

THE INFLUENCE OF PROFESSIONAL LEARNING COMMUNITIES ON TEACHER
EFFICACY AND ADVANCED PLACEMENT PRACTICES

by

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(Under the Direction of Karen Bryant)

ABSTRACT

As the general public demands more accountability on behalf of schools, educators struggle to meet rising minimum standards. In an effort to address these expectations and search for ways to improve, educators consider applying a professional learning community (PLC) practice, which centers on the improvement of teaching and learning. While traits of professional learning communities are documented in the literature, little is known about how the model affects both teacher efficacy and the classroom practices of Advanced Placement (AP) teachers. The purpose of this study is to determine the influence a PLC has on the efficacy of the teachers participating, as well as the AP English exam scores of those teachers' students. Action research will drive this project in an attempt to answer the following research questions:

1. How is teacher self efficacy influenced by participation in a PLC?
2. In what ways do teachers engage in the process of collective learning through a PLC?
3. How does participation in a PLC affect teacher practices in AP classrooms?

The researcher employed a mixed methods approach. A survey instrument and student exam scores were used to gather quantitative data. Qualitative data in this study consists of pre and post interviews with participants and researcher observation notes.

Keywords: professional learning community (PLC), teacher efficacy, advanced placement (AP), collaborative learning

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DEDICATION

To

Marilyn Fay Lawrence and Kenneth Lawrence

My mother and father

Raised two doctors and more importantly two Christians. Not bad for two kids from Beallwood!

And to think you only needed two things: God and EACH OTHER! I am eternally grateful for
all of the life, love, laughter, and lessons.

and

Dr. Chelsea Brinee Lawrence

My beautiful sister

You are my muse! Who would have guessed that my little sister could serve as such an
inspiration? Every time I felt like quitting your smile would not let me. I love you!

and

Annie Jean and Robert Lee Bass and the late Ozemma and James Lawrence, Sr.

My grandparents

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oppression, is nothing short of a miracle! I pray that you take great pride in the current and future

triumphs of your lineage.

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the late Herbert Greene and Dr. James Brewbaker

My coach and my mentor

Thanks for giving me a shot and the life lessons outside of basketball Coach Greene. Dr.
Brewbaker I am not a teacher without your encouragement and guidance. I hope I have made
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The late Randy Newton, Antwon Whitehead and Richard Cummings, Jr.

My friend and teammate and my two players

You guys you were taken from me far too soon! I will continue to work as hard as I can for the
students in my charge to honor your legacy.

and

Peyton Ryan Butler and Vivian Claire Kimbrough

My godson and goddaughter

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TABLE OF CONTENTS

	Page
CHAPTER	
1. INTRODUCTION.....	7
2. LITERATURE REVIEW.....	16
3. METHODOLOGY.....	29
4. CASE STUDY – STORY OF THE ACTION RESEARCH PROJECT.....	37
5. FINDINGS.....	54
6. ANALYSIS, CONCLUSIONS, AND IMPLICATIONS.....	71
7. REFERENCES.....	82
8. APPENDICES.....	88

CHAPTER 1

INTRODUCTION

Background

Statement of Research Questions

The purpose of this action research project was to improve teacher efficacy and student performance on English Literature and English Language Advanced Placement (AP) exams. This case study investigated the influence that a professional learning community (PLC) has on both teacher efficacy and student achievement, so that the action research (AR) team may develop ways to improve teaching and learning. The AR team also delved into methods by which any potential success might be replicated throughout the school. Members of the action research team worked in concert to answer the following research questions:

- How is teacher self efficacy influenced by participation in a PLC?
- In what ways do teachers engage in the process of collective learning through a PLC?
- How does participation in a PLC affect teacher practices in AP classrooms?

Conceptual Framework

Research on PLCs has shown that when used properly they can positively affect both teacher and student learning (Hoban, Hastings, Luccarda, and Lloyd, 1997). Similarly, much research has been done on the positive correlation between teacher self efficacy and student achievement (Bray-Clark & Bates, 2003). Research also suggests that collaboration among

teachers produces a great sense of efficacy among those teachers (Ross, 1992). Given the research, a conceptual framework was devised to depict the desired symbiotic relationship between the three entities shown in Figure 1. In this particular framework the PLC positively influences teacher self efficacy, which, in turn, positively influences student achievement. The ramifications of this work are potentially far-reaching. Establishing a link between PLCs, self efficacy, and achievement could be applied to virtually any system run by people in various roles.

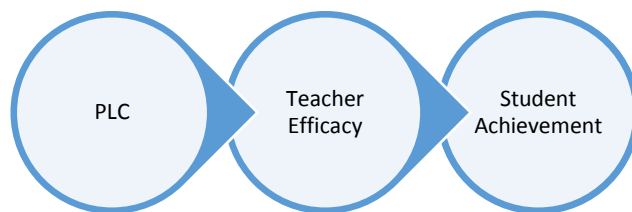


Figure 1: Graphic organizer of conceptual framework which illustrates the relationship between professional learning communities, teacher efficacy, and student achievement.

Methodology

This study employs a mixed methods approach, consequently, both qualitative and quantitative data will be gathered in order to achieve clarity on the research questions. The qualitative data that was collected consisted of researcher observations and reflections, as well as, interviews that were conducted and coded in order to analyze developing themes and trends of those participating in the PLC. The quantitative data in this study consisted of the results of the survey responses that were scored in order to gain a more accurate picture of the level of efficacy among the teachers in the PLC. The results were analyzed for statistical significance as

to the potential influence of the PLC on student achievement. Action research is the most practical approach for this study because it allows for action to address a relative problem and the study of that action. McDonough & McDonough (1997) propose four characteristics of ‘pure’ action research as follows: 1) It is participant-driven and reflective; 2) It is collaborative; 3) It leads to change and the improvement of practice not just knowledge in itself; and 4) It is context-specific. Experimental research would require too many years of iterative cycles without the prospect to intervene as needed. Given the current state of the AP program at Heritage High School, action research provides the essential outlet for meaningful reflections, action, and alterations.

Significance

The underperforming and underrepresentation of African American students in AP coursework is a national problem. Research has suggested several causes of this phenomenon ranging from community perceptions of students in AP curriculum to accessibility to the AP program for students. Many of these potential explanations are examined in the review of literature, however, the factor that will be examined specifically in this research study is that of teacher efficacy with regard to AP students of color. While not every child can be successful with AP material, a teacher with a deficit attitude can interfere with a student gaining access to or succeeding in an AP course. It is not surprising that there are problems when teachers either do not believe certain students belong in an AP class or that there is only one right way to teach an AP class. Tucker, et. al. (2005) point out:

Teachers exert a potent influence over the achievement of all students, low-income culturally diverse students in particular. Although recent research has confirmed that teacher involvement is critical for promoting academic engagement of low-income and

ethnically diverse students, other literature suggests that teachers have lower expectations for and fewer interactions with these children. These findings have prompted calls for promoting teacher self efficacy for working with children from diverse backgrounds.

Teacher efficacy is an interesting phenomenon. It is the extent to which a teacher believes that her students can learn or that she can help them learn. Surprisingly, teachers with a higher teacher efficacy rate are more successful with students than their colleagues with a lower efficacy rating. Guided by Vygotsky's social cognition theory and Bandura's concept of self efficacy, this action research project considers how educators may improve student achievement and strengthen their self efficacy for teaching through a PLC framework. This study is timely and will add to the limited body of research on the connection between professional learning communities for teachers and the academic achievement of economically disadvantaged African American students.

Problem

Overview of the Case

This action research study addresses the influence of a PLC on teacher efficacy and student achievement. Heritage High School, a medium-sized secondary school within an urban school district, will be the context for this action research study. Heritage is located in a metropolitan city in the Southeastern United States with a population of roughly 200,000 and a median household income of \$40,563 (approximately \$7,000 below the state rate). The school district, Laker Public Schools (LPS), is the second leading employer in the area after a nearby army base. Therefore, the city and LPS have a strong relationship as shown by the new Special Purpose Local Option Sales Tax (SPLOST) that LPS was granted last year. Heritage High is a

Science, Technology, Engineering, and Mathematics (STEM) high school serving approximately 1,100 students. Heritage was recently recognized by the state for improving its graduation rate from 59% to 76% during the 2014-2015 school year. The school is ethnically and racially homogenous as Black students account for 97% of the school population (Hispanic 2%, White 1%). Heritage High is also a Title I school with 100% of the student body receiving free or reduced lunch. There is a 15:1 student to teacher ratio. Heritage is one of nine traditional high schools in the overall school district. LPS, is comprised of 34 elementary schools (PreK-5), 12 middle schools (6-8), and nine high schools (9-12) serving roughly 32,000 students.

I currently serve Heritage High School as an American Literature teacher (11th grade), boys' basketball coach, Leadership Team member, Partners in Education committee member, LPS basketball coordinator, and most vital to this study, I am the Advanced Placement (AP) Coordinator for Heritage High. Given the level of autonomy granted me as AP Coordinator, I am positioned effectively to lead this action research study.

Problem Framing in the Context

This action research study will concentrate on improving teacher efficacy and AP English scores through the implementation of a PLC. In May of 2014 my principal, Mr. Johnson, called me into his office and informed me that I had been appointed AP Coordinator for Heritage High School. I was thrilled with the level of confidence Mr. Clarkson showed in me; however, I was uninformed about what the position entailed and what Mr. Clarkson's expectations were. He gave me a packet to look over and told me to meet him in his office the next day after school. The next day during our meeting, Mr. Clarkson laid out goals toward which he expected to see progress in the 2014-2015 school year: (a) more students taking AP exams, (b) to offer more AP courses, and (c) to increase the number of students

making a three, four, or five on the exam. LPS had recently hired a new superintendent who was stressing academic rigor for all students, and his assistant superintendent was a champion for AP programs and gifted education. Mr. Clarkson stated that with this change in leadership at LPS, it was imperative that Heritage devoted more attention to the AP program. This would require a change in culture, because historically, Heritage High has almost exclusively focused on a high school graduation rate. One could hardly blame Mr. Clarkson for focusing most of his attention to a graduation rate that was an abysmal 48% when he was named principal in 2005. Many of the challenges Heritage High School faces are concurrent with the socioeconomic constraints of the school. There are discipline, attendance, and parental involvement issues that must be navigated in order to delve into the purpose of schools, which is teaching and learning. The year prior to my appointment as AP Coordinator, a total of six students took an AP exam (table 1.1). Of those six students, only one scored a three or higher on the exam, which was in Biology.

