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CHANGE LEADERSHIP PLAN: HOW PRINCIPALS UNDERSTANDING
OF BEST PRACTICES IN PROFESSIONAL DEVELOPMENT
IMPACT TEACHER PEDAGOGY

National Louis University
Educational Leadership Doctoral Program

Digital Commons Document Origination Statement

This document was created as *one* part of the three-part dissertation requirement of the National Louis University (NLU) Educational Leadership (EDL) Doctoral Program. The National Louis Educational Leadership EdD is a professional practice degree program (Shulman et al., 2006).

For the dissertation requirement, doctoral candidates are required to plan, research, and implement three major projects, one each year, within their school or district with a focus on professional practice. The three projects are:

- Program Evaluation
- Change Leadership Plan
- Policy Advocacy Document

For the **Program Evaluation** candidates are required to identify and evaluate a program or practice within their school or district. The “program” can be a current initiative; a grant project; a common practice; or a movement. Focused on utilization, the evaluation can be formative, summative, or developmental (Patton, 2008). The candidate must demonstrate how the evaluation directly relates to student learning.

In the **Change Leadership Plan** candidates develop a plan that considers organizational possibilities for renewal. The plan for organizational change may be at the building or district level. It must be related to an area in need of improvement, and have a clear target in mind. The candidate must be able to identify noticeable and feasible differences that should exist as a result of the change plan (Wagner et al., 2006).

In the **Policy Advocacy Document** candidates develop and advocate for a policy at the local, state or national level using reflective practice and research as a means for supporting and promoting reforms in education. Policy advocacy dissertations use critical theory to address moral and ethical issues of policy formation and administrative decision making (i.e., what ought to be). The purpose is to develop reflective, humane and social critics, moral leaders, and competent professionals, guided by a critical practical rational model (Browder, 1995).

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A THREE-PART DISSERTATION:

A PROGRAM EVALUATION OF JOB-EMBEDED PROFESSIONAL DEVELOPMENT IN AN URBAN SCHOOL DISTRICT

AN EXAMINATION OF PRINCIPALS' UNDERSTANDING OF BEST PRACTICES IN PROFESSIONAL DEVELOPMENT AND ITS IMPACT ON TEACHER PEDAGOGY: A CHANGE LEADERSHIP PLAN

THE UTILIZATION OF CYCLES OF INQUIRY AS A PROFESSIONAL DEVELOPMENT MODEL FOR TEACHERS: A POLICY ADVOCACY DOCUMENT

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ABSTRACT

The role of the principal has changed drastically from what was once known as a building manager to an instructional leader. Principals are the key lever to creating professional development with teachers in order to improve teaching and learning. The single most important variable to student achievement is the quality of the teacher in the classroom (Darling-Hammond, 2014). In order to ensure teacher quality, principals need to understand adult learning theory and professional development design. I am examining using Wagner's 4C's how principals' understanding of PD design can impact staff perceptions, beliefs and teacher quality. This study also looked at through Wagner's "as is" and "to be" framework, identifying leadership strategies needed transformation of the current professional development happening in Sunny Side School District. Making this leadership shift, however, demands, resources, time and support. Professional development for educators must encompass more than training teachers: it must also help principals acquire the skills necessary to be successful. There is a call for legislative changes where the federal government invest time and resources to provide sustained professional development for teachers and school leaders.

PREFACE

In recent years as accountability for school leaders has increased, educational leaders are faced with many demands. They are confronted with a rigorous set of learning standards, an assessment that measures the impact of teaching on student learning. If principals are to meet these demands, they must figure out how to support the teachers who are in front of students on a daily basis. Students come to school with an array of learning styles and other needs that have made teaching a complicated and complex art.

Principals are now challenged with designing professional development that not only meets the needs of their teachers but has an impact on student achievement. Professional development that improves teaching and learning has distinct characteristics (Darling-Hammond 2012). In the course of my research, I explored various professional development models and the characteristics of each. Dunst and Hambry (2002) conducted a meta-analysis of these models and found that by in large, PD failed to make the systemic improvements to teaching and learning. School leaders must now be able to select or design professional development models that encompass the 7 principles of quality professional development design. Research suggest that PD must be; informed by data, content specific, job embedded, collaborative, sustained, include feedback and allow for reflection.

In this study, I assessed two principals and the superintendent's understanding of quality professional development design and compared them to teachers perceptions and made a recommendation for a framework that will ensure best practices in professional development were considered.

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SECTION ONE: INTRODUCTION

Since the implementation of standards-based reform, school districts and policymakers have invested a great deal of time and resources in developing professional development particularly for teachers. There are many professional development models. As Augustine-Shaw (2016) outlined, significant support in the literature validates the linkage between student achievement and school leadership. This linkage is mainly due to school leaders are tasked with setting the foundation for a high-quality learning environment through shaping curriculum and instruction, setting assessment priorities, and setting a firm focus in the district on high expectations for learning. Thus, meaning that effective school leaders will work to build capacity in their schools, and then develop a culture of learning to support organizational change.

Effective leaders also need to understand the local context of their community and school district. As was discussed earlier, context determines the composition of the professional development. The needs of a financially strapped district with many teachers who may be teaching out of their specialty areas in comparison with a well-financed district with many qualified teachers are entirely different, so a contextually-appropriate response is needed depending upon the specific situation (Guskey, 2003). Instructional leadership plays a crucial role in that it sets the tone and mostly makes the decisions about what professional programs are to take place within the district. However, there is little investment and resources allocated to ensure that school principals can design professional development that leads to drastic student outcomes. In a study conducted by Metropolitan Life Insurance Company, 75% of principals feel that their jobs are too complex and 50% of the participants described having “high levels of stress. (Metropolitan Life Insurance Company 2013)”.

Over the last decade, the role of school leaders has drastically shifted. A role most commonly known as building managers has morphed into instructional leaders that are responsible for; leading instructional change, supporting teachers and students, be accountable to supervisors and district level mandates. As if this is not enough being responsible for student achievement as well. This is a lot, right? Well, it is, but imagine being a principal without formal training in adult learning theory and being one of, and in most cases, the sole person responsible for making decisions on what teachers should and need to learn. Research shows it takes approximately five years to put a teaching staff in place as well as fully implement policies and practices that will positively affect the school's performance (Seashore-Louis et al. 2010). Be mindful that effective principals still make significant improvements in their first years as well (Coelli and Green Forthcoming, Portin, et al. 2003, Seashore-Louis, et al. 2010). The average length of a principal's tenure is three to four years for the average school (Seashore-Louis et al. 2010).

In low-performing schools and schools serving disadvantaged students, the average tenure is even shorter. Impact evaluations find that PD programs more often than not fail to produce systematic improvements in instructional practice or student achievement, especially when implemented at-scale (Jacob & Lefgren, 2004; Garet et al., 2008; Garet et al., 2011; Garet et al., 2016; Glazerman et al., 2010; Harris & Sass, 2011; Randel et al., 2011).

The failure of traditional professional development programming to improve instruction and achievement has generated calls for research to identify specific conditions under which PD programs might produce more favorable outcomes (Desimone, 2009; Wayne et al., 2008). These efforts have led to a growing consensus that effective PD programs share several “critical features” including job-embedded practice, intense and sustained durations, a focus on discrete

skill sets, and active learning (Hammond et al., 2009; Desimone, 2009; Desimone & Garet, 2015; Garet et al., 2001; Hill, 2007). The impact of professional development programs on effectiveness is quite mixed (Boyd et al. 2008).

There are some programs in New York City, such as the Cahn Fellows program, that have been shown to improve the effectiveness of already effective principals (Clark, Martorell and Rockoff 2009). However, when the Wallace Foundation interviewed principals across nine states, most gave their districts low marks for providing quality professional development to teachers (Seashore-Louis et al. 2010). I know many might wonder if I am proposing to do away with professional development for the teacher. In a review of ten years' worth of recent articles in *Teaching and Teacher Education*, Avalos (2013) categorizes peer coaching mainly under the category of teacher co-learning. Placement of coaching in this category is consistent with data already discussed regarding social learning theory. Also discussed was the impact of peer coaching under the topic of student learning. The premise of year-round intensive coaching professional development program focused on reading comprehension instruction increased the outcomes of student learning for that subject matter. Also viewed to improve collaboration and facilitate teacher co-learning in the studies considered was peer coaching. The honest answer is that the separation of the two should not occur. One to one coaching or mentoring of the teacher is not standalone and must be a direct response after professional development. If school districts could define and create a framework for PD design for principals, they would drastically improve their skills to lead and develop staff; districts would see an increase in principal retention and more schools positively impacting and sustaining student achievement.

Rationale

A recent listening tour with principals by a current Alabama superintendent, and their discussion on PD design, along with consistent low academic performance, led me to want to learn about how Sunny Side School District has supported principals in designing professional development that meets the needs of teachers but also drives student achievement. In Scotland, there has been a growing recognition regarding the need for continuing professional development (CPD) of teachers. As a result, Fraser, Kennedy, Reid, and McKinney (2007) explain, the McCrone Agreement was reached, codifying CPD as a professional entitlement, with teachers being allotted 35 hours of CPD annually as part of their contracts, and the expectation is that teachers would maintain their professional development portfolio.

International studies referenced by Fraser et al. (2007) indicate that for CPD to be effective it should be an experiential process, and teachers should work together as facilitators in a collaborative environment. One of the transitional models indicated as being effective in supporting professional autonomy is that of coaching/mentoring. This was put to the test in the Cognitive Acceleration in Science Education (CASE) intervention, which was a two-year CPD program working on increasing performance in science classrooms. Part of what made the CASE program so successful was the in school coaching that occurred during the latter portion of the program. Additionally, the changes to the ESSA and Alabama's principal evaluation tool denotes a need for Sunny Side Schools to begin to think about how it supports principals in an effort to improve teacher quality. Half of principals agree or strongly agree that they feel prepared to design PD that supports individual teacher's needs. (Superintendent Entry Plan 2018). Three fourths of principals cited that insufficient supports from supervisors as the reason they plan on leaving. (Superintendent Entry Plan 2018) Sunny Side School District has a new

Superintendent who has been very successful as a building leader. The new Superintendent has four schools consisting of an: elementary, middle, high and technical school.

