2007). An array of qualitative data analysis tools: A call for the data analysis triangulation. *School Psychology Quarterly*, *22*(4), 557-

584. doi:10.1037/1045-3830.22.4.557

Levine, T. H. (2010). Tools for the study and design of collaborative teacher learning: The affordances of different conceptions of teacher community and activity theory. *Teacher Education Quarterly, Winter,* 109-130.

Liang, L. A., & Dole, J. A. (2006). Help with teaching reading comprehension: Comprehension instructional frameworks. *The Reading Teacher*, *59*(8), 742-753. doi:10.1598/RT.59.8.2

Lieberman A., & Miller, L. (Eds.) (2001). *Teachers caught in action: Professional development that matters*. New York: Teachers College Press.

Lindsey, R. B., Roberts, L. M., & CampbellJones, F. (2005). *The culturally proficient school.* Thousand Oaks, CA: Corwin Press.

Lipton, L., & Wellman, B. (2007). How to talk so teachers listen. *Educational Leadership,* September, 30-34.

Little, M., & Houston, D. (2003). Research into practice through professional development. *Remedial and Special Education*, *24*(2), 75-87.

Lloyd, S. L. (2004). Using comprehension strategies as a springboard for student talk. *Journal of Adolescent and Adult Literacy, 48*(2), 114-124. doi:10.1598/JAAL.48.2.3

LomBombard, J. (2009). *A qualitative case study of professional development processes in the classroom: From initiatives to implementation* (Unpublished doctoral dissertation). Walden University, Minnesota.

Manzo, K. K. (2006). The heart of the matter: With an unusual system wide approach, the

Jefferson County, Kentucky, school district is tackling poor reading skills among high school students**.** *Education Week*, *25*(38) 30-33.

Madaus, G. F., & Stufflebeam, D. L. (1984). Educational evaluation and accountability: A review of quality assurance efforts. *The American Behavioral Sciences*, *27*(5), 649-672.

Martin, S., Brannigan, J., & Hall, A. (2005). Sustainability, systems thinking, and professional practice. *Journal of Geography in Higher Education, 29*(1), 79-89. doi:10.1080/03098260500030389.

Marzano, R. J. (2003). *What works in schools: Translating research into action.* Alexandria, VA: Association for Supervision and Curriculum Development.

Marzano, R. J. (2007). *The Art and Science of Teaching.* Alexandria, VA: Association for Supervision and Curriculum Development.

Mason, J. (2006). Mixing methods in a qualitatively driven way. *Qualitative Research*, *6*(1), 9-25. doi:10.1177/1468794106058866

Maurer, M. J. (2010). Lessons learned: Creating and participating in a quality professional development community. *Science and Children,* 32-35.

McDonald, L. (2009). Teacher change: A dynamic interactive approach. *The International Journal of Learning*, *16*(10), 623-636.

McQuiston, K., O'Shea, D., & McCollin, M. (2008). Improving phonological awareness and decoding skills of a high school students from diverse backgrounds. *Preventing School Failure*, *52*(2), 67-70.

Mella, P. (2008). Systems thinking: The art of understanding the dynamics of systems.

The International Journal of Learning, *15*(10), 79-88.

Meo, G. (2008). Curriculum planning for all learners: Applying universal design for learning (UDL) to a high school reading comprehension program. *Preventing School Failure*, *52*(2), 21-30.

Merriam, S. B., & Associates (2002). *Qualitative research in practice.* San Francisco, CA: Jossey-Bass.

Mohr, M. M., Rogers, C., Stanford, B., Nocerino, M. A., McClean, M. S., & Clawson, S. (2004). *Teacher research for better schools.* New York: Teachers College Press.

Moore, J., & Whitfield, V. (2009). Building schoolwide capacity for preventing reading failure. *The Reading Teacher, 62*(7), 622-624.

Mullen, C. A., & Hutinger, J. L. (2008). The Principal's role in fostering collaborative learning communities through faculty study group development. *Theory and Practice*, *47*, 276-285.

Naccarella, L., Pirkis, J., Kohn, F., Morley, B., Burgess, P., & Blashki, G. (2007). Building evaluation capacity: Definitional and practical implications from an Australian case study. *Evaluation and Program Planning*, *30*, 231-236. doi:10.1016/j.evalprogplan.2007.05.001

National Council of Teachers of English. (2006). *NCTE principles of adolescent reform.*

Nelson, T. H., Deuel, A., Slavit, D., & Kennedy, A. (2010). Leading deep conversations in collaborative inquiry groups. *The Clearing House*, *83*, 175-179.

Nelson, T. H., & Slavit, D. (2008). Supported teacher collaborative inquiry. *Teacher Education Quarterly, Winter,* 99-116.

Ness, M. K. (2008). Supporting secondary readers: When teachers provide the "what," not the "how." *American Secondary Education*, *17*(1), 80-95.