Table 1.1

Heritage High School results from the 2014 AP Exam administration

	Macroeconomics	U.S. History	Calculus AB	Biology	Total Exams
Number of Exams	2	1	1	2	6
Number of Passing Scores	0	0	0	1	1

In my first year as AP Coordinator, I began the work of fulfilling the charge put forth by Principal Clarkson. Knowing that the goal of offering more AP courses was something that could be accomplished before the 2013-2014 school year ended, approval from the district was requested to send two teachers to an AP Summer Institute. The request was

granted and as a result, Heritage High was able to offer AP Language and Composition along with AP Chemistry. The next goal was to ensure that all students in Heritage's AP classes had the opportunity to take the AP exam. It became clear that one of the main reasons students were not signing up to take the exams was due to the AP exam fee of \$91. Upon consulting with College Board, we learned that any student who met the College Board Fee Waiver requirements could take one exam for free with any additional exams costing a reduced rate of \$53. With some assistance from the guidance department, Heritage was able to secure fee waivers for every child in the AP program. With my first two objectives complete, I was eager to receive the results from the 2015 AP exams to see if there was any progress made toward the third objective of raising the number of students receiving a score of three or higher.

Table 1.2

Heritage High School results from the 2015 AP Exam administration

	Macroeconomics	U.S. History	Calculus AB	Biology	Chemistry	Literature and Composition	Total Exams
Number of Exams	10	37	4	3	2	39	95
Number of Passing Scores	0	0	0	0	0	1	1

The data (table 1.2) shows that while Heritage improved the number of students taking the AP exam by 89, the number of students to score a three or higher remained at one, and the average score fell 0.54 points. This presented a new problem to the leadership of Heritage High; the staff had to take a closer look at the instruction within the AP program. After a

meeting with the AP teachers, the mood was somber as teachers began to question their ability to effectively guide our students toward success on the AP exam. I found this alarming given that four of our six AP teachers are veterans with over 10 years of experience.

In response to this data, the principal reminded teachers that change is slow and encouraged me to continue with this work. The principal stressed that, as the AP culture at Heritage shifted, there would be a steady increase in the success of our students. This was important for me to hear because I felt as if I had failed in my goals. Heritage received the AP Champion award from the state for the large increase in students taking the AP exam. I presented this to teachers as motivation to prove that we were worth the attention. I vowed to be even more involved with AP teachers and students. For the 2015-2016 school year Heritage did not offer AP Macroeconomics because the instructor received a promotion elsewhere in LPS. However, Heritage did add AP Statistics and AP Language and Composition to its program. Considering my increased involvement with the AP program, the motivation of last year's poor showing in scores, the addition of two new courses, and increasing the number of Heritage's AP test takers by 38, I was confident that we would see a major improvement in the performance of our students (table 1.3).

Table 1.3

Heritage High School results from the 2016 AP Exam administration

	Biology	Calculus AB	Biology	English Lang/Comp	English Lit/Comp	Statistics	U.S. History	Total Exams
Number of exams	7	10	8	20	31	31	26	133
Number of Passing Scores	0	0	0	1	3	0	0	4

This action research case study attempted to improve the state of the AP program at Heritage High School. This year Macroeconomics has been added and is to be taught by a veteran teacher with a fair amount of success at her previous school. This research study, however, focused on the Pre-AP and AP English teachers at Heritage. In order to establish a baseline of teacher efficacy among the AP and Pre-AP English teachers at Heritage High School, I administered the Teacher Sense of Efficacy Scale (TSES) (Appendix A) (Tschannen-Moran, 2015). Participation in this research voluntary. The challenges at Heritage High are not unique and accurately reflect the national trends as shown in the literature review.

CHAPTER 2

LITERATURE REVIEW

This chapter provides a review of the literature to develop the theoretical framework for this action research case study. Preparation of the literature review required searches of empirical studies, journals, articles, and books related to AP trends, teacher efficacy models, and professional learning communities. The University of Georgia Libraries provided several databases to search the literature pertaining to the topic. Furthermore, the phrases used for searching on Google Scholar, ProQuest Dissertations, EBSCO, and ERIC were: *advanced placement and minorities, professional learning communities, and teacher efficacy*. Research focusing on collaborative leadership practices was conducted in the later stages of the study.

Problem Framing in the Literature

The achievement gap. In its Annual AP Report to the Nation, the College Board has consistently acknowledged the glaring gap in both the access and success of African American students in Advanced Placement (AP) programs (figure 2.1). African American students are underrepresented in AP programs at both state and national levels, and often achieve significantly lower scores on the AP Exam than any other demographic (College Board, 2012). The presence of this inequity has negatively affected the Black student population. Students who score a three or higher on an AP exam have higher grade point averages in high school, and graduate in four years at a much higher rate than students who do not participate in an AP curriculum (Morgan & Klaric, 2007). For students of color, the

impact of the gap is felt even more; in a study conducted by the U.S. Department of Education researchers found that minority and low-income students are three times more likely to earn a bachelor's degree by simply taking an AP course (Adelman, 2006). While significant strides have been made over the last decade, no state with a large number of Black students has been able to close this achievement gap. Black students also suffer the widest margin when it comes to AP participation rates. Black students make up 14.7% of the national student population and only 9% of the national AP examinees. Other racial participation break downs are as follows: Whites, 59.2% of population and 57.1% of AP examinees; Hispanic/Latinos, 17.6% of the population and 17% of AP examinees; American Indian/Alaska Natives, 1.1% of the population and .6% of examinees; Asian/Pacific Islander, 5.7% of the population and 10.3% of examinees (College Board, 2012).

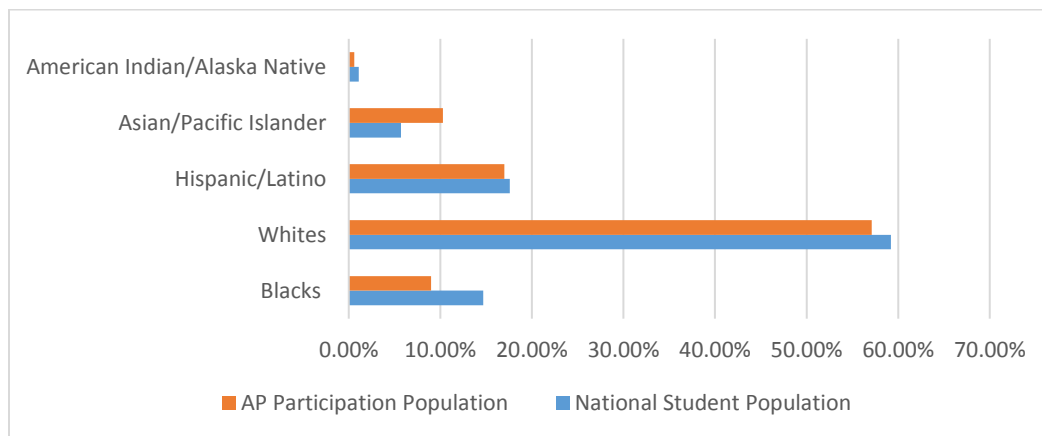


Figure 2.1: National vs. AP Examinee Population

Black students who took an AP exam in 2011 make up 4.1% of all students who scored a three or higher. Furthermore, nearly 50% of all Black examinees scored a one on the AP exam while less than 16% of their White counterparts fell into this group. Contrariwise, 15.5% of White examinees scored a five on an AP exam as opposed to 3.4% of Black examinees making the same mark.

Klopfenstein (2004) lists race and socioeconomic status as a major contributor to both the underrepresentation and underachievement of Black students. The findings of Taliaferro & DeCuir-Gunby (2008) state that educators are aware of this gap and often find themselves powerless to close it. Buice (2012) reports that often times students feel as if they lack the intelligence to succeed in an AP program. The findings of these empirical studies give a glimpse into several of the undergirding issues facing minority students in AP curricula.

Social constructivist theory. Russian psychologist Lev Vygotsky, widely recognized as the father of social constructivism, believed that knowledge was constructed through conversation and interaction with others (Vygotsky, 1978). He argued that knowledge is co-constructed in a social setting and that in the process of social interaction, people use language as a tool to construct meaning. The use of language between individuals in an environment serving as a psychological tool is vital to social constructivist thought on the learning process. Successful learning is said to result in an internal dialogue as a psychological tool that can be used in the future across varying situations (Marsh & Ketterer, 2005; Vygotsky, 1978). This support can be stored in the memory of the learner and accessed when trying to make meaning out of the environment.

Theorists identify differences between knowledge and learning. According to social constructivism, knowledge is co-created in a given environment among participants (Vygotsky, 1978). Although learning may occur through collaboration, it is still an internal process. Learning, therefore, happens at a personal level and is a product of knowledge creation through cooperation, whereas knowledge is co-constructed in the environment. The internalization of information is viewed as both an individual and social practice (Steiner & Mahn, 1996).

Vygotsky proposed that individual-level learning occurs within the zone of proximal development (ZPD) or the area in which intellectual development is still in progress (Marsh & Ketterer, 2005). The ZPD may be defined as “the functions that have not yet been learned – they are the “buds” of development, not the “fruits” of development” (Vygotsky, 1978, p.87). These “fruits” refer to already learned knowledge that exists in the zone of actual development (ZAD). Vygotsky essentially defines learning as the ZPD growing until it eventually matures into the ZAD (figure 2.2).

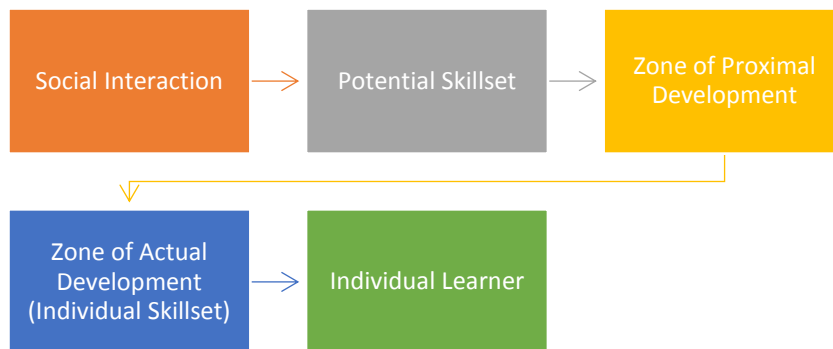


Figure 2.2: Theoretical Foundation for Social Constructivism

Communities of practice. Since the beginning of time, humans have formed communities as a means of sharing cultural practices to display what they have learned collectively. This is seen in various examples from cavemen around a fire to a street gang. Active participation in these communities of practice is vital to our learning and is essentially what makes us human. Communities of practice are how people establish competence. A school may define the job of a teacher as getting 85% of their students to pass a state assessment, however, the competence required to achieve this goal in practice is created by a teacher’s interactions with colleagues (Wenger & Snyder, 2000).

Communities of practice define competence by combining three elements (Wenger, 1998). The first element is that of a joint enterprise, meaning that members collectively determine what their community is about and they hold each other responsible to this standard. To be competent is to have both an understanding of this enterprise and the ability to enhance it. The second element is mutuality, meaning that members build the community through a joint engagement. Members interact with each other to establish both norms and mutual relationships. To be competent in this regard means that the member is a trusted partner and is able to engage the community in these mutual relationships. The third element is the shared repertoire of communal resources, which includes routines, languages, artifacts, styles, stories, among qualities. Competence here is shown by a member's ability to access the repertoire and utilize it properly (Wenger & Snyder, 2000).

