THE EFFECTIVENESS OF PROFESSIONAL LEARNING COMMUNITIES IN PROMOTING EDUCATIONAL LEARNING AS PERCEIVED BY TEXAS HIGH SCHOOL PRINCIPALS

A Dissertation

by

AMELIA GUAJARDO-CANTÚ

BS, Texas A&M University-Corpus Christi, 2008 MS, Texas A&M University-Corpus Christi, 2010

Submitted in Partial Fulfillment of the Requirements for the Degree of

DOCTOR of EDUCATION

in

EDUCATIONAL LEADERSHIP

Texas A&M University-Corpus Christi Corpus Christi, Texas

August 2017

© Amelia Guajardo-Cantú All Rights Reserved August 2017

THE EFFECTIVENESS OF PROFESSIONAL LEARNING COMMUNITIES IN PROMOTING EDUCATIONAL LEARNING AS PERCEIVED BY TEXAS HIGH SCHOOL PRINCIPALS

A Dissertation

by

AMELIA GUAJARDO-CANTÚ

This dissertation meets the standards for scope and quality of Texas A&M University-Corpus Christi and is hereby approved.

Kamiar Kouzekanani, PhD Chair Frank Lucido, PhD Committee Member

Bryant Griffith, PhD Committee Member

Kevin Concannon, PhD Graduate Faculty Representative

ABSTRACT

Teaching in the 21st century requires the search for new and ongoing innovative practices. Such emerging practices in the field of teaching are reshaping the everyday normalities of how educators taught in the past. The Professional Learning Community (PLC) model is an emerging educational innovation and is considered a powerful strategy for sustaining substantial school improvement. The purpose of the study was to examine the perceptions of Texas high school principals regarding the importance and effectiveness of the PLC model as an educational innovation for the development of school leadership, teacher self-efficacy, student achievement, and school success.

The Professional Learning Community Questionnaire (PLCQ) was used for the purpose of data collection. A total of 98 high school principals from rural, urban, and suburban districts throughout the state of Texas participated in the study. A typical principal was 48 years old, had 23 years of experience in education, and nine years as a campus principal. Respondents were predominately white, male, held graduate degrees, and had prior experience with the PLC model.

The results showed that the high school principals, regardless of various demographic characteristics (i.e., age, gender, ethnicity, community type, education level, prior PLC experience, years of experience in education, and years as a campus principal found school leadership, teacher self-efficacy, student achievement, and school improvement quite important in everyday operation of their high schools and that the PLCs could be positively effective in influencing them.

As a result of the study's findings, it is anticipated that school principals may be able to predetermine whether they desire to embark on the efforts and time it takes to reach school

success by fostering a new style of collaborative engagement, such as the tenets of the PLCs. Additionally, the results may provide evidence regarding the effectiveness of the PLCs in developing school leadership among teachers and staff, enhancing teacher self-efficacy, increasing student achievement, and improving school success. A trustworthy relationship within a school community ought to be sought and attained before embarking on PLCs, without which, the initiative will likely fail to serve its purpose.

DEDICATION

Dedication of my work originates with my one and only true Lord above; for You have gracefully provided me with strength, courage, and self-discipline, empowering me to have the perseverance to overcome this great journey in which I have embarked upon. A dear friend once reminded me that if my work is of importance to me, then it is also of importance to Him.

For my father, Lucio Guajardo, Jr., who has given me the inspiration and motivation to carry on and my mother, Rosalinda Glover, who has taught me independence and strong will. For my children, Willie, Johnny, Marisela, and Yasmine, and my grandchild (Alaina); for all the days, months, and years they have sacrificed spending time without their mother (grandmother) so I would be able to complete this degree.

Most of all, for a righteous man God has given me, my devoted husband, Willie Andrew Cantú; who has loved and supported me through some of life's most difficult and trying times; without you this journey would have never reached its destination.

ACKNOWLEDGEMENTS

I would like to acknowledge a special man who will always be reminisced upon and who I deeply respect, Dr. Kamiar Kouzekanani, my dissertation chair. His demeanor and sternness as a professor in regards to holding high expectations for his students, his dedication and commitment toward his work, and his expertise within his field greatly exemplifies that of an educator in which I represent. I never hesitated to seek Dr. Kouzekanani's leadership in serving as my dissertation chair and I will always have the fond memory of being pleased with his willingness to accept. I am grateful for his contributions towards the utmost quality and completion of my work. I owe it to his leadership that I have accomplished this degree for it was due to his tiny pocketbook of appointments, meetings, due dates, and deadlines that accounted for endless nights of "Happy Writing." Dr. Kouzekanani made it clear to me that overcoming each new hurdle would lead me a step further toward earning the title of "Dr. Cantú." Experiences of being overwhelmed throughout my dissertation were equally weighed with my satisfaction of completing my mission and it was he who often reminded me to "just do it." I will always take pleasure in knowing that Dr. Kouzekanani had taken me under his wing for what would be my greatest accomplishment in life.

In addition, I would like to acknowledge each of my dissertation committee members, Dr. Frank Lucido, Dr. Bryant Griffith, and Dr. Kevin Concannon for their participation in my work. I would like to give a special thank you to Dr. Lucido for his support in being one of my most positive role models both as a professor and religious educator for my husband, children, and me. Your longtime commitment to serving our Lord and families within our community are deeply appreciated.

TABLE OF CONTENTS

CONTENTS PAGE
ABSTRACTv
DEDICATIONvii
ACKNOWLEDGEMENTSviii
TABLE OF CONTENTSix
LIST OF TABLESxii
LIST OF FIGURESxv
CHAPTER I: INTRODUCTION1
Background and Setting
Statement of the Problem6
Purpose of the Study6
Theoretical Framework
Operational Definitions9
Delimitations, Limitations, and Assumptions
Significance of the Study11
CHAPTER II: REVIEW OF THE LITERATURE
Introduction
Traditional Professional Development in Secondary Schools
Highly Qualified Teachers and the Emergence of PLCs

	Conceptual Framework of a Professional Learning Community	23
	Professional Learning Communities and Culture Change	25
	Impact on Leadership Development and Self-Efficacy of Educators	26
	Advantages of Professional Learning Communities	28
	Challenges of Professional Learning Communities	30
	Summary	32
C	CHAPTER III: METHOD	34
	Introduction	34
	Research Design	34
	Subject Selection	34
	Instrumentation	35
	Data Collection	37
	Data Analysis	38
C	CHAPTER IV: RESULTS	40
	Introduction	40
	A Profile of the Subjects	40
	Item-Level Results	42
	Importance	42
	Effectiveness	45
	Scale Scores	47

Generability of the Scale Scores	8
Within Group Differences54	4
Comparison of Importance with Effectiveness	7
Summary	8
CHAPTER V: SUMMARY, CONCLUSIONS, AND DISCUSSION 5	9
Introduction	9
Summary of the Results	1
Conclusions6	2
Discussion	2
Implications6	5
Recommendations for Further Research	8
Final Remarks69	9
REFERENCES	1
APPENDIX A: PROFESSIONAL LEARNING COMMUNITY QUESTIONNAIRE	8

LIST OF TABLES

FABLE	PAGE
Table 1: Reliability Coefficients for Professional Learning Community Questionnaire (PLC	Q)
	37
Table 2: A Profile of the Subjects, Categorical Variables	41
Table 3: A Profile of the Subjects, Continuous Variables	42
Table 4: The Ranking of the Importance of School Leadership	43
Table 5: The Ranking of the Importance of Teacher Self-Efficacy Items	43
Table 6: The Ranking of the Importance of Student Achievement Items	44
Table 7: The Ranking of the Importance of School Improvement Items	44
Table 8: The Ranking of the Effectiveness of Professional Learning Communities on Affect	ing
School Leadership	45
Table 9: The Ranking of the Effectiveness of Professional Learning Communities on Affect	ing
Feacher Self-Efficacy Items	46
Table 10: The Ranking of the Effectiveness of Professional Learning Communities on Affective	eting
Student Achievement Items	46
Table 11: The Ranking of the Effectiveness of Professional Learning Communities on Affective	cting
School Improvement Items	47
Table 12: The Importance on the Four High School Constructs	48
Table 13: The Effectiveness of PLCs on Affecting the Four High School Constructs	48

Table 14: The Importance of the Four High School Constructs by Gender	49
Table 15: The Effectiveness of the PLCs on Affecting the Four High School Constructs by	
Gender	49
Table 16: The Importance of the Four High School Constructs by Ethnicity	50
Table 17: The Effectiveness of the PLCs on Affecting the Four High School Constructs by	
Ethnicity	50
Table 18: The Importance of the Four High School Constructs by School Community	51
Table 19: The Effectiveness of the PLCs on Affecting the Four High School Constructs by	
School Community	51
Table 20: The Importance of the Four High School Constructs by College Degree	52
Table 21: The Effectiveness of the PLCs on Affecting the Four High School Constructs by	
College Degree	52
Table 22: The Importance of the Four High School Constructs by Prior PLC Experience	53
Table 23: The Effectiveness of the PLCs on Affecting the Four High School Constructs by PLC	C
Experience	53
Table 24: Repeated Measures ANOVA Results for the Importance of the Four High School	
Constructs	54
Table 25: Post Hoc Results for the Importance of the Four High School Constructs	55
Table 26: Repeated Measures ANOVA Results for the Effectiveness of PLCs on Affecting the	,
Four Constructs	56

Table 27: Post Hoc Results for the Effectiveness of PLCs on Affecting the Four High School	
Constructs	56
Table 28: Comparison of Importance of the Four High School Constructs with Effectiveness	of
PLCS on Affecting the Constructs	57

LIST OF FIGURES

FIGURE	PAGE
Figure 1: Framework for Learning to	Teach

CHAPTER I: INTRODUCTION

Background and Setting

Student populations in today's modern classrooms arrive with diverse learning needs and educators must ensure learning is tailored to all readiness levels (Barnett, Shoho, & Cypres, 2012). It is crucial for educators to ensure learning is taking place for all students. Educational opportunities reflecting positive learning outcomes as a result of educators' engagement in work that is collaborative and consistent is essential for student improvement. Educators must engage in ongoing professional development opportunities that offer the best research-based teaching practices with effective instruction in order to gain and sustain greater student success rates (Hipp & Huffman, 2010). Teaching in the 21st century requires the search for new and ongoing innovative practices. Such emerging practices in the field of teaching are reshaping the everyday normalities of how educators used to teach in the past. Educators are not only reshaping how they teach but also how they learn as school districts are readily providing them with continuous job-embedded learning opportunities, which take on more of a collective inquiry learning approach. Educators who take advantage of these emerging teaching and learning approaches are benefitting themselves and the students they teach. Educators can transfer and apply such teaching and learning processes to students in their classrooms and will find it better to understand and relate to the learning needs of students in today's society (Barnett, Shoho, & Cypres, 2012; Hipp & Huffman, 2010).

More importantly, teachers who consistently meet and collaborate in a collective manner can support their teams of teachers by addressing problematic areas and by continuously making adjustments to students' needs in their pedagogical practices. Teachers engage in ongoing reflection of their daily teaching efforts. Thus, teachers can reach higher student academic

achievement by promoting a sense of camaraderie among the students in the classrooms in which they teach (Barnett, Shoho, & Cypres, 2012). Students will be able to attain greater success levels as their teachers engage and redefine their teaching practices through frequent and ongoing professional learning communities. Through such engagements, educators will feel less reluctant to seek assistance from their colleagues and the campus will begin building relations of trust in the school environment. Educators who take advantage of professional development opportunities provided at the campus or district level and who frequently network with other educators can build their professional leadership capacities and empower themselves to become more experienced educators resulting in tailoring instruction more naturally that will elicit greater student results through supportive professional learning communities. Education in the 21st century has become more challenging due to in student diversity, increased teacher/student ratios, yearly increased budget cuts, reduced human capital, and the rise of technology and expansion of globalization; therefore, it is important for educators to seek educational innovations that can help alleviate some of these challenges and pressures within the current educational sphere (Barnett, Shoho, & Cypres, 2012).

It has been reported that professional learning communities (PLCs) can offer some assistance in helping educators bond and share expertise as they develop their own leadership skills, provide opportunities that can lead to teacher empowerment, and eventually lead to the ability to impact student improvement through achieving greater academic success for students. Educational leaders such as district administrators, curriculum and instruction coaches and most importantly, school principals, serve in leadership capacities, which allow them to foster opportunities for their constituents within their campuses to engage their staff in PLCs. The PLC model is a new type of emerging educational innovation seen today in how schools operate in the

21st century and is considered as a powerful strategy for sustaining substantial school improvement (DuFour, Eaker, & DuFour, 2005). As educators of an organization take on a more collaborative approach towards learning, they benefit from knowledgeable and more experienced experts who contribute and share their expertise through dialogue and discussion within group settings. Implementation of effective PLC models focus on learning not only for the student, but also for the adults (DuFour & Fullan, 2013). Educators who engage in a shared approach of learning through collective inquiry benefit by developing their expertise as an educator. Collaborative inquiry, as defined by Stoll (2010), is a means by which learning communities "deconstruct knowledge through joint reflection and analysis, re-constructing it through collaborative action, and co-constructing it through collective learning from their experiences" (p. 474). Not only do the PLCs directly affect student achievement, but also members of a school community participating in the PLC can benefit from the significant influence they share throughout their daily activities (Roberts & Pruitt, 2009).

Educational leadership in the 21st century calls for a new type of school leader who accepts the tasks of taking on both instructional and managerial responsibilities (Humada-Ludeke, 2013). Traditionally, school principals functioned with top-down leadership approaches in which the school principal was considered the sole decision-maker. Educational leadership has been transforming towards a more collaborative approach, encouraging all educators to function in a shared learning community (Barnett, Shoho, & Cypres, 2012; Ratcliffe & Harts, 2011; Siccone, 2012). An effective school leader consciously understands the significance of reframing the traditional top-down authoritative leadership approach and makes judgements in assisting his or her school by employing effective educational innovations such as the PLC model to better serve all bodies within the school: students, teachers, and the entire staff.

Educators can exercise their leadership roles individually or as a group, and individuals participating in the PLCs are expected to enhance their capacities as leaders as they continuously collaborate on teaching practices, which promote a shared vision of attaining the school's mission and goals versus acting in isolation (DuFour & Eaker, 1998).

Kaplan and Owings (2015) shared Marzano's statement that the single most important aspect of any effective school reform is leadership. Furthermore, Hallinger and Heck (1998) shared that school principals "exercise a measurable, though indirect effect on school effectiveness and student achievement" (p. 186). Today's educational leader serving in a leadership capacity as a school principal is becoming more exposed to changing roles within the current school setting to include guidelines and requirements set forth by the Texas Educational Agency (TEA). School principals are held accountable in maintaining, sustaining, and operating a school as outlined by various standards.