Nichols, M. (2006). *Comprehension through conversation: The power of purposeful talk in the reading workshop.* Portsmouth, NH: Heinemann.

Onsman, A. (2010). Dismantling perceived barriers to the implementation of national higher education accreditation guidelines in the Kingdom of Saudi Arabia. *Journal of Higher Education Policy and Management*, *32*(5), 511-519. Doi:10.1080/1360080X.2010

Page, M., Parker, S. H., & Renger, R. (2007). How using a logic model refined out program to ensure success. *Health Promotion Practice*, *10*(1), 76-82. doi:10.1177/1524839906296.

Pardini, P. (2005). View from the classroom. *National Staff Development Council*, *26*(4), 14-18.

Patton, M. Q. (1994). Developmental evaluation. *Evaluation Practice*, *15*(3), 311-319.

Perie, M., Patton, M. Q. (2001). Evaluation, knowledge management, best practices, and high quality lessons learned. *American Journal of Evaluation*, *22*(3), 329-336. doi:10.1177/1098214001022

Pierre, R. (2007). *A case study evaluation of a community college based welfare-to-work program.* (Doctoral dissertation). Retrieved from http://library.waldenu.edu/784.htm

Pitcher, M. P., Martinez, G., Dicembre, E. A., Fewster, D., & McCormick, M. K. (2010). The literacy needs of adolescents in their own words. *Journal of Adolescent &*

Adult Literacy, *53*(8), 636-645. doi:10.1598/JAAL.53.8.2

Poole, D. (2008). Interactional differentiation in the mixed-ability group: A situated view of two struggling readers. *Reading Research Quarterly*, *43*(3), 228-250. doi:10.1598/RRQ.43.3.2

Pope, T. (2008). Getting serious (and practical) about helping struggling readers succeed. *The Virginia English Bull*, *57*(2), 59-63.

Postlethwaite, K., & Haggarty, L. (1998). Towards effective and transferable learning in secondary school: The development of an approach based on mastery learning. *British Educational Research Journal*, *24*(3), 333-353.

Poth, C., & Shulha, L. (2008). Encouraging stakeholder engagement: A case study of evaluator behavior. *Studies in Educational Evaluation*, *34*, 218-223. doi:10.1016/j.stueduc.2008.10.006

Reeves, D. B. (2001). Standards make a difference: The influence of standards on classroom assessment. *NASSP Bulletin*, *85*(621)*,* 5-12. doi:10.1177/019263650108562102

Reeves, D. B. (2010). *Transforming professional development into student results.* Alexandria, VA: ASCD.

Richardson, J. (2005). Steeped in study. *National Staff Development Council*, *26*(4), 50-60.

Richmond, J., Stuntz, L., Richmond, K., & Egner, J. eds. (2010). *Tracing Connections: Voices of Systems Thinkers.* Isee Systems: Lebanon NH.

Rimanoczy, I., & Brown, C. (2008). Bringing action reflection learning into action

learning. *Action Learning: Research and Practice*, *5*(2), 185-192.

Rose, A. (2000). Literacy strategies at the secondary level. *Leadership*, *30*(2), 12-16.

Rubin, H. J., & Rubin, I. S. (2005). *Qualitative interviewing: The art of hearing data.* Thousand Oaks, CA: SAGE Publications.

Ryan, A. G. (1987). Truth wrought in tales: An exploration of how case-study evaluations are received by those participating in the process. *Journal of Curriculum and Supervision*, *2*(4), 330-341.

Sanders, J. R., & Sullins, C. D. (2006). *Evaluating school program: An educator's guide.* Thousand Oaks, CA: Corwin Press.

Savaya, R., & Waysman, M. (2005). The logic model: A tool for incorporating theory in the development and evaluation of programs. *Administration in Social Work*, *29*(2), 85-103.

Scammacca, N., Roberts, G., Vaughn, S., Edmonds, M., Wexler, J., Reutebuch, C.K., & Torgensen, J.K. (2007). *Interventions for adolescent struggling readers: A meta-analysis with implications for practice.* Portsmouth, NH: RMC Research Corporation, Center on Instruction.

Scharlach, T. D. (2008). START comprehending: Students and teachers actively reading text. *The Reading Teacher*, *62*(1), 20-31. doi:10.1598/RT.62.1.3

Schoenbach, R., Braunger, J. Greenleaf, C., & Litman, C. (2003). Apprenticing adolescents to reading in subject-area classrooms. *Phi Delta Kappan*, 133-138.

Schorzman, E. M., & Cheek, E. H. Jr. (2004). Structured strategy instruction: investigating an intervention for improving sixth-graders' reading comprehension.

Reading Psychology, *25*, 37-60. doi:10.1080/02702710490271828

Sellars, M. (2008). Intelligence for the 21st century: A discussion of intrapersonal and emotional intelligences. *The International Journal of Learning*, *15*(2), 79-87.