The sole charge of Superintendent is to develop, support and hold accountable school leaders as powerful agents of change. In its current design, school principals relying solely on the Superintendent to set the expectations for PD, as well as, serve in other city and state leadership capacities, responds to parent inquiries for the district, lead and direct the work of the academic departments which presents a challenging task. Adult learners need to know the benefit of investing time in learning material. Second, they are driven by a concept of self and are autonomous and resent others' efforts to impose superiority on them. Third, previous experiences are a vital resource for adult learners to draw from. Fourth, the degree to which they are receptive to learning depends upon the perceived relevance of the topic. Fifth, learning is centered on problem-solving, task completion and life experience. Finally, adult learners are motivated by an internal drive to learn (Ozuah, 2016).

As the district looks to ensure that quality professional development is happening in every school, Sunny Side must look at how they support principals understanding of designing effective PD. The intense support during and after PD is crucial to leading academic growth.

Goals

The intended goals of the change plan were to examine the impact of principals understanding and ability to deliver aligned professional development to improve teacher practice. Furthermore, this addressed how the superintendent of Sunny Side School district and other districts think about meeting the requirement of Every Student Succeeds Act (ESSA). One of the tenants includes; High-Quality Professional Supports Capacity-building systems that provide teachers and principals with professional development or the knowledge, skills, and

tools—such as needs assessments—to provide effective instruction and leadership within a well-rounded framework (Alabama Department of Education, 2019).

Demographics

Sunny Side Schools, one of Alabama's smallest school districts in the state, is rated in the lowest 50% based on student achievement data. Currently, there are just over 1500 students in the district. In 2017, there were 30 Preschool students and 130 kindergarten students. Traditional Elementary Schools are grades 1-5. The 20th-day numbers indicated that there are 625 elementary students. There are 299 students in grades 6-8. Lastly, the number of secondary (9-12) students was 431. Sunny Side Schools has 98.00% of economically disadvantaged students; based on household income. English Language Learners (ELL) make up 7.17% of the district's students and lastly, 13.66% of the students have Individual Education Plans (IEP's) (Alabama Department of Education, 2019).

While Sunny Side is a small district, it has over 98.00% of students of color with African American being the largest group. This percentage is 88% higher than the state average of 44% African American students. The district received a diversity score of .27%. Currently, 1269 students or 84% are African American, 202 students, 13% is Hispanic, 30 students, or 2% listed as White the remaining three groups are Asian .9%, Hawaiian/Pacific Islander 0.2%, Multi-Racial 1.1% (Alabama Department of Education, 2019).

Sunny Side Schools has struggled on many of the nation's key indicators: 17% at or above national norms in Reading far behind the state of 38%. While only 13% of students are proficient in Math as compared to the state's average of 43%. This percentage is for both elementary, middle and high schools. What is interesting to note is that they graduate between 85%-87% of its high school students, which is on par with the state's average. What is interesting

to highlight for this change plan is the number and ethnic makeup of principals within the district. A recent report shows the number of Sunny Side Schools has four building leaders. African Americans make up 100% of this population (Alabama Department of Education, 2019).

SECTION TWO: ASSESSING THE 4C'S

Sunny Side principals understanding and ability to deliver quality professional development will be assessed using Wagner's 4C's model. Wagner et al. (2006) assert that successful change agents must think systemically about an issue while also keeping in mind each related element. This systems thinking allows the leader to "form a more holistic picture" of the change process and emphasizes the interrelationships among each part of the whole (p 97). I will use the 4C's-Context, Competencies, Culture and Conditions to describe Bullock County's current structure of how principal approach designing learning for teachers.

Context

Wagner (2006) refers to context as the larger organizational systems within which we work, and their demands and expectations, formal and informal (Wagner p. 104). Bullock County is one of the smallest districts in the state. The district has four principals; 1 elementary, 1 middle 1 high school and 1 technical center. The superintendent supports the district leaders. He is responsible for the support and development of each principal. The last superintendent led the district for 10 years. Principals were given a great deal of autonomy and provided professional development often in stand-alone sessions.

District turnover rate is one of the lowest in the state, which means teachers often retire from this small district. On average, each school performance is lower than the state's average on standardized assessments in both reading and math (Alabama Department of Education, 2019). Student achievement has long been an issue before the newly appointed Superintendent. While he has only been in the role for less than four months, he has been a successful principal in another school district in Alabama. The Superintendent has a strong background and experience in developing professional development that has led to academic outcomes for students. He has

been able to create a department to assist with managing the day-to-day operations of the district.

In theory, this would create more time for him to focus on ensuring principals have the necessary skills to develop and design professional development for teachers. A few months in the role, the superintendent has been able to increase the reserves in the district, which led him to create several new small departments: Teaching and Learning, and School Administration that will focus on school principals. He believes that principals are the key agents of change in their schools and must understand adult learning to be able to drive academic outcomes for students.

The Sunny Side Schools spends \$10,670 per pupil on average, which is higher than the state. District spending per student has remained flat over the last five years and but has seen a five percent decrease (Alabama Department of Education, 2019). This decrease adversely affects additional revenues spent on teacher development. Companies, which fall into our “high-impact” categories, spend significantly more on training than average. So companies who invest in a total L&D strategy spend more per employee than those who are inconsistent. This outcome shows that L&D spending pays off (Bernstein, 2014).

Culture

The culture, defined as shared values, beliefs, assumptions, expectations and behaviors related to students and learning, teachers and teaching, instructional leadership and the quality of relationships within and beyond the school (Wagner, 2006 p. 102). Principals’ don’t see professional development and collaboration as an option as there is one elementary, middle, high and technical school principal. They are the only person in the district with their particular type of school, so having a “thought partner” and best practice sharing or creating a PD model has been met with some resistance. Teachers consistently agree through district-level surveys that professional development has led to little or no change in practice and often feel, what principals

present isn't relevant to their work. Guskey (2000) stated that consideration of five assessment areas that should occur whenever evaluating the effectiveness of professional development programs for teachers. The final area – and Guskey (2000) might argue the most important area – is that of measuring student outcomes. Multiple government agencies have soundly criticized professional development in education because it often provides scant evidence of the impact that such professional development programs have had on student achievement.

As Guskey (2000) notes, measuring the relationship between professional development and student learning is not necessarily an easy task. Student learning occurs in the context of many complex interactions between some elements that teachers can control and others that are outside of the control of teachers. Even though drawing direct causal links between a professional development program and student achievement is daunting, it is important to note that “improvements in student learning have never been observed in the absence of professional development” (Guskey, 2000, p. 208). Therefore, based on this information, there is a discernable link between professional development and measuring it and producing definitive evidence to support the relationship is a significant challenge. From the superintendent to the central office, there is no element of choice and topics are mandated. Feedback is believed to be rushed and most times not accompanied by in-person feedback, action planning and monitoring.

Conditions

Conditions are those external architectures surrounding student learning, the tangible arrangements of time, space and resources (Wagner 105). In its current structure, the school district has not identified a framework that assists principals with designing professional development. It is a building level decision and although there are only four principals, each one has a different approach. Superintendent supervises all four schools and often without the

support of having an Associate Superintendent in place. The superintendent by Alabama State Law is required to observe and provide feedback to principals twice a year. In theory, as he observes how principals lead and develop teachers, he must become proficient in four very different approaches. Outside of their principal preparation program, which does not focus on adult learning theory, schools typically are designing programming for teachers using traditional one and done approach to meet the minimal requirements of the district.

As Bayar (2014) noted, substantial literature supports the assertion that teacher quality has a direct relationship to student learning and achievement. Due in part to this body of evidence, the No Child Left Behind Act (NCLB) of 2001 and subsequent ESSA Act of 2015 both stipulated that high-quality professional development programs for teachers be put into place to improve student learning outcomes (Bayar, 2014; Rowland, 2017). Unfortunately, with the mandate to put high-quality professional development programs into place, a clear definition of high quality, guidelines on how to execute such a program, or directions of what the programs should contain were not provided. The district has flexibility in how it spends or allocates resources. Every Student Succeeds Act also requires the school district, to provide support for teacher and principals.

The superintendent is responsible for recruiting and hiring of all principals. The current superintendent inherited all four of the district leaders. According to a listening tour conducted by the newly appointed superintendent, many principals reported their day is directed towards compliance and paperwork and while they seek input on what teachers should learn, their understanding of andragogy is limited. This strategy could potentially prohibit or diminish the time and quality of programming for teachers. More importantly, with the way that the state mandates the district calendar, teachers on average receive five days of dedicated professional

development (Alabama Department of Education, 2019). Thus, it could affect what teachers learn and the method of implementation. The problem in this small district is there is one school for each band, differentiation by the elementary or high school would mean hosting four different days of training by the district. Therefore, it is critically important that principals' and teachers understand and design professional learning that meets their needs. Principals previously noted that the former superintendent rarely did informal observations or visits to the schools were infrequent especially during teacher institute days. Principals are held to Alabama's eight professional rationales, intended to drive principal practice and student achievement.

Competencies

Wagner defines competencies as the repertoire of skills and knowledge that influences student learning (Wagner pg. 99). In school leadership, administrators must develop their competencies regularly through ongoing development opportunities (Wagner pg. 99). Principals have no set or structured way to develop their understanding of adult learning theory nor a district-wide professional development framework. The current principals 'all have been leading their buildings on average seven years. When asked, four of four principal preparation programs did not go into depth or mention adult learning principles.