The Texas Examinations of Educator Standards (TExES) – Principal Standard 2 demonstrates the requirement of the school leader to ensure there are highly qualified teachers (HQT) and staff in every classroom throughout the school. Therefore, it is crucial for school principals to begin developing PLCs among their schools so to fulfill principal standards set forth and required by TEA guidelines better serving both the teachers and students (Texas Education Agency, 2017).

School principals must be successful in promoting a collaborative environment that is conducive to learning and instills a collective responsibility for all stakeholders to achieve the tenets set forth by PLCs to target and promote student success. DuFour and Fullan (2013) reported widespread leadership as the basis for sustaining effective improvement efforts and

reported the importance of today's school leader to undertake school-wide efforts in fostering the development of teachers and staff members throughout the school so to serve as tomorrow's leaders.

School principals occupy a position where they must carry the burden of fulfilling the TEA's accountability requirements by leading school improvement efforts as well as enduring educational challenges filtered down from superiors and district level administrators. An important passage of legislation known as the No Child Left Behind Act of 2001, or the NCLB, concerning education in America called for closing the educational gap with accountability, flexibility, and choice, so that no child is left behind (U.S. Department of Education, 2015a).

Within this important piece of legislation, one of the provisions guaranteed by the act required that all schools would have "highly qualified" and "trained" teachers in every classroom and held school leaders accountable for incorporating research-based teaching practices (U.S. Department of Education, 2015a). Principals must effectively distribute these challenges among other school personnel such as assistant principals, counselors, teachers, and any staff member. Best teaching practices and initiatives deemed effective for educating the dynamics of today's diverse classroom continue to be sought by educators who are accountable for student achievement.

The study examined the perceptions of Texas high school principals on the importance and effectiveness of the PLCs. The study focused on school leadership skills, teacher self-efficacy, student achievement, and school improvement.

Efforts geared toward school improvement and student achievement to increase student performance are evident throughout the U.S. schools; therefore, educational practitioners continue to search for research-based best teaching and learning practices for all concerned

individuals. School principals willing to make the change for the betterment of their schools and who are not resistant to change will have better results when it comes to school improvement. Federal and state mandates (e.g., NCLB) in education require that instructional leaders must ensure their schools are performing according to the federal and state standards.

Statement of the Problem

Educational leadership models have been emerging towards a more distributive and shared type of leadership since the instructional leader alone is no longer the optimal model to carry out the complexity of the job responsibilities. Educational leaders must recognize that there are solutions for educational challenges, such as, student diversity, increased teacher/student ratios, increased budget cuts, reduced human capital, and the rise of technology and globalization. Such challenges in education can be overcome by the effective implementation and fostering of the PLCs. When implemented efficiently, the PLCs can be instrumental in moving instructional leaders towards becoming positive change agents using teaching and learning models known to demonstrate an increase in school improvements for all stakeholders. However, do we know the extent by which the PLCs can influence the school environment? Feger and Arruda (2008) noted that an abundance of qualitative research studies exists in supporting the impact of the PLCs on teacher practices and student achievement. The review of the literature showed that the topic benefits from additional studies pertaining to the perceptions of educational practitioners and their experiences with PLCs.

Purpose of the Study

The purpose of the study was to examine the perceptions of Texas high school principals regarding the effectiveness of the PLCs in the development of school leadership, teacher self-

efficacy, student achievement, and school success. The study was guided by the following research questions:

- 1. What are the perceptions of Texas high school principals regarding the importance of school leadership, teacher self-efficacy, student achievement, and school improvement?
- 2. What are the perceptions of Texas high school principals regarding the effectiveness of the professional learning communities on affecting school leadership, teacher self-efficacy, student achievement, and school improvement?

Theoretical Framework

The study was grounded by the origins of the theory of constructivism that relates to how learners develop new knowledge and construct previous knowledge. In earlier days, theories of education lent themselves towards a traditional style of teaching and learning when the field of teaching was more evident as working in isolation versus team building (DuFour & Eaker, 1998).

As educational reform efforts continue to maximize the benefits of learning and educational school improvement efforts, the theory of constructivism has been more appreciated and accepted as a new style of teaching and learning as it relates to new and emerging teaching practices. Fosnot (2005) stated that as major reform in education began to take place, constructivist pedagogy began to emerge, which she further clarified by stating that constructivism is not a theory of teaching and that it must be regarded as a theory of learning.

Teacher education programs that are based on a constructivist view of learning must offer more than a constructivist perspective in coursework. For example, teachers need to be engaged in collaborative learning experiences that confront traditional beliefs and provide them with the

opportunities to study children and their meaning-making (Fosnot, 2005). The elements found in the PLCs can be most aligned with a constructivist perspective in teaching and learning as educational paradigms continue to shift and focus more on a collaborative style of teaching and learning. The manner by which the PLCs demonstrate the development of individual and collective knowledge is inherent in the process as seen within the constructivist theory (Donohoo, 2013).

In addition to constructivism as a theory of learning, Siccone (2012) informed his readers about the interest and emergence of a leadership model, one that would provide much needed assistance to the instructional leader in which other members of a school are assigned a portion of the leadership roles within the campus; further referred to as a distributive model of leadership. With distributive models of leadership comes action learning, a type of learning much like those evident within PLCs. Dinham, Aubusson, and Brady (2008) stated, "in action learning, action research, and experimental learning, a key aspect is that of a cycle of reflection and action and is repetitive" (p. 2), and noted that this type of learning assists in sustaining the building capacity of schools to improve practice.

Again, it has become evident that school administrators, as sole providers, cannot account for student achievement. The sole leadership role of the instructional leader to turn around schools that continue to fail and struggle with school improvement due to its complexity is no longer optimal and more schools are turning in the direction of adopting a distributive leadership model. By delegating responsibilities to teacher leaders and staff members, school principals have found their "leadership role has evolved into that of creating a professional learning community" (Siccone, 2012, p. 104). The PLCs incorporate and foster shared responsibilities in

which all team members have a voice and exercise the ability to contribute toward the group for overall school improvement.

Harris (2004) identified commonalities that enhance and support teacher leadership and distributed leadership. Harris (2004) noted that "time needs to be set aside for PD and collaborative work between teachers, teacher leaders need opportunities for continuous PD in order to develop their role, and the success or otherwise of teacher leadership within a school is heavily influenced by interpersonal factors and relationships with other teachers and the school management team" (pp.6-7).

Operational Definitions

For the purpose of the study, the researcher developed a three-part survey instrument to measures the constructs of school leadership, teacher self-efficacy, student achievement, and school improvement. The respondents' responses were used to measure the variables of interest. Glossary of Terms

Capacity building – actions that lead to an increase in the collective power of a group to improve student achievement, especially by raising the bar and closing the gap for all students (DuFour, R., DuFour, R., Eaker, R., & Many, T., 2006).

Collective inquiry – a means by which learning communities deconstruct knowledge through joint reflection and analysis, re-constructing it through collaborative action, and co-construct it through collective learning from their experiences (Stoll, 2010).

Constructivism – a theory about knowledge and learning; it describes both what "knowing" is and how one "comes to know" – a theory that describes knowledge not as truths to

be transmitted or discovered, but as emergent, developmental, nonobjective, viable constructed explanations by humans engaged in meaning-making in cultural and social communities of discourse (Fosnot, 2005).

Distributed Leadership – an earlier focus on formal leadership, especially the principal, has broadened to consider the influence of other school leaders and teachers as a shared responsibility (Dinham, 2005).

Highly qualified teachers (HQTs) - highly qualified teachers must hold at least a bachelor's degree, be fully certified to teach in Texas, and demonstrate competency in their core academic subject area (Strong, 2011).

No Child Left Behind (NCLB) - reauthorized ESEA from Congress and President George W. Bush signed into law in 2002 with bipartisan support (U.S. Department of Education, 2015a).

Organizational learning - the deliberate use of individual, group, and system learning to embed new thinking and practices that continuously renew and transform the organization in ways that support shared aims (Collinson & Cook, 2007).

Professional development (PD) - the familiar term used to describe practitioners' improvement of their professional knowledge and skills (Collinson & Cook, 2007).

Professional Learning Communities (PLCs) – educators committed to working collaboratively in ongoing process of collective inquiry and action research to achieve better results for the students they serve, operating under the assumption that the key to improved learning for students is continuous job-embedded learning for educators (DuFour et al., 2006).

S.M.A.R.T. Goals – goals that are <u>S</u>trategic and Specific, <u>M</u>easurable, <u>A</u>ttainable, Results-Oriented, and Timebound (O'Neill & Conzemius, 2006).

Self-efficacy – the belief in one's capabilities to organize and execute the courses of action required to manage prospective situations; beliefs as determinants of how people think, behave, and feel (Bandura, 1994).

Texas Education Agency (TEA) – the state agency that oversees primary and secondary public education in the state of Texas, delivering education to more than 5 million students (Texas Education Agency, 2015).

Delimitations, Limitations, and Assumptions

The study was delimited to Texas high school principals because they hold educational leadership positions, which allows them to foster the development of educators throughout the school. Additionally, the study was delimited to the constructs of school leadership, teacher self-efficacy, student achievement, and school improvement. Due to the non-probability nature of the sampling, external validity was limited to the study's participants. Due to the non-experimental nature of the study, no causal inferences were drawn. It was assumed that the study participants were honest in completing the survey instrument.

Significance of the Study

The study may provide school districts and educators in the state of Texas with a better understanding of the PLCs. Due to various educational leadership models in use today, research has shown that distributive or shared leadership, as well as transformational leadership, best mirrors the key components of the PLC model in which educational leaders may wish to work as they become change agents for their schools (Barnett, Shoho, & Cypres, 2012; Ratcliffe & Harts,

2011; Siccone, 2012). The study's participants noted that school leadership, teacher self-efficacy, student achievement, and school improvement are important in proper functioning of high schools and that PLCs can positively affect them. The study's findings are significant as to whether educational leaders can produce change-ready schools in which they can develop a more effective strategy for pursuing continuous school improvement because of implementing the PLCs (Hord, 1997a).

As a result of the study's findings, it is anticipated that school principals may be able to predetermine whether they desire to embark on the efforts and time it takes to reach school success by fostering a new style of collaborative engagement such as through the tenets of the PLCs. Additionally, the results may provide evidence regarding the effectiveness of the PLCs in developing school leadership skills among teachers and staff, enhancing teacher self-efficacy, increasing student achievement, and improving school success.

Educators continue to search for best practices that can promote learning as a collective inquiry and support hands-on learning to achieve positive results. Educational leaders may find this study relevant when the need arises to take on a new plan of action as a goal to promote overall success of the school.

CHAPTER II: REVIEW OF THE LITERATURE

Introduction

The review of the literature focused on how PLC models can help support educational practitioners and leaders as they seek collaborative innovations to enhance both teaching and learning in today's world. The following sources were used to identify the relevant literature: education books, peer-reviewed journal articles and publications, electronic databases such as EBSCO, ERIC, and ProQuest, as well as additional information from educational websites. The keywords included professional learning communities, school leadership development, leadership styles, teacher self-efficacy, school improvement, student achievement, collective inquiry, and collaboration in relation to the field of education. The review of the literature was delimited to a period within the last ten years from the date of the study as well as some seminal publications.

Many aspects account for whether organizations may succeed with innovations aimed towards their overall vision and goals. Each step of a new plan requires hard work, time, energy, and collaboration from all stakeholders involved within the organization.

Teaching and learning, as it has evolved, continues to open new pathways as more and more innovative ideas begin to emerge. Peter Senge's (1990) publication, *The Fifth Discipline*, offered educational ideas that were originally meant for corporations and businesses.

Nevertheless, his ideas on how to change organizations for continued growth and survival attracted educational organizations. In order to build successful learning organizations, Senge (1990) described five learning disciplines that should be effectively employed: (1) personal mastery, (2) mental model, (3) team building, (4) building shared vision, and (5) systems thinking, which have been investigated by various researchers (DuFour & Eaker, 1998; Hipp &

Huffman, 2010; Dimmock, 2012). Much like the PLC models, which are aimed at transforming a school organization into schools as communities of learners, Senge's five disciplines fall along the same continuum.

The review of the literature was guided by the following themes: traditional professional development in secondary schools, highly qualified teachers (HQTs) and the emergence of PLCs, the conceptual framework of the PLC model, PLCs and cultural change, the impact on leadership development and self-efficacy of educators, and both the challenges and advantages of PLCs.

Traditional Professional Development in Secondary Schools

Schools and districts are culturally transforming as they address how professional development (PD) is offered and organized. Knight (2013) reported that school leaders have recognized the insufficient impact traditional PD has had on teaching and learning. Traditional PD in schools somewhat differs from PD as it is seen today. Traditional teaching and learning processes used to be more isolated and individualized as compared to the more continuous and collective inquiry processes of collaboration known today. Academic departments in high school settings worked independently and lacked communication with department colleagues about their teaching. High school professional communities lacked the sharing of ideas about teaching and learning, and lacked a strong technical culture (McLaughlin & Talbert, 2001).

Today, newly defined positions within districts, known as content coaches, have emerged and are utilized throughout schools to support teacher and student improvement. Content coaches are not meant to be top-down positions, rather, they should primarily work alongside teachers to collaborate and help develop teacher leaders whose classrooms become sites for professional

learning communities (Knight, 2013). Such models of coaching are inquiry-based and continuously evolving.

Contrary to traditional PD in schools, teachers of the 21st century must redefine and rethink their purpose due to technology; for example, students now have greater access to computers and the Internet than did in the past. The PLC model, as an educational innovation, can assist and aid educators as they model learning in which creativity and inquiry are used to seek solutions to problems. Society and technology are interconnected and interdependent, and if the concept of systematic thinking (the cognitive process of studying and understanding systems of every kind) is to be considered, such systems that are larger and complex become intertwined with smaller organizational systems that are seen within school districts. Today's schools and districts function as a smaller system; therefore, they must value the importance of systems thinking by focusing on the whole system and realizing that all parts of the school and district are interconnected within this larger complex system (Tate, 2009). Therefore, it would befit school districts to take an integral part of the whole system and adapt accordingly by integrating technology into the school organization. School departments function independently as compared to the whole system. Each smaller system is interdependent in improving teaching and student learning. Present designs of school systems may result in fragmentation of the organization in which the levels of coherence and collaboration that are needed to achieve higher student achievement are rarely manifested. Today, content coaches are available and occupy a position in which they work with teachers, principals, and district administrators to lessen the fragmentation within the system to serve the purpose of reaching higher student achievement (Knight, 2013).