Senge, P. M., (2000). *Schools that learn: A fifth discipline fieldbook for educators, parents, and everyone who cares about education.* Doubleday: New York, NY.

Servage, L. (2008). Critical and transformative practices in professional learning communities. *Teacher Education Quarterly*, winter, 63-77.

Sherwood, H. (2010). Utilizing staff perceptions to guide and shape future program planning. *Georgia School Counselors Association (GSCA) Journal*, *17*(1), 15-25.

Skaržauskienė, A. (2008). Systemic thinking as a competitive advantage in the development tool. *Organizations: Systematic Research* (46), 117-132.

Skarzauskiene, A. (2009). Systems thinking as a competence in the leadership paradigm. *Management Theory and Studies for Rural Business and Infrastructure Development,* Nr. 16 (1). Research Papers.

Smyth, J. (2007a). Teacher development against the policy grain: An argument for recapturing relationships in teaching and learning. *Teacher Development*, *11*(2), 221-236.

Smyth, J. (2007b). Pedagogy, school culture and teacher learning: Towards more durable and resistant approaches to secondary school literacy. *Language and Education*, *21*(5), 406-419.

Socol, T. T. (2007). Finding meaning and purpose together. *Phi Delta Kappan,*

Sparks, D. (2005). Overview: Differentiation within team-based teacher learning. *Journal*

of Staff Development, *26*(4), 4.

Spencer, B. H., & Guillaume, A. M. (2006). Integrating curriculum through the learning cycle: Content-based reading and vocabulary instruction. *The Reading Teacher*, *60*(3), 206-219. doi:10.1598/RT.60.3.1

Sridharan, S., & Nakaima, A. (2011). Ten steps to making evaluation better. *Evaluation and Program Planning, 34*, 135-146. doi:10.1016/j.evalprogplan.2010.09.003

Szabo, S. (2006). KWHHL: A student-driven evolution of the KWL. *American Secondary Education*, *34*(3), 57-67.

Talbert, J. E., & McLaughlin, M. W. (2002). Professional communities and the artisan model of teaching. *Teachers and Teaching: Theory and practice*, *8*(3/4), 325-343.

Theriot, S., & Tice, K. C. (2009). Teacher's knowledge development and change: Untangling beliefs and practices. *Literacy Research and Instruction*, *48,* 65-75.

Thurston, W. E., Graham, J., & Hatfield, J. (2003). Evaluability assessment: A catalyst for program change and improvement. *Evaluation & The Health Professions*, *26*(2), 206-221.

Tobia, E., Chauvin, R., Lewis, D., & Hammel, P. (2011). The light bulb clicks on: Consultants help teachers, administrators, and coaches see the value of learning teams. *Journal of Staff Development*, *32*(1), 22-29.

Tomlinson, C. A. (2005). Traveling the road to differentiation in staff development. *Journal of Staff Development*, *26*(4), 8-12.

Tomlinson, C. A., & McTighe, J. (2006). *Integrating differentiated instruction and understanding by design.* Alexandria, VA: Association for Supervision and

Curriculum Development.

Trevisan, M. S. (2007). Evaluability assessment from 1986-2006. *American Journal of Evaluation*, *28*(3), 290-303.

Triplett, C. F. (2007). The social construction of "struggle": Influences of school literacy contexts, curriculum, and relationships. *Journal of Literacy Research*, *39*(1), 95-126. doi:10.1080/10862960709336759

Vacca, R. T., & Gove, M. K. (1984). Teacher reflections in the use and adaptation of instructional innovations: Improving the staff development process. Paper no. 10. National Staff Development Council, Oxford, OH.

Vacca R. T., & Vacca, J. L. (2002). *Content Area Reading*. Boston, MA: Allyn & Bacon.

Vygotsky, L. S. (1990, org. 1926). *Educational Psychology.* (R. Silverman, Trans.) Boca Raton, FL: St. Lucie Press.

Waldman, J. D. (2007). Thinking systems need systems thinking. *Systems Research and Behavioral Science,* 24, 271-284. doi:10.1002/sres.828

Ward-Begnoche, W. L., Gance-Cleveland, B., Harris, M. M., & Dean, J. (2008). Description of the design and implementation of school-based obesity prevention program addressing needs of muddle school students. *Journal of Applied Psychology*, *24(*2), 247-263. doi:10.1080/15377900802093249

Watson, S. T. (2005). *Teacher collaboration and school reform: Distributing leadership through the use of professional learning teams.* (Doctoral dissertation).

Weinbaum, A., Allen, D., Blythe, T., Simon, K., Seidel, S., & Rubin, C. (2004). *Teaching as inquiry: Asking hard questions to improve practice and student achievement.*

New York: Teachers College Press.