In the study by Bayar (2014), the categorizing of teacher mentoring and coaching was under the non-traditional format, with short workshops and conferences being considered more traditional formats. The reason for the categorization of coaching as a non-traditional form of professional development was due to the longer duration of such programs. Non-traditional approaches like coaching are considered more effective means of professional development. This approach is due to the longer time on a task that teachers spend in such programs. The author cited numerous sources that asserted that due to the short period that traditional professional

development programs for teachers spend that these programs are "virtually a waste of time"(Bayar, 2014, p. 321). Respondents in Bayar's qualitative study indicated that long-term professional development activities would be more effective than traditional short-term approaches. Monthly principal meetings focus on district initiatives and compliance measures. These sessions, however, rarely focus on how to train principals to think about supporting teachers' development and best practice sharing. On average principals have cited that they do not feel knowledgeable on PD design and it shows in the academic performance of the district. In analyzing the question of what makes professional development for teachers effective, Garet, Porter, Desimone, Birman, and Yoon (2001) noted that traditional approaches of professional development such as workshops and conferences have received substantial criticism for the limited activities, content, and time that they devote to any given subject, making them largely ineffective at fostering meaningful changes in teachers' pedagogy. This approach has caused those who design professional development programs to turn to less traditional forms of professional development such as coaching and mentoring. Alabama has recently created a list of eight rationales or competencies that make up the principal evaluation tool. Within each rationale, there are on average six to eight important indicators, to assist with focusing on the specific needs of each principal.

SECTION THREE: METHODOLOGY

Research Design and Overview

According to Patton, "as an evaluation unfolds, evaluators and primary intended uses must work together to identify the evaluation that best fits their information needs and the program's context and situation (Patton pg. 199). Deemed to assess the "As Is" of the current status of professional development, and the principals' ability to leverage it as a key lever of student achievement, was a qualitative methodology approach. Wagner et al. (2006) suggest that in the preparing phase, "data is used to capture the hearts and minds of individuals to understand the problem and to cultivate urgency for the hard work ahead." He continues, "Data must be persuasive on logical and emotional levels, touching individuals about the humanity of the effort to create and sustain energy." Data regarding the leadership development plan is critical in establishing how the district provides supports to principals on best practices in professional development to support teachers based on the LDP.

Under Alabama's Standards for Instructional Leaders, created in 2012. A principal in Alabama receive an evaluation that is comprised of 50% practice and 50% student growth. Principals create learning targets are assessed on them and given final ratings of Distinguished, Proficient, Basic or Unsatisfactory. There are eight competencies reviewed and each receives one of the above ratings. The competencies are:

1. Planning for Continuous Improvement Engages the school community in developing and maintaining a shared vision; plans effectively; uses critical thinking and problem-solving techniques; collects, analyzes, and interprets data; allocates resources, and evaluates results for continuous school improvement.

2. Teaching and Learning Promotes and monitors the success of all students in the learning environment by collaboratively aligning the curriculum; by aligning the instruction and the assessment processes to ensure effective student achievement; and by using a variety of benchmarks, learning expectations, and feedback measures to ensure accountability.

3. Human Resources Development Recruits, selects, organizes, evaluates, and mentors' faculty and staff to accomplish school and system goals. Works collaboratively with the school faculty and staff to plan and implement effective professional development that is based upon student needs and that promotes both individual and organizational growth and leads to improved teaching and learning.

4. Diversity responds to and influences the larger personal, political, social, economic, legal, and cultural context in the classroom, school, and the local community while addressing diverse student needs to ensure the success of all students.

5. Community and Stakeholder Relationships Identifies the unique characteristics of the community to create and sustain mutually supportive family-school-community relations

6. Technology Plans, implements, and evaluates the effective integration of current technologies and electronic tools in teaching, management, research, and communication

7. Management of the Learning Organization manages the organization, facilities, and financial resources; implements operational plans; and promotes collaboration to create a safe and effective learning environment.

8. Ethics Demonstrates honesty, integrity, and fairness to guide school policies and practices consistent with current legal and ethical standards for professional educators.

The study examined how Sunnyside School district principals' select, design and deliver professional development, as well as, how the district plays a vital role in ensuring there is a PD

model. By doing so, this directly affects Competencies One Two, Three, and Seven. Surveys data will help inform how well the current structure of professional development is affecting principal leadership and student achievement. The purpose was to gauge principals understanding of the current structure, their perceptions of the supports and if it aligns to meet, the needs outlined in the LDP. The survey questions provided an in-depth look at the strengths and areas of opportunities this new Superintendent should consider when supporting school leaders in improving professional development for teachers.

Cordingley and Buckler (2012) note a key shortcoming in much continuing professional development (CPD) programs is that many CPD programs are designed by the school district, leaving teachers little opportunity to take control over the development and execution of such programs. As a result, this could lead to the programs being non-educational rather than beneficial. The authors point to the fact that coaching programs for CPD can suffer the same fate if there is not widespread adoption in the school context. Even though there is a strong body of evidence, both theoretically and empirically, to support the value of coaching for teachers, unless there is institutional support for it, and unless the teachers embrace the practice, it may be hard to get coaching programs to realize the promise that they could offer if they were adopted in a more widespread fashion. The questions analyzed if the district is personalizing, grouping similar learners or completely group support. The survey consisted of a combination of both closed and open-ended questions. Open-ended questions often provide respondents with the opportunity to include more information, including their feelings, attitudes and understanding of a subject. This approach allows the researcher to better access the respondents' true feelings on an issue. The benefit of closed-ended questions allows the researcher to identify patterns and themes that emerge and statistical interpretation can be assessed.

Participants

The participants included principals and the Superintendent who voluntarily elected to be a part of the study from the district. Participatory Action Research (PAR) is an exceptional tool for educational leaders because it builds on the professional learning community environment found in schools. (E. James pg. 24).

The goal was to get a minimum of two of four principals and the Superintendent to participate in the surveys. The survey was emailed to every principal and the Superintendent within the network in the form of a survey link. Participation was voluntary, and the survey was anonymous.

Data Gathering Techniques

As part of the research, analyzed, were multiple sources of quantitative data from numerous sources of information. Quantitative data included surveys given to principals and the Superintendent, which included both closed and opened ended questions. The survey asked the participants to answer a mixture of open and closed-ended questions about professional development. Open-ended questions often provide respondents with the opportunity include more information, including their feelings, attitudes and understanding of a subject. This approach allows the researcher to better access the respondents' true perceptions on an issue. The benefit of closed-ended questions allows the researcher to identify patterns and themes that emerge and statistical interpretation can be assessed. The survey was sent via survey monkey and responses were kept to ensure the integrity of the data. To understand how the process by which, principals and Superintendent approached designing professional development, their beliefs on quality and its impact on student achievement was a focal point in the questions. A survey was sent to the principals and Superintendent who voluntarily opted into the study.

Data Analysis Techniques

Due to this study being qualitative in nature, grounded theory approach to analysis was deemed most appropriate. Cresswell (1998) states “this process is systematic and appropriate to use when it is necessary to explain the actions of people and/or interactions among people” (p. 432).

When making a decision on design, it is imperative that I weighed the procedures and categories needed to be emphasized in order to create a grounded theory. There are varying degrees of opinions of systemization of the process in particular with gathering and coding to develop a grounded theory.

Credibility and use are important factors in ensuring the right data analysis technique is enacted. Credibility includes the perceived accuracy and fairness, and believability of the evaluation and the evaluator (Patton, 2008). Based on principal, teacher and Superintendent surveys, I coded the surveys from each that allowed me to look for themes.

The theory needed to be grounded in the data as this study sought to identify how principals and teachers’ perception of professional development impact student achievement. and descriptive statistics, which are numbers that were used to summarize and describe data from the survey. Patton states “claims are based on more than one kind of evidence or data” this is known as triangulation of data (Patton, 2008).

Grounded theory is based on the qualitative approach to scientific research regarding various social sciences. As Rosenbaum, More, and Steane (2016) state, qualitative research has dualistic qualities in which it aims to discover realistic ideas about the world while also determining how the realities of these ideas have come into existence. Representing a key method of qualitative research, a grounded theory further aims to identify a spectrum of critical

elements that establish a functional framework once all of the elements have been combined (Rosenbaum et al., 2016). Grounded theory is an inductive approach that asks one or more questions. There are several designs grounded theory supports, such as systematic, emerging, or constructivist designs, all which aid in collecting, measuring, and analyzing qualitative data.

Systematic Design

The initial design is the Systematic Design approach which was first proposed by Strauss and Corbin (1990). This design consists of three phases: *open*, *axial*, and *selective*. Through the three phases, data moves from what is known as broad categories to theory development. *Open coding* aids in the establishment of initial information categories regarding the subjects of a study through the organization of data that is collected. *Axial coding* aids in establishing connections between open categories and other categories that are based on causal conditions, interventions, environmental factors, and outcomes, and *selective coding* aids in the generation of a theory (or theories) via the interpretation of emerging interrelationships amongst the categories that were established in the axial coding stage (Metcalf, 2019). In terms of information processing, the systematic design essentially begins with specificity and becomes more conceptual, ending with practical explanations of the findings.

Emergent Design

The adaptation to new ideas or concepts in addition to research findings is a key feature of the emergent design and is less systematic and was identified by Glaser (1992). This design supports letting what Creswell identifies as a theory emerge from the data. In this approach Glaser believed this process allows researchers to compare incident to incident, incident to category and category to category focusing on connecting categories to the emergent theory.

The emergent design is extremely flexible, however, depending on the type of research questions and hypotheses, this flexibility can be seen as either a strength or weakness (Metcalf 2019).

Constructivist Design

The third framework of developing grounded theory is the Constructivist Design. This framework was first proposed by Charmaz (2006). As Lauckner, Paterson, and Krupa (2012) point out, the constructivist design is known for acknowledging a subjective point of view regarding researchers that construct grounded theories via past and present experiences with other people, diverse perspectives, and common research practices. A big strength of the constructivist design is that it recognizes that researchers are actively involved with experiences and consistently interpret the purpose and/or meanings of these experiences (Lauckner et al., 2012). Andrew, Pedersen, and McEvoy (2011) also reiterate on the importance of these characteristics, which help researchers focus on one concept at a time while also incorporating personal values within a study. This design examines subject settings or contexts and helps in validating the accuracy of research findings (Andrew et al., 2011).

Since the constructivist design aligns researchers with the settings or contexts of subjects to better comprehend subject generated meanings, thus, providing researchers with the opportunity to collaborate with subjects, it is highly suitable for qualitative interviews that consist of open-ended questions (Andrew et al., 2011). Lauckner et al. (2012) emphasize the usefulness of this particular design regarding open-ended interviews, stating the design focuses on connecting prominent features of circumstances, interpretations, and research problems.