Professional development is changing as a response to the changing roles of principals and teachers. A new vision for staff development includes all staff members and not only classroom teachers. The current standards set forth by the National Staff Development Council (NSDC) have implications for districts, schools, and educators. These new movements include coherent strategic plans for staff development by reorganizing individual development to organizational development; district-focused to school-focused approaches for staff development; focus on student needs and learning outcomes instead of adult needs and satisfaction; job-embedded trainings conducted away from schools to multiple forms of jobembedded learning on the campus; from a focus of generic instructional skills to a combination of generic and content-specific skills; from staff development delivered by one department to a major responsibility performed by all administrators and teacher leaders; from staff development geared towards teachers only to everyone who affects student learning; from a focus primarily on learning content to opportunities involving reflective practice; and from lectures to hands-on opportunities and problem-solving approaches. These opportunities are provisions for what constitutes a PLC that is implemented effectively, which consistently offers a routine of ongoing practice (Protheroe, Shellard, & Turner, 2003).

McLaughlin and Oberman (1996) and Lieberman (1995) provided additional observations pertaining to old traditional in-service trainings to new professional learning opportunities. Teacher development in the past was limited by the lack of knowledge of how teachers learn and teachers' definitions pertaining to problems within the field have been ignored. Teacher's ideas, creativity, and inventions within their fields have been minimal due to a teaching that is described as a technical set of skills. Furthermore, the researchers added that adequate time and mechanisms for inventing and consuming new knowledge have often been

absent from schools, professional development opportunities have lacked the context within which teachers work, and strategies for change have lacked the support mechanisms and the necessity of learning over time. Lastly, it can be said that the agenda for reform involves teachers in practices that have not been a part of the accepted view of their professional learning, and that professional development and teacher standards must be revised to mirror how teaching and learning takes place in the 21st century.

Highly Qualified Teachers and the Emergence of PLCs

Continuous school reform efforts have been ongoing and endless as accountability standards continue to rise. All students must be provided with the needed resources and knowledge to function in an era where greater emphasis is placed on educational innovations. Such innovations should result in the essential ingredients (i.e. learning through collective inquiry, problem-based learning, student-centered approaches, development of critical-thinking skills and problem-solving skills, creativity, and technological skills) that are needed to live a successful life in the 21st century that reflects the ever-changing shifts of education (DuFour & Marzano, 2011; Wiseman, 2009).

As far back as 1965, a significant piece of legislature, signed by President Lyndon B. Johnson, the Elementary and Secondary Education Act (ESEA), was a civil rights law and accounted for a portion of President Johnson's War on Poverty campaign. The ESEA was the first federal legislation affecting education in the country that established high standards, accountability, and emphasized equal access to education for all Americans. The ESEA of 1965 provided a full educational opportunity for all citizens and offered grants to districts serving low-income students, federal grants for textbooks, funding for professional development and instructional materials, funding for special education centers, resources to support educational

programs and parental involvement, and provided scholarships for low-income college students (U.S. Department of Education, 2015b). President Johnson believed that the nation's first goal should be to provide all students with a full educational opportunity. The ESEA legislation continues to be reauthorized every five years since its enactment.

President George W. Bush reauthorized the provisions of the ESEA in his No Child Left Behind Act (NCLB) of 2001 (U.S. Department of Education, 2015b). The federal government's role in education was then heightened to aid in closing the achievement gaps among underserved students by creating Title I provisions to support disadvantaged students. In addition, another goal of the NCLB was to improve student achievement by providing federal funds to improve teacher quality. The NCLB conditions to support the improvement of teacher quality was to guarantee and ensure that every classroom around the nation was to be staffed by what had been coined as highly qualified teachers (HQT) and principals by 2005. The NCLB states that student achievement is reached by increasing the effectiveness of teachers and principals through professional development, as well as, holding local education agencies and schools accountable for improvements in student academic achievement.

Yet, still some 50+ years after the original signing of the 1965 ESEA, President Obama expanded educational provisions and signed into legislation the most current bipartisan bill known as the Every Student Succeeds Act (ESSA) in December of 2015 (U.S. Department of Education, 2015c). Briefly stated, the ESSA holds all students to a higher academic standard, prepares them for success in college and careers, provides access to high-quality preschool, guarantees school improvement, reduces the burden of testing while maintaining annual information for parents and students, and helps support and grow local innovations, including

evidence-based and place-based interventions developed by local leaders and educators, consistent with investing in innovations that work (U.S. Department of Education, 2015).

Another important report in U.S. history, which accounted for educational excellence and groundwork for school improvement, is the report, *A Nation at Risk* in 1983, by members of the National Commission on Excellence in Education. Throughout this report, numerous indicators of the risk of educational failures were outlined and evidence provided an increasing number of Americans described as being functionally illiterate to international comparisons of student achievement that showed American students were declining unlike ever before (U.S. Department of Education, 2015d). Since the beginning of educational reform efforts, American educational policymakers and educational practitioners have worked to develop more focused and detailed educational plans to target disparities among the teaching and learning activities to better prepare American schools (DuFour & Marzano, 2011; Shoho, Barnett, & Tooms, 2010; Hipp & Huffman, 2010).

Learners of the 21st century are experiencing more rigorous educational settings than ever before as higher standards of academic achievement are becoming more evident among all schools across the nation. These students are experiencing greater academic pressures and are becoming more challenged in today's schools to reach higher academic success rates. Thus, students of the 21st century are better preparing themselves as they acknowledge the importance of competing for higher paying jobs across the globe. American students must compete with both their American and non-American peers.

Educators have a responsibility of preparing today's students for an ever-changing society. Education in the 21st century calls for innovations of teaching and learning that can be

seen throughout the tenets of the PLC. For student learning to take place through such new educational innovations, educators must become proficient in teaching. Educational practitioners and higher education preparatory programs must be willing to redesign their current pedagogical practices for pre-service teachers and aspiring educational administrative leaders to accept, acknowledge, and embrace emerging and innovative teaching practices to achieve HQTs and principals in every school across America, greater student success, and greater school improvement (Shoho et al., 2010).

Quality of teacher preparation varies widely throughout American schools. Though most individuals in the field of education train through a traditional fashion, such as an educational preparatory program receiving a year or more of experience, still others come through alternative pathways in which the rigor of such preparation programs is limited or nonexistent. In addition, some teachers are hired through emergency permits, may have no teacher preparation at all, and may have no exposure to basic information pertaining to children, curriculum, or schools. To improve academic success of students, President Bush's educational act of 2001, No Child Left Behind (NCLB), laid out the premises that all classrooms across America would employ HQTs by the 2005-2006 school year. Though the term "highly qualified" could vary across states, NCLB referred to and defined "highly qualified" teachers as educators who obtained full certification, having a bachelor's degree, and demonstrating proficiency in subject matter and teaching (Strong, 2011).

Darling-Hammond and Baratz-Snowden's (2005) Framework for Learning to Teach emphasized a consistent vision of what good teaching ought to entail. The framework recommended that teachers learn best when considering the following factors: developing a vision for practice; having the knowledge that pertains to teaching, learning, and children;

formulating conceptual and practical tools (e.g., learning theories and instructional resources and materials); developing habits of thinking and action to include reflection and learning from practice; and most of all, collaborating with experienced colleagues by sharing their teaching norms and practices and constructing integrated learning experiences within professional communities. Without collaboration and support of colleagues, beginning teachers may never obtain the tools necessary to develop the criteria as a HQT; therefore, it is essential for school administrators to capitalize on each area of Darling-Hammond and Baratz-Snowden's (2005) Framework for Learning to Teach (Figure 1).

Figure 1: Framework for Learning to Teach

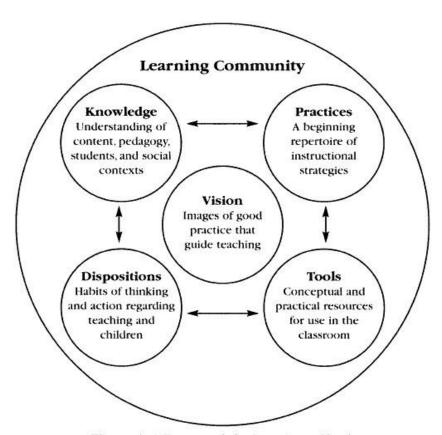


Figure 1: A Framework for Learning to Teach

School administrators, as effective leaders of human capital, must ensure HQTs are placed in all classrooms throughout their campuses and must be able to facilitate professional learning communities within their schools to continuously review data and support development (Table 1). The PLC model has become a current trend in new and innovative teaching practices aimed at enhancing both teaching and learning. Teacher experts, such as Richard and Rebecca DuFour, Robert Eaker, Stephanie Feger, and Elise Arruda are accredited with their continued efforts and expertise in supporting the PLC movements throughout school districts. The PLC model has been universally accepted by experts in the field of education as a powerful tool to provide an effective two-way transfer of knowledge versus the traditional one-way transfer of knowledge, which was previously known to originate from the teacher (expert) to the student (learner). The PLC model has been emerging and becoming universally identified as a common practice for educational leaders searching for ways to improve their districts and schools (Hairon & Dimmock, 2012; Fink & Inkelas, 2015).

There is a growing interest of the PLCs in other cultures. For example, educational policymakers in Singapore are relying on the PLC concepts for improvements in professional development for educators and student achievement (DuFour & Marzano, 2011; Hairon & Dimmock, 2012). Singapore previously piloted 51 of their schools to implement the PLCs in 2009 to raise the level of teacher quality and professionalism. According to international tests such as Trends in International Math and Science Study (TIMSS) and the Program for International Student Assessments (PISA), schools in Singapore have shown evidence of outstanding performance (Hairon & Dimmock, 2012). They have used the PLC model because of searching for new curricular and pedagogical and assessment practices to reflect learning in

the 21st century. Currently, Singapore has committed to a system-wide initiative and all 360 schools in the area have adopted a PLC model as the main interest for professional development.

Conceptual Framework of a Professional Learning Community

A professional learning community is a model, which relies on continuous teacher efforts in an ongoing engagement, using collective inquiry and dialogues on best teaching practices, delivery of instruction, student learning and success, educator reflection on teaching, and frequent and consistent constructive feedback as an initiative to support school improvement (DuFour & Eaker, 1998). Teamwork and collaboration are needed and those working together as a PLC model must understand the responsibilities and the expectations of such a model if success is to become the outcome of the learning community. DuFour and Eaker (1998, p. 44) suggested six key components for a PLC model:

Shared mission, vision, and values – A community must be comprised of learners having a common understanding of the groups' values. Members exercise a commitment to shared guided principles that articulate what the group plans to seek and create. These guided principles are embedded in all the members of the group, not solely those who occupy a leadership position.

Collective inquiry – The members of the learning community seek improvement, growth, and renewal of the professional learning community through collective inquiry. Members have an openness to new possibilities and realize that their search for answers in their learning processes to seek new methods, testing methods, and reflecting on them is done so collaboratively. Team members can develop new skills and capabilities that in turn leads to new experiences and awareness. In the process of collective inquiry, significant changes in the culture of the organization occur.

Collaborative teams – The structure of the school learning community is comprised of collaborative teams that share a common purpose. The ability to building students' capacity to learn is collaborative rather than an individual task. Members learn from one another as they create momentum for continued improvement. The focus is on organizational renewal and willingness to work together in continuous improvement processes.

Action orientation and experimentation – PLCs are action oriented where all members act and these learning communities are unwilling to accept inaction. Learning always occurs in context of taking action and members in the PLC believe engagement and experience are among the most effective teachers. Action oriented groups have the willingness to experiment through developing and testing hypotheses. Failed experiments are looked at as an integral part of the learning process.

Continuous improvement - Members of a PLC are unsatisfied with the status quo and continuously seek a better way for improvement. Each member of the organization considers the following questions: what is our fundamental purpose? What do we hope to achieve? What are our strategies for becoming better? What criteria will we use to assess our improvement efforts?

Results orientation – PLCs realize their efforts to develop a shared mission, vision, and values; engage in collective inquiry; build collaborative teams that take action; and focus on continuous improvement being assessed based on results rather than intentions. Senge (1996) noted the rationale for any strategy for building a learning organization revolves around the premise that such organizations will produce dramatically improved results.

Not only is it essential that a PLC model include all six components, organizations that wish to implement a successful PLC model must continuously revisit each component as an

ongoing measure for the sake of reaching positive results. Additionally, it would be instrumental to have all human capital on board help achieve the anticipated goals and outcomes. The PLC models have been known to be district-wide in comparison to individual schools who wish to take on the challenge of functioning as a PLC model. Regardless of which organizational structure is included in the approach towards implementation, it must be an "all hands on deck" type of operation when the time arises for educators to begin to embark on this journey. The PLCs can play an optimal role in the improvement of teacher practices, student achievement, and overall school improvement. School leaders act as a change-agent for their schools, especially if they decide to implement change efforts within the school setting. The next section covers the research on how a PLC model can influence individuals and school organizations as a change in culture begins to shape the school's environment (DuFour & Eaker, 1998).

Professional Learning Communities and Culture Change

The need for student performance and the improvement of professional practice of educators will always be of great importance. It has been stated that the key to school reform efforts, which target student learning outcomes, stems from the improvement of teacher quality and capacity building so to support a collaborative culture within the organization (DuFour, DuFour, Eaker, & Many, 2006; Hairon & Dimmock, 2012). School leaders need to be prepared to be change-agents as they implement new initiatives such as those set forth by PLC models. There has been an extensive amount of research supporting team building and collaboration and no research to support the fact that the best way to help students learn at higher levels is through teacher isolation (DuFour & Eaker, 1998).

In a PLC, not only it is the responsibility of school leaders to become agents of change but teachers are to support their leader's endeavors and become change-agents as well. Collaborative teams are the main source of school improvement; therefore, it is crucial for educational leaders to lead an environment where staff members receive training in collective inquiry and understand the benefits of collaboration. Incorporating and implementing change in organizations are not easy tasks and can be an ongoing struggle. Missions, goals, and visions evident and sought through by the means of implementing the PLCs in schools can be a challenge for school and district leaders; however, this task must not discourage educational practitioners for taking part in quality teaching practices. Therefore, it is central for school leaders and school districts who wish to implement new educational innovations, such as a PLC model, to be prepared to act as change-agents in their schools. Furthermore, they must be able to provide support among their constituents throughout the process. School and district leaders' ability to provide resources, proper training, and ongoing support to help teachers and schools succeed while implementing a PLC model is known as having *reciprocal accountability* (DuFour & Marzano, 2011; DuFour, DuFour, Eaker, & Many, 2006; Shoho, Barnett, & Tooms, 2010).

Hairon and Dimmock (2012) stated that policymakers are increasingly shifting the responsibility onto school leaders and teachers to take their own initiatives, as change-agents, in leading curricular and pedagogical innovations. Those in the educational sphere understand that learning is continuous and never-ending. It is in the best interest of educational leaders to continue to strive for overall improvement when targeting both teaching and student performance.