Westat, J. F., Frierson, H., Hood, S., & Hughes, G. (2002). *The 2002 user friendly handbook for project evaluation.* National Science Foundation.

Westerheijden, D. F., Hulapiau, V., & Waeytens, K. (2007). From design and implementation to impact of quality assurance: An overview of some studies into what impacts improvement. *Tertiary Education and Management*, *13*(4), 295-312.

Wiggins G., & McTighe, J. (2005). *Understanding by design.* Alexandria, VA: Association for Supervision and Curriculum Development.

Wilhelm, J. D. (2002). *Action strategies for deepening comprehension*. New York: Scholastic Professional Books.

Wilson, E., & Demetriou, H. (2007). New teacher learning: Substantive knowledge and contextual factors. *The Curriculum Journal*, *18*(3), 213-229. doi:10.1080/09585170701589710

Yin R. K. (1994). Discovering the future of the case study method in evaluation research. *American Journal of Evaluation*, *15*(3), 283-290. doi:10.1177/109821409401500309

Zexian, Y., & Xuhui, Y. (2010). A revolution in the field of systems thinking—A review of Checkland's system thinking. *Systems Research and Behavioral Science,* 27, 140-155. doi:10.1002/sres.1021

Zimmerman, B. J., & Bandera, A. (1994). Impact of self-regulatory influences on writing course attainment. *American Educational Research Journal*, *31*(4), 845-862.

Appendix A: Policy Proposal

Policy and Procedures for the Professional Development Program Cycle

Created by Ellen Riina Hirsch

Table of Contents

Introduction

My name is Riina Hirsch and I am an English teacher at Local High School. One of my passions has always been teacher professional development. This Policy Proposal is the culmination of seven years of doctoral studies pursuing a Doctorate of Education in Teacher Leadership with a focus on professional development. My research has focused on uncovering the details of the professional development program at the high school and investigating research-based best practices for professional development programs. When I began this process, the high school had recently adopted a system of teacher-led, small group, self-selected, differentiated professional development known as Learning Teams. The program is viewed as a significant improvement over previous professional development programming. I became curious about how the program was developed. In my research, I discovered that there was little available information about this program or how programs are initiated, conceptualized, designed, implemented, and evaluated in the district.

To address the lack of information or specific procedures, this Policy Recommendation has been developed. The purpose of this proposal is to clarify roles, responsibilities, and procedures to support successful professional development programs throughout the district. It is hoped that clarifying procedures in this way will allow the district to remain a leader in innovative professional development programs that can be used as a model for other districts.

Definition of the Problem

A system of professional learning opportunities designed to meet teacher needs, to provide ongoing support, to include time for reflection and refinement, and to respect the differences among teachers has been shown to help all teachers use best practices to effectively support student learning (Flannagan & Kelly, 2009; Fogarty & Pete, 2010; Guskey, 2003; Hutson, 1979; Lee, 2010; Maurer, 2010; Tomlinson, 2005; Wilson & Demetriou, 2007). The current professional development program at the high school was designed to address these priorities. The problem is the lack of systemic mechanisms to document how and why the program was implemented, what its intended impact was, and whether or not the goals of the program were met over time. Currently, the school does not have adequate documentation of how and why the program was implemented or what its intended impact was, and has not established clear measures for evaluating the impact of this program over time.

To move beyond general school data such as attendance and graduation rates, standardized test results, local assessment results, and student failure rates, administrators need consistent procedures to grow and evaluate programs tailored to local needs. In the past, general data has helped identify areas in need of improvement, but it has not generated viable conclusions about which specific programs contributed to teacher and student success; it has been impossible to disaggregate the impact each program or initiative has had on teachers and students. More specific mechanisms that support the design, tracking, and assessment of individual programs have the potential to increase

program effectiveness and student achievement. (Baggett, 2009; Desimone, 2009; Fazio & Gallagher, 2009; Guskey, 2003; Guskey & Yoon, 2009; LomBombard, 2009).

Existing Policy

The ABC School District has existing policies related to professional development aligned to state requirements. These policies stipulate that professional development be provided by the district. This professional development must meet a number of specific criteria including that it be differentiated to meet staff and student needs, be aligned to the Comprehensive School Improvement Plan (CSIP), encourage staff to pursue higher education opportunities through salary incentives, have designated time set aside in the district calendar, be based on a locally developed Professional Development Plan (PDP) and include a technology component. In addition, the district policies specify annual evaluations that meet a number of criteria including alignment, impact, sustainability, and adequacy of resources. Finally, the policies require professional development activities be managed by Professional Development Committees (PDCs) at the district and building levels.

These policies provide guidelines for the content and outcomes of professional development, but do not address structures, procedures, roles, or responsibilities. In other words, there is no guidance for how to ensure the policies are being upheld.