SECTION FOUR: REVIEW OF LITERATURE

Introduction

The purpose of this literature review is to review and synthesize scholarly research on professional development for teachers. It will begin with a brief overview of the topic, followed by a discussion of the most common models for teachers' professional development. Next, it will review the literature on building effective PD for teachers, followed by a discussion of best practices in professional development. The review then discusses andragogy (adult learning), followed by PD design. Finally, the review will discuss cycles of inquiry in PD before concluding with a summary of findings.

Overview

It is now generally recognized that professional development is necessary in order for educators to refine their knowledge of pedagogy and how to teach students the skills they need to succeed in ever changing curriculum. Research has linked PD to changes in teacher behaviors and student achievement (Whitmore & Chiu, 2014). Professional development is defined as “structured professional learning that results in changes in teacher practices and improvements in student learning outcomes” (Darling-Hammond, Hyler & Gardner, 2017, para 2). Professional development has emerged as the most common way to improve teachers’ level of preparedness (Bayer, 2014). The point of professional development (PD) is to improve teachers’ pedagogic practices in order to improve student learning (Whitmore & Chiu, 2014).

Darling-Hammond et al. (2017) have identified several characteristics associated with effective professional development. First, it is focused on content that includes teaching strategies appropriate for specific disciplines. Second, it utilizes active learning, engaging teachers in experimenting with teaching strategies and developing ways to implement those

strategies in the classroom. Third, it facilitates collaboration as teachers work with colleagues to improve the pedagogic practices and culture of their institutions. Fourth, it utilizes models and modeling as a core aspect of instruction. Fifth, it includes peer support and expert coaching to guide teachers in implementing evidence-based instructional practices. Sixth, it includes expert feedback and the opportunity for teachers to engage in reflection about what they have learned and how to incorporate it in practice. Finally, it expands sufficient time for teachers to thoroughly learn and internalize new techniques so that teachers can put the lessons into practice (Darling-Hammond et al., 2017).

Models of Professional Development

There are numerous models of professional development for teachers, each with its advantages and weaknesses. Which model is most appropriate typically depends on the goal of PD, though some models have been shown to be overall more effective than others. Kennedy (2005) conducted a comparative analysis of models for teachers' professional development and identified nine basic models. These are: the training model, the award-bearing model, the deficit model, the cascade model, the standards-based model, the coaching or mentoring model, the community of practice model, the action research model, and the transformative model (Kennedy, 2005).

The Training Model

The training model of professional development is based on providing teachers with the opportunity to update their skills in order to achieve required competency in instruction (Kennedy, 2005). This model casts the teacher seeking PD in the role of more or less passive learner who receives instruction from a trained professional. It is typically of short duration and

relies on standardized instruction. The training model is most effective when the purpose of PD is to introduce teachers to new knowledge (Kennedy, 2005).

The Award-Bearing Model

The award-bearing model of professional development is based on attaining some type of reward or accreditation for completing the program. This model is based on external validation and is frequently utilized when there is an emphasis on standardized measures of quality improvement and a need to ensure continuity of teachers' skills and knowledge (Kennedy, 2005).

The Deficit Model

The deficit model of professional development is based on directly addressing particular deficits in teachers' knowledge and skills. This model focuses on teachers' perceived gaps rather than connecting weaknesses to systemic problems (Kennedy, 2005).

The Cascade Model

The cascade model of professional development utilizes select teachers to attend PD events and then disseminate the knowledge and skills learned there through their schools by demonstrating to other teachers (Kennedy, 2005). This model of PD is utilized in school systems where resources are scarce (Kennedy, 2005).

The Standards-Based Model

The standards-based model for professional development, also known as the competence-based model, uses an evidence-based approach to PD (Kennedy, 2005). Kennedy (2005) is critical of this model because it "belittles the notion of teaching as a complex, context-specific political and moral endeavor" in favor of presenting it as a scientific system (p. 241). In addition, this model does not provide a framework for collaborative learning, focusing instead on

individual teachers' competencies. However, the standards-based model does provide a scaffold for PD that includes a common vocabulary and standard expectations of practice.

The Coaching or Mentoring Model

The coaching or mentoring model of professional development is based on the one on one relationship between the teacher and the mentor or coach (Kennedy, 2005). It can be either between two colleagues or based on a hierarchy in which the novice teacher is mentored by an expert. Kennedy (2016) notes that the value of coaches in PD programs depends upon how they facilitate teacher engagement with the program. The most effective models involved coaches collaborating with teachers in creating lesson plans and modeling strategic planning.

The Community of Practice Model

The community of practice model for professional development is based on a community of professional peers engaged in learning and developing skills (Kennedy, 2005). Learning occurs through the interactions of members of the community. Kennedy (2016) found that PD programs based on professional learning communities (PLC) have varying degrees of efficacy on improved student outcomes. She notes that the most effective PLCs were research study groups, in which teachers were given research findings to discuss, facilitated by a discussion leader.

Collaborative Design

Collaborative Design is one aspect of professional learning communities. Research has shown that collaborative professional development improves teachers' knowledge and skills and increases the likelihood that they will implement them in classroom instruction (Voogt et al., 2015). In addition, collaborative professional development has been associated with improved student learning outcomes. Collaboration involves teachers working together in teams under the guidance of an expert to design or adapt materials to meet the learning needs of students and to

fit within specific classroom environments (Voogt et al., 2015; Tsourlidaki, 2015). A collaborative setting gives teachers a chance to reflect on their own contributions while learning from peers.

Voogt et al. (2015) emphasize that collaborative design is an important feature of professional development. The authors note that it is important to keep in mind that teacher learning continues outside of formal professional development programs and takes place within the context of the school environment, the classroom and the community of peers (Voogt et al., 2015).

Voogt et al. (2015) point out that collaborative design does not entail beginning from scratch. Rather, it entails redesigning existing curriculum, strategies and practices. The key to successful collaboration, argue Voogt and colleagues, lies in teachers taking ownership of changes; “The assumption underlying this contribution is that the shared process of adaptation through collaborative design offers ample opportunities for teacher professional development” (Voogt et al., 2015, p. 259).

Other Models

Several of the models Kennedy identified need only be mentioned in brief due to their relatively limited use in current PD. The action research model of professional development entails participants researching a situation they find themselves embedded in with the goal of improving actions (Kennedy, 2005). The transformative model of professional development is actually a combination of various processes of PD drawn from other models. This model combines elements from different models in order to achieve a transformation in teachers’ attitudes, beliefs and actions (Kennedy, 2005).

Building Effective Professional Development

The goal of professional development for teachers is to alter teachers' attitudes and beliefs, leading to a change in teaching behaviors and practices. The ultimate measure of how effective a professional development program is improved student learning. Researchers have identified five qualities of effective professional development. PD should be sustained over time, embedded in the learner's job, be based on interactive participation, build a sense of collegiality, and integrate a variety of tools and activities (Zepeda, Parylo & Bengtson, 2013).

Researchers have examined the issue of building effective professional development from the perspective of instructors, utilizing qualitative data to determine what characteristics teachers' view as most effective elements of professional development. Bayar (2014) conducted a study of elementary school teachers working in urban schools in Turkey in order to ascertain which activities they deemed most effective in professional development programs and identify the key elements of an effective PD program. Based on interviews with teachers and documented analysis of professional development teachers engaged in Bayar identified several key components of effective PD: It must be matched to instructors' existing needs, as well as the school's existing needs; teachers must be involved in the planning and design of PD activities; teachers must have the opportunity to actively participate; it must engage teachers over a sustained period of time; high-quality instructors must be in charge of PD (Bayar, 2014).

Some researchers have focused on the role that school leaders play in effective professional development. Whitmore and Chiu (2014) argue that school leaders at the local and district level play an important role in PD by supporting teacher change and ensuring that implementing professional development is a school priority. Further, they argue that school leaders should be incorporated into any professional development plans.

A great deal of research has focused on collaboration as an essential part of professional development. Professional learning communities are based on the premise that interaction among teachers will improve teachers' instructional practices and improving the way that teachers' practice will result in improvement of student learning.

Research suggests that professional development that is part of a professional learning community (PLC) is more effective than other models (Whitworth & Chiu, 2015). Birenbaum et al. (2009) found that in schools that maintained professional learning communities based on the cycle of inquiry students and teachers scored better on all measures of formative assessment compared to schools without PLCs. Graham (2007) found that middle school teachers who participated in a professional learning community had improved classroom instruction practices compared to those who did not participate. Graham also noted that preliminary evidence suggests that student outcomes were also improved by teacher participation.

Vescio, Ross and Adams (2008) noted that PLCs are based on two assumptions. First, they argue that knowledge is located within the everyday lived experiences of teachers and can best be understood through interacting with peers in a meaningful way. Second, by actively engaging teachers in PD with their peers, teachers will increase their professional knowledge, which in turn will lead to improved classroom practices and student outcomes (Vescio et al., 2008).

Researchers have identified key characteristics of effective PLCs (Vescio, et al., 2008). First, participants must develop a shared set of norms and values. Second, the group must have a clear and consistent focus that centers on improving student learning. Third, reflective dialogue must be featured prominently in the PLC. Teachers must engage at length and repeatedly about processes such as curriculum design, teaching methods and other professional tasks and goals.

These common characteristics are apparent to some degree in all successful PLCs (Vescio et al., 2008).

Bolam et al. (2005) noted that creating and sustaining PLCs can be a challenging task. The researchers identified four processes necessary to do so, focusing on the role of administrators and school leaders. Leaders must optimize their resources and existing structures in order to encourage participation and reduce costs. Leaders must also work to promote individual and collective learning throughout the school system. Bolam et al. emphasized that it is vital to explicitly and repeatedly promote PLCs. Finally, the researchers note that leaders must be held accountable for managing the PLCs. This study is useful because it addresses the role of school leaders in maintaining PLCs as a valuable tool for PD.

It is important to note that PLCs change over time based on the needs, skills and knowledge of members (Bolam et al., 2005). Thus, in order to remain effective, facilitators in PLCs must be able to adapt to the changing nature of the community rather than remain dedicated to adhering to set guidelines and parameters.