Communities of practice are born out of the merging of competence and experience, which are both facilitated by mutual engagement. They present the members with the opportunity to negotiate competence by gaining experience through direct participation. Consequently, they have been established as critical social learning units, especially, as systems grow larger. With communities of practice as the foundation, these larger systems principally become constellations, with each different community being its own star (Wenger & Snyder, 2000).

Self Efficacy. Bandura's theory of social cognition is another foundational theory for this research. Within this theory Bandura introduces the notion of self efficacy. Fry (2009) echoes Bandura's definition by stating self efficacy "is the conviction that one can successfully execute the behavior required to produce outcomes" (p. 96). According to Bandura (2001), social cognition theory focuses on the interactions among personal factors, behaviors, and the

environment and stresses that individuals are “self-organizing, proactive, self-regulating, and self-reflecting” (Skaalvik & Skaalvik, 2007, p. 611).

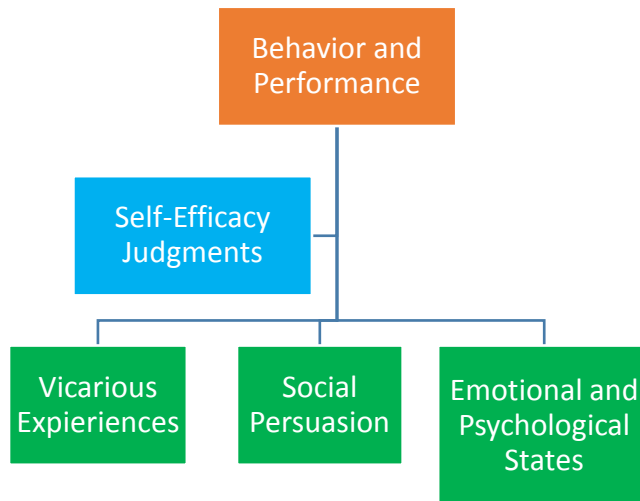


Figure 2.3: Bandura’s Theoretical Framework of Self efficacy

Sources of self efficacy come from mastery, vicarious experience, verbal persuasion from others, and emotional arousal (Bandura, 1982), and are illustrated in figure 2.3. The mastery of a specific task builds self efficacy and failure to successfully complete a task weakens it. Mastery learning is seen as the most potent source of self efficacy (Zimmerman, 2000). Vicarious experience (also called modeled performance) is another influential factor in self efficacy (Gist, 1987). For example, observing a person being rewarded for accomplishing a task could influence the self efficacy of the observer. Positive verbal persuasion can also encourage an individual to attempt and complete a task, thereby positively affecting self efficacy. This occurs if the person offering the advice is viewed as an expert on that task (Bandura, 1982). The fourth and final source of self efficacy is emotional or physiological arousal. How an individual interprets his or her physiological signs influences self efficacy (Bandura, 1997). To exemplify,

an individual could interpret a stomachache as a stress reaction and therefore avoid finishing a task. Such an interpretation could undermine self efficacy (Hemmings, 2015). Leaders should be constantly seeking ways to improve levels of self efficacy among staff members. This could potentially have large-scale ramifications in the classroom. A teacher's sense of efficacy affects his or her attitudes toward education. Teachers with high levels of self efficacy use productive teaching practices (Tschannen-Moran & Barr, 2004); believe in their own ability to positively impact student learning (Hoy & Woolfolk, 1993); and produce better student outcomes (Bray-Clark & Bates, 2003). An increased sense of self efficacy can improve personal accomplishment and well-being (Pajares, 2000) as well as enhance capacity to respond effectively to challenging and stressful situations (Bray-Clark & Bates, 2003). There is a positive correlation between collaboration among educators and high sense of self efficacy for teachers (Ross, 1992).

Professional learning communities. Consideration of professional collaboration began with Follett (1924), whose interest in the human-relations movement in the business world led to practices of self-governing in education. Since then, the ideas of professional collaboration in the workplace have grown into the development of PLCs in school districts as a replacement for the one-shot staff development approach. This expansion was largely due to growing evidence that when teachers consistently collaborate and problem-solve, student achievement improves (NSDC, 2001).

In the 1970s and 1980s, the notion of professional collaboration continued to be a popular frontier. PLCs were undergirded by human and participatory philosophies such as social constructivism that were revealed through teamwork in the workplace regarding organizational improvement. Knowles (1979) debunked traditional assumptions regarding adult learning such as, a person was fully equipped to practice a profession upon completion of formal professional

training. According to Knowles, the rapidly changing technology and communal or shared situations caused a person's skill level to depreciate unless he or she engaged in a lifelong program of professional development. For instance, an individual who fluently used a typewriter in the 1970s probably required ongoing professional development in the occupational setting in order to operate a computer and Microsoft Word. Knowles' work deemed the one-shot workshop model for professional development ineffective and increased support for workplace collaboration and learning (Williams, 2013).

Little (1982) conducted an ethnographic study that involved three high-performing and three low-performing schools in an urban school district. After a 19-week period he concluded that the amount of collaboration among teachers was the primary difference between the schools represented in the study. Sparks (1983) concluded that singular staff development presentations did not allow for steady change, which involves opportunities for consistent dialogue of problems related to the enactment of new learning. DuFour and Eaker (1998) found that one of the most encouraging strategies for sustained, functional school improvement was developing the capacity of teachers and principals to function as PLCs. After completing a correlational study involving 46 secondary teachers, Guskey (1985, 1986) proposed the following alternative professional development model: (a) change is gradual and challenging; (b) teachers need regular feedback on student achievement; and (c) teachers require ongoing support and follow-up after the first training (Williams, 2013).

Findings from studies conducted in the 1990s amplified support for PLCs. McQuarrie and Wood (1991) outlined misinterpretations regarding classroom practice that were discussed by teachers during weekly PLCs. For instance, teachers rarely made connections to instructional issues in their classrooms after attending one staff development session designed to encourage

improvement. The singular staff development approach was not supported by the research and theory that underpinned teacher change (Sparks, 1983; Guskey, 1985). McQuarrie and Wood concluded that change, specifically in classroom practices, is accomplished in phases over time.

Likewise, Hoban et al. (1997) found that participation in weekly PLCs among high school science teachers enhanced the learning of not only the teachers, but the students as well. In their investigation, Hoban et al. proposed a three-year professional development program, called Enhanced Action Learning, which used PLCs. During PLC meetings and collaborative sessions, teachers communally focused on science content and how to address science skills at each grade level. As the establishment of PLCs was fortified, collaboration among these teams of science teachers increased and major changes in their classroom practices ensued that eventually impacted student learning in a positive manner.

By the 21st century, many school districts across the nation continued to implement organized PLCs. Castle, Arends, and Rockwood (2008) collected student achievement data over a six-year period from two low performing elementary schools with similar demographics. Students at the elementary school where teachers participated in weekly PLCs showed a 35% increase in fourth and fifth grade reading scores (Williams, 2013).

Empirical findings. The literature confirms that a major deficiency exists among Black students involved in an advanced placement curriculum. There is an income based opportunity gap (Klopfenstein, 2004) as well. Teachers are aware of this gap and it is affecting their efficacy (Taliaferro & DeCuir-Gunby, 2008). Due to numerous external circumstances, Black students often question their own efficacy involving AP coursework (Buice, 2012). Professional literature illustrates several research-based strategies to measure the rise and decline of teacher efficacy (Isbell & Szabo, 2015). Finally, PLCs offer a viable means by which teachers

can create knowledge and improve student teacher interactions (Brodie, 2014). The gap in the literature occurs when trying to establish a causal relationship between PLCs, self efficacy, and minority AP exam performance (see Table 4). Empirical findings includes seven different case studies that help frame the action research study conducted at Heritage High School within the literature. Essentially, the aforementioned theories provided the lens for the analysis of these cases, and each of the researchers drew conclusions that impacted the development and direction of the study.

Table 4: Empirical Findings

Study	Brief Description	Qualitative			
		Sample & Context	Data Collection	Findings	Implications
Brodie, K. (2014)	Two areas of research (learner errors in mathematics education and how it is beginning to focus on how teachers can learn to identify and engage with the reasoning behind these errors and research on how professional learning communities are beginning to show that they present powerful opportunities for on-going teacher collaboration and learning) are brought together to show how teachers in this community came to understand key concepts about learner errors and shifted their ways of talking about learner errors.	Professional learning communities in the Data Informed Practice Improvement Project	Many studies that identified particular misconceptions and showed how these are reasonable and sensible to learners	Three important shifts that the teachers made in their learning about learner errors: from identifying to interpreting errors; from interpreting to engaging errors; and from focusing on learner errors to focusing on their own knowledge.	These three shifts suggest a deepening of teachers' thinking in relation to learner errors.
Klopfenstein, K. (2004)	The purpose of this study was to develop a microeconomic model of the AP participation decision to determine whether low income is the major determinant in the AP opportunity gap.	All white, Hispanic and Black students attending Texas public high schools in which at least one Advanced Placement course was offered.	The analyses are conducted using the Texas Schools Microdata Panel (TSMP) for the 1998-1999 academic year. Logit regressions are estimated separately for white, Hispanic, and black students as a function of student and school characteristics. The	Income is the major factor in the AP opportunity gap that exists for minorities. Also, minority students enroll in AP math, science, and English at lower rates than comparable white students. Magnet	Administrators should provide teachers with the support and incentives to help minority students set realistic academic goals, prepare for college level work, and navigate the college admissions process. Also, business and community leaders can come together with

			student is the unit of observation.	schools promote AP participation among white students but reduce participation among college-bound black students. Race-matched role models promote AP-taking among high-achieving Black males, and AP incentive programs have the potential to dramatically increase minority student participation.	schools, as they have in Dallas, to provide funding for programs that promote teacher training and provide incentives for student achievement. Such efforts constitute a critical component of any strategy to break the cycle of minority poverty and academic underachievement.
Buice, S. (2012)	The purpose of this study is to determine the causes for high school students' decisions not to enroll in Honors or Advanced Placement (AP) courses.	16 students (a mixture of 10 th , 11 th , and 12 th graders) at a Georgia high school.	A phenomenological design was incorporated. Students were selected through a purposeful criterion sampling. Through the use of an initial interest survey, individual interviews, and focus groups, the students voiced their reasons, and the researcher used coding and structural and textural descriptions. Data collection and data analysis were triangulated to ensure the trustworthiness of the study so that the research is shown to be valid and	Many students labeled themselves as lazy in their advanced coursework and thought that an A in the regular could still get them to a 4.0 so why bother. Students also revealed that the staff could do a better job in educating students about the long term benefits	Students should more willing to be pushed to unlock their full academic potential. Teachers should be more consistent in recommending students for a more rigorous curriculum. Counselors should get more involved in the process and attempt to find as much support for underrepresented youth as possible. Administrators should allow for as much