Suggested Policy Statement

This policy statement is composed of specific language that articulates the policy using formal language consistent with the language used in other district policies. It adds the component of systematic accountability and clear documentation of all programs. The statement would provide the district's view of the purpose of the policy as well as how it should be administered and implemented. The suggested policy statement reads:

> The program policy contained herein outlines the procedure for adopting new programs and for administering continuing programs the district has already adopted. The District is committed to continuous improvement based on research-based best practices, student achievement, and professional learning. The District is responsible for creating and maintaining appropriate systems to oversee the creation, replication, and continuation of successful educational programs for students and teachers. Likewise, the District is responsible for clarifying the program development process to ensure stakeholders equitable opportunities to propose programs based on perceived need. The District accepts responsibility for reviewing submitted program proposals in a reasonable timeframe (not to exceed six months). The District will dedicate appropriate resources and supports to accepted program proposals within budgetary constraints and is responsible for supporting such programs that meet stated goals and outcomes.

This statement provides an overview of the district's position towards new programs that can be used to guide decision-making throughout the program proposal

process. The specific guidelines could be included in the policy or as a separate document members of the district must use with all professional development programs.

Policy Goals

The suggested goals of the policy are

(a) to provide a consistent, transparent process for program initiation, development, implementation, and evaluation throughout the district;

(b) to provide equitable access to the program proposal process to all stakeholders;

(c) to ensure programs are well-developed and have adequate support before implementation;

(d) to provide documentation of programs over time; and

(e) to support data-driven decision-making and shared leadership throughout the district. These goals align with the themes that emerged from the research and the expressed priorities of the district in question. They also align with research-based best practices in organizational and adult learning (Aderu & Shariff, 2010; Fixson, Blasé, Wallace, & Wallace 2009; Killion, 2008; Knight, 2011; Nelson, Deuel, Slavit, & Kennedy, 2010).

Policy Components

Below are the guidelines and templates for use with professional development programs. Anyone has the opportunity to propose a new program. To initiate a new program, complete each section carefully and completely. Use the chart below to ensure all components are included and have been submitted for approval.

Component	**Date**	**Approval. Each section should be approved by the designated district representative. Sections 1-5 may be submitted together. Sections 6-8 can be submitted together but will NOT be reviewed without approval of sections 1-5.**
1. Problem Statement		
2. Needs Assessment		
3. Feasibility		
4. Resources		
5. Goals and Outcomes		
6. Program Details		
7. Timeline		
8. Evaluation		

1. Problem Statement. This section articulates the perceived problem. Write a concise statement of the problem you seek to address.

Guiding Questions:

-What is the problem?

-Why should the problem be addressed?

-How does it impact teachers or students?

2. Needs Assessment. Provide a detailed account of data relevant to the problem. The data needs to be gathered, analyzed, and presented to demonstrate the significance of the problem. In other words, prove the problem matters. In addition, at least two types of data must be included proving the existence of the problem. Acceptable forms of data include student achievement data, assessment results, state collected school improvement data, demographic data, surveys, interviews, and anecdotal data (when supported by other sources).

Data Source: What information is available to show the problem and its importance?	**Data Analysis: What does the information tell you? How does it show the problem? How does it show why the problem matters?**
1.	
2.	
3.	
4.	

Summary:

3. Feasibility. In this section, explain the feasibility of solving the problem you are presenting. Describe what will help the program be successful and what might threaten the success of the program.

Supports: Discuss what is happening in the district that will help the program you are proposing successful.	**How will you capitalize on these supports?**
Obstacles: Discuss what is happening in the district that might prevent the program you are proposing from being successful.	**How will you overcome these obstacles?**
Summary: Why is this program likely to succeed in solving the problem?	

4. Resources. The needed resources (including personnel, time, supplies, and budget for the proposed program) must be determined and approved before implementation can begin. Be as specific as possible.

Resource: **What will be needed?**	**Cost:** **How much will it cost? Include tangible costs (costs $) and intangible costs (time, space etc.)**	**Purpose:** **Why is this resource needed in this amount?**
Summary: Why is this program worth these resources?		

5. Goals and Outcomes. This section will include both goals and expected outcomes. Goals will be defined as broad statements of intended purpose while expected outcomes will be determined by specific, measurable objectives. Potential benefits should also be explored in this section.

What are the overall goals of the program? What is the ultimate impact of the program intended to be?		
Short term outcomes: What results can be expected in the short term? (weeks to months)	**When can these outcomes be expected?**	**How will these outcomes be measured?**
Medium term outcomes: What results can be expected in the medium term? (months)	**When can these outcomes be expected?**	**How will these outcomes be measured?**
Long-term outcomes: What results can be expected in the long term? (months to years)	**When can these outcomes be expected?**	**How will these outcomes be measured?**
Potential Benefits: Describe the benefits of the program? Who will benefit? In what ways? Why does this matter?		