Impact on Leadership Development and Self-Efficacy of Educators

The PLCs can be fundamental in helping educators develop their leadership skills and enhance self-efficacy. Since the concept of a PLC model is to learn by collective inquiry, a means by which learning communities deconstruct knowledge through joint reflection and

analysis and co-construct new knowledge through collective learning from their experiences, educators improve their own instruction by working and learning from their team members through ongoing professional development. Individual team members are responsible for helping to build the capacity of school teams in order to improve student achievement. The goals of the PLC teams are to continuously seek and share learning and then reuse this new knowledge to grow professionally. Teams continuously focus on problem-solving through the use of critical-thinking skills, engage in shared decision-making and constructive dialogue, analyze new knowledge, reflect on data-based inquiry, and provide feedback which can all lead to self-mastery; all while doing so in a collective manner. Simultaneously, teams shape and build their individual knowledge base as a professional. A sense of motivation and professional satisfaction becomes evident as teachers transform and expand their roles because of team interaction, cooperation, and support of teacher networks in PLCs (Hord, 2004; Hipp & Huffman, 2010).

The structural make-up of the model shows that "there is no longer a hierarchy of who knows more than someone else, but rather the need for everyone to contribute" (Kleine-Kracht, 1993, p. 393). When teachers have opportunities to engage in collective inquiry and feel a sense of support from the system, they are more likely to share upon what they have gained as new knowledge, while enhancing their own efficacy throughout the process, and are more likely to adopt new classroom behaviors and remain in the profession (Hord, 1997b). As a result of taking on the challenge to function as a PLC, some differences that staff members experience include "a higher likelihood that they will be well informed, professionally renewed, and inspired to inspire students; and more satisfaction, higher morale, and lower rates of absenteeism" (Hord, 1997a, p. 5). As "school leaders increase their leadership skills, the

capacity for change is enhanced in individual schools and can affect the entire educational system" (Wiseman, 2009, p. 2). The PLCs require that all staff members take part in the initiative; thus, making each member a contributing factor to the group. Consequently, teacher competency grows and the development of leadership begins to transform by the processes offered throughout the PLC model. Since PLCs are not considered a program, but a process, individuals involved in the process have the opportunities to enhance their leadership skills and attributes of self-efficacy as they continue to be life-long learners. Hairon and Dimmock (2012) stated that PLC initiatives differ fundamentally from previous policy innovations in the notion of teacher-initiated learning and that of teachers as agents taking responsibility for developing their own professional practice.

Advantages of Professional Learning Communities

There is a substantial amount of research addressing the effectiveness of the PLC models and the relevant literature on effective PLCs continue to grow. Scholars in Anglo-American contexts support schools and districts operating in a PLC manner and support the fact that PLCs are a pedagogical innovation that can improve instructional practice and student outcomes. In addition, schools and districts that follow a PLC model yield an increase in positive teacher performance, healthier school climates and cultures, and holistic school improvement (Hord 2004; Donohoo, 2013; Fullan 2001; McLaughlin & Talbert, 2001).

Foxdale Middle School, a campus which, at the time, served 12% economically disadvantaged students based on the eligibility for free and reduced lunch, had a highly educated and committed faculty, an approximately 95% attendance rate, and no dropouts. However, it had a significant number of behavioral referrals each year. It began to function as a PLC to overcome steadily decreases in test scores, declining enrollment, failed referendums, and low

morale issues. The Foxdale community reported a climate of distrust and had a growing lack of confidence from both the parents and community members. After the school members vowed to make changes and give up their professional development days to be committed to this project, they demonstrated learning through collective inquiry and reported that the most important factor that made the PLC a success was the building of trust within the staff. Building trust is the first level of developing an effective PLC (Hord, 1997a).

In another school setting, McLauglin and Talbert (2001) found that two departments within the same high school, Oak Valley High, reported both strong and weak departments within the same PLC school due to having two divergent cultures of high school teaching practices, one with a strong technical culture that focused on student-centered practice instead of the traditional teacher-centered practice and a highly collegial community while, in contrast, the other department worked in isolation and not as a community of practice. The norm for this department demonstrated individualism and conservationism, which is the opposite notion of how a PLC ought to function.

Fullan (2001) found that professional development of individuals in regards to increasing student achievement is not sufficient, and; thus, schools must create PLCs in which educators can use their minds to identify new and better ideas, establish strategies and mechanisms for development, and involve relationships school-wide. School leaders who have the desire to support today's teaching and learning processes by operating as an effective PLC may find Donohoo's (2013) Facilitator's Guide to School Improvement meaningful.

The PLCs focus on quality teaching, which is enhanced as the learning process, takes place through continued practice of a PLC. The PLC model provides educators with structure by

offering a substantial amount of systematic researched-based materials and field books on how to transform and sustain a school or school district in order to be successful throughout their endeavors. Participants are involved in collegial learning from one another and engage in frequent and constructive dialogue, process meaningful information as collective inquiry, and participate in reflection relevant to their teaching practices and student performances. In addition, educators are clearly life-long learners who seek continuous learning, job-embedded learning, reflective practice, and inquiry-based and evidence-informed practices (Hord, Roussin, & Sommers, 2010; Hairon & Dimmock, 2012).

Hipp and Huffman (2010) highlighted areas in which PLCs can provide advantages for school leaders, namely, continuous learning, supportive conditions, connections among leadership, collective efficacy, inclusive leadership, and involvement of all stakeholders. The participation in the PLCs also helps close the knowing-doing gap set forth in the private sector (DuFour, Eaker, & DuFour, 2005). The knowing-doing concept can be applied in the field of education and support the evidence that educators have known all along on how to enhance school performance but do nothing to act upon these claims. Educators who function effectively by the provisions set forth by the PLC model work towards closing this knowing-doing gap.

Challenges of Professional Learning Communities

There are challenges that educational leaders continue to face as they seek innovations to improve schools. School leaders must understand and internalize that there are various factors, both internal and external, in regards to the school environment that may hinder the effectiveness of the PLCs. First, if the PLC model is not established, implemented, applied, or developed in a continuous fashion and with a collaborative approach, it may fail in achieving positive outcomes.

Secondly, achieving teacher buy-in can be difficult to attain, especially if the campus consists of resistant teachers who blame the system altogether (DuFour & Eaker, 1998).

As a school leader implements a change process within the campus environment, it is important to have constituents engage in collaborative approaches as they explore innovations to come up with effective building capacities among all staff members. It is necessary to provide a clear mission, goal(s), and vision through a collective approach to gain the support of all staff members. Implementing the phases of an effective PLC takes time and a success rate is hindered if educational leaders move too quickly and fail to designate a significant amount of time for a proper implementation to unfold (DuFour & Eaker, 1998).

Clear expectations of all six components of the PLC model (i.e. shared mission, vision, and values; collective inquiry; collaborative teams; action orientation and experimentation; continuous improvement; and results orientation) should be effectively communicated and demonstrated if educational leaders wish to avoid their constituents deterring from the initiatives all together. Sustainability can become a problematic issue while striving to implement an effective PLC model if teams focus on barriers of the process such as the lack of clarity of a shared vision, lack of sufficient training of the concepts, lack of professional development of learning through collective inquiry, lack of sufficient time periods to implement the PLC model, and lack of continuous engagement of group members collaborating on their findings and reflections (DuFour & Eaker, 1998).

Additional internal barriers that can adversely affect the implementation of a successful PLC model may include teachers working in isolation, lack of a sense of community, lack of teacher empowerment, failure of building a trustworthy relationship among school leaders and staff members, and the lack of teacher-student learning practices and materials. These barriers

account for the challenges school leaders and educators must endure because they can create a school culture that hinders a conducive learning environment (DuFour & Eaker, 1998).

Additionally, Hairon and Dimmock (2012) and Feger and Arruda (2008) reported the following external barriers to the effectiveness of the PLCs: home-school relationships, socio-economic status, level of support from community, policy decisions, and availability of learning infrastructure such as access to university faculty and programs that can impact the work of the PLCs. Student discipline issues can become problematic when trying to create a change in school culture and the lack of motivation for learning by some students can also influence the outcomes of new initiatives.

Summary

Federal policies and changes in teaching and learning in the 21st century calls for educational innovations such as the employment of the PLC model. As accountability in schools across the nation continue to rise, educational leaders and practitioners must rethink and redefine their purpose due to the inclusion of new technological systems and societal changes being intertwined and interdependent within our communities. School systems today are evidently more complex than in the past and school districts must apply the approach of systems thinking, one that will benefit the organization in its entirety. Previously functioning school organizations resulted in fragmentation; therefore, coherence and collaboration was rarely manifested which is needed for higher student achievement.

The review of the literature showed that educators are experiencing more rigorous expectations in educational settings than ever before. In addition, students are held to higher standards and are being challenged to reach higher academic success rates; thus, educational preparatory programs must be stronger so to prepare educational practitioners for a new

educational era. Schools across the nation have turned to educational innovations such as the PLC model as an effective school reform initiative resulting in closing these gaps. Numerous renowned educational organizations and practitioners have endorsed the concept of the PLC model such as the National Education Association, the National Council of Teachers of English, the National Science Teachers Association, the National Board of Professional Teaching Standards, and the National Council of Supervisors of Mathematics. Although implementing a PLC model is a challenge, the results will benefit students, teachers and administrators.

CHAPTER III: METHOD

Introduction

The quantitative study was designed and implemented to answer the following research questions:

- 1. What are the perceptions of Texas high school principals regarding the importance of school leadership, teacher self-efficacy, student achievement, and school improvement?
- 2. What are the perceptions of Texas high school principals regarding the effectiveness of the professional learning communities on affecting the school leadership, teacher self-efficacy, student achievement, and school improvement?

Research Design

The study employed an exploratory quantitative research design in which the data were collected, processed, and analyzed. The study was descriptive in nature and the characteristics that affect the importance and effectiveness of the PLCs, in the context of four constructs, namely, teacher leadership skills, teacher self-efficacy, student achievement, and school improvement, were investigated. Due to the descriptive and exploratory nature of the study, there were no independent or dependent variables (Vogt, 2007). Due to non-experimental nature of the study, no causal inferences were drawn.

Subject Selection

The study's respondents were from various school districts throughout the state of Texas. All high school principals were invited to participate in the study. A listing of all 2016 - 2017 high school principals (n = 1,454), which included email addresses, was obtained from the Texas Education Agency (TEA). There were 1,375 usable email addresses, which defined the study's

accessible population. Permission to conduct the study was obtained from the Institutional Review Board (IRB) at Texas A&M University-Corpus Christi (HSRP #39-17).

Instrumentation

For the purpose of the study, the researcher developed the Professional Learning

Community Questionnaire (PLCQ) to measure the study's four constructs and to collect data on
the selected demographic characteristics of the respondents to describe the sample (Appendix A).

The PLCQ's 33 items were derived from the literature.

School leadership was measured by nine items derived from the Vanderbilt Assessment of Leadership in Education, VAL-ED (Porter, Murphy, Goldring, Elliott, Polikoff, & May, 2008): (1) planning programs and policies that promote discipline and order, (2) planning for a positive environment in which student learning is the central focus, (3) implementing a learning environment in which all students are known and cared for, (4) building a culture that honors academic achievement, (5) allocating resources to build a culture focused on student learning, (6) supporting collaborative teams to improve instruction, (7) advocating a culture of learning that respects diversity of students, (8) communicating with parents about the aspects of a positive school culture, and (9) discussing standards of professional behavior with faculty.

Teacher self-efficacy was measured by eight items derived from Albert Bandura's (2006) guide for constructing self-efficacy scales: (1) get through to most difficult students; (2) get students to learn when there is a lack of support from the home; (3) keep students on task on difficult assignments; (4) increase students' memory of what they have been taught in previous lessons; (5) motivate students who show low interest in schoolwork; (6) get students to work well together; (7) overcome the influence of adverse community conditions on students' learning; and (8) get children to do their homework.

Student achievement was measured by seven items: (1) positive home – school relations; (2) opportunity to learn and student time on task; (3) climate of high expectations; (4) clear and focused mission; (5) frequent monitoring of student progress; (6) instructional leadership; and (7) safe and orderly environment (Ratcliffe & Harts, 2011).

School improvement was measured by nine items, derived from the Vanderbilt Assessment of Leadership in Education, VAL-ED (Porter et al., 2008): (1) developing a plan for individual and collective accountability among faculty for student learning, (2) developing a plan emphasizing accountability to stakeholders for student academic and social learning, (3) use faculty input to create methods to hold faculty accountable, (4) allocating time to evaluate faculty for student learning, (5) allocating time to evaluate student learning, (6) challenging faculty who attribute student failure to others, (7) advocating that all students are accountable for achieving high levels of performance in both academic and social learning, (8) communicating to faculty how accountability results will be used for school improvement, and (9) monitoring the accuracy and appropriateness of data used for student accountability.

A four-point Likert-type scaling was used. For importance, 4 = very important, 3 = important, 2 = moderately important, and 1 = not important. For effectiveness, 4 = very effective, 3 = effective, 2 = moderately effective, and 1 = not effective.

The content validity of the PLCQ was determined by the researcher's doctoral dissertation committee. The PLCQ was pilot-tested with 25 public school educators to examine its reliability and utility. The pilot-test data were used to estimate the reliability coefficients (Cronbach's Coefficient Alpha). As can be seen in Table 1, all constructs showed high reliability/internal consistency.

Table 1
Reliability Coefficients for Professional Learning Community Questionnaire (PLCQ)

		Reliability Coefficient			
Construct	#of items	Importance	Effectiveness		
School leadership	9	0.85	0.90		
Teacher self-efficacy	8	0.86	0.95		
Student achievement	7	0.87	0.93		
School improvement	9	0.88	0.94		

Data Collection

Utilizing Qualtrics survey software, an online version of the PLCQ was used to collect the data. The potential participants were contacted by email. The Texas Education Agency provided 1,454 public email addresses of Texas high school principals, of which 48 bounced and 31 were duplicated. Thus, the total number of online surveys emailed to potential participants was 1,375. The initial email was sent on February 21, 2017, which included an invitation to participate in the study, the purpose of the study, and the link to the online survey. The follow-up emails were sent on February 27, March 6, March 15, and March 22, 2017. There were 98 high school principals who responded to the online survey, yielding a 7.13 % response rate. Due to non-probability nature of sampling, the 98 participants were not representative of the population.

Data Analysis

The online data were downloaded into an Excel file and exported into the Statistical Package for the Social Sciences (SPSS) that was used for the purpose of data manipulation and analysis. The level of significance was set, a priori, at 0.01. Descriptive statistics, including frequency and percentage distribution tables, measures of central tendency, and measures of variability, were used to summarize and organize the data (Field, 2013).

Cronbach's Coefficient Alpha (Crocker & Algina, 1986) was used to estimate the internal consistency of the four constructs. Specifically, $\alpha = [k/k-1] [1-(\Sigma \sigma_i^2/\sigma_x^2)]$, where k is the number of items on the test, σ_i^2 is the variance of item i, and σ_x^2 is the total test variance (sum of the variances plus twice the sum of the co-variances of all possible pairs of its components, that is, $\sigma_x^2 = \Sigma \sigma_i^2 + 2\Sigma \sigma_{ij}$) was computed for each of the constructs.