			can be replicated in further studies.	of the AP curriculum.	growth of an AP program as possible, offer as many courses as possible, and get the community involved as much as possible through avenues such as donations.
Mixed Methods					
Taliaferro, J. & DeCuir-Gunby, J. (2008).	The purpose of this study was to determine if educators believe that an opportunity gap exists between African American students and an AP curriculum.	The study was conducted in 10 urban High Schools in North Carolina. All of the schools were participating in the American Excellence Association (AEA) program.	The case study method was used to allow an in-depth examination, analysis, and understanding of the intricacies of the school personnel's attitudes toward student success. The case study methodology provided a systematic way of exploring the research question promoting a multi-layered analysis of the information.	Results of the analysis suggest that there is a perceived and real gap in the participation of African American students in AP courses.	In order for students to have a connection to and take ownership of their education, they must be treated like, and perceive themselves to be, full citizens of the educational system. When students are given all the responsibilities of the system (i.e., adhering to regulations, attending class, test taking, etc.) but not afforded all of the system's rights (i.e., college exposure, recommendations to AP courses) they are not operational citizens of the school community.
Isbell, L. Szabo, S. (2015)	The purpose of this study was to research in which they examined teacher quality, teacher efficacy, and various instruments used in	Teachers, support staff, administrators, and parents in Texas.	Mathematics Teaching Efficacy Beliefs Instrument; Science Teaching Efficacy Believe Instrument; Writing Teaching Efficacy Beliefs Instrument; and Reading Teaching Efficacy Beliefs Instrument.	According to the research, none of the instruments was used during RTI implementation except for the TEBBS. After reviewing, analyzing, and critiquing	Because teacher efficacy is content-specific, the authors found only one instrument that could be used to measure general teacher efficacy

previous teacher-efficacy studies to determine which instrument would best be used while implementing Response to Intervention (RTI).	All these self efficacy instruments measure two factors: teacher efficacy and outcome expectancy.	different tools to measure teacher efficacy in context of RTI, the TEBBS was supported by current empirical studies that measured teachers' perceptions of their impact on student achievement while trying to implement instructional changes due to RTI and their self efficacy relative to making the changes.	while change in instruction was occurring due to mandated RTI changes.
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CHAPTER 3

METHODOLOGY

The purpose of this action research case study is to explore the influence of professional learning communities on teacher efficacy and AP classroom practices. The research questions this study answers are: 1) how is teacher self efficacy influenced by participation in a PLC?, 2) in what ways do teachers engage in the process of collaborative learning through a PLC?, and 3) how does participation in a PLC affect teacher practices in an AP classroom?

Action

Intervention Plan

When this study was originally proposed to the high school principal, he was asked the simple question: *What is the biggest improvement that you would like to see at Heritage High School?* The principal replied, “The performance of our AP program.” This was a key moment in the process of the study because this response, along with data on the performance of students in the AP program, established the need for this research. Once the AR team (which consists of the researcher, principal, two AP English teachers, and two pre-AP English teachers) was assembled, different ideas were proposed about how we could effectively remedy the low AP performance of students at Heritage High. One idea was that we need to provide incentives for students to take the PSAT more seriously so that we can better identify those children who display an aptitude for success in a particular AP course. While this was a solid idea in theory, the principal decided that it was in the best interest of the school to have something more immediate. The AR team conducted research and discovered that the most direct link to student success in AP coursework is the quality of instruction. For that reason, the AR team chose to

focus on teachers and then analyze student success as a by-product of improved instruction. Every AR team member commented that they noticed a strong sense of disappointment in teachers after sharing the AP exam results from the previous year. This observation led to the belief that implementing a PLC among the Pre-AP and AP teachers in a particular subject would be the most effective and expedient means to see an improvement in the scores of the students at Heritage. The principal is a strong believer that literacy is the interdisciplinary conduit by which all subjects might show improvement. Based on this suggestion, the team agreed that, for the purpose of this research study, only Pre-AP and AP English courses would participate.

Implementation Plan

The timeline for this study was as follows:

- Early November: Consent meeting is held (15-30 minutes), initial Teacher Sense of Efficacy Scale is administered to the participants (10-15 minutes), initial interviews are conducted with each participant by the researcher (15-30 minutes), PLC is established.
- Mid November-Mid December: PLC meets weekly after school from 3:30-4:30 to discuss methods to improve the English AP performance of their students.
- January-April: PLC resumes meeting weekly after school from 3:30-4:30 to discuss methods to improve the English AP performance of their students.
- May: Participants are given the Teacher Sense of Efficacy Scale for a final time (10-15 minutes), participants are interviewed for the final time (15-30 minutes)
- July: Results from the 2017 AP exams will be shared with the participants.

Resources to be used in this study included: a recruitment flyer, a consent form, pre and post interview protocol, the Teacher Sense of Efficacy Scale, and the 2017 AP exams in English/Language and English/Literature (table 3.1).

Table 3.1

Research Intervention Plan

Proposed Intervention	Action Research Team Activities [what will the team do]	Anticipated Outcomes/ Connection to problem, theoretical framework	Proposed Timeline	What data will be collected on the intervention?
Professional Learning Community (PLC)	Monitor the progress of the PLC and provide guidance as to specific areas where they would like to see growth	A stronger sense of self efficacy and rise in student performance on the AP English exams	Early November -Early July	1. Survey Responses 2. Researcher Observations and Reflections 3. Interviews 4. English AP Exam Results

Research

Design

All Pre-AP and AP English teachers at Heritage High were targeted for participation in the research. Teachers were sent an invitational flyer via email and two follow up emails in the subsequent days. Pre-AP and AP English teachers received an email inviting them to participate in the research study. The email stated that the purpose of this mixed methods study was to enhance the self efficacy of the Pre-AP and AP English teachers while improving the achievement of AP students at Heritage High School. Research participants were informed that

their participation would involve completion of a survey entitled Teacher Sense of Efficacy Scale. The email informed research participants that involvement in the study was voluntary, and that they could have chosen to not participate or stop at any time without penalty or loss of benefits to which they would have been entitled to otherwise.

The participants signed the consent form acknowledging that their participation in the research study was voluntary and that they understood the manner in which the research would be conducted. The participant then took the anonymous Teacher Sense of Efficacy Scale to establish a baseline for their efficacy level. The participant participated in an interview with the researcher to gain better insight into their thoughts and feelings heading into the research. Beginning in late October, for approximately 2 months, the participant met with the PLC weekly before school for 30 minutes from 7:30 until 8:00 to discuss actions to improve the performance of their students on English AP exams. In January the participant continued with a 4-month cycle of meeting with the PLC weekly for 30 minutes from 7:30-8:00 to discuss actions to improve the performance of their students on English AP exams. At the beginning of May, the participant was given the Teacher Sense of Efficacy Scale again to determine any significant gains in their efficacy. Participants were interviewed again for the final time. In July the participants will be notified of the performance of their AP students on the AP English exams.

Data Collection

Data collection for this study consisted of surveys, interviews, researcher observations and reflections (table 3.2). The Teacher Sense of Efficacy Scale used in this study is the long version found in Tschannen-Moran & Hoy (2001). This particular instrument was chosen because Tschannen-Moran and Hoy are two of the foremost experts on teacher efficacy in the world. The scale was developed at Ohio State University and was found to be valid.

Table 3.2

Data Collections Methods

Research Question	Quantitative	Qualitative
Q1. How is teacher self efficacy influenced by participation in a PLC?	Teacher Sense of Efficacy Scale	Researcher Observations
Q2. In what ways do teachers engage in the process of collective learning through a PLC?		Interviews Researcher Observations Researcher Reflections
Q3. How does participation in a PLC affect teacher practices in an AP classroom?		Interviews

All interviews and group observations were coded to determine trends. For this research project the descriptive method of coding was employed. As described by Miles, Huberman, and Saldaña (2014), labels were assigned to the data to summarize the topic of the selection in a word or a short phrase. From there an inventory of topics were developed that highlighted the major themes of this study. The teacher efficacy surveys were anonymous and scores were analyzed to determine growth in efficacy. The student results on the English AP exams were retrieved by the guidance director of Heritage High School and stripped of all student identifiers. The results were then given to the researcher to analyze for statistical significance as the exam score will be the only quantitative data considered for this study.

Delimitation

A controlled sample limited to one high school in the Southeastern United States provided information relevant and restricted to one geographical area and one school organizational level.

Limitations

The limitations of this study identified by the researcher were as follows: (a) Results of this study were limited to one school and restricted to one geographical area and one school organizational level; (b) Interviewing only the four Pre-AP/AP English teachers who were participating in the PLC in this study provided insight of a limited number of personnel; (c) Participants could have been unfamiliar with the terms used in the data collection instrument; (d) Individual interviews could have inhibited the responses of the participants, who may have potentially been more open in a group setting; (e) Unknown factors could potentially contribute to a rating on the survey which was not reflective of the participants' actual perception of each dimension of a PLC; (f) The researcher was a participant researcher, which

Sustainability

Although many positive benefits of a PLC model are found in the literature, researchers express concern about the sustainability of the model over time (Leonard & Leonard, 2005). Reforms, Coburn (2003) acknowledges, "can be adopted without being implemented, and can be implemented superficially only to fall into disuse" (p. 6). Hargreaves and Fink (2003) report that most "school leadership practices create temporary, localized flurries of change by little lasting or widespread improvement" (p. 9). As Hipp and Huffman (2003) maintain, the success of any reform initiative depends on how well the endeavor can be sustained and embedded in the

culture. More than just maintaining over time, sustainability is planning for the future (Hargreaves & Goodson, 2006).

Huffman and Jacobson (2003) suggest that changes may not prove to be entirely successful over time. Structures are useful to productive change but insufficient to sustain change without leadership (Joyce, 2004). Sustainability, according to Hargreaves and Fink (2003), is described as enduring, demanding commitment, requiring investments that are long-term, and inspiring improvements that continue to be ongoing. Furthermore, in identifying key characteristics of sustainability, Hargreaves and Fink explain that sustainability is improvement that (a) fosters learning, (b) endures over time, (c) can be supported by resources that are both available or obtainable, (d) does not negatively impact the environment of any surrounding schools or systems, and (e) “promotes ecological diversity and capacity throughout the educational and community environment” where everyone benefits from committed relationships within the organization (p. 695). In addition to difficulties encountered with any change, Hargreaves and Fink (2003) report sustainability of educational change involves more than just maintaining those improvements over time and presents major challenges to organizations undergoing change. According to Hargreaves and Fink, the movement from the implementation phase to the institutionalization phase of any reform model not in agreement with traditional institutions of education, “neither spreads nor lasts” (p. 694). Fullan (2000) states the key reason for breakdown of school improvement efforts is a failure to understand “that both local school development and the quality of the surrounding infrastructure are critical for lasting success” (p. 581).