6. Program Details. This section will detail the overall program. Here, the day to day functioning of the program will be specified. The functioning of the proposed program must be outlined such that its impact on existing structures is clear. This section may take any form. Use these guiding questions below to ensure all required components are included.

a) **How will the program function? How will it work?**
b) **What will each day, week, month, time segment of the program look like?**
c) **Who will be involved in/responsible administering the program?**
d) **Who will participate in the program?**
e) **When will the program occur? How will this impact existing programs, structures, schedules etc.?**

7. Timeline. An implementation timeline should indicate how long and in what stages implementation will occur, when outcomes can be expected to appear, and how long the program will run. Guiding questions will be provided.

a) **How long will it take to implement the program? Specify stages of implementation that will happen over time.**
b) **Define each stage of implementation, its duration, who is responsible, and what will happen in that stage.**
c) **When can outcomes be expected to appear? How and why?**
d) **How long is the program scheduled to run when it reaches full implementation before it is formally evaluated?**

8. Evaluation. The final section will explicate how the program will be monitored and assessed over time. This will include evaluation materials and identify who will evaluate the program and when the program will be evaluated. Guiding questions and suggested websites that provide guidance in this area will be provided.

a) **How will the district know if the program is successful?**

b) **What evidence will be used to judge success?**

c) **How and when will that evidence be collected?**

d) **How will you make sure the data collected is valid and reliable?**

e) **Who will be responsible for collecting and analyzing data?**

f) **How often will data be collected? Why?**

Suggested websites for evaluation information:

(1) http://www.uwex.edu/ces/lmcourse/

(2) http://www.cdc.gov/eval/resources/

(3) http://www.ascd.org/publications/educational-leadership/mar02/vol59/num06/Does-It-Make-a-Difference%C2%A2-Evaluating-Professional-Development.aspx

(4) http://learningforward.org/docs/pdf/evaluationguide.pdf?sfvrsn=0

(5) http://www.updc.org/assets/files/professional_development/umtss/conf2013/handouts/Pre-Conference%20Materials%20/13Guskeys-Five-Levels-Matrix.pdf

(6) http://www.hfrp.org/evaluation/the-evaluation-exchange/issue-archive/professional-development/evaluating-the-impact-of-professional-development-in-eight-steps

Expected Outcomes

Expected outcomes are defined as specific, measurable outcomes anticipated as a result of the program (Killion, 2008). For this policy proposal, the criteria for measuring the expected outcomes must be specified by the district as part of adopting the policy. Recommended criteria for stating outcomes include but are not limited to:

- Clear documentation of program components will be available to stakeholders for all future programs.
- Programs will have clear criteria and mechanisms for evaluation over time.
- Programs will identify and secure required resources prior to implementation.
- Subsequent to adoption of this policy, more programs will be initiated by stakeholders who do not hold positions of authority.
- The number of programs with documented successes will be greater than before adoption of this policy.

Other outcomes and additional specificity may be established at the discretion of the district.

Stakeholders Roles

This section provides the potential responsibilities of each stakeholder group in the district. By adopting the policy proposal, the district incurs the responsibility and right to set up and administer policy elements. The district is expected to assign roles and responsibilities to ensure the policy's procedures have adequate implementation and oversight.

Parents, teachers, and other employees have the right and responsibility to try to initiate programs. Teacher and other employees also have the right and responsibility to participate in assigned programs and their evaluation activities as part of regular employment.

Site-based administrators and professional development leaders have the same rights and responsibilities.

Administrators at the building and district level have the responsibility to facilitate programs at all stages. Administrators should act as resources for other stakeholders who are trying to initiate a new program by providing access to relevant data, analyzing feasibility, and assessing resource availability (Knight, 2011). Additionally, administrators are responsible for overseeing program implementation and evaluation to ensure fidelity or designating that role to another member of the school community. Further, building administrators have the right to advocate for programs that address identified problems and to participate in evaluative activities.

District level personnel and board members have the responsibility to review submitted program proposals (as assigned), approve programs, designate appropriate

resources for approved programs, participate in evaluative activities as appropriate, and review evaluation results. District level personnel and board members have the right to deny or discontinue programs that fail to meet expected outcomes.

Implementation Plan

Adoption of the policy will include implementation steps as follows.

1. The policy will be implemented with new programs and later applied to existing programs.
2. Materials will need to be made available on the district website.
3. The duty of reviewing submitted proposals and determining if resources can be secured must be assigned to one or more individuals.
4. Introductory sessions explaining the policy to various district employees such as teachers and administrators will be conducted. These sessions could take place during professional development times or building faculty meetings. They will need to be scheduled.
5. Sessions for community stakeholders such as parents would be voluntary and held in the evening. They will need to be scheduled.
6. After the policy has been introduced to the district, anyone who has suggestions for new programming will be asked to complete the process outlined in the proposal.
7. Once the policy is in place for new programs, components of the policy can be retroactively applied to existing programs.
8. Additional sessions about specific portions of the process will be scheduled on an as needed basis.