Evaluation of Professional Development

In order to determine if a professional development program is effective there must be way to evaluate it. One of the major questions in the field is how to appropriately assess teacher learning as a result of professional development. King (2013) noted that it is difficult to evaluate the impact of professional development on teachers and on student learning outcome. Ideally, evaluation should include an assessment of teachers' implementation of the techniques and tools addressed during professional development and on student learning (King, 2013). Most evaluation of professional development programs focuses on teachers' perspectives of their efficacy (King, 2013).

Shaha, Glassett and Copas (2015) evaluated professional development by examining student learning outcomes. The researchers analyzed data from 292 schools spread across 27 states to assess the efficacy of a professional development program provided through an on-demand, online medium. The program consisted of interactive communities that facilitated collaboration and facilitated use of PD materials. The researchers found that participation in the program significantly improved student learning outcomes (Shaha et al., 2015). They conclude that online professional development is a convenient and cost-effective mechanism for teachers' professional development. Soebari and Aldridge (2015) developed a model for evaluating professional development based on students' perceptions of teachers' changes using a pre- and post-design.

In a meta-analysis Kennedy (2016) identified which attributes of professional development are most effective. Kennedy found that professional development programs that focus exclusively or mostly on content knowledge are less effective than other type of PD. Kennedy (2016) notes that PD duration can be an indicator of program success depending upon the type of strategy used, with prescriptive programs of long duration much less effective than programs that provide teachers with strategies or facilitate teachers gaining insight. Voogt et al. (2015) argued that quality professional development must be based on the social factors associated with learning and note that teachers must find the material directly relevant to their practice. These studies indicate that there are myriad ways of evaluating the efficacy of PD for teachers.

Best Practices in Professional Development

Researchers have identified several best practices for effective professional development. Desimone and Garet (2015) described five core elements of effective professional development:

“content focus, active learning, coherence, sustained duration, and collective participation” (Desimone & Garet, 2015, p. 252). According to the researchers, first, activities should be tailored to focus on specific subject matter content (reading, math, etc.) and how students best learn those subjects rather than addressing vague or general learning topics.

Second, PD should be built around active, rather than passive, learning. This includes providing teachers with the opportunity to observe, analyze, and respond to feedback and other activities rather than merely listening to lectures from hired experts. Third, professional development should be based on a coherent link between goals, content and activities that coincide with the school’s curriculum. It is essential that teachers be able to link the PD to their actual practice in order to appreciate its value. Fourth, PD should be sustained over time rather than offered as an isolated or short-term event. Desimone and Garet (2015) argued that 20 hours or more are necessary in order for PD to be successful. Finally, PD should consist of collaborative participation among teachers to create an interactive learning environment that actively engages all learners (Desimone & Garet, 2015, p. 252).

The best practices outlined above are further honed by a discussion of how application in a classroom setting plays out. Desimone and Garet (2015) reviewed recent randomized controlled trials in order to refine a five-pronged conceptual framework for effective professional development. The first finding is that “changing procedural classroom behavior is easier than improving content knowledge or inquiry-oriented instruction techniques” (Desimone & Garet, 2015, p. 254). In other words, PD that is designed to affect teachers’ practices in the classroom rather than broaden their content knowledge or employ cycle of inquiry techniques is most effective. The researchers note that less PD time is required to facilitate teachers’ changing

specific classroom behaviors, such as giving students warm up problems every day, compared to meaningfully improving teachers' knowledge of specific subjects.

Second, Desimone and Garet (2015) reported that teachers' response to professional development varies considerably from one person to the next. Third, research shows that professional development is most successful when it is linked to specific classroom lessons. Fourth, professional development must provide for specific circumstances of urban classrooms. Fifth, support from leadership is necessary to help teachers implement PD lessons in the classroom. In summarizing their findings, Desimone and Garet (2015) provide a concise overview of best practices in professional development for teachers.

Andragogy

The concept of andragogy is often discussed in terms of teachers' professional development. Andragogy is an academic discipline that focuses on examining the way that adults learn. Andragogy differs from pedagogy in that pedagogy refers to "the art and science of teaching children" while andragogy refers to the "approach to adult learning" (Ozuah, 2016, p. 83). It considers the way that adults' cognitive and social processes differ from those of child learners. This section of the literature review will provide a brief history of how the concept has been used in the context of teachers' professional development. It will also briefly discuss how various learning theories are applied in andragogy.

The concept of andragogy emerged in the late 1920s when Eduard C. Lindeman distinguished between adult learners and children. He argued that unlike childhood education which is based on learning subject matter, adult education should focus on "the root of problem solving" (Ozuah, 2016, p. 83). Lindeman also conceived of a different role for teachers, whom he argued should play the role of guide when working with adult learners.

Malcom Knowles continued to refine the idea of andragogy in the late 1960s by establishing the defining principles of education tailored for adults. Like Lindeman, he argued that adult learners are autonomous and self-directed, and that instructors should facilitate learning rather than simply present content in a top-down approach (Henschke, 2011). He articulated a framework for how educating adult learners should differ from educating children in typical classroom settings.

Knowles developed several basic assumptions about the needs of adult learners that have impacted how professional development is designed today (Ozuah, 2016). First, adult learners need to know the benefit of investing time in learning particular material. Second, they are driven by a concept of self and are autonomous, and resent others' efforts to impose superiority on them. Third, previous experiences are a vital resource for adult learners to draw from. Fourth, the degree to which they are receptive to learning depends upon the perceived relevance of the topic. Fifth, learning is centered on problem-solving, task completion and life experience. Finally, adult learners are motivated by an internal drive to learn (Ozuah, 2016).

Learning theories have been applied to the study of andragogy in order to theorize about the different processes involved in adult learning. Behavioral theory is based on the teacher taking an active role in prompting a change in behavior in the learner. Though on the surface behavioral theory is more applicable to childhood education, it is often employed in adult vocational training (Ozuah, 2016).

Other theories also provide insight into adult learning processes. Applying cognitive theory to andragogy, the instructor uses the adult learners' existing knowledge and skills to connect new knowledge to the learner's existing reservoir (Ozuah, 2016). The constructivist theory is utilized to create shared knowledge, with the instructor developing learning objectives

with the adult student, grounding learning in experience (Ozuah, 2016). Developmental theory is applied by instructors who have as their goal helping adult learners maximize their potential (Ozuah, 2016). Finally, humanistic learning theory holds that people, even adults, are predisposed to learn and that providing a positive learning environment is one of the best ways to facilitate learning (Ozuah, 2016).

Some research has applied the concept of andragogy directly to professional development for teachers. Zepeda, Parylo and Bengtson (2013) analyzed how adult learning theory is utilized in professional development and identified several common practices. The researchers found that PD is more effective “when it combines theory, practical application, feedback and cognitive peer coaching with follow-up” (Zepeda, Parylo & Bengtson, 2013, p. 299). Further, the researchers note that andragogy “integrates action learning, experiential learning, self-directed learning and project-based learning” (p. 299). Andragogy must always be considered when designing professional development for teachers in order to ensure that the PD will resonate with and be effective for adult learners.

Professional Development Design

There are a large number of designs for professional development program for teachers. Which type of model utilized will depend in large part on the specific goals of PD. This section of the literature review will discuss one of the most common and most effective types of professional development design – professional learning communities (PLCs).

Professional Learning Communities (PLC)

Recently teacher professional development has shifted to emphasize active learning in peer groups known as professional learning communities (PLCs). These communities of peers facilitate active engagement with learning and increase teacher investment in the process of PD

(Stewart, 2014). The differences of opinion that arise in PLCs allow teacher-participants an environment to apply problem solving skills. Spirited debate can lead to group cohesion, which improves the efficacy of PLCs (Stewart, 2014).

Stewart (2014) outlines other factors that contribute to the efficacy of PLCs. First, there must be a sense of equity and all teachers have a voice in the planning of activities rather than simply being required to attend. Second, teachers must have a choice about what they learn and what activities they engage in. Third, there must be a sense of mutual respect among all members of the PLC. Fourth, teachers must be given the time and space to reflect upon their learning process. Fifth, there must be an opportunity for participants to receive feedback. Finally, the learning must be applicable to the real-world practice of teaching (Stewart, 2014).

Stewart (2014) suggest that at the beginning of a PLC a needs assessment should be conducted in order to determine how the group's time should be spent to be productive.

Ermeling (2010) examined the impact of professional development focused on collaborative teacher inquiry on teachers' classroom behaviors. The study covered two cycles of teachers' planning, implementation and reflection through analysis and found that using cycle of inquiry in PD effectively led to changes in teachers' classroom behaviors. Ermeling (2010) concludes that PD is most effective when teachers work in collaborative groups run by trained leaders, utilize inquiry-focused methods and provide participants with a stable environment for sustained PD.

Cycles of Inquiry

Cycle of inquiry is one of the fundamental components of professional learning communities (PLCs). This section will provide a brief discussion of cycles of inquiry in the context of teacher professional development. Nelson et al. (2010) define the cycle of inquiry as

“a process of investigating a problem of practice or a teaching challenge that needs attention and improvement.” (p. 36). Ermeling (2010) defines collaborative inquiry as “the search for knowledge and solutions through the ‘systematic, intentional study’ of practice” (p. 378). Nelson et al. (2010) argue that there are two factors associated with an effective PLC: implementing a collaborative inquiry cycle and cultivating deep and meaningful conversations.

There is some slight degree of variation in what specific processes are included in the cycle of inquiry. Pedaste et al. (2015) note that there are five basic phases of inquiry: “orientation, conceptualization, investigation, conclusion and discussion” (p. 47). Broderick and Hong (2011) have a somewhat different idea, identifying five stages of the cycle of inquiry: observation, development of hypothesis, planning a research question, planning interventions to guide thinking and investigation and conducting research or investigation. The specific stages employed in the cycle of inquiry depend on the context of the learning community.