CHAPTER 4

CASE STUDY – STORY OF THE ACTION RESEARCH PROJECT

The story of this action research project began when I was named AP Coordinator at Heritage High School. After meeting with my principal, I was tasked with two major goals, increase the number of students taking the AP exam and increase the number of students making a passing score of a three, four, or five. However, I was not initially sure about this being my topic for this study. A former professor of mine suggested that I use the AP program as a study because I already had ready access to the AP program at Heritage.

Description of the Context

Heritage High School is located in a lower income area of Laker Public Schools (LPS). Heritage meets the requirements for a Title I school with a 100 percent of its students on free or reduced lunch. The school was one of two high schools in LPS that was designated for black students during the time of segregation. Consequently, it is both a cultural and historical staple of the area. Demographically, in the 2016-2017 school year, there are 97 percent black students, 2 percent Hispanic students, and 1 percent white students.

Located in a low-income residential area, Heritage sits at the top of a steep hill and is a recently constructed \$37,000,000 facility. The 2017-2018 school year was Heritage's fifth year occupying this building, and the alumni association as well as the surrounding community have made sure to keep the facilities looking immaculate. Upon entering Heritage, a visitor would see

an atrium filled with photographs of all of the past principals of Heritage dating back to 1963 (every principal has been a black male). All along the main hallways of the bottom floor are the past graduation classes dating back to the first class. This instills a sense of pride and tradition in all who enter.

Eighty-five percent of the staff at Heritage have four or more years of experience. The past year Heritage had to deal with an abnormally high turnover rate with 14 staff vacancies. Half of the openings were due to retirement and promotions. The other half was due to transfer requests or teachers moving into a different professional field.

After a meeting with all AP teachers before the 2016-2017 AP exams, the consensus was that with the number of examinees going from six to 95, Heritage would see far more passing grades than the year before. After teachers received their AP scores in July of that year, they reported to a summer AP meeting. In this meeting, administration sensed a feeling of disappointment and a perceived decline in teacher efficacy. This observation was discussed among the administration team. We began to think of ways to positively affect both the performance of the AP program at Heritage and the self efficacy of Heritage's AP teachers. Thus, the aim of our action research study was conceived.

Action Research Team Members

To initiate the action research process, I had a meeting with my principal where I opened with the question, "what areas would you like to see improve the most here at Heritage?" His initial response was attendance, parental engagement, and the AP program. This statement confirmed my decision to focus my action research topic on the AP program because it was a critical concern. After confirming that the AP program at Heritage would be at the center of my

study, we also agreed that action research would be the best method to achieve our goal because, “action research is research in action, rather than research about action” (_____, p. ____). We also agreed that the installation of a PLC would serve as an effective intervention and mesh well with the action research method due to action research being, “a collaborative democratic partnership; and a sequence of events and an approach to problem-solving” (Creswell, 2014). My principal and I also concluded that the PLC would consist of the AP teachers from the English department since that department performed the best on state exams, had the least amount of turnover, and none of the teachers were new teachers, meaning they all had over three years’ experience. A recruitment flyer was sent out on November 3, 2016 to recruit those four teachers into the action research process. On November 9, 2016 at 3:35 p.m., a meeting was held in my classroom at Heritage for those teachers who decided to join the action research team. All four teachers who were targeted agreed to participate in this case study and so the action research team was set.

Background of Team Members

All four members of the action research team signed the document granting their consent to participate. Below is a brief description of the four AR team members who participated throughout the process:

Dan Chamberlain

Mr. Chamberlain is a ninth year English teacher who teaches pre-AP sophomores. He holds a Master in the Art of Teaching Degree in English/Secondary Education. Chamberlain is also the sponsor for the school yearbook. Education is his second career choice as he previously spent 15 years in the corporate world. As a veteran teacher who has spent his entire career at

Heritage, Chamberlain expressed excitement for an opportunity to grow as a professional with three of his closest colleagues.

Regrettably, Chamberlain's attendance fluctuated as he received news that he had cancer. However, this did not dampen his spirits as he constantly kept the team encouraged. Although Chamberlain said very little, the team marveled at how he would show up to meetings while exhausted from previous chemotherapy treatments. In the case of his absences, I provided notes from the meetings and always met with him for 15-20 minutes to gather his opinion on our progress and whether he had any questions. The PLC illuminated Mr. Chamberlain's dedication to the students and faculty at Heritage High. Repeatedly, Chamberlain voiced how grateful he was to learn from his colleagues and how he personally benefitted from participating.

Janet West

From the outset, Mrs. West displayed the most fervor. As a 14-year veteran English teacher, she has spent her entire career at Heritage and is extremely close with the faculty and students. She was the veteran member in both age and teaching experience which proved invaluable to the PLC. West holds a Master of Education Degree in English/Secondary Education and teaches AP Language and Composition. She is also the coach of the Academic Decathlon team and has won several local and state competitions. West is a true practitioner who is devoted to her craft and had the most adverse reaction to the news that Heritage only had one examinee out of 95 receive a score of a three or better. Mrs. West approached the PLC as an opportunity to prove to herself and the central office of LPS that the AP program at Heritage could produce a better performing students on AP exams. West is constantly looking for ways to improve, and at the conclusion of the research cycle was immediately ready to reconvene with the PLC on ways to improve for next year. It is of note that Mrs. West is also a cancer survivor

who periodically was late or absent to a meeting due to keeping medical appointments. Due to the cancer commonality, West and Chamberlain appeared to be a little closer than other members away from the PLC. Mrs. West also assisted in making sure that Mr. Chamberlain was aware of the proceedings whenever he was forced to be absent due to chemotherapy.

Nicole Goodrich

Mrs. Goodrich is an 11-year veteran teacher who holds a Bachelor of Arts in English/Secondary Education and is currently enrolled in a program for her Master of Education Degree in the same field. However, Goodrich has only spent one year teaching at Heritage High School. She spent one year as a middle school English teacher in Alabama and then transferred to South High School in LPS. South High School serves a similar demographic to Heritage. South has approximately 800 students (roughly 300 less than Heritage), and they are 75 percent black, 5 percent white, and 20 percent Hispanic. From a socioeconomic lens, they are also similar to Heritage with a vast majority of their students receiving free or reduced lunch. South High is the other school in the district that was exclusively for black students during segregation. Given her previous experience, the principal felt comfortable assigning her to teach freshman pre-AP Literature/Composition, and in her first year at Heritage, she made a seamless transition into the faculty.

Upon receiving the invitation to participate in this PLC, Nicole Goodrich was quite skeptical. She was not a skeptic as to whether she would see any positive change or not, but as to the amount of energy that all candidates would put into the PLC. Goodrich had been in previous PLCs in the past and had apprehension about each member giving full effort. A contributing factor to her trepidation could be that she was the newest English teacher to Heritage. However, by the end of the research process, Goodrich expressed enthusiasm in hoping that our work as a

PLC could continue and yield successful results in the AP performance of the students at Heritage High.

Andrea Johnson

Andrea Johnson is in her fourth year as an English teacher and has only worked at Heritage. Johnson currently teaches AP Literature and Composition, a senior course. She, much like Mr. Chamberlain, did not exit her undergraduate studies with education as her chosen profession. Ms. Johnson has Bachelor of Arts Degree in English Literature and a Master of Public Administration Degree in Government and Administration and had desires to attend law school. Recently, she graduated with her Master in the Art of Teaching Degree in English/Secondary Education and is currently enrolled in a program to obtain her Educational Specialist Degree in English/Secondary Education. Johnson currently serves on the Leadership Team and as the English Department Chair at Heritage. This is her first year in both roles. Johnson is the youngest member of the action research team and also has the fewest years of experience.

Ms. Johnson brought energy to the PLC. Her youth and optimism were valuable throughout the research process. Given that this was Johnson's first year carrying out these leadership duties in only her fourth year of teaching, she expressed a significant level of concern in regard to her availability. She is a single mother of a toddler and was worried about her ability to balance the PLC, her work life, and her personal life. Ms. Johnson's anxiety in this regard is unique, but not a complete surprise considering she is the only single member of the PLC. However, Johnson's commitment to her craft as a professional certainly shined through, as she proved both flexible and resilient in her attendance and contributions. Ms. Johnson's drive to cast a positive light on Heritage, the English department, and her own prowess as an AP educator was

impressive, and in a later conversation, she revealed that this drive was fueled in large part by desire to validate her current leadership roles.

Action Research Cycles

The action research team met every Wednesday beginning on November 16, 2016 after members of the AR team signed the consent forms to participate. Coghlan and Brannick (2014) state:

The action research cycle comprises a pre-step and three core activities: planning, action, and fact-finding. The pre-step involves naming the general objective. Planning comprises having an overall plan and a decision regarding what is the first step to take. Action involves taking that first step, and fact-finding involves evaluating the first step, seeing what was learned and creating the basis for correcting the next steps. So there is a continuing ‘spiral of steps, each of which is composed of a circle of planning, action and fact-finding about the results of an action’ (p. 9).

Upon creating the action research team, the members decided that their main objective should be to create uniformity between the pre-AP and AP programs at Heritage. As a collective they felt there were gaps between what teachers expected of students upon entering each grade level. Consequently, the action research team was able to recognize a specific weakness in the curriculum alignment of the AP program at Heritage: this disorder was the cause of incongruence among pre-AP and AP teachers, and was manifested in the underachievement of the AP students at Heritage on the AP exams. Furthermore, the impact of the poor performance on AP exams had a perceived negative impact on teacher efficacy among these teachers. Therefore, action research was the chosen method to resolve this issue within the organization (Creswell, 2014).

Context and Purpose

In order to effectively present the action research project conducted at Heritage High it is crucial to provide organizational context. The demographic and physical context has previously been presented, therefore, this section will describe additional forces at play within Heritage High School and Laker Public Schools. Additionally, I will discuss the aspirations of the school and school district and those who took ownership of this action research study (Coghlan & Brannick, 2014).

Social Forces in Laker Public Schools

Laker Public Schools hired a new Superintendent on July 23, 2013. Dr. Clark Buss came to LPS from another district out of state where he was the Assistant Superintendent. Dr. Buss made the following statement upon being hired:

We're going to lead this district to be the premier district in the state of Georgia. We are going to work on behalf of all children to ensure that all children achieve as high a level as possible, and the rigorous standards, high expectations and servant leadership will be steadfast marks of our administration going forward. I appreciate your support at this point, and I'm looking forward to the support from the community at large and parents. I am committed to Laker Public Schools, and I look forward to this as my new home.