Univariate repeated measures analysis of variance (Stevens, 2009) was employed to examine within-group differences. The statistical technique uses the blocking procedure to isolate the effects of a nuisance variable, thus, reducing the error term. The linear model equation is $X_{ij} = \mu + \alpha_j + \pi_i + \epsilon_{ij}$ (Score = Grand Mean + Treatment Effect + Block Effect + Error Effect). The Sphericity assumption, which requires that the variances of the differences for all pairs of repeated measures be equal, was tested, using Epsilon (ϵ). If ϵ is 0.70 or greater, the assumption is met. Modified Tukey procedure, HSD = $q_{\alpha;k,(n-1)(k-1)}$ $\sqrt{MSRES/n}$, where (n-1)(k-1) is the error degrees of freedom and MSRES is the error term, was used for the purpose of post hoc analysis.

Multivariate analysis of variance (MANOVA) was performed to examine group differences because the outcome measures were correlated with each other. Vector is a mathematical expression, representing scores on more than one response variable. The mean of the vectors for each group is called a centroid, and MANOVA is used to compare group differences based on

the centroid (Stevens, 2009). The Box's M was used to test the homogeneity of co-variances matrices assumption.

The mean difference effect size, Cohen's d, was computed to examine the practical significance of the findings. To do so, the mean difference was divided by the standard deviation of the mean difference and characterized as 0.2=small, 0.5=medium, and 0.8=large (Cohen, 1988).

The analysis of the data also included t-test for correlated samples and Pearson Product Moment Correlation Coefficient (Field, 2013).

CHAPTER IV: RESULTS

Introduction

The primary purpose of the study was to examine the importance and effectiveness of the PLC model in high school settings as an educational innovation for teaching and learning in the 21st century. The study focused on school leadership, teacher self-efficacy, student achievement, and school improvement, and was guided by the following research questions:

- 1. What are the perceptions of Texas high school principals regarding the importance of the school leadership, teacher self-efficacy, student achievement, and school improvement?
- 2. What are the perceptions of Texas high school principals regarding the effectiveness of the professional learning communities on affecting the development of school leadership, teacher self-efficacy, student achievement, and school improvement?

Descriptive statistics, univariate (t-test, Pearson Product Moment Correlation Coefficient), and multivariate (Cronbach's Coefficient Alpha, repeated measures ANOVA, MANOVA) statistical techniques were used to analyze the data. Mean difference effect sizes were computed to examine the practical significance of the findings. The level of significance was set, a priori, at 0.01.

A Profile of the Subjects

There were 98 participants from rural, urban, and suburban districts within the state of Texas. The respondents were predominately white males holding graduate degrees. Frequency and percentage distributions were used to summarize the results and are shown in Table 2.

Table 2 $\label{eq:continuous} A \mbox{ Profile of the Subjects, Categorical Variables, } n = 98$

Variable	F	%	
Gender			
Male	69	70.40	
Female	29	29.60	
Ethnicity			
White	63	64.30	
Hispanic	23	23.50	
African American	11	11.20	
Other	1	1.00	
Education			
Master's Degree	72	73.50	
Doctoral Degree	26	26.50	
District Type			
Rural	48	49.00	
Suburban	26	26.50	
Urban	24	24.50	

A typical principal was 48 years old (SD = 8.74) with 23 years of experience in education (SD = 8.18) and nine years as a campus principal (SD = 6.55). Results are summarized in Table 3.

Table 3 A Profile of the Subjects, Continuous Variables, n=98

Variable	Mean	Median	Mode	SD	
Age	48.34	48.00	50.00	8.74	_
Years as Educator	22.84	22.00	22.00	8.18	
Years as Campus Principal	8.92	7.00	3.00	6.55	

Item-Level Results

Importance

The principals were asked to complete the 33-item Professional Learning Community Questionnaire (PLCQ), using a 4-point Likert-type scaling: 4 = very important, 3 = important, 2 = moderately important, and 1 = not important. The principals rated the importance of nine items measuring school leadership, eight items measuring teacher self-efficacy, seven items measuring student achievement, and nine items measuring school improvement. The means of the respondents' responses were used to rank the importance of the items. Results are summarized in Tables 4 - 7.

Table 4 $\label{eq:table_eq}$ The Ranking of the Importance of School Leadership, n=98

Item	Mean*
Planning for a positive environment in which student learning is the central focus	3.88
Implementing a learning environment in which all students are known and cared for	3.78
Supporting collaborative teams to improve instruction	3.61
Advocating a culture of learning that respects diversity of students	3.59
Allocating resources to build a culture focused on student learning	3.53
Building a culture that honors academic achievement	3.50
Discussing standards of professional behavior with faculty	3.09
Planning programs and policies that promote discipline and order	3.04
Communicating with parents about the aspects of a positive school culture	3.02

^{*} 4 = very important, 3 = important, 2 = moderately important, 1 = not importantTable 5

The Ranking of the Importance of Teacher Self-Efficacy Items, n = 98

Item	Mean*
Motivate students who show low interest in schoolwork	3.77
Get students to learn when there is a lack of support from the home	3.70
Get through to most difficult students	3.66
Overcome the influence of adverse community conditions on students' learning	3.61
Get students to work well together	3.58
Keep students on task on difficult assignments	3.55
Increase students' memory of what they have been taught in previous lessons	3.31
Get children to do their homework	2.74

^{* 4 =} very important, 3 = important, 2 = moderately important, 1 = not important

Table 6 $\label{eq:table_eq}$ The Ranking of the Importance of Student Achievement Items, n=98

Item	Mean*
Climate of high expectations	3.93
Safe and orderly environment	3.86
Frequent monitoring of student progress	3.82
Instructional leadership	3.81
Clear and focused mission	3.74
Opportunity to learn and student time on task	3.62
Positive home – school relations	3.41

^{* 4 =} very important, 3 = important, 2 = moderately important, 1 = not important

Table 7 $\label{eq:table_rate} The \ Ranking \ of \ the \ Importance \ of \ School \ Improvement \ Items, \ n=98$

Item	Mean*
Allocating time to evaluate student learning	3.76
Advocating that all students are accountable for achieving high levels of performance	
in both academic and social learning	3.68
Developing a plan for individual and collective accountability among faculty for	
student learning	3.61
Monitoring the accuracy and appropriateness of data used for student accountability	3.60
Challenging faculty who attribute student failure to others	3.56
Allocating time to evaluate faculty for student learning	3.54
Use faculty input to create methods to hold faculty accountable	3.54
Communicating to faculty how accountability results will be used for school	
improvement	3.53
Developing a plan emphasizing accountability to stakeholders for student academic	
and social learning	3.45

^{* 4 =} very important, 3 = important, 2 = moderately important, 1 = not important

Effectiveness

The principals used the same 33-item PLCQ to rate the effectiveness of the PLCs on affecting school leadership, teacher self-efficacy, student achievement, and school improvement. The means of the respondents' responses were used to rank the ratings. Results are summarized in Tables 8-11.

Table 8 The Ranking of the Effectiveness of Professional Learning Communities on Affecting School Leadership, n=98

Item	Mean*
Planning for a positive environment in which student learning is the central focus	3.68
Supporting collaborative teams to improve instruction	3.65
Implementing a learning environment in which all students are known and cared for	3.63
Building a culture that honors academic achievement	3.55
Advocating a culture of learning that respects diversity of students	3.53
Allocating resources to build a culture focused on student learning	3.44
Discussing standards of professional behavior with faculty	3.32
Communicating with parents about the aspects of a positive school culture	3.23
Planning programs and policies that promote discipline and order	3.21

^{* 4 =} very effective, 3 = effective, 2 = moderately effective, 1 = not effective

Table 9 The Ranking of the Effectiveness of Professional Learning Communities on Affecting Teacher Self-Efficacy Items, n=98

Item	Mean*
Get students to work well together	3.33
Motivate students who show low interest in schoolwork	3.29
Get students to learn when there is a lack of support from the home	3.28
Overcome the influence of adverse community conditions on students' learning	3.27
Get through to most difficult students	3.24
Keep students on task on difficult assignments	3.13
Increase students' memory of what they have been taught in previous lessons	3.06
Get children to do their homework	2.63

^{* 4 =} very effective, 3 = effective, 2 = moderately effective, 1 = not effective

Table 10 The Ranking of the Effectiveness of Professional Learning Communities on Affecting Student Achievement Items, n=98

Item	Mean*
Climate of high expectations	3.68
Instructional leadership	3.58
Frequent monitoring of student progress	3.57
Clear and focused mission	3.53
Safe and orderly environment	3.50
Opportunity to learn and student time on task	3.39
Positive home – school relations	3.10

^{* 4 =} very effective, 3 = effective, 2 = moderately effective, 1 = not effective

Table 11 The Ranking of the Effectiveness of Professional Learning Communities on Affecting School Improvement Items, n=98

Item	Mean*
Allocating time to evaluate student learning	3.57
Monitoring the accuracy and appropriateness of data used for student accountability	3.51
Communicating to faculty how accountability results will be used for school	
improvement	3.45
Developing a plan for individual and collective accountability among faculty for	
student learning	3.42
Advocating that all students are accountable for achieving high levels of performance	
in both academic and social learning	3.37
Use faculty input to create methods to hold faculty accountable	3.36
Developing a plan emphasizing accountability to stakeholders for student achievement	
and social learning	3.34
Allocating time to evaluate faculty for student learning	3.29
Challenging faculty who attribute student failure to others	3.18

^{* 4 =} very effective, 3 = effective, 2 = moderately effective, 1 = not effective

Scale Scores

The 33-item PLCQ measured four high school-related constructs: school leadership (9 items), teacher self-efficacy (8 items), school achievement (7 items), and school improvement (9 items). The means of the respondents' responses were used to compute a scale score for each construct, measuring its importance and the effectiveness of the PLCs on affecting the construct. Cronbach's Coefficient Alpha was used to estimate the internal consistency of the scale scores. Results are summarized in Tables 12 and 13.

Table 12 The Importance on the Four High School Constructs, n=98

Reliability				
Construct	#of items	Coefficient	M*	SD
School leadership	9	0.73	3.45	0.50
Teacher self-efficacy	8	0.82	3.50	0.42
Student achievement	7	0.74	3.74	0.30
School improvement	9	0.86	3.59	0.39

^{*4 =} very important, 3 = important, 2 = moderately important, 1 = not important

Table 13

The Effectiveness of PLCs on Affecting the Four High School Constructs, n=98

Reliability					
Construct	#of items	Coefficient	M*	SD	
School leadership	9	0.88	3.47	0.47	
Teacher self-efficacy	8	0.92	3.15	0.63	
Student achievement	7	0.74	3.48	0.45	
School improvement	9	0.92	3.39	0.54	

^{*4 =} very effective, 3 = effective, 2 = moderately effective, 1 = not effective

Generalizability of the Scale Scores

The study's 98 high school principals were mostly white (n = 63), male (n = 69), and from rural school districts (n = 48). The majority reported holding master's degrees (n = 72) and had prior experience with the PLC model (n = 87). A series of MANOVA was performed.

The differences between male and female principals based on the importance of the constructs, Wilks' Lambda = 0.98, F(4, 93) = 0.47, p = 0.76, and the effectiveness of the PLCs on affecting the constructs, Wilks' Lambda = 0.97, F(4, 93) = 0.82, p = 0.52, were not statistically significant. Results are summarized in Tables 14 and 15.

Table 14

The Importance of the Four High School Constructs by Gender

	Male $(n = 69)$		Female (n	= 29)
Construct	M*	SD	M*	SD
School leadership	3.46	0.49	3.42	0.55
Teacher self-efficacy	3.48	0.43	3.53	0.41
Student achievement	3.75	0.28	3.71	0.32
School improvement	3.59	0.37	3.57	0.42

^{*4 =} very important, 3 = important, 2 = moderately important, 1 = not important

Table 15

The Effectiveness of the PLCs on Affecting the Four High School Constructs by Gender

	Male $(n = 69)$		Female (r	n = 29)
Construct	M*	SD	M^*	SD
School leadership	3.50	0.41	3.41	0.60
Teacher self-efficacy	3.18	0.62	3.09	0.67
Student achievement	3.52	0.39	3.37	0.58
School improvement	3.44	0.46	3.25	0.69

^{*4 =} very effective, 3 = effective, 2 = moderately effective, 1 = not effective

Based on ethnicity, the sample was dichotomized into whites and non-whites. The group differences on the basis of the importance of the constructs, *Wilks' Lambda* = 0.94, F(4, 93) = 1.47, p = 0.22, and the effectiveness of the PLCs on affecting the constructs, *Wilks' Lambda* = 0.97, F(4, 93) = 0.74, p = 0.59, were not statistically significant. Results are summarized in Tables 16 and 17.

Table 16

The Importance of the Four High School Constructs by Ethnicity

	White $(n = 63)$		Non-white $(n = 1)$	
Construct	M*	SD	M*	SD
School leadership	3.38	0.47	3.58	0.54
Teacher self-efficacy	3.47	0.42	3.54	0.42
Student achievement	3.70	0.32	3.82	0.22
School improvement	3.53	0.39	3.68	0.36

^{*4 =} very important, 3 = important, 2 = moderately important, 1 = not important

Table 17

The Effectiveness of the PLCs on Affecting the Four High School Constructs by Ethnicity

	White $(n = 63)$		Non-wh	ite $(n = 35)$
Construct	M*	SD	M*	SD
School leadership	3.44	0.48	3.54	0.45
Teacher self-efficacy	3.14	0.64	3.18	0.63
Student achievement	3.43	0.46	3.56	0.44
School improvement	3.35	0.54	3.45	0.56

^{*4 =} very effective, 3 = effective, 2 = moderately effective, 1 = not effective

The difference among the school communities, urban, suburban, and rural, based on importance of the constructs, Wilks' Lambda = 0.98, F(8, 184) = 0.27, p = 0.98, and the effectiveness of the PLCs on affecting the constructs, Wilks' Lambda = 0.90, F(8, 184) = 1.30, p = 0.25, were not statistically significant. Results are summarized in Tables 18 and 19.

Table 18

The Importance of the Four High School Constructs by School Community

	Urban (n = 24)	Suburban $(n = 26)$		Rural (1	n = 48)
Construct	M*	SD	M*	SD	M*	SD
School leadership	3.50	0.55	3.42	0.54	3.44	0.47
Teacher self-efficacy	3.45	0.54	3.50	0.38	3.51	0.38
Student achievement	3.72	0.32	3.73	0.35	3.76	0.24
School improvement	3.56	0.47	3.60	0.43	3.60	0.32

^{*4 =} very important, 3 = important, 2 = moderately important, 1 = not important

Table 19

The Effectiveness of the PLCs on Affecting the Four High School Constructs by School Community

	Urban (n	= 24)	Suburban (n = 26)		Rural (r	n = 48)
Construct	M*	SD	M*	SD	M*	SD
School leadership	3.50	0.53	3.53	0.47	3.43	0.45
Teacher self-efficacy	3.08	0.66	3.31	0.57	3.10	0.65
Student achievement	3.51	0.48	3.59	0.46	3.40	0.43
School improvement	3.50	0.61	3.40	0.65	3.32	0.43

^{*4 =} very effective, 3 = effective, 2 = moderately effective, 1 = not effective

The differences between the principals with master's or doctoral degrees on the basis of the importance of the constructs, Wilks' Lambda = 0.94, F(4, 93) = 1.36, p = 0.26, and effectiveness of the PLCs on affecting the constructs, Wilks' Lambda = 0.88, F(4, 93) = 3.34, p = 0.01, were not statistically significant. Results are summarized in Tables 20 and 21.