9. All programs will eventually be required to establish evaluative activities and submit analyzed data for program continuation.
10. All programs will also document the other portions of the program cycle for future reference.

When the policy has been fully implemented, every program in the district will have, retroactively or at the time of initiation, completed documentation of all aspects of the program cycle and will be using the policy components for continuous improvement.

Implementation Timeline

This section outlines the anticipated timeline needed to fully implement the procedures delineated by the policy should the district choose to adopt it. The overall timeline from adoption to complete implementation of all the procedures encompassed by the policy is approximately three years.

Time	Task
1. Two months (June and July)	**Making materials available and assigning associated duties**
2. One school semester during contracted hours (fall)	**Introductory sessions to promote awareness of the policy**
3. One school semester after school or evenings (fall)	**Sessions for other stakeholders**
4. One school semester (ongoing after initiation in spring)	**New programs subject to policy guidelines**
5. One school semester (ongoing after initiation in spring)	**Existing programs begin developing and implementing evaluative activities**
6. Ongoing	**Additional in depth sessions on policy's procedures**
7. One school year	**All programs implement a full evaluation cycle and submit data for review**
8. One and one half school years	**Documentation of all aspects of the program cycle for each program would be developed and used to determine if renewal is approved.**

Policy Evaluation

The policy's procedures can be evaluated over time using formative measures on an on-going basis and summative measures as a formal annual review by the Board of Education for renewal.

Formative evaluation is designed to allow programs to self-assess for continuous improvement (Lenthall, Wakerman, & Knowght, 2009). The policy's procedures can be evaluated using the same strategies as those applied to specific programs because it is a set of actions with intended outcomes that can be judged over time. Using surveys at the end of each informational session will allow immediate adjustments to better serve the stakeholders. Reflection on the process surveys will provide additional information about how the policy components and procedures are functioning and meeting its intended goals. While bias is a challenge in the wording of any survey, the advantages are immediate feedback, low cost, anonymity, and comparable longitudinal data (Fink, 2006). The formative evaluation process used to assess the policy's procedures will also serve as model to specific professional development programs in the local district.

The formal annual review will be a summative evaluation. The summative evaluation will attempt to determine how well the goals and outcomes of the policy procedures have been met. Again, because the policy is comprised of a series of procedures that guide a program from inception to evaluation, the same evaluative measures can be used to determine its success as are used with individual programs. The summative evaluation will have two components. The first component will be a meta-analysis of all formative measures and submitted documentation related to the

functioning of the policy's procedures. This component will provide a summary of the on-going formative assessment to determine overall alignment with stated goals and outcomes. The second component will be a review of all professional development programs in the district and the evaluation documentation provided by each. Each program will have its own evaluative measures, but this review will provide a comprehensive view of all current professional development programs. By reviewing the results of all district professional development programs, the district can identify positive or negative trends in program performance. The district can also assess how effectively programs are being conceptualized, designed, implemented and evaluated. This summative data will allow the district to make a decision about whether to renew, modify, or discontinue the policy and its procedures.

The overall evaluation goals are to determine if the policy's procedures have had the intended impact on program process, to identify strengths and weaknesses to increase the effectiveness of the policy's procedures, and to verify the results of the project with data. The annual review combined with ongoing formative measures should provide evidence to determine if the policy proposal addressed the needs revealed by the data. If this project is successful, new programs should be successfully conceptualized, designed, implemented, and evaluated using the policy procedures. The programs using the policy procedures should be engaged in the program cycle with more transparency, stakeholder involvement, and evaluative data than was previously available. Rather than the haphazard and often unclear mechanisms currently in place, professional development programs should have clear guidelines for all stages of the program cycle. The second

goal of the evaluation is to identify strengths and weaknesses of the policy procedures. Identifying strengths and weaknesses of policy components will allow adjustments to be made to improve the procedures which support the district's commitment to continuous improvement. The third evaluation goal is to use data to verify the results of this project and provide that data to stakeholders. Making formative and summative data available to stakeholders will enable them to participate in determining how to improve the policy procedures in the future.