Immediately, Dr. Buss went about instilling his vision throughout LPS. One of the first schools Buss visited was Heritage. He says that a conversation he held with some students playing basketball in the neighborhood convinced him to accept the position at LPS and so Heritage has some sentimental value. Upon visiting, he held a private conversation about what he would like to see from the principal moving forward. On September 13, 2013, shortly after his visit to Heritage, Buss hired Jean Walton as his Assistant Superintendent. Walton had been a colleague

alongside Dr. Buss in his previous position and he was excited to bring her aboard. The Assistant Superintendent position in LPS had been unoccupied for five years, so there was much intrigue among LPS employees as to what Mrs. Walton's job description would be. It was later revealed that her main duties would be curriculum and learning. In her previous post Walton had done extensive work with AP programs and gifted education, consequently, she is a champion for advanced coursework in public schools. Shortly after her confirmation, Mrs. Walton called a meeting of all of the high school principals and assistant principals and stated her vision to see increase in the SAT scores, ACT scores, dual enrollment, and AP exam scores. Toward the end of that same school year, Heritage administered a mere six AP exams with one passing score. Due to the 58 percent graduation rate that Mr. Clarkson inherited upon arriving at Heritage his focus had been on raising the number of graduates. As a result, the AP program remained virtually unattended. However, after careful examination of the AP data, Mr. Clarkson realized that this would not be acceptable under the new direction for LPS.

AP Program

Earlier in the 2013-2014 school year I expressed to Principal Clarkson a desire to take on a larger leadership role at Heritage. Clarkson viewed this as opportunity to fortify a weakness at Heritage with a fresh perspective, as well as give strong teachers an opportunity to grow. Subsequently, he named me AP Coordinator and immediately divulged the vision of both Dr. Buss and Mrs. Walton. Mr. Clarkson said that in the upcoming school year he would like to see an increase in the number of students taking the AP exam, in addition to an increase in the total number of passing scores on AP exams. Clarkson and the faculty believed that once I procured funding that would allow for 95 exams to be taken instead of six, the number of passing scores would increase as well. Regrettably, that proved not to be the case as Heritage remained at one

passing score. Ideas were implemented such as having a *Hip-Hop into AP* Day to invite more children to participate in AP courses, information was sent home to parents to increase awareness at home, and assemblies were held to increase self-confidence among the AP students. These actions led to an increase in the number of students taking AP courses and AP exams. However, we still saw minimal gains as we only went to four passing scores out of 133 attempted exams. Upon receiving the results of the 2016 AP exams, Principal Clarkson decided that action research would be required to strengthen this weakness at Heritage High.

Desired Outcomes of the Study

Upon gaining approval from the Laker Public Schools Research, Accountability, and Assessment Department, it was clear that this study was a step in the direction of realizing the new LPS AP vision. After receiving the topic of the study at a district AP meeting hosted at Heritage Dr. Buss stated, “This homegrown research is yet another example of the great people we have working at LPS, who are dedicated to providing our kids with an equitable and accessible AP experience.”

At Heritage High School Mr. Clarkson desired solutions from this study that could improve Heritage. Clarkson was eager to see the strengths and weaknesses of this undertaking in actual practice, also, after reviewing College Board AP data from across the nation, Clarkson expressed hope that the study would shed light on possible solutions to aid in better minority performance on AP exams. Additionally, Clarkson wants to increase the efficacy level of his teachers. The Heritage principal claimed, “The purpose of schools is teaching and learning and this project addresses both aspects.”

Ownership of the Team Members

Because the AP program at Heritage was the specific weakness targeted by Principal Clarkson, he along with the team members took ownership of this action research project. However, due to the close knit nature of Heritage, all teachers, especially other AP teachers, wanted the study to be a success because it could be replicated among other departments and prove beneficial for all students.

Constructing: Early November 2016 – Mid November 2016

“The first step of the action research cycle is a dialogue activity in which the stakeholders of the project engage in *constructing* what the issues are, however provisionally, as a working theme, on the basis of which action will be planned and taken” (Coghlan & Brannick, 2014, p. 10). The members of this action research team worked together to create a single focus and direction of the project.

Once the AR team was constructed, I immediately conducted the initial interviews and administrations of the Teacher Sense of Efficacy Scale. As the construction phase of this project progressed the AR team discussed whether the PLC would be effective and what actions would have to take place in order to make it successful. They frequently reviewed literature and discussed their own individual findings and potential implications it would have on the project. AR members often reflected on their own individual strengths and weaknesses as educators. Furthermore, I reported to the proceedings of AR meetings to Mr. Clarkson upon request and received feedback from him about things he would for the AR team to consider.

Upon completion of the construction stage of the study, I kept minutes of all meetings, provided requested statistics, articles, publications, and personnel. As a result, the AR team strongly identified with work of Dr. Shirley Hord (2009) and adopted her PLC ideals that our

community would possess: collective creativity, shared values and visions, supportive conditions, and shared personal practice.

Planning Action: Mid November 2016 – Early December 2016

“Planning action follows from exploration of the context and purpose of the project, and construction of the issue, and is consistent with them” (Coghlan & Brannick, 2014, p. 10). The planning phase of this project consisted of the next three meetings in which the AR planned out how they would systematically go about improving the scores of their AP students.

Conversations at these meetings mainly revolved around ways to increase the awareness of both parents and students, streamlining the AP English curriculum for all grades, and boosting the efficacy of the AP students. I began each meeting with a recap of the previous meeting and a goal of where the PLC should be at the end of the session. My original thought was to begin each meeting with an agenda, however, I feared that this might stifle the collective creativity tenet that the AR team desired to maintain. This proved to be a wise decision as the conversation in the PLC stayed focused and productive. At the end of the third meeting, the AR team had devised a plan to attack the three aforementioned areas of concern.

Taking Action: Mid December 2016 – Early June 2017

“At this stage, the plans are implemented and interventions made collaboratively” (Coghlan & Brannick, 2014, p. 11).

To address increasing awareness of both students and parents, the AR team decided to install an AP specific section in the annual Heritage Open House event. This event presented an excellent opportunity to make both parents and students aware since it is required that both be in attendance. Literature was passed out and I made a presentation as AP Coordinator. The presentation was received well as I had several parents and students ask questions regarding the

AP program. Throughout the remainder of the school year, I visited AP classrooms to serve reminders of deadlines. During each visit I delivered two or three quotes from different colleges and universities regarding their opinion of the AP program, along with, how much money could be saved at each school by scoring a three or higher on their AP exams. The AR team thought this would serve as solid motivation throughout the year and give the students immediate goals. In order to make it relevant, the AR team collected qualitative data through conversations with students as to which schools interested them most and how they planned to pay for it. A list of popular schools was then given to me and I researched tuition, potential savings, and AP perception of the college or university. All of this information was delivered to students verbally and in print so that they could take information home and review it with their parents.

The second goal of the PLC was to streamline the AP curriculum in a way that would be consistent for students as they move through the AP program at Heritage. The idea was that new skills will be taught and that there would be minimum re-teaching from grade to grade. Ideally, all of the foundational AP standards would be taught in the freshman and sophomore pre-AP English courses, leaving the AP Literature and Language teachers with only specific standards to teach for the exams. This was a major goal of the AR team due to perceived gaps and loss of skills between grades. I anticipated this being a potential struggle because it would require teachers to focus less on the state standards and more on the AP standards. This concern was voiced in a previous PLC meeting. The fear was that AP standards do not align with state standards and so using them exclusively would be detrimental to student performance on the state exams that they take as freshmen and juniors. My reply was that the AP standards are considerably more rigorous than the state standards, and that there should not be students who pass the AP exam but not the state exam. I asked the teachers to allow me to confirm that logic

with Mr. Clarkson. After a debrief session with Mr. Clarkson he agreed that the logic of the AP curriculum being preferred to the state due to rigor. I sent an email out to the AR team of his response and the team gladly accepted it. After confirming with Mr. Clarkson it became part of every meeting to work on vertically aligning the AP English standards. To expedite the process I emailed the PLC a rubric of the AP English standards produced by College Board. The rubric divides the standards into five major categories: Reading, Writing, Listening, Speaking, and Media Literacy. Within each category the standards are divided into objectives, and each objective is given six levels of performance expectations. The AR team decided to take the College Board AP English standards rubric and divide it among grade levels as follows: levels one and two would be taught by Mrs. Goodrich in pre-AP Literature and Composition I, levels three and four would be taught by Mr. Chamberlain in pre-AP Literature and Composition II, level five would be taught by Mrs. West in AP Language and Composition, and level six would be taught by Ms. Johnson in AP Literature and Composition. Mrs. Goodrich's portion of Reading standard one objective one is provided in table 4.1

After arriving at this conclusion, all talks regarding the vertical alignment of the AP curriculum revolved around how each teacher in the PLC would accomplish the tasks within the rubric. It was amazing to observe the collaborative learning process take place among these professionals. They worked with each other to create possible assignments, projects, and rubrics. They discussed using different works to teach different standards and objectives. Goodrich and Chamberlain appeared to benefit the most from having the two AP teachers there, because they now had definitive mark of where these students should be in order to have success on the AP English exams. This allowed them to have a more holistic approach to teaching and removed much of the uncertainty and guesswork from their lesson planning.

Table 4.1

Mrs. Goodrich's Responsibilities for Reading Standard 1 Objective 1

Reading Standard 1 - Comprehension of Words, Sentences, and Components of Texts Objective R1.1 - Student comprehends the meaning of words and sentences.		
Performance Expectation Category	Level 1	Level 2
R1.1.1 Uses the origins, history, and evolution of words and concepts to enhance understanding.	R1.1-1.1 Identifies roots, prefixes, and suffixes in words.	R1.1-1.2 Uses knowledge of roots, prefixes, and suffixes to understand words.
R1.1.2 Uses context to determine the meaning of words.	R1.1-2.1 Uses context of sentence to clarify the meaning of unknown words.	R1.1-2.2 Uses context of sentence to clarify the meaning of unknown words or differentiate between primary and secondary meanings of words.
R1.1.3 Integrates word meaning, grammar, syntax, and context to construct a coherent understanding of sections of text.	R1.1-3.1 Uses word knowledge, grammar (e.g., subject, verb, pronoun reference), and sentence structure (e.g., clauses, phrases, compound sentences) to determine the meaning of a sentence.	R1.1-3.2 Uses word knowledge, grammar (e.g., subject, verb, pronoun reference), sentence structure (e.g., clauses, phrases, compound and complex sentences), and surrounding sentences to determine the meaning of a sentence.

The third goal of the AR team was to improve student efficacy. The PLC thought that students should hear from other students who had gone on to be successful. In mid-December the team invited a young, black, beauty queen currently serving the Miss America network to speak about her experience. This young lady's testimony was very popular with the students because she came from a similar background socioeconomically, she is a current college student at a prestigious private institution, she is an LPS product (she did not attend Heritage), and she had taken IB (International Baccalaureate) courses and exams, which allowed her to enter college as a sophomore. Additionally, in early April a month before students were to take their AP exams, I was asked by Superintendent Buss to write an essay defending the AP program. Dr. Buss sent this paper to a highly reputable newspaper that printed the story. The article centered on a former student at Heritage who was able to attend college largely due to success in her AP English courses. In mid-April we were fortunate to have her conduct a question and answer session with

our AP students. The student feedback from this event was also positive. Students commented that they enjoyed hearing the personal testimony from a peer. This validated many students who wondered if their hard work would be beneficial long term. This also helped debunk some of the negative feelings many minority students had toward advanced coursework because of race or a low socioeconomic background. Our guest student speaker showed the students at Heritage that AP success is not only advantageous, but tangible as well.