The use of inquiry as a fundamental tool for improving teachers’ practice can be traced back to 1993 when John Dewey theorized that learning stems from a state of uncertainty, which initiates a process of inquiry as the individual attempts to solve the problem (Ermeling, 2010). It remains a key component of modern professional development. Broderick and Hong (2011) noted that the cycle of inquiry is a vital tool for curriculum planning and for teachers’ professional development. They found that implementing a cycle of inquiry as the foundation for teachers’ professional development helped teachers develop emergent curricula and provided a framework for mentors to “scaffold and assess” teachers in training (Broderick & Hong, 2011).

The cycle of inquiry has been identified as a fundamental component of effective professional learning communities (Birenbaum et al., 2009). Working in collaborative groups teachers embark on short-term projects to solve problems related to instructional practices,

curriculum design or other matters. The process begins with identifying and articulating the problem. The teachers then work together to collect and analyze data and then design instruction practices or materials to improve student performance. Reflection on the process is another key component of the cycle. The cycle of inquiry can be tailored to meet the specific needs of the community in which it is used.

Conclusion

Professional development for teachers has been researched from a variety of angles. Researchers have examined theories of adult learning and common models of professional development to identify the best practices that will improve teacher instruction and ultimately lead to improved student outcomes. Whereas it was once conceived of primarily as a short-term method of furthering teachers' skills and knowledge through traditional lectures, PD is now primarily understood as ongoing and sustained process of teacher development. In particular, the professional learning community (PLC) using a cycle of inquiry framework has become a dominant model for teacher professional development. Future research will continue to identify what characteristics and processes maximize the benefits of PLCs.

SECTION FIVE: DATA ANALYSIS AND INTERPRETATION

Summary of Survey Responses of Principal of School 1 and Principal of School 2

Principal of School 1

The principal of school one (principal one) gave a response to the Survey about Professional development. Principal one says that he has been in this role for five years. Principal one acknowledged that teachers and administration are the ones who decide on offering professional development, by the teachers and students performance. Principal one also agreed that he feels there is a direct impact of professional development on Students Achievement. He continues to say that the last professional development session for his teachers is the Rigor, Relevance and Engagement Toolkit. This was the first time he delivered this topic and was a continuation from the past sessions held on this topic.

The principal says that professional development is differentiated and the engagement of teachers in professional development is twice a week in the school. The principal also allows teachers to go away for professional development, but when they return they are to implement lessons they learned and provide training to the other staff. After providing professional development, the principal says a follow up is done to check its effectiveness. Hence, the principal has high confidence in the implementation of professional development.

Principal of School 2

The principal of school two (principal two) says he has been a principal for more than eight years. He says that the school or the district level administration, and teachers decide whether to offer professional development to teachers. The principal agrees that professional development has a direct impact on the achievements of students. Principal two's last session of professional development was on 4th February 2019, and it was ICLE relevance framework

continuation. He acknowledges that professional development is either differentiated or same for teachers. According to the principal, teachers' engagement in professional development is weekly. However, in his professional development process, there is no engagement in peer learning walks. When the principal creates professional development for teachers, the individual first has to know two or three instructional goals for the year for the school or even the district. The principal also allows teachers to go away for professional development, and when they return, they have to incorporate the knowledge gained into lesson activities and provide turn-around training for faculty.

Principal two believes once there is the provision of professional development, there should be an evaluation of participant reactions and learning, organization change and support and the students learning outcomes. Finally, the principal has high confidence to create an effective professional development and increase the learning outcomes of students by analyzing the student achievement data.

Superintendent Responses

The newly appointed Superintendent has been in his role for eight months. He's held various positions in other district and is highly regarding for making improvements in his tenure as a principal. The Superintendent reported that professional development topics are selected based on; state and district mandates, but also schools are able to identify learning opportunities for teachers. The superintendent believes that professional development when designed appropriately has a direct impact on teaching and learning.

Admittedly, the principal observed professional development that is generally whole group and was really not aware of instances that teachers engaged in sustained learning overtime. In his first year, the superintendent identified additional dollars for some teachers to go to

statewide conferences but was unsure of what happened with that learning once they returned. It was his belief that while principals have some knowledge of designing professional development, there needs to be a focus on ensuring that school leaders have a deep understanding of how to design quality professional development. He is confident in his ability to lead professional development but understands he needs to intentionally support principals to be equally as confident.

Comparison of Principals' and Superintendent Responses

From the responses of the three, they all agree that it is not them as principals or Superintendent who decides what to offer for professional development, but it is the decision of the teachers and the school or district administrations. Both of the two principals, as well as the Superintendent believe that professional development has a direct impact on student achievement, hence the support it. Both principals allow teachers to go away for professional development and allow them to come back and share the knowledge they gained when they were away. While the Superintendent supports teachers attending outside professional development, he was unsure about what happens once teachers return to their schools. Also, after providing the professional development, they both do evaluations and follow-ups. However, principal one doesn't have a culture and climate that supports peer learning walks as part of professional development, but principal two does allow and support peer to peer learning. The Superintendent admits that each school has a different culture and climate and not all schools are in a place to conduct learning walks. Lastly, principal one considers observations and Students performances when creating professional development, while principal two, considers two or three instructional goals for the year at the school or district. The district superintendent considers district and state mandates when designing professional development.

Discussion

Principal of school one responses compared to the teachers of school one

According to principal one, knowledge acquired from professional development should be implemented in the school and taught to other staff, but school one concludes that professional development lacks effectiveness in delivery and implementation. Teacher one accepts that the use of professional development is helpful for student achievement and teachers' acquisition of knowledge, but teachers of school one says that holding to this professional development is non-strategic. Also, principal one says that the teachers and administration are in charge of deciding whether professional development should be offered, but the teachers of school one gives education board the powers to make decisions for schools.

Principal of school two responses compared to the teachers of school two

The principal of school two and the teachers of school two are all satisfied with the use of professional development. Both principal two and teachers of school two acknowledge the fact that after professional development programs, the knowledge should be implemented. Also, both believe and practice the aspect of continuity. However, principal two believes that teachers should be able to implement the professional development knowledge, but teachers of school two says some teachers cannot use the concepts from professional development to the school's advantage.

Superintendent responses compared to principals and teachers' responses.

The superintendent based on his listening tours and surveys is aware that teacher satisfaction with professional development is based on the school. In some cases, teachers report higher satisfaction than in other. The superintendent agrees that after professional development teachers should be encouraged to implement new knowledge in a safe environment and that

believes professional development should be ongoing but has understands there is no clear process for ensuring this happens and is working with schools to identify the process.

To actualize the ideal state of Sunny Side School District, the Superintendent that is responsible for supporting principals would adopt Cycles of Inquiry as the district's professional development framework. This would provide all schools with a common language and practices. Peer to Peer observations in and across schools is regarded to improve teacher practice and build a community of practitioners. Peer-to-peer observation—that is, teachers observing teachers—is the most powerful way for teachers to improve their practice. Flom (2014). Selecting a framework for professional development not only builds a PLC for teachers but can also serve as one for principals. This explicit design for professional development could continue to support the low turnover rate seen in the district. The current superintendent would leverage the newly created Teaching and Learning team to create a vision and strategic plan that identifies instructional priorities. By establishing goals, this would give schools teams autonomy to assess where they are in relation to those goals and identify the problem they are trying to solve while being in alignment with district expectations. Like all successful professionals, good teachers strive to grow their knowledge and adapt to changes in the landscape of their work; their expertise is critical in the classroom; input of colleagues strengthens that expertise. It can be difficult, but worth the effort, to find proper balance between personal skill and combined efforts in the classroom. This department would be responsible for making investments in principals as they begin to implement Cycles of Inquiry and to model this framework when delivering PD. “High impact” companies spend significantly more on training than those who are inconsistent, thus, Learning and Development spending pays off (Bernstein, 2014). Funding through a tax levy could be implemented to support provide the additional resources needed.

SECTION SIX: A VISION OF SUCCESS (TO BE)

Context

The Superintendent would allocate resources that would support extended day for teachers to or substitute coverage, so teachers could engage in continuous professional development during the year. Additionally, the school district would adopt a professional development framework that schools would implement to ensure that best practices in PD were evident. By adopting this framework, this would lead to improving teacher practice and measure by increased student achievement in both reading and math on the state's achievement exam.

Culture

Principals would not only collaborate and engage in a professional learning committee around Cycles of Inquiry, but they would also engage in peer visits to learn and share best practices that will build their competencies. Additionally, principals would be able to model and plan and create a schedule that would allow teachers to visit other sites to learn and best practice share as this will be a new process for everyone. Sharing best practice in should be integral to any role but teaching for certain. After all teaching is a collaborative process - helping our colleagues and sharing what we know works can help not only our teaching practices, but our students' results (Spencer, 2017). Teachers would through this process begin to believe in the impact of how the district shifted professional development to meet their needs and provide a process to engage in a reflective process. Finally, as teachers begin to refine their practice and focus on improving pedagogy and best practice sharing, student achievement data as measured by the state's assessment system would validate the importance of consistently reflecting on and refining teacher practice.

Conditions

The Superintendent would create a committee comprised of stakeholders from all school, district offices, state office to form a professional learning committee. Since there are various models of Cycle of Inquiry, the first goal would be allowing this working group to research and identify which model they would implement. Once this model is established, each school would create a schedule that would allow them to be able to implement the cycles with fidelity. This such as scheduling, before and after school time or early release days would need to be considered. Principals would work with schools to create a calendar of proposed cycles. Each school within the district would follow this model with fidelity. As a part of on-going professional development, the district would review and refine the model as needed, as well as, in the event there are new administrators and teacher. The superintendent would schedule to do daily school visits. There is a total of four schools and although the state requires that principals be observed twice by law, weekly formal observations to be able to provide coaching and feedback to the principal on implementation of a cycle is going to be critical to the success of the district. Having principals identify what you should *start*, *stop*, and *continue* doing is an effective way to solicit their thoughts. Principals may find it easier to respond to such "stop-sign" words than to identify my strengths and weaknesses, even though the two methods may end up offering the same information. Such questions can lead to rich discussions. Sometimes simply asking brings progress because it tells others that you want to hear what they are thinking. A study of effective leaders in the British navy, Young and Dulewics (2007) recommended a know-yourself model as a formula for successful leadership. An education model based on Young's recommendations would encourage principals to: Develop your self-awareness; Build your

professional learning community (develop teachers' professional and organizational capacities); and focus your resources on high student achievement for all students.