Table 20
The Importance of the Four High School Constructs by College Degree

	Master's $(n = 72)$		Doctorate (n = 26	
Construct	M*	SD	M *	SD
School leadership	3.49	0.50	3.34	0.51
Teacher self-efficacy	3.54	0.42	3.37	0.41
Student achievement	3.74	0.31	3.73	0.25
School improvement	3.61	0.39	3.53	0.38

^{*4} = very important, 3 = important, 2 = moderately important, 1 = not important

Table 21

The Effectiveness of the PLCs on Affecting the Four High School Constructs by College Degree

	Master's $(n = 72)$		Doctorate	e(n = 26)
Construct	M*	SD	M*	SD
School leadership	3.52	0.47	3.33	0.45
Teacher self-efficacy	3.19	0.62	3.06	0.68
Student achievement	3.46	0.47	3.53	0.40
School improvement	3.43	0.55	3.27	0.51

^{*4 =} very effective, 3 = effective, 2 = moderately effective, 1 = not effective

The differences between principals with or without prior experience with PLC models based on importance of the constructs, Wilks' Lambda = 0.96, F(4, 91) = 0.86, p = 0.48, and the effectiveness of the PLCs on affecting the constructs, Wilks' Lambda = 0.98, F(4, 91) = 0.55, p = 0.70, were not statistically significant. Results are summarized in Tables 22 and 23.

Table 22

The Importance of the Four High School Constructs by Prior PLC Experience

	Prior PLC Experience (n = 87)		No Prior PLO (n = 9)	C Experience
Construct	M*	SD	M*	SD
School leadership	3.45	0.50	3.57	0.49
Teacher self-efficacy	3.48	0.41	3.67	0.35
Student achievement	3.73	0.30	3.90	0.14
School improvement	3.58	0.39	3.75	0.26

^{*4} = very important, 3 = important, 2 = moderately important, 1 = not important

Table 23

The Effectiveness of the PLCs on Affecting the Four High School Constructs by PLC Experience

	Prior PLC Experience (n = 87)		No Prior PLC Experience (n = 9)	
Construct	M*	SD	M*	SD
School leadership	3.46	0.47	3.58	0.50
Teacher self-efficacy	3.13	0.64	3.39	0.59
Student achievement	3.47	0.46	3.67	0.38
School improvement	3.37	0.55	3.60	0.51

^{*4} = very effective, 3 = effective, 2 = moderately effective, 1 = not effective

A typical principal was 48 years old, had 23 years of experience in education, and nine years as a campus principal. None of the bivariate associations between the importance and effectiveness scores on one hand and age, years of experience in education, and years as a campus principal, ranging from 0.01 to 0.25, was statistically significant. None of the demographic differences based on the outcome measures and associations with the four constructs was statistically significant. Therefore, results were generalized to all study's participants.

Within Group Differences

A univariate repeated measures analysis of variance was performed to examine the differences among the importance of the four high school constructs. The sphericity assumption was met, as both the *Greenhouse-Geisser Epsilon* (0.84) and *Huynh-Feldt Epsilon* (0.86) were greater than 0.70. The mean differences were statistically significant, F(3, 291) = 22.08, p < 0.01. Results are summarized in Table 24.

Table 24

Repeated Measures ANOVA Results for the Importance of the Four High School Constructs

Source	SS	df	MS	F
Construct	4.90	3	1.64	22.08*
Block	42.77	97	0.44	
Residual	21.55	291	0.07	

^{*}p < 0.01

A modified Tukey procedure was performed for the purpose of post hoc analysis.

Results showed that with the exception of school leadership vs. teacher self-efficacy and teacher self-efficacy vs. school improvement, all pairwise comparisons were statistically significant at the 0.01 level. Results are summarized in Table 25.

Table 25

Post Hoc Results for the Importance of the Four High School Constructs

Pairwise Comparison	Significance*		
School leadership – teacher self-efficacy	NS		
School leadership – student achievement	S		
School leadership – school improvement	S		
Teacher self-efficacy – student achievement	S		
Teacher self-efficacy – school improvement	NS		
Student achievement – school improvement	S		

^{*}NS = not statistically significant, S = statistically significant

Another univariate repeated measures analysis of variance examined the differences among the effectiveness of PLCs on affecting the four high school constructs. The sphericity assumption was met (*Greenhouse-Geisser Epsilon* = 0.85, *Huynh-Feldt Epsilon* = 0.88). The mean differences were statistically significant, F(3, 291) = 27.08, p < .01. Results are summarized in Table 26.

Table 26

Repeated Measures ANOVA Results for the Effectiveness of PLCs on Affecting the Four Constructs

Source	SS	df	MS	F	
Construct	6.85	3	2.28	27.08*	
Block	84.71	97	0.87		
Residual	24.53	291	0.08		

^{*}p < 0.01

The modified Tukey procedure showed that the pairwise comparisons of school leadership skills vs. student achievement, school leadership skills vs. school improvement, and student achievement vs. school improvement were not statistically significant. The other three pairwise comparisons were statistically significant. Results are summarized in Table 27.

Table 27
Post Hoc Results for the Effectiveness of PLCs on Affecting the Four High School Constructs

Pairwise Comparison	Significance*		
School leadership – teacher self-efficacy	S		
School leadership – student achievement	NS		
School leadership – school improvement	NS		
Teacher self-efficacy – student achievement	S		
Teacher self-efficacy – school improvement	S		
Student achievement – school improvement	NS		

^{*}NS = not statistically significant, S = statistically significant

Comparison of Importance with Effectiveness

A series of paired-samples t-tests was performed to compare the importance of the four high school constructs with the effectiveness of the PLCs on affecting them. Mean difference effect sizes (Cohen's d), characterized as 0.20 = small, 0.50 = medium, and > 0.80 = large, examined the practical significance of the findings. As can be seen in Table 28, the importance scores were higher than were the effectiveness scores for teacher self-efficacy, student achievement, and school improvement, the differences were statistically significant, and mean differences effect sizes ranged from 0.40 to 0.63. The importance vs. effectiveness for school leadership was not statistically significant and the effect size of 0.04 was negligible.

Table 28 Comparison of Importance of the Four High School Constructs with Effectiveness of PLCS on Affecting the Constructs, n=98

	Importance		Effectiveness			
Construct	\mathbf{M}^{a}	SD	M^{b}	SD	t	d ^c
School leadership	3.45	0.50	3.47	0.47	-0.40	0.04
Teacher self-efficacy	3.49	0.42	3.15	0.63	5.49*	0.56
Student achievement	3.74	0.29	3.48	0.45	6.26*	0.63
School improvement	3.59	0.39	3.39	0.54	4.02*	0.40

^{*}p < 0.01

^a 4 = very important, 3 = important, 2 = moderately important, 1 = not important

^b 4 = very effective, 3 = effective, 2 = moderately effective, 1 = not effective

 $^{^{}c}$ d = mean difference effect size: 0.20 = small, 0.50 = medium, > 0.80 = large

Summary

The results showed that the high school principals, regardless of various demographic characteristics (i.e., age, gender, ethnicity, community type, education level, prior PLC experience, years of experience in education, and years as a campus principal) found the constructs of school leadership, teacher self-efficacy, student achievement, and school improvement quite important in everyday operation of their high schools and that the PLCs could be effective in influencing them. With the exception of school leadership skills, all importance scores were higher than the effectiveness scores.

CHAPTER V: SUMMARY, CONCLUSIONS, AND DISCUSSION

Introduction

National education laws include the original Elementary and Secondary Education Act (ESEA) of 1965, the reauthorized No Child Left Behind Act (NCLB) of 2001, and the most current reauthorization of the Every Student Succeeds Act (ESSA) of 2015. The highlights of these federal policies call for raising the bar for excellence through assessing and measuring student achievement and holding educators accountable for the learning of every race and income level (Mehta, 2015). Each of these laws would work to close the educational gap with accountability, flexibility, and providing choice to students while being inclusive to all student groups, especially for the at-risk and disadvantaged. Inevitably, educational policymakers and school districts must continue to be in pursuit of effective educational innovations aiding in surpassing the status quo of current teaching and student performances across the nation (U.S. Department of Education, 2015b).

School principals are serving a position, unlike the past, in which their professional responsibilities have become far more complex due to state and federal policies of today's school systems. The once known top-down managerial and instructional school principal is no longer optimal if schools are to perform at higher academic rates. Schools are becoming organizational systems that are far more complex than ever before. Reaching fulfillment of a school's vision and goals calls for everyone on the campus to contribute towards school accountability versus the school principal alone. In addition, teachers can no longer work in isolation within pedagogical teaching practices and the notion of individualism can no longer be accepted if schools are to satisfy the extensive amount of responsibilities set forth through school reform efforts and federal and state educational policies (DuFour & Eaker, 1998).

One solution gaining increased recognition as an effective educational innovation for 21st century school districts is that of transforming a school into a PLC model. Operating as a PLC can yield multiple benefits for educators of a school. For example, educators benefit from collaboration within the school community, because the PLC model provides for learning through collective inquiry, holds all stakeholders accountable for reaching higher student achievement, provides for frequent feedback and ongoing adjustments within teaching practices, and allows for ongoing reflection of the work; all contributing to the sustainability of school improvement. School principals who choose to foster a PLC model within the multifaceted dynamics of their schools will be taking a huge leap in cultivating positive change in hopes of gaining increased heights in student achievement and school improvement while developing teacher leaders and improving the overall educational profession.

The purpose of the study was to examine the perceptions of Texas high school principals regarding the importance and effectiveness of the PLC model as an educational innovation for the development of school leadership, teacher self-efficacy, student achievement, and school success. The following research questions guided the study:

- 1. What are the perceptions of Texas high school principals regarding the importance of school leadership, teacher self-efficacy, student achievement, and school improvement?
- 2. What are the perceptions of Texas high school principals regarding the effectiveness of the professional learning communities on affecting school leadership, teacher self-efficacy, student achievement, and school improvement?

Summary of the Results

The researcher-developed Professional Learning Community Questionnaire (PLCQ) was used for the purpose of data collection. The content validity and internal consistency of the instrument were examined and documented. A total of 98 high school principals from rural, urban, and suburban districts throughout the state of Texas participated in the study. A typical principal was 48 years old (SD = 8.74) with 23 years of experience in education (SD = 8.18) and having nine years as a campus principal (SD = 6.55). Respondents were predominately white (n = 63) males (n=69) holding graduate degrees (n = 72) who had prior experience with the PLC model (n = 87).

The results showed that the high school principals, regardless of various demographic characteristics (i.e., age, gender, ethnicity, community type, education level, prior PLC experience, years of experience in education, and years as a campus principal) found the constructs of school leadership, teacher self-efficacy, student achievement, and school improvement are quite important in everyday operation of their high schools and that the PLCs could be effective in influencing them. With the exception of school leadership skills, all importance scores were higher than the effectiveness scores.

Due to the non-experimental nature of the study, no causal inferences were drawn and the external validity was limited to the study's participants due to the non-probability nature of the sampling.

Conclusions

The researcher had postulated that school leadership, teacher self-efficacy, student achievement, and school improvement are important factors in everyday operation of high schools and PLCs can affect them. The results of the study supported the notions regardless of the age, gender, ethnicity, community type, education level, prior PLC experience, and years of experience as either an educator or school principal.

Discussion

The study employed an exploratory quantitative research design to examine the impact of PLCs on school leadership, teacher self-efficacy, student achievement, and school improvement. The study was delimited to Texas high school principals, who, as leaders in the 21st century schools are faced with a number of challenges as they are held to new leadership mandates, resulting in enhanced performance of the school (Onorato, 2013). Intertwined within the Texas Examinations of Educator Standards (TExES – Principal Standard 2), school principals must ensure that there are highly qualified teachers and staff in every classroom and must facilitate professional learning communities within their schools. The facilitation of PLCs within the school can be instrumental in creating a communicative structure of learners focused on effective learning.

Being successful in today's educational systems can be truly challenging and calls for strategic planning by the school principal. School principals have the ability to inspire their teachers and staff to take part in school-wide initiatives aimed at achieving student success. However, the notions of "all hands on deck" and "teacher buy-in" do not come easily for all schools because of resistance to change. Consequently, it becomes the responsibility of the

school principal to work with the non-compliant individuals to reach a mutually acceptable resolution.

Renowned educational researcher, Marzano (2003), reported that the single most important aspect of any school reform is leadership. The review of literature on school leadership styles recognizes three models most closely mirrored with the key components of framing an effective PLC model. These leadership models include shared leadership, distributive leadership, and transformational leadership, all playing a significant role in developing a communicative sphere of learners and making the process of change and reaching school improvement more attainable. Shared and distributive leadership models call for the school principal to delegate responsibilities to teacher leaders and staff, ultimately resulting in teacher empowerment. Onorato (2013) shared insights on transformational leadership in which this style of leadership attempts to influence the conditions that directly impact the quality of curriculum and instruction, targets variables in the change process such as encouraging continuous learning and sharing learning throughout the organization, and working with the community toward achieving organizational goals.

The study's theoretical framework was grounded on the origins of constructivism, the notion that learners develop new knowledge and deconstruct previous knowledge. The PLC model fosters the theory of constructivism as learning takes place through the means of collective inquiry and as an ongoing reflection of practice where teams of teachers exercise the opportunities to engage in meaningful discourse and reflect upon their pedagogical teaching practices to maximize the benefits of learning. Educators can apply these same concepts of learning into the classroom and instruction can be tailored to the ways in which students of today learn best; through a constructivist perspective, instead of isolation that was once considered the

traditional style of teaching and learning (DuFour & Eaker, 1998). Teaching and learning complement each other and cannot be easily separated. Constructivism does not dismiss the active role of the teacher or his/her knowledge, but encourages the learner to apply his/her existing knowledge and real-world experiences. Students learn to hypothesize, test their theories, and draw conclusions from their findings. Thus, students' ideas gain complexity and may lead to the development of the ability to integrate new knowledge. Teachers facilitate the learning process and students learn from one another rather than reproducing a series of facts (Constructivism as a Paradigm, 2017).