At the end of May, the Teacher Sense of Efficacy Scale was re-administered to determine if the level of efficacy among the PLC participants had risen. Exit interviews were also conducted with each PLC participant to determine trends, changes, and potential answers to the research questions.

Evaluating Action: Mid June 2017

“The outcomes of the action, both intended and unintended, are examined with a view to seeing: if the original constructing fitted; if the action taken matched the constructing; if the action was taken in an appropriate manner; and what feeds into the next cycle of constructing, planning and action” (Coghlan & Brannick, 2014, p. 10). After the AR team ended the action research cycle, the results were examined closely to determine if the research questions were aligned with the findings of the project. Notably, the conceptual framework was re-examined using a teacher efficacy and collaborative learning perspective.

The action research process was effective in the construction and evaluation of this process. The aim of this study was to increase the efficacy of the teachers and to create a more collaborative culture among AP teachers at Heritage High School. Consequently, the PLC was found to be a viable means of accomplishing both of these goals simultaneously.

The method by which this project was evaluated included conducting interviews with the AR team/PLC members and analyzing the data from Teacher Sense of Efficacy Scale.

Significantly, as the research organizer, I found that the PLC meetings were highly successful in bringing about the desired positive impact to teacher efficacy and collaborative practice. The action research participants are now more prepared to face the organizational issues that will arise at Heritage. Skepticism was present among the participants at the beginning of this process; however, as the participants reflected on their work in the PLC there was a sense of optimism that they could affect their students and colleagues in positive manner through a PLC. Subsequently, these reflections signaled the end of the AR cycle for this project.

CHAPTER 5

FINDINGS

The goal of this action research project was to investigate the impact that participation in a PLC has on collaborative teacher practices and teacher self efficacy. The belief is that collaboration builds efficacy and an efficacious teacher will have higher student achievement long term. The research seeks to answer the following questions:

1. How is teacher self efficacy influenced by participation in a PLC?
2. In what ways do teachers engage in the process of collaborative learning through a PLC?
3. How does participation in a PLC affect teacher practices in an AP classroom>

Table 5.1

Research Findings

Research Question	Findings
1. How is teacher self efficacy influenced by participation in a PLC?	<ol style="list-style-type: none">a. Teacher efficacy responses were higher after participation in a PLC.b. Opportunities for teachers to engage in organic discourse are recommended.
2. In what ways do teachers engage in the process of collective learning through a PLC?	<ol style="list-style-type: none">a. Teachers work together to create a collective creativity.b. Teachers thrive with supportive and shared leadership and leadership must model a collaborative culture within the organization.c. Cultures of support within PLCs promote engagement and efficacy.
3. How does participation in a PLC affect teacher practices in an AP classroom?	<ol style="list-style-type: none">a. Teachers become willing to share their personal practices.

This chapter will include the findings of each research question from the case study (table 5.1). These findings are the product of data pulled from researcher observations and reflections, Teacher Sense of Efficacy Scale responses, and interviews of the PLC participants at Heritage High School.

Research Question 1: How is Teacher Self efficacy Influenced by Participation in a PLC?

The survey instrument used to measure the level of teacher efficacy was the Teacher Sense of Efficacy Scale. This instrument uses a scale from 1 – 9 to measure teacher efficacy and contains 24 questions broken into three categories. For each question the teacher is asked to identify how much they can do in regards to a series of questions with a rank of 1 indicating nothing, 3 indicating very little, 5 indicating some influence, 7 indicating quite a bit, and 9 indicating a great deal. Consequently, any ranking above 5 indicates that the teacher believes he or she have a modicum of influence and would indicate a higher sense of efficacy. The teachers were instructed to only answer the survey as it pertains to their pre-AP and AP students. The mean score was calculated for each of the three categories during the pre-administration (before the teachers participated in the PLC): 6.28 for Efficacy in Student Engagement, 6.75 for Efficacy in Instructional Strategies, and 7.25 for Efficacy in Classroom Management. Given these numbers, it appears that teachers in this PLC have a respectable sense of efficacy. However, considering that there is only one teacher featured in the PLC with single-digit years of experience one might expect the pre-PLC averages to be slightly higher. Notably, after PLC participation the means of all three categories did increase: 7.94 for Efficacy in Student Engagement which is an increase of 1.66, 7.91 for Efficacy in Instructional Strategies which shows an increase of 1.16, and 8.06 for Efficacy in Classroom Management which saw the lowest increase at .81.

While these results are not definitive, there are some noteworthy takeaways. For instance, classroom management scored the highest final mean, but scored the smallest increase. This could be attributed to experience of the teachers. Since they share a combined 42 years of teaching between them, it is no shock that classroom management saw the smallest amount of increase but the highest amount of confidence. Veteran teachers are expected to have strong classroom management skills because the practice that requires years to gain competency. It is also important to note that student engagement showed the most increase. This occurrence would suggest, even among veteran teachers, the free commerce of ideas can add to their perception of student engagement. Consequently, if a collection of teachers with this much experience perceives there to be an increase in student engagement there is a high probability that the improvement took place.

Opportunities for Teachers to Engage in Organic Discourse are Recommended

Conclusions for these results can also be drawn from researcher observations in order to explain this finding. At the beginning of a February meeting the PLC randomly decided that they would begin every session with a discussion of “good, bad, and ugly.” This served as an opportunity for teachers to share their weekly triumphs and challenges. These informal sessions lasted a maximum of 10 minutes. In one such session, participants said that they were noticing more behavior issues in their AP class than in previous years. One of their solutions was to peer review lesson plans with a focused goal of examining rigor in order to boost student engagement. After participating in this practice via email, Ms. Johnson (the teacher with less than 10 years of experience) openly acknowledged that she saw a positive behavior difference during a March meeting. Through the supportive dialogue constructs that the teachers provided via email correspondence, Ms. Johnson was able to address behavior problems via proactive lesson

planning. In another one of these sessions, the group decided that they would encourage collaboration through intentional furniture arrangement in their classrooms. Through conversation unrelated to agenda items, they decided that they would discontinue rows and all of their seating would be grouped. The AR team concluded that if a close proximity arrangement helps teachers foster a collaborative culture, then it may support students in the same way. The notions of trust and physical conditions will be discussed later in this chapter. Finally, PLCs demonstrate the true value of organic conversation. Agendas are good at times to provide focus, however, many times teachers expand their Zone of Proximal Development through everyday discourse.

Research Question 2: In what ways do teachers engage in the process of collective learning through a PLC?

Collaboration is considered a best practice in education. Vygotsky's theory states that humans maximize their capacity only through human interaction. Through this lens, the research facilitator and principal Clarkson believed that the PLC was an effective intervention for teacher efficacy in the short term, and student achievement in the long term at Heritage. Consequently, the collective learning process would be highly visible in this action research project and considering that high visibility it becomes imperative to document the manner in which teachers engage each other during this process. Therefore, the findings for this research question derive from qualitative data collected via interviews, researcher observations and researcher reflections. Through these modes of data collection, the following themes emerged for this research question:

- Teachers work together to create a collective creativity.
- Teachers thrive with supportive and shared leadership.

- Teachers establish a culture of support among each other.
- Teachers are willing to share their personal practices with each other.

Teachers Work Together to Create a Collective Creativity

In the education setting, the learning community is demonstrated by people from multiple constituencies, at all levels, collaboratively and continually working together (Louis & Kruse, 1995). Such collaborative work is grounded in reflective dialogue, in which staff conduct conversations about students and teaching and learning, identifying related issues and problems. The participants in this PLC demonstrated this on several occasions.

During the meetings and interviews, teachers expressed an appreciation for the opportunity to collaborate with colleagues. They enjoyed creating a product with different and knowledgeable others enjoying the process with them. A great example of this process can be seen in Mr. Chamberlain's response to the following question:

Researcher: How different do you think the school would be if there were no PLCs?

Chamberlain: I then think you would have the tendency to skip or miss stuff that would be advantageous. Not saying that every teacher won't hit the standards but there are specific works whether it be novels or plays or whatnot that for me as a pre-AP teacher I have no knowledge of what's on that AP exam. So it helps me a lot communicating with people who actually know what's on that AP exam. And I think that if kids have an exposure to something it's just much more advantageous. You know if you're teaching a standard a kid is supposed to be able to read "A Letter from Birmingham City Jail" and apply the standard to anything. On paper I think that works but I also think it would be way more advantageous to go, "ok I'm taking the AP exam 'Letter from Birmingham

Jail’ is on it I remember doing this, this helps a lot because I remember the overall theme and the overall work. It was hit on in the 10th grade and we got it again in the 11th grade.”

Humorously, Mr. Chamberlain stated several times throughout the research cycle that he is a man and, therefore, requires more help in the creativity department. However, this comical statement serves as an excellent example of why collective creativity is so important.

Chamberlain as the Pre-AP Literature II teacher is not AP certified and is therefore, self-admittedly, not as aware of what the AP exam entails as he should be. Through this process he received a clearer understanding of the expectations on the AP exam. He also enlisted the help of Mrs. West to create a joint project centered on “Letter from Birmingham Jail” that would have sophomores completing those level three and level four tasks for which he was responsible. Next year, as the students moved into Mrs. West’s class they would have a different project involving the same work by Dr. King, but West will focus solely on the level five requirements.

Another example of collective creativity within the PLC was displayed in May toward the end of the research cycle. In one of the final meetings participants were reflecting on ways to improve the AP program at Heritage for next year. In addition to arriving at the conclusion that they should definitely continue to meet frequently, they began to come up with concepts for an AP Day. They collectively decided that an AP Day would be a great way to express to the students that they are valued and celebrated. Possible ideas were an AP lip sync battle, where AP teachers would battle to songs that students who passed their AP exams got to choose. Another concept would be an AP Family Feud game where a teacher would host and freshmen would compete against sophomores and juniors would compete against seniors. It was amazing to observe not only the rapid pace at which ideas were being presented, but also the level of excitement the teachers displayed in presenting them. This occurrence took on the form of a

competition where each teacher was attempting to create an idea that was even more over the top than the previous one. Toward the end of the session, the PLC narrowed their choices down to three concepts. One was themed around pop culture characters, one was rodeo themed, and the other was game showed themed. The participants made plans to revisit these concepts over the summer in order to get a head start on having an AP Day concept ready to present to their AP peers the following school year.

The first finding of the second research question resulted from multiple means of data collection, including, interviews and researcher observations. Through the transcripts and practice the participants made it clear that collective learning was a staple of their function as a PLC.