Competencies

Principal would be trained, understand and implement the newly adopted model for professional development; Cycles of Inquiry. Principal's would lead teachers through the process of

1. Analyzing all relevant data, in this process teams would review current state and ideal state to identify the gaps in between using a problem-solving process to
2. Begin to frame or reframe key questions or issues from their data review to determine a focus.
3. Next teams would work to create an action plan and include milestones and goals to guide their work
4. Finally, analyze impact by reviewing multiple forms of data including teacher and student surveys, as well as, student interim assessment data.

The superintendent and the Office of Teaching and Learning would model a cycle by using schools' data and scaffold the learning determine how to best support each principal. Afterwards the superintendent would informally and formally observe and be provide support and critical feedback to principals on how they train and lead their staff through a cycle ensuring fidelity to the district wide process. The goal is to eventually have teachers lead and own the process.

SECTION SEVEN: STRATEGIES AND ACTIONS FOR CHANGE

Professional Development Improvement Strategies and Action Plan

Strategies	Action
Create a Professional Development Framework Adaption Committee	<ul style="list-style-type: none"> • Superintendent creates a committee of various stakeholders to review PD frameworks • Committee research the various ways of implementing Cycles of Inquiry
Create an environment of trust Train Principals and District Staff on Cycles of Inquiry	<ul style="list-style-type: none"> • Select Learning Forward the Professional the Learning Association to support PD redesign • Establish PLC and Book Studies on Cycles of Inquiry <i>Leading with Inquiry and Action</i> (Militello, Rallis and Goldring, 2009) • Provide opportunities for principals and teachers to observe other school districts where Cycles of Inquiry has been established
Increase the efficacy of Cycles on Inquiry	<ul style="list-style-type: none"> • Provide opportunities for teacher leaders to lead a cycle to build with teachers and administrators • Schools create a schedule for each cycle • Allow time during, before or after school to support collaboration • Superintendent plans to observe and give feedback to principals weekly on implementation of cycles using <i>The Feedback Process</i> (Killion, 2013)
Collect appropriate data to use to evaluate the effectiveness of implementation of Cycles of Inquiry	<ul style="list-style-type: none"> • Provide principals and teachers with a voice in the district level decision-making process • Creation of interim assessment to measure impact of cycles on student learning • Allow teachers and students an opportunity using 5-essentials tool to give regular feedback on the implementation process • System to track student progress at the end of each cycle and over time • Organize school teams to evaluate final state assessment data annually and identify a problem of practice that will guide each school focus

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APPENDICES

Appendix A

Informed Consent

My name is **Brian Metcalf**, and I am a **doctoral student** at National Louis University. I am asking you to participate in this study, “**How Does Quality Professional Development Impact Student Achievement in Urban Schools**”, occurring from **01-2019 to 02-2019**. The purpose of this study is *to assist school districts with examining their current practices for supporting teachers and what adjustments they might consider*. This study will help researchers develop a deeper understanding of the characteristics of professional development that drive student and contribute to the body of professional development literature. This form outlines the purpose of the study and provides a description of your involvement and rights as a participant.

By signing below, you are providing consent to participate in a research project conducted by **Brian Metcalf**, student, at National Louis University, Chicago.

Please understand that the purpose of the study is to explore the characteristics of professional development that drives student achievement in urban school districts. Participation in this study will include:

- One survey to be completed scheduled at your convenience in January and February of the 2018-19 academic year.
 - Survey will take up to 45 min. and include approximately 10 questions to understand what critical elements of professional development is needed to support teacher pedagogy?
 - Survey’s will be administered through survey monkey and are anonymous

Your participation is voluntary and can be discontinued at any time without penalty or bias. The results of this study may be published or otherwise reported at conferences, and employed to inform professional development practices in school districts but participants’ identities will in no way be revealed (data will be reported anonymously and bear no identifiers that could connect data to individual participants). To ensure confidentiality the researcher will secure surveys in a locked cabinet in his home office. Only Brian Metcalf will have access to data.

There are no anticipated risks or benefits, no greater than that encountered in daily life. Further, the information gained from this study could be useful to your school and other schools and school districts looking to initiate or refine how professional development is delivered.

Upon request you may receive summary results from this study and copies of any publications that may occur. Please email the researcher, Brian Metcalf at bmetcalf@my.nl.edu to request results from this study.

In the event that you have questions or require additional information, please contact the researcher, Brian Metcalf, bmetcalf@my.nl.edu or, 312-285-3587.

If you have any concerns or questions before or during participation that has not been addressed by the researcher, you may contact Dr. Gloria- McDaniel-Hall at gmcdanielhall@nl.edu he co-chairs of NLU's Institutional Research Board: Dr. Shaunti Knauth; email: Shaunti.Knauth@nl.edu; phone: (312) 261-3526; or Dr. Carol Burg; email: CBurg@nl.edu; phone: (813) 397-2109. Co-chairs are located at National Louis University, 122 South Michigan Avenue, Chicago, IL.

Thank you for your consideration.

Consent: I understand that by signing below, I am agreeing to participate in the study (*STUDY NAME*). My participation will consist of the activities below during *XX time period*:

(briefly list participation activities as in example below):

- 3 Interviews lasting approximately 45 minutes each
- 1 ninety-minute observation of my classroom

Participant's Signature

Date

Researcher's Signature

Date

Appendix B

Surveys

Teacher Questionnaire 2

QUALITY PROFESSIONAL DEVELOPMENT AND IMPACT ON STUDENT ACHIEVEMENT

Questionnaire Schedule

1. How many full school years have you been teaching? _____
2. Do you feel that professional development has directly influenced your pedagogy? _____
3. Please rate your overall experience with professional development in your school?
 - a. Highly Effective
 - b. Somewhat Effective
 - c. Neutral
 - d. Not Effective
4. Please explain your answer to question

5. What factors do you believe your leaders consider when designing professional development? _____

6. Do you think professional development is directly related to student achievement? _____
7. How has professional the professional development you received impacted students achievement? _____

8. What was the last professional development session that you attended? What was the format? What did you find useful? What was missing?

9. If you had professional development that really, affected your teaching in a positive way, what were the characteristics? Please describe.

10. Please describe the ideal environment in order for you to implement new learnings.

11. At your school, what does professional development typically look like for teachers? Please describe.

12. What changes should be made to the way you experience professional development?

Principal Questionnaire

Questionnaire Schedule

1. How long have you been a principal? _____
2. Who decides what professional development is offered to your teachers?

3. Do you feel professional development for teachers has a direct impact on student achievement? Elaborate on the correlation between professional development and student achievement.

4. What was the last professional development session for teachers? Was this the first time you delivered this topic? Was it a continuation? Please describe.

5. Is professional development differentiated or the same for teachers? _____
 - a. How often do teachers engage in professional development in your school?
 - b. Do you engage in peer learning walks as a part of professional development?
6. When you create professional development for teachers, what is the process? What factors do you consider?

7. What do you feel is the greatest influence on your decision for professional development topics?
 - a. District mandates
 - b. Funding and resources
 - c. Your skills and expertise
 - d. Teachers learning styles
 - e. Students achievement data
 - f. Collective Bargaining Agreement
 - g. Improvement plan
 - h. Planning Preparation
 - i. New Initiatives
8. Based on your answer to question eight, please explain why you chose your answer.
9. Do you allow teachers to go away for professional development? _____
 - a. If so, what is the process for going?
 - b. What do teachers do once they return?
10. What is your understanding of adult learning theory? How do you incorporate these principles when you design professional development?

11. What happens once professional development is provided?
12. Describe your level of confidence to implement professional development that influences student achievement.

Superintendent Questionnaire
PROFESSIONAL DEVELOPMENT FOR TEACHER

Questionnaire Schedule

1. How long have you been a Superintendent? _____
2. Who decides what professional development is offered to your teachers?

3. Do you feel professional development for teachers has a direct impact on student achievement? Elaborate on the correlation between professional development and student achievement.

4. What was the last professional development session for teachers? Was this the first this topic was presented? Was it a continuation? Please describe.

5. Is professional development differentiated or the same for teachers? _____
 - a. How often do teachers engage in professional development in your school?
 - b. Do you engage in peer learning walks as a part of professional development?
6. When district and principals create professional development for teachers, what is the process? What factors do you consider?

7. What do you feel is the greatest influence on your decision for professional development topics?
 - a. District mandates
 - b. Funding and resources
 - c. Your skills and expertise
 - d. Teachers learning styles
 - e. Students achievement data
 - f. Collective Bargaining Agreement
 - g. Improvement plan
 - h. Planning Preparation
 - i. New Initiatives
8. Based on your answer to question eight, please explain why you chose your answer.
9. Do you allow teachers to go away for professional development? _____
 - a. If so, what is the process for going?
 - b. What do teachers do once they return?

10. What is your understanding of adult learning theory? How do you incorporate these principles when you design professional development?