Constructivism continues to play a significant role in schools as teachers and students encounter advancements in ever-changing technologies. Though not necessarily new to students, access to technology within schools has been advancing rapidly. Since technology has been known to increase productivity and enhance the learning process, school districts are incorporating technological devices into pedagogical practices to benefit both teachers and students. Though never once seen before in school settings, technology is no longer moving at an incremental speed. Schools are challenged with the need to keep up with the speed of change as to how technology has been evolving in society. Schools must have a plan in place to manage technological changes and align the right technology to learning issues that are unique to specific environments and avoid inconsistent speed of change (Paddick, 2016). Technologies have become an integral part of education, affecting how we teach and learn.

Upon reflection of the study's findings, current and aspiring educational leaders can become aware of the value of PLCs as a contributor to school accountability. Participants of the study responded to a multitude of school-related factors (e.g., programs and policies, positive learning environment, culture and climate of the school, reflection of data-driven results,

allocation of resources, support of collaboration, professional development, student diversity, instructional leadership, parental involvement, professional ethic and standards) in which they indicated the importance of each factor while under the assumption that the key to improved learning for students were the educator's continuous development of job-embedded learning. The study provided insights on how school principals can foster effective communities of learners inclusive of the interconnectedness of groups among students, teachers, principals, and school districts. With accountability stakes higher than ever before, no groups within the school community can be excluded from the responsibility of reaching higher accountability rates of student learning. Regardless of the type of school reform efforts a school desires to embark upon, educational leadership plays a critical role as such individuals can provide evidence to whether school reform initiatives, such as fostering a PLC model, can support or hinder school improvement (Cranston, 2009).

Implications

Though numerous renowned educational researchers, such as DuFour, DuFour, Eaker, and Hord, suggested that PLCs are a promising mechanism for school improvement. As higher accountability standards continue to rise, the model has recently been gaining more recognition in today's schools, where the search for educational innovations are foremost (DuFour & Eaker, 1998; DuFour, Eaker, & DuFour, 2005; Hord, 1997b, 2004).

Educational leaders are ultimately responsible for school improvement and the Texas Education Agency has developed a new principal evaluation protocol in aiding school leaders in enhancing their professional development and improving as instructional leaders. Texas school principals are now being evaluated with the Texas Principal Evaluation and Support System (T-PESS). The T-PESS protocol provides guidance for the school leader in projecting his or her

own pathway for professional growth and development; while, at the same time, assisting school principals with clear guidelines for appraisals that "nurture ongoing improvement, systematically supporting performance, identifying performance strengths and support gaps, and providing for constructive feedback (Texas Education Agency, 2017). Educational policy makers, practitioners, researchers, and school leaders within the state of Texas should consider investing in the PLC model. The study's findings provided some evidence that the PLCs can be beneficial to the performance of schools and sustainability of higher student achievement. Schools, regardless of elementary or secondary settings, should take advantage of the PLC model as a response to school reform efforts for increased student achievement.

Educational leaders, who find interest in the conceptual framework of the PLC model and wish to instill the key elements of such an innovation in their schools, must first understand a major precondition of the model if they wish to achieve positive results. A trustworthy relationship within a school community ought to be sought and attained before embarking on PLCs. Therefore, it can be implied that without relational trust and frequent collaboration, a PLC model will fail to serve its purpose altogether (DuFour & Eaker, 1998).

School districts can make a difference in assisting the school principal to implement an effective PLC model. The review of literature indicated that the concept of reciprocal accountability, in which school districts should provide schools with relevant resources, is important. Such resources include job-embedded professional development, financial support, and human capital, which are important in assisting school communities to maximize their efforts while holding the school principals accountable for the new educational innovations such as the facilitation of PLCs (DuFour & Marzano, 2011; DuFour, DuFour, Eaker, & Many, 2006; Shoho, Barnett, & Tooms, 2010).

Educational leaders and practitioners would continue to be held accountable for student achievement and higher accountability standards as seen through various educational laws (ESEA of 1965, NCLB of 2001, ESSA of 2015). American schools operating in the 21st century are far more multifaceted than were in earlier years due to factors such as the rise of technology, globalization, budgetary restraints, reduction in force, and high stakes testing. School principals continue to face educational challenges that they are no longer able to overcome as a single entity. It can be implied that such leaders must seek educational innovations, allowing for continuous and frequent collaboration as an ongoing practice to support and sustain a community of learners for both students and teachers to achieve better academic achievement. The PLC model can have a positive influence on guiding school principals and their constituents in reaching such endeavors.

For PLCs to be a successful innovation for learning, all concerned educational leaders must be willing to reexamine traditional professional development. Society has brought about new pathways of learning through social media and has transformed how teachers and students function. Accessing information, communicating, and networking has become just a click away and educators should seek new pedagogical practices to help support such learning styles.

Educators must rely on district personnel as their support systems to succeed as a PLC. District leadership teams should coordinate professional development trainings by incorporating the published literature on PLCs, providing funds for materials, and obtaining the human capital for schools in need of additional support. District leadership teams should create model schools representing a family of educators functioning as an effective PLC and allow other schools to visit the campus. Other schools within the district would have the opportunity to refer to these

campuses as examples in developing and implementing PLCs. Such approaches enhance school leadership and benefit the campus as a whole.

The enhancement of teachers' self-efficacy through the inclusion of PLCs would greatly increase the quality of the instruction; thus, improving annual teacher evaluations and increasing student achievement. The PLC model allows for teachers to work interdependently to achieve common goals in which every individual throughout the organizational hierarchy contributes to the improvement of the school. The PLC model can lead to teacher empowerment. Ultimately this model will create a stronger school. District personnel can tailor pre-service and in-service professional development based on the PLC model and school principals can tie in teacher evaluations to include strategies embedded within the PLC model.

Increasing student achievement, as a result of fostering a PLC model, can be demonstrated by various test scores and assessments. School principals and teachers must be able to view, record, and reflect upon test scores in an attempt to improve students' academic achievement. In short, PLCs can significantly contribute to overall school improvement.

Recommendations for Further Research

The study's delimitations, limitations, and assumptions offers opportunities for further research: (1) due to the non-probability nature of the sampling, external validity was limited to the study's participants; (2) the study was delimited to Texas high school principals; (3) the study was delimited to the four constructs of school leadership, teacher self-efficacy, student achievement, and school improvement; (4) it was assumed that the study's participants were honest in completing the survey instrument. To enhance the generalization of the results, the researcher recommends: (1) replication of the study in other states within the nation; (2)

replication of the study to examine constructs other than the four examined in this study; (3) replication of the study with elementary and middle school principals; (4) a longitudinal study to examine the developmental changes that can be contributed to PLCs; (5) replication of the study to examine school principals practicing PLCs in conjunction with at least one of the three leadership models (shared, distributive, and transformational); and (6) conducting qualitative research to document the perspective of the educational leaders regarding the advantages and disadvantages of the PLC model.

Final Remarks

Conducting the dissertation research provided me with an opportunity to advance my expertise in school leadership, teaching, and learning, and implementing PLCs will guide me towards becoming an innovative, aspiring educational leader. In an era of higher accountability and school reform, a school principal must be able to invest in researched-based pedagogical practices, such as the PLC model, to enhance the improvement of student achievement and school success.

I have gained much insight on how school principals ought to function as they take on complex organizations. Key components fostered within a PLC model mirror closely with my personal philosophies and beliefs in regards to the demeanor of my character and how I choose to operate as an educator. The concepts of job-embedded professional development, learning as a collective inquiry, ongoing collaboration, frequent reflection of pedagogical teaching practices derived from data-driven results, and teacher empowerment and development are influential factors in which the school principal exercises the ability to either hinder or embrace such factors.

I have been teaching in an era of educational change in which I have had the opportunity to undergo numerous school reform initiatives that appear to be never-ending. Some of these initiatives have been successful while others often have taken opposite paths. In addition, I have taught in a time when new educational laws have developed (e.g., NCLB and ESSA) in a continuation to expand on the notion of school accountability and overall school success. Educational laws, such as the ESEA, NCLB, and ESSA, have put great restraints upon current and past educators, especially for the school principal. Nurturing the school community in efforts towards raising the bar for increased student achievement must remain a central focus of school principals while adapting to and fulfilling the current federal and state accountability standards.

As an aspiring educational leader, this research provided me with insights on what it is to be serving as a school leader on a daily basis and during the most difficult times of school reform. In my professional opinion, the PLC model will be a promising 21st century educational innovation as a means of a school reform initiative to embark upon when I find myself serving as an administrator.

REFERENCES

- Bandura, A. (2006). Self-efficacy beliefs of adolescents. *Guide for constructing self-efficacy scales*, 307-337. Retrieved from https://www.uky.edu/~eushe2/Bandura/BanduraGuide2006.pdf
- Bandura, A. (1994). Self-efficacy. In V.S. Ramachaudran (Ed.), *Encyclopedia of human behavior*, 4. New York: Academic Press, pp. 71-81.
- Barnett, B. G., Shoho, A. R., & Cypres, A. T. (Ed.). (2012). *The changing of instructional leadership in the 21st century* (Vol. 8). Charlotte, NC: Information Age Publishing.
- Cohen, J. (1988). Statistical power analysis for the behavioral sciences (2nd ed). Hillsdale, NJ: Lawrence Erlbaum Association, Inc.
- Collinson, V. & Cook, T.F. (2007). Organizational learning. Thousand Oaks, CA: Sage.
- Constructivism as a paradigm for teaching and learning. (June 24, 2004). Retrieved from http://www.thirteen.org/
- Cranston, J. (2009). Holding the reins of the professional learning community: Eight themes from research on principals' perceptions of professional learning communities. *Canadian Journal of Educational Administration and Policy*, (90), 1-22.
- Crocker, L., & Algina, J. (1986). Introduction to classical and modern test theory. New York, NY: CBS College Publishing.
- Darling-Hammond, L., & Baratz-Snowden, J. (Eds.). (2005). The national academy of education: A good teacher in every classroom preparing the highly qualified teachers our children deserve. San Francisco, CA: Jossey-Bass.
- Dimmock, C. (2012). Leadership, capacity building and school improvement: Concepts, themes, and impact. New York: Routledge.

- Dinham, S. (2005). Waves of leadership. Australian Centre for Educational Leadership, 1, 3.
- Dinham, S., Aubusson, P., & Brady, L. (2008). Distributed leadership as a factor in and outcome of teacher action learning. *International Electronic Journal for Leadership in Learning*, v12, n4.
- Donohoo, J. (2013). Collaborative inquiry for educators: A facilitator's guide to school improvement. Thousand Oaks, CA: SAGE Publications Corwin.
- DuFour, R., DuFour, R., Eaker, R., & Many, T. (2006). *Learning by doing: A handbook for professional learning communities at work*. Bloomington, IN: Solution Tree Press.
- DuFour, R., & Eaker, R. (1998). Professional learning communities at work: Best practices for enhancing student achievement. Bloomington, IN: Solution Tree Press.
- DuFour, R., Eaker, R., & DuFour, R. (2005). Closing the knowing-doing gap. On common ground: The power of professional learning communities. Bloomington, IN: Solution Tree Press.
- DuFour, R. & Fullan, (2013). *Cultures built to last: Systematic PLCs at work*. Bloomington, IN: Solution Tree Press.
- DuFour, R., & Marzano, R. (2011). Leaders of learning: How district, school, and classroom leaders improve student achievement. Bloomington, IN: Solution Tree Press.
- Feger, S. & Arruda, E. (2008). Professional learning communities: Key themes from the literature. *The Education Alliance, Brown University*. Retrieved from www.alliance.brown.edu
- Field, A. (2013). Discovering statistics using IBM SPSS statistics (4th ed.). Thousand Oaks, CA: SAGE.

- Fink, J.E., & Inkelas, K. K. (2015). A history of learning communities within American higher education. *New Directions for Student Services*, 2015(149), 5-15.
- Fosnot, C. T. (2005). *Constructivism: Theory, perspectives, and practice*. Amsterdam Avenue, New York, NY: Teachers College Press.
- Fullan, M. (2001). Leading in a culture of change. San Francisco: Jossey-Bass.
- Hairon, S., & Dimmock, C. (2012). Singapore schools and professional learning communities:

 Teacher professional development and school leadership in an Asian hierarchical system. *Educational Review*, 64(4), 405-424.
- Hallinger, P., & Heck, R. H. (1998). Exploring the principal's contribution to school effectiveness: 1980-1995. *School Effectiveness and School Improvement*, 9(2), 157-191.
- Harris, A. (2004). Teacher leadership and distributed leadership: An exploration of the literature. *Leading and Managing*, 10(2), 1-9.
- Hipp, K. K., & Huffman, J. B. (2010). *Demystifying professional learning communities: School leadership at its best.* Lanham, MD: Rowman & Littlefield Publishers, Inc.
- Hord, S. (1997a). Professional learning communities: What are they and why are they important? *Issues...about Change*, *6*(1), 1-8. Retrieved on September 25, 2015 at www.sedl.org
- Hord, S. (1997b). *Professional learning communities: Communities of continuous inquiry and improvement*. Austin, TX: Southwest Educational Development Laboratory.
- Hord, S. (2004). Professional learning communities: An overview. In S.M. Hord (Ed.), *Learning together: Leading together. Changing schools through PLCs* (pp. 5-19). New York: Teachers College Press.
- Hord, S., Roussin, J. L., & Sommers, W. A. (2010). *Guiding professional learning communities: Inspiration, challenges, surprise, and meaning.* Thousand Oaks, CA: Corwin.

- Humada-Ludeke, A. (2013). The creation of a professional learning community for school leaders: Insights on the change process from the lens of the school leader. The Netherlands: Sense Publishers.
- Kaplan, L. S., & Owings, W. A. (2015). *Introduction to the principalship: Theory to practice*. New York, NY: Taylor & Francis.
- Kleine-Kracht, P. A. (1993). The principal in a community of learning. *Journal of School Leadership*, *3*(4), 391-399.
- Knight, J. (Ed.). (2013). *Agents of change: How content coaching transforms teaching and learning*. Portsmouth, NH: Heinemann.
- Lieberman, A. (1995). Practices that support teacher development: Transforming conceptions of professional learning. *Phi Delta Kappan*, 76, 591-596.
- McLaughlin, M. W., & Oberman, I. (Eds.). (1996). *Teacher learning: New policies, new practices*. New York, NY: Teachers College Press.
- McLaughlin, M. & Talbert, J. (2001). *Professional communities and the work of high school teaching*. Chicago: University of Chicago Press.
- Marzano, R. (2003). What works in schools: Translating research into action. Alexandria, VA: ASCD.
- Mehta, J. (2015). Escaping the shadow: "A Nation at Risk" and its far-reaching influence.

 *American Educator, 39(2), 20-26.
- O'Neill, J. & Conzemius, A. (2006). *The power of SMART goals: Using goals to improve student learning*. Bloomington, IN: Solution Tree.