Appendix B: Administrator Interview Guide

Interview Questions	Participant Responses
Introduction	Review of informed consent by stating the purpose of the study, length of this interview, confidentiality, and strategies for protecting privacy. Participants will then review the signed consent form and be reminded that the interview will be recorded.
Q1: Previous Professional Development	-Please describe previous professional development experiences provided by the school or district. -How effective were those professional development experiences at improving instructional practices and student achievement? -How is the current professional development program different from previous professional development provided by the school or district? a. Please elaborate on specific changes you have noticed.
Q2: Program Cycle	-Who or what inspired this program? -How was this program developed? Sub-question topics might include: a. Needs assessment b. Specific established procedure for new ideas c. Paperwork d. Best practice research e. Timeframe f. Transparency g. Stakeholder involvement -Who was involved in the process of conceptualizing, creating, and implementing this program?
Q3: Program Outcomes	-What specific programs, systems, or protocols have you seen used or used yourself to conduct professional development? -What results do you expect from the current professional development program? -How will the program and its impact be evaluated? -What do you believe are the strengths and weaknesses of the current professional development program? -How could the program be improved?

Thanks for your participation.	Is there anything else you would like to add about the program that was not addressed in my questions? Do you have any questions or concerns you would like to share? The transcript of this interview will be provided to you to review as soon as it is available. Initial interpretations of interview data will also be provided to you for comment.

Appendix C: Focus Group Interview Guide

Interview Questions	Participant Responses
Introduction	Review of informed consent by stating the purpose of the study, length of this interview, confidentiality, and strategies for protecting privacy. Participants will then review the signed consent form and be reminded that the interview will be recorded.
Q1: Previous Professional Development	-Please describe previous professional development experiences provided by the school or district. -How effective were those professional development experiences at improving instructional practices and student achievement? -How is the current professional development program different from previous professional development provided by the school or district? a. Please elaborate on specific changes you have noticed.
Q2: Program Cycle	-How did you become a facilitator in the current program? -How has this role developed for you? -What changes in teachers do you see as a result of your experiences in the current professional development program? -What changes in students do you see as a result of your experiences in the current professional development program?
Q3: Program Outcomes	-How has the current professional development program influenced your thinking, your relationships with colleagues and/or your instruction? -What do you believe are the strengths and weaknesses of the current professional development program? -How do you believe the program could be improved?
Thanks for your participation.	Is there anything else you would like to add about the program that was not addressed in my questions? Do you have any questions or concerns you would like to share? The transcript of this interview will be provided to you to review as soon as it is available. Initial interpretations of interview data will also be provided to you for comment.

Appendix D: Teacher Participant Interview Guide

Interview Questions	Participant Responses
Introduction	Review of informed consent by stating the purpose of the study, length of this interview, confidentiality, and strategies for protecting privacy. Participants will then review the signed consent form and be reminded that the interview will be recorded.
Q1: Previous Professional Development	-Please describe previous professional development experiences provided by the school or district. -How effective were those professional development experiences at improving instructional practices and student achievement? -How is the current professional development program different from previous professional development provided by the school or district? a. Please elaborate on specific changes you have noticed.
Q2: Program Cycle	-What information do you have about how the current program came into being and/or has been developed? -What specific programs, systems, or protocols have you noticed being used in professional development settings? -What specific programs, systems, or protocols have you received training in as part of the current professional development program? -What changes in yourself do you see as a result of your experiences in the current professional development program? -What changes in students do you see as a result of your experiences in the current professional development program?
Q3: Program Outcomes	-How has the current professional development program influenced your thinking, your relationships with colleagues and/or your instruction? -What do you believe are the strengths and weaknesses of the current professional development program? -What do you believe is the intended impact of the program? -How do you believe the program could be improved?

Thanks for your participation.	Is there anything else you would like to add about the program that was not addressed in my questions? Do you have any questions or concerns you would like to share? The transcript of this interview will be provided to you to review as soon as it is available. Initial interpretations of interview data will also be provided to you for comment.

Appendix E: Director of Professional Development Interview Guide

Interview Questions	Participant Responses
Introduction	Review of informed consent by stating the purpose of the study, length of this interview, confidentiality, and strategies for protecting privacy. Participants will then review the signed consent form and be reminded that the interview will be recorded.
Q1: Previous Professional Development	-Please describe previous professional development experiences provided by the school or district. -How effective were those professional development experiences at improving instructional practices and student achievement? -How is the current professional development program different from previous professional development provided by the school or district? b. Please elaborate on specific changes you have noticed.
Q2: Program Cycle	-Who or what inspired this program? -How was this program developed? Sub-question topics might include: h. Needs assessment i. Specific established procedure for new ideas j. Paperwork k. Best practice research l. Timeframe m. Transparency n. Stakeholder involvement -Who was involved in the process of conceptualizing, creating, and implementing this program?
Q3: Program Outcomes	-What specific programs, systems, or protocols have you seen used or used yourself to conduct professional development? -What results do you expect from the current professional development program? -How will the program and its impact be evaluated? -What do you believe are the strengths and weaknesses of the current professional development program? -How could the program be improved?
Thanks for your participation.	Is there anything else you would like to add about the program that was not addressed in my questions? Do you have any questions or concerns you would like to

	share? The transcript of this interview will be provided to you to review as soon as it is available. Initial interpretations of interview data will also be provided to you for comment.