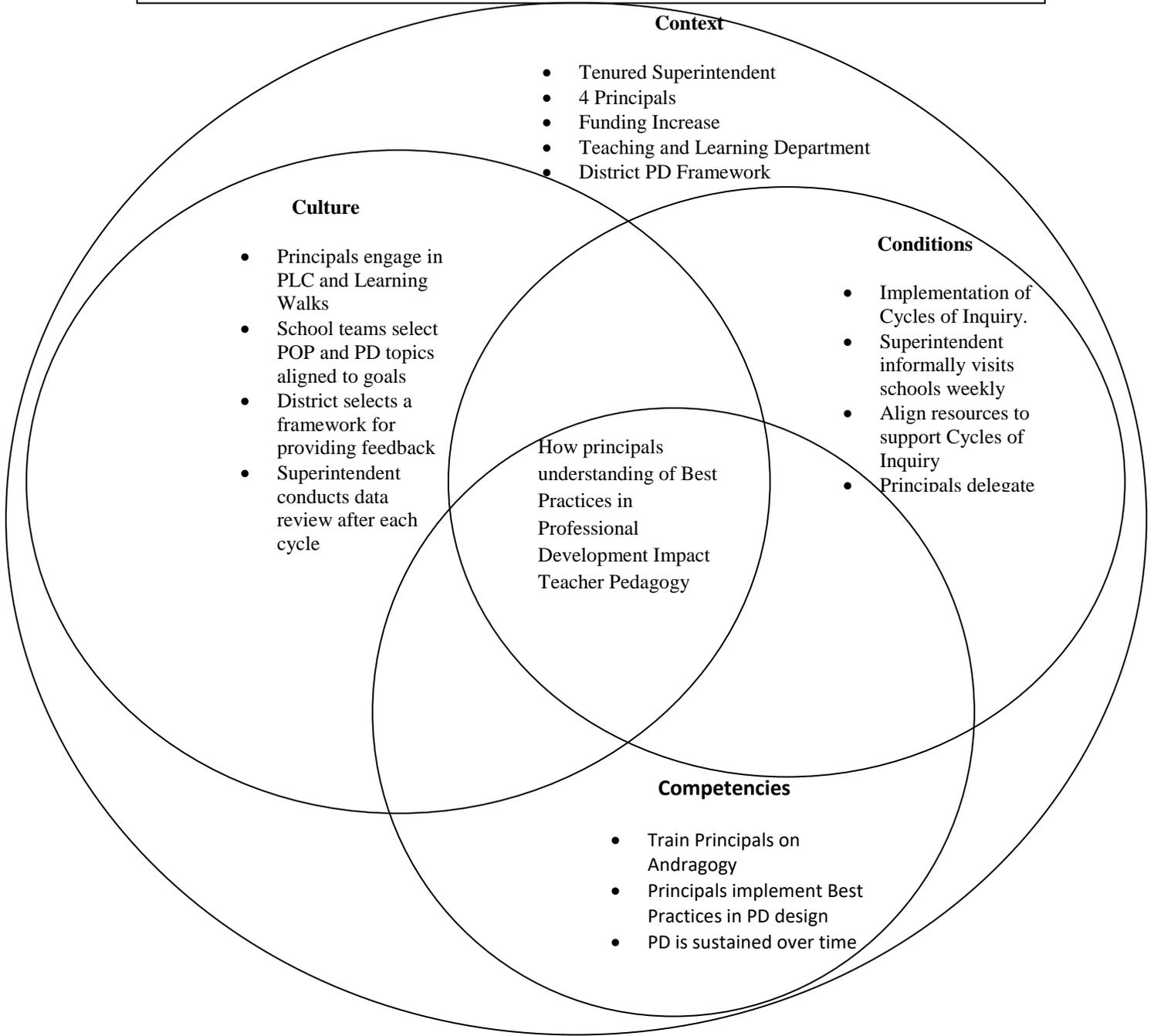
11. What happens once professional development is provided?

12. Describe your level of confidence to implement professional development that influences student achievement.

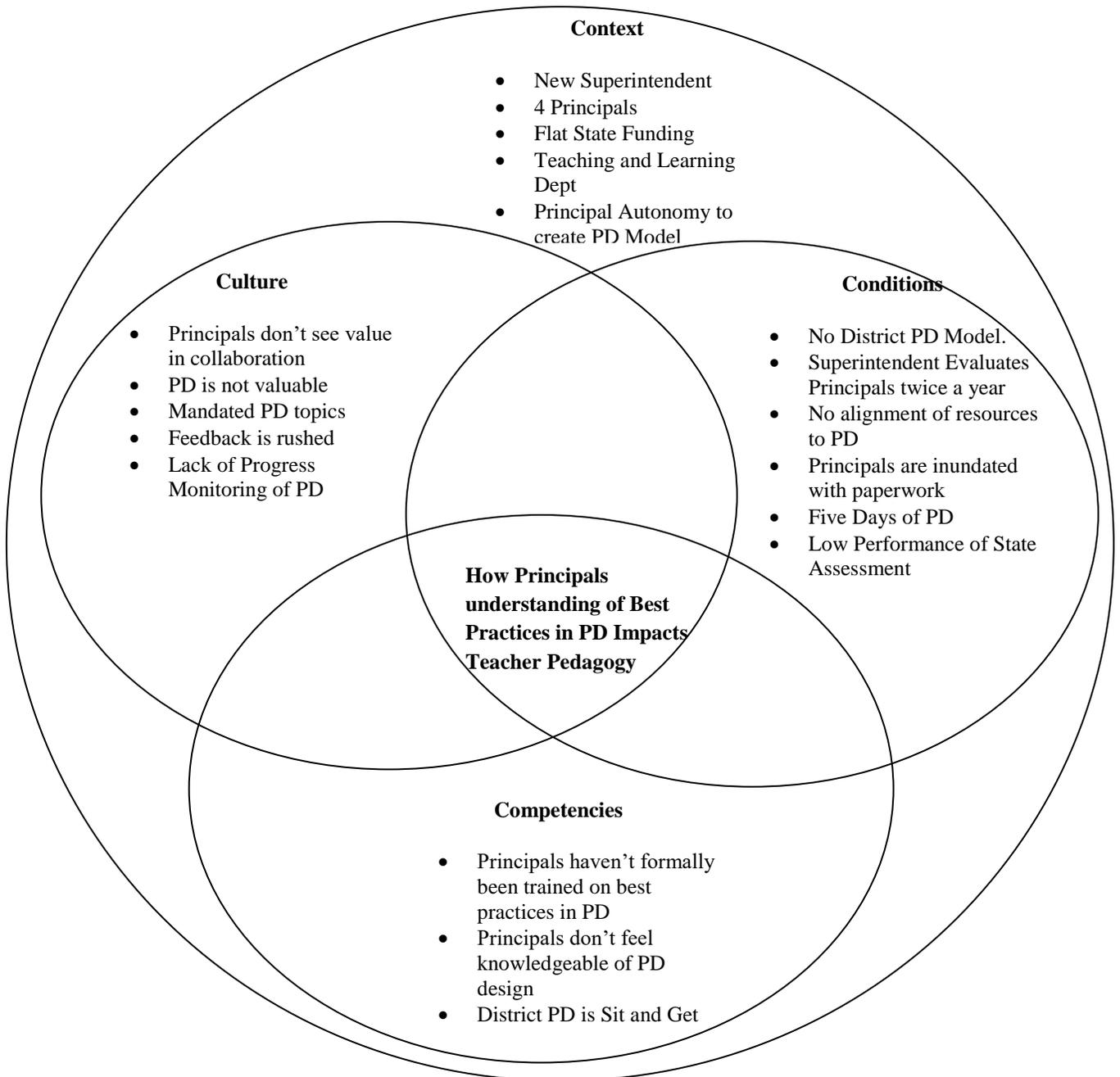
Appendix C

Change Graphs

“To be” 4 C’s Analysis for: How principals understanding of Best Practices in Professional Development Impact Teacher Pedagogy



“As Is” 4 C’s Analysis for: How principals understanding of Best Practices in Professional Development Impact Teacher Pedagogy



Appendix D

Superintendents' Responses

1. I have been in the current role of Superintendent for 1 year and 8 months, but when you started this study I was in the role for 4 months.
 - a. How long have you been in education? I've been in the field of education for 21 years total.
 - b. What other roles have you had? I've held various positions from classroom teacher, assistant principal, principal, and Chief Academic Officer.
2. Currently, principals decide what supports teachers should receive at the school level. There are times when the district directs professional development based on, data trends or mandates by the state. The majority are local level decisions.
3. I believe that professional development has an impact on student achievement if done well. I am not sure that this is happening in this district based on data and teacher survey results. The idea that if teachers are provided the right types of professional development that is informed by data and teacher needs, then it would lead to student achievement. The theory is there but the practice or to what extent we do this is not evident.
 - a. Do you think your teachers and principals feel the same way? I believe that most teachers would agree that professional development is having little impact on student achievement so therefore they don't believe it. Some teachers would say yes and they see it in their specific classroom results, not looking at the whole district. Principals would say largely that the professional development is having some impact on student achievement.
4. The last professional development session for teachers, I am not sure as it's different for each school because we have only one school of its kind. I am not sure if the topics were the first time being presented or a continuation. It's been difficult since we have one school per grade band and not framework for professional development to really keep an accurate record of this. This is something we are moving towards by having schools create PD plans so we will know what's being learned and when.
5. Professional development here is typically the same for all teachers. That's what I've generally noticed when I do visit or hear from teachers. It's something we are trying to address and find a solution. This is also due to principals understanding about professional development design.
 - a. Teachers engage in professional development on district improvement days and sometimes during teacher grade level meetings.
 - b. We do not have a formalized process for peer learning walks and the culture and climate is not conducive in every school to make this happen. We are working on the culture and climate and building trust in order to do this.
6. We generally at the district office will direct PD based on state requirement and will try and give schools some direction based on school needs. So we will use data such as assessment results. We try and consider the time of the year, things such as state testing

approaching, we try and consider teacher voice most times or individualizing it for schools.

7. I think it's a combination of district, student achievement data, new initiatives.
8. I chose district as an option because there are some required topics based on state or federal law that drives professional development, like mandatory reporting or teacher evaluation. We also think about student achievement data, when we look end of the year assessment data and action plan on how do we support students in demonstrating mastery in order to improve their growth and proficiency. Finally, like most district's we are rolling out new initiatives that we try and support teachers through professional development when we think about how we support our staff and to gain buy-in
9. Schools will allow teachers to go away for professional development, however it is not often due to its controlled by budgets and principals have to approve and pay for it. There is not a formalized process for sharing learning once teachers go away. That is dependent on the school and principal and teacher. I know this is an area of growth for us.
10. I did research on adult learning principles and have a deep understanding and recognize that it is lacking in our current professional development design. I think that some school incorporate some of the principles. Like choice, or data informed but there are some components that are never present like sustained or consistent feedback and coaching.
11. Once professional development has been provided, what happens next depends on the school. I will say that most times than not there isn't much that happens or it's not well thought out and therefore has little to no impact.
12. I can design professional development that would impact teacher practice, however, I am looking at ways to support and grow principals in this practice so that they along with their staff can begin to design and implement professional development that is aligned to adult learning theory.