- Onorato, M. (2013). Transformational leadership style in the educational sector: An empirical study of corporate managers and educational leaders. *Academy of Educational Leadership Journal*, 17, (1), 33-47.
- Paddick, R. (2016). Keeping up with the speed of change. *Educational Technology*. Retrieved from http://edtechnology.co.uk
- Porter, A. C., Murphy, J., Goldring, E., Elliott, S. N., Polikoff, M. S., & May, H. (2008).

 *Vanderbilt assessment of leadership in education [Technical Manual]. Retrieved from http://www.wallacefoundation.org/knowledge-center/Documents/Vanderbilt-Assessment-of-Leadership-in-Education-Technical-Manual-1.pdf
- Protheroe, N., Shellard, E., & Turner, J. (2003). A practical guide to school improvement:

 Meeting the challenges of NCLB. Arlington, VA: Educational Research Service.
- Ratcliffe, M. J. & Harts, M. L. (2011). Schools that make the grade: What successful schools do to improve student achievement. Baltimore, MD: Paul Brookes Publishing.
- Roberts, S. M., & Pruitt, E. Z. (2009). Schools as professional learning communities:

 Collaborative activities and strategies for professional development (2nd ed.). Thousand Oaks, CA: Corwin.
- Senge, P. (1990). *The fifth discipline: The art and practice of the learning organization*. New York, NY: Doubleday Currency.
- Senge, P. (1996). Leading learning organizations. In F. Hesselbein, M. Goldsmith, & R. Beckhard (Eds.), *The leader of the future* (pp. 41-58). San Francisco, CA: Jossey-Bass.
- Shoho, A. R., Barnett, B. G., & Tooms, A. K. (2010). The challenges for new principals in the twenty-first century: Developing leadership capabilities through professional support.

 Charlotte, NC: Information Age Publishing, Inc.

- Siccone, F. (2012). Essential skills for effective school leadership. Upper Saddle River, NJ: Pearson Education, Inc.
- Stevens, J. P. (2009). *Applied multivariate statistics for the social sciences* (5th ed.). New York, NY: Routledge.
- Stoll, L. (2010). Connecting learning communities: Capacity building for systematic change. In Hargreaves, A. Lieberman, M. Fullan, & D. Hopkins (Eds.), *Second international* handbook of educational change (pp. 469-484). Dordrecht, Springer: International Handbook of Education.
- Strong, M. (2011). The highly qualified teacher: What is teacher quality and how do we measure it? New York, NY: Teachers College Press.
- Tate, W. (2009). *The search for leadership: An organizational perspective*. Portland, OR: Triarchy Press.
- Texas Education Agency, (2015). About TEA. Retrieved from http://tea.texas.gov/
- Texas Education Agency, (2017). Texas principal evaluation & support system. Retrieved from https://tpess.org
- U.S. Department of Education (2015a). No Child Left Behind Act. Retrieved from http://www2.ed.gov/nclb/landing.jhtml
- U.S. Department of Education (2015b). Elementary and Secondary Education Act. Retrieved from http://www.ed.gov/esea
- U.S. Department of Education (2015c). Every Student Succeeds Act. Retrieved from http://www.ed.gov
- U.S. Department of Education (2015d). A Nation at Risk. Retrieved from http://www.ed.gov/
- Vogt, P. W. (2007). Quantitative research methods. Boston, MA: Pearson Education.

Wiseman, A. W. (2009). Educational leadership: Global contexts and international comparisons.

Lehigh University, USA: Emerald Group Publishing Limited.

APPENDIX A: PROFESSIONAL LEARNING COMMUNITY QUESTIONNAIRE

The online survey is organized as a three-part instrument and your responses will be kept confidential.

In Part I, you are asked to indicate the level of *importance* of factors affecting school leadership skills, teacher self-efficacy, student achievement, and school improvement.

In Part II, you are asked to indicate the *effectiveness* of the professional learning communities in impacting the factors that define the abovementioned constructs.

In Part III, you are asked to kindly provide some demographic information.

For the purpose of the study, professional learning communities consist of educators committed to working collaboratively in ongoing process of collective inquiry and action research to achieve better results for the students they serve, operating under the assumption that the key to improved learning for students is the educators' continuous jobembedded learning.

CONSENT FORM

Introduction:

The purpose of this form is to provide you information that may affect your decision as to whether or not to participate in this research study. If you decide to participate in the study, this form will also be used to record your consent.

What will I be asked to do?

If you agree to participate in the study, you will be asked to complete an electronic survey. The survey may take up to 20-30 minutes to complete.

What are the risks involved?

The risks are minimal and not greater than risks ordinarily encountered in daily life.

What are the possible benefits?

You will receive no direct benefit from participating in the study; however, the study's findings may have a benefit in the field of higher education leadership.

Do I have to participate?

No, your participation is voluntary and you may decide to drop out at any time throughout the study with no penalties.

Who will know about my participation in this research study?

No one, and no identifiers linking you to this study will be included in any report that may be published. Your name and/or IP address will not be collected.

Who do I contact with questions about the research?

You may contact the researcher, Amelia Guajardo-Cantú, at acantu7@islander.tamucc.edu or 361-510-7501.

Who do I contact about my rights as a research participant?

The research study has been reviewed by the Research Compliance Office and the Institutional Review Board at Texas A&M University-Corpus Christi. For research-related problems or questions regarding your rights as a research participant, you can contact Caroline Lutz, Research Compliance Officer, at caroline.lutz@tamucc.edu or 361-825-2497.

Agreement to Participate

You agree to participate in the study by completing the following survey. Participants must be 18 years of age or older. Please do not complete the survey if you do not wish to participate in the study.

Part 1 – Please indicate the level of importance of the following:

4 = very important, 3 = important, 2 = moderately important, and 1 = not important

School Leadership

Planning programs and policies that promote discipline and order.					
☐ Very important	☐ Important	☐ Moderately important	□Not important		
Planning for a positive enviro	onment in whic	h student learning is the centra	al focus.		
☐ Very important	☐ Important	☐ Moderately important	□Not important		
Implementing a learning envi	ironment in wh	ich all students are known and	cared for.		
☐ Very important	☐ Important	☐ Moderately important	□Not important		
Building a culture that honor	Building a culture that honors academic achievement.				
☐ Very important	☐ Important	☐ Moderately important	□Not important		
Allocating resources to build	a culture focus	sed on student learning.			
☐ Very important	☐ Important	☐ Moderately important	□Not important		
Supporting collaborative teams to improve instruction.					
☐ Very important	☐ Important	☐ Moderately important	□Not important		
Advocating a culture of learning that respects diversity of students.					
☐ Very important	☐ Important	☐ Moderately important	□Not important		
Communicating with parents about the aspects of a positive school culture.					

☐ Very important	☐ Important	☐ Moderately important	□Not important
Discussing standards of pr	rofessional behavi	or with faculty.	
☐ Very important	☐ Important	☐ Moderately important	□Not important

Teacher Self-Efficacy

Get through to most difficult	students.			
☐ Very important	☐ Important	☐ Moderately important	□Not important	
Get students to learn when the	nere is a lack of	support from the home.		
☐ Very important		☐ Moderately important	□Not important	
Keep students on task on diff	ficult assignme	nts.		
☐ Very important	☐ Important	☐ Moderately important	□Not important	
Increase students' memory o	f what they hav	ve been taught in previous less	ons.	
☐ Very important	☐ Important	☐ Moderately important	□Not important	
Motivate students who show	low interest in	schoolwork.		
☐ Very important	☐ Important	☐ Moderately important	□Not important	
Get students to work well to	gether.			
☐ Very important	☐ Important	☐ Moderately important	□Not important	
Overcome the influence of adverse community conditions on students' learning.				
☐ Very important	☐ Important	☐ Moderately important	□Not important	
Get children to do their home	ework.			
☐ Very important	☐ Important	☐ Moderately important	□Not important	

Student Achievement

Positive home – school relat	ions.		
☐ Very important	☐ Important	☐ Moderately important	□Not important
Opportunity to learn and stu	dent time on tas	sk.	
☐ Very important	☐ Important	☐ Moderately important	□Not important
Climate of high expectations	S.		
☐ Very important	☐ Important	☐ Moderately important	□Not important
Clear and focused mission.			
☐ Very important	☐ Important	☐ Moderately important	□Not important
Frequent monitoring of stud	ent progress.		
☐ Very important	☐ Important	☐ Moderately important	□Not important
Instructional leadership.			
☐ Very important	☐ Important	☐ Moderately important	□Not important
Safe and orderly environment	nt.		
☐ Very important	☐ Important	☐ Moderately important	□Not important

School Improvement

Developing a plan for individual and collective accountability among faculty for student				
learning.				
☐ Very important	☐ Important	☐ Moderately important	□Not important	
Developing a plan emphasiz learning.	ing accountabil	ity to stakeholders for student	academic and social	
☐ Very important		☐ Moderately important	□Not important	
Use faculty input to create m	nethods to hold	faculty accountable.		
☐ Very important	☐ Important	☐ Moderately important	□Not important	
Allocating time to evaluate f	faculty for stude	ent learning.		
☐ Very important	☐ Important	☐ Moderat ely important	□Not important	
Allocating time to evaluate s	student learning			
☐ Very important	☐ Important	☐ Moderately important	□Not important	
Challenging faculty who attr	ribute student fa	ilure to others.		
☐ Very important	☐ Important	☐ Moderately important	□Not important	
Advocating that all students are accountable for achieving high levels of performance in both				
academic and social learning.				
☐ Very important	☐ Important	☐ Moderately important	□Not important	

Communicating to faculty h	now accountability	ity results will be used for sci	nool improvement.	
☐ Very important	☐ Important	☐ Moderately important	□Not important	
Monitoring the accuracy and appropriateness of data used for student accountability.				
☐ Very important	☐ Important	☐ Moderately important	□Not important	

 $\label{eq:part_II} \begin{tabular}{l} \textbf{Part II} - \textbf{Please indicate the effectiveness of the professional learning communities in affecting the following.} \end{tabular}$

4 = very effective, 3 = effective, 2 = moderately effective, and 1 = not effective

School Leadership

Planning programs and poli	cies that promo	te discipline and order.		
☐ Very effective	☐ Effective	☐ Moderately effective	□ Not effective	
Planning for a positive envi	ronment in whi	ch student learning is the centr	ral focus.	
☐ Very effective	☐ Effective	☐ Moderately effective	□ Not effective	
Implementing a learning en	vironment in w	hich all students are known and	d cared for.	
☐ Very effective	☐ Effective	☐ Moderately effective	□ Not effective	
Building a culture that hono	Building a culture that honors academic achievement.			
☐ Very effective	☐ Effective	☐ Moderately effective	□ Not effective	
Allocating resources to build a culture focused on student learning.				
☐ Very effective	☐ Effective	☐ Moderately effective	□ Not effective	
Supporting collaborative tea	ams to improve	instruction.		
☐ Very effective	☐ Effective	☐ Moderately effective	□ Not effective	
Advocating a culture of lear	rning that respec	cts diversity of students.		
☐ Very effective	☐ Effective	☐ Moderately effective	□ Not effective	

Communicating with paren	nts about the aspo	ects of a positive school cult	ure.	
☐ Very effective	☐ Effective	☐ Moderately effective	□ Not effective	
Discussing standards of professional behavior with faculty.				
☐ Very effective	☐ Effective	☐ Moderately effective	□ Not effective	

Teacher Self-Efficacy

Get through to most difficult students.				
☐ Very effective	☐ Effective	☐ Moderately effective	□ Not effective	
Get students to learn when the	nere is a lack of	support from the home.		
☐ Very effective	☐ Effective	☐ Moderately effective	□ Not effective	
Keep students on task on diff	ficult assignme	nts.		
☐ Very effective	☐ Effective	☐ Moderately effective	□ Not effective	
Increase students' memory o	f what they hav	ve been taught in previous less	ons.	
☐ Very effective	☐ Effective	☐ Moderately effective	□ Not effective	
Motivate students who show	low interest in	schoolwork.		
☐ Very effective	☐ Effective	☐ Moderately effective	□ Not effective	
Get students to work well together.				
☐ Very effective	☐ Effective	☐ Moderately effective	□ Not effective	
Overcome the influence of adverse community conditions on students' learning.				
☐ Very effective	☐ Effective	☐ Moderately effective	□ Not effective	
Get children to do their homework.				
☐ Very effective	☐ Effective	☐ Moderately effective	□ Not effective	

Student Achievement

Positive home – school relations.				
□ Very effective	☐ Effective	☐ Moderately effective	□ Not effective	
Opportunity to learn and stud	dent time on tas	sk.		
☐ Very effective	☐ Effective	☐ Moderately effective	□ Not effective	
Climate of high expectations	S.			
□ Very effective	☐ Effective	☐ Moderately effective	□ Not effective	
Clear and focused mission.				
□ Very effective	☐ Effective	☐ Moderately effective	□ Not effective	
Frequent monitoring of stude	ent progress.			
□ Very effective	☐ Effective	☐ Moderately effective	□ Not effective	
Instructional leadership.				
☐ Very effective	☐ Effective	☐ Moderately effective	□ Not effective	
Safe and orderly environment.				
□ Very effective	☐ Effective	☐ Moderately effective	□ Not effective	

School Improvement

Developing a plan for individual and collective accountability among faculty for student			
learning.			
☐ Very effective	☐ Effective	☐ Moderately effective	□ Not effective
Developing a plan emphasiz	ing accountabil	ity to stakeholders for student	academic and social
learning.			
☐ Very effective	☐ Effective	☐ Moderately effective	□ Not effective
Use faculty input to create m	nethods to hold	faculty accountable.	
☐ Very effective	☐ Effective	☐ Moderately effective	□ Not effective
Allocating time to evaluate f	aculty for stude	ent learning.	
☐ Very effective	☐ Effective	☐ Moderately effective	□ Not effective
Allocating time to evaluate s	tudent learning	; .	
□ Very effective	☐ Effective	☐ Moderately effective	□ Not effective
Challenging faculty who attr	ribute student fa	ailure to others.	
□ Very effective	☐ Effective	☐ Moderately effective	□ Not effective
Advocating that all students are accountable for achieving high levels of performance in both			
academic and social learning.			
☐ Very effective	□ Effective	☐ Moderately effective	□ Not effective
Communicating to faculty how accountability results will be used for school improvement.			

☐ Very effective	☐ Effective	☐ Moderately effective	□ Not effective
Monitoring the accuracy	and appropriatene	ss of data used for student ac	ecountability.
☐ Very effective	☐ Effective	☐ Moderately effective	□ Not effective

Demographic Information

1.	What is your gender?
	Male
	Female
2.	What is your Ethnicity?
	American Indian or Alaska Native Asian Black or African American Hispanic or Latino Native Hawaiian or Other Pacific Islander White Other
3.	Highest Degree attained? Bachelor's Master's Doctorate
4.	What type of community does your school serve? Urban Suburban Rural
5.	What is your age?
6.	Number of years of experience as a campus principal?
7.	Number of years of experience as an educator?