Teachers Thrive with Supportive and Shared Leadership and Leadership Must Model a Collaborative Culture

When this action research project was first conceived the role of the principal was not a point of interest. However, as the project began to take form, acknowledging the influence of the building-based administrator was unavoidable. In the early stages of the study, teachers were constantly inquiring about the thoughts and concerns of the principal. Their initial thoughts were that PLC meetings would be frequently observed by either Clarkson or one of his assistant principals. However, as the project progressed, participants noticed that this was not the case and they seemed to take more pride and ownership of the process. In a January session, Mrs. Goodrich jokingly made the statement, “does Mr. Clarkson really care about this work?” I replied that he is well-informed and after we shared a laugh as a group I reflected on that moment with Mrs. Goodrich. Her statement follows:

It seemed odd to me that he was so distant from us. But, as time went on I released the expectation that an administrator would be there at least every other meeting. This is probably because this was the way things were done at my old school. It was cool though because it's like he's giving us his stamp that we're trusted professionals and that we can get the job done. That does in a way add to the expectations because with that responsibility you want to make sure that you do a good job.

As a department chair, Ms. Johnson confirmed that Clarkson tries to practice this supportive and shared leadership model in other aspects of Heritage High School as well. She stated in her interview. When asked how might changes in leadership affect the PLC Johnson's response was:

Hopefully there are no changes in leadership. I feel as leadership was pretty supportive consistently throughout this process and the way in which they run the school supports this type of dialogue amongst teachers. If there were any changes it could potentially spell trouble for the PLC especially if more is pushed upon the plates of the teachers who are already bogged down as it is. So hopefully, here at Heritage, everything will remain the same.

Furthermore, when questioned about the type of leadership style that is most conducive to an effective PLC during their exit interviews, every participant mentioned a style much like that employed by Mr. Clarkson. Chamberlain stated that he believes that a teacher facilitator should lead a PLC and the leader should be informed as to prevent micromanagement:

Researcher: In your opinion what is the role that a school administrator should play in the functioning of a PLC?

Chamberlain: I think that administration should be very aware and that it should be a program that's not just used and implemented just to have something to do. In other words let's actually sit and meet and iron out some things that we need to do and just pile other tasks on it.

R: That was an interesting word choice by you. What did you mean when you said *aware*?

C: I think a teacher should be a chairperson. They should make sure they're doing it for accountability purposes. There's a fine line between micro management and no management they should walk that fine line be present but not present.

Ms. Johnson believes that a principal's influence should be minimal, however, they should be constantly informed so that they can occasionally provide direction to the PLC with different perspective:

Researcher: In your opinion what do you think the role of a school administrator is in a PLC?

Johnson: I think that they should stand back and observe. I think that they should only make suggestions if they think that something is not going to work. One of the beautiful things about being a teacher is that most of the time you're an idealist and sometimes you need a voice to say, "hey that's a wonderful idea if we lived in LALA Land...but we don't so we need to minimize it to figure out how it will work for our demographic of kid."

R: So when you say, "they should stand off" are you suggesting a laissez faire attitude where a principal would just release this to the teachers and let things play out?

J: No I'm just saying that input should be minimal but potent. Because many times admin does have to step in to keep grounded they just don't need to handcuff us because then we don't take ownership.

R: So is there ever a case where a principal should just turn a PLC over completely to a group of teachers?

J: Yes, but there must be the right balance in that dynamic.

Goodrich affirms that the principal should only be involved from a pedagogical standpoint, because many times they are not knowledgeable of the specific content that teachers engage with. According to Mrs. Goodrich this pedagogy should manifest itself as the administrator modeling solid collaborative practices. She replies:

Researcher: In your opinion what is the school administrator's role in PLCs?

Goodrich: Well if you're the leader of a school then you should know what's going on within every department that's come together to do a PLC. And that makes you a more effective when district or community stakeholders ask questions about what is going on in your building. As far as a role for them doing anything there's nothing for them to do especially if they don't know the content. But, at least he would know what's going on from a pedagogical perspective and he could model that for other departments. It would make the faculty feel as if the administration was vested in the PLC process.

Mrs. West echoes her sentiments in her response:

I: In your opinion what do you think the school administrator's role is in a PLC?

W: Modeling. I think their role is to facilitate and to facilitate often by modeling instead of just supervising. And I know that might be difficult but once a semester you should show up and model. And when I say administrator I mean building-level administrators not district content coaches or specialists. I think that because building-level administrators can often rely on those district-level coaches, they often don't know what is going on in their classrooms and they speculate and they haven't even been there. And not just classrooms. Let's go back to the PLC. Administrators should know who's communicating with who? Are they communicating well? Are they growing that communication? Can see forward to improvements for the next year? Has this relationship grown and will it be better? If those administrators or not watching those changes they can't make those kind of decisions and they're the ones who make faculty decisions.

The findings of modeling collaborative culture as well as shared and supportive leadership is supported by research. School change and educational leadership literature clearly identifies the role and influence of the principal or assistant principal on whether change will occur within the school. Transforming a school into a learning community can be done only with the endorsement of the leaders and the active cultivation of the entire staff's progress as a community. Thus, a look at the principal of a school whose staff is a PLC seems a good starting point for relating what these learning communities resemble and how the principal builds, sustains, and embraces a healthy relationship with teachers to share leadership, authority, and decision making. Leaders cannot function as top-down agents of change nor can they be seen as the visionaries of the establishment; instead leaders must be educators (Hord, 2009).

Teachers Must Establish a Culture of Support within the PLC

The third finding of the second research question derives from interviews as well as researcher observations. Based on this qualitative data the finding uncovered via the action research process. Two factors come into play when discussing supportive conditions within a PLC. Both physical conditions and people capacities must be acceptable in order for a PLC to flourish. Physical factors that support learning communities include: a designated and respected time to meet and talk, small in number and physical proximity of the staff to one another, symbiotic teaching roles, strong communication, school autonomy, and teacher empowerment (Hord, 2009). Hord's ideal physical conditions were adhered to as much as possible for this PLC. The designated and respected time, autonomy, and teacher empowerment was established by Mr. Clarkson. My classroom provided a small setting where members were arranged in close proximity to each other. However, the symbiotic teaching roles and strong communication were organically installed by the PLC participants.

Initially, I anticipated some difficulty having symbiotic teaching roles without interference from myself or Mr. Clarkson. Considering that Ms. Johnson is the acting department chair, and as stated in chapter four, eager to prove herself she would assume a sort of informal leadership role. However, this never occurred as the group arrived at the conclusion that they all needed each other or their goal of an aligned AP curriculum would never materialize. In an April session while working on AP standard re-alignment Mrs. Goodrich made the comment, "I sure have a lot more confidence in this given that we are all strong teachers." Her colleagues all agreed and they went back to the task. This incident is a strong qualitative indicator of the symbiotic teaching construct at work. The teachers, without any prompting, realized and accepted the fact that they need each other to excel.

Strong communication is also a necessary tenet of a successful PLC. Communication was obviously present and never more evident than during the standards realignment portion of meetings. The educators in the PLC had no problem expressing themselves or receiving critique. In his exit interview Mr. Chamberlain offered an explanation as to why strong communication within the group is so critical:

Researcher: Why do you need a Professional Learning Community (PLC) at your school?

Chamberlain: Well for many reasons you want to make sure that you have all bases covered and that everybody is on the same page. They also make sure nothing is missed and nothing is duplicated, or that if it's duplicated that there's a reason for it to be duplicated.

Mrs. Goodrich reverberated these sentiments of communication creating consistency:

Interviewer (I): Why do you need Professional Learning Communities (PLCs) at your school?

Goodrich (G): We need PLCs so that we can bridge the gap between grade levels and make sure that things are consistent and that the kids can grow as they move forward.

The strong communication skills of the PLC facilitated a free flowing exchange of ideas and played a key role in the PLC aligning a large portion of the AP English curriculum at Heritage. Importantly, each member of the PLC has strong communication as individuals and the impact that the PLC had on their communication is difficult to determine. However, what is undeniable is that the participants of this PLC were able to communicate and access their collective voice with ease.

Equal to the presence of favorable conditions, an effective PLC must have ideal people capacities as well. One of the first traits cited by Louis and Kruse (1995) of individuals in a productive PLC is a willingness to accept feedback and to work toward improvement. This was clearly present among the PLC participants in this study as proven by their responses to the second question of their exit interview. In their responses they credit each other as the major factors for the success of the learning community. This event was captured expertly by Ms. Johnson's response to the following questions:

I: What would you say has made it easy for your school to engage in one of these PLCs and why?

J: I would say teacher cooperation because I believe that here at Heritage we have a very high expectation of our students and I believe that we as teachers are extremely motivated for our students' success. So by everyone keeping that common goal of student success in their mind we were able to make progress even though it was TIME CONSUMING!!

I: What difficulties were encountered during the running of this PLC and how did your school handle those difficulties?

J: Again the time factor is tough because you have so much to do before school and after school. And that was our biggest thing everyone being able to meet because everyone wanted to meet but then there was so many time conflicts. But, we handled that by everyone being patient and understanding. And even if the meeting had to be held at 5:00 pm the availability was the availability and we rolled with it.

This statement from Ms. Johnson shows that this collection of teachers possessed the personal capacity necessary to affect change within an organization. The community developed a

closeness that manifested itself as a commitment to the task as well as each other. The probability is high that this level of support also played a major role in there being a significant difference in the efficacy level of the teachers after participating in a PLC.

Research Question 3: How does participation in a PLC affect teacher practices in an AP classroom?

Teachers must be willing to Share Their Personal Practices

The old adage “sharing is caring” must be visible if a PLC is to be effective. Teachers can no longer return to the days where they are individual contractors of knowledge. Success requires the presence of a collaborative culture with volunteered sharing. The finding for the third research question is based off of a combination of exit interview responses and researcher’s observations.

Participants in this PLC were more than willing sharers. This was evident in their meetings as they made concerted efforts to visit each other’s classrooms. Deep into the action process detailed in chapter four as they created lessons they would frequently schedule times on their planning in which they could see these lessons put into practice. The benefits of these teacher-to-teacher visits were observed and recorded by the researcher as the PLC participants discussed their visits during sessions. The following benefits were observed: 1) there was no pressure since there was a level of trust present among the teachers, 2) teachers got to see the different level of students and what their struggles were and could devise ways to address them, 3) teachers received critique through a safe, familiar, unique, and practical lens, and 4) teachers were allowed to “steal” ideas from each other they may not have been discussed in the meeting. The participants seemed to appreciate every opportunity to observe each other in action and on several occasions invited their colleagues into their room for critique.

A culture as forthright as this one could not be possible without a high level of trust and security. These factors permeated through the group and can be seen in their exit interview responses. Notably, the participants listed the open sharing of ideas as the main reason why PLCs are needed at Heritage. Ms. Johnson attests to the sharing nature of this group in the following response:

Researcher (R): Why do you think it's important to have professional learning communities (PLC) in your school?

Johnson (J): I think that it's important to have PLCs in our schools because it's always good to be able to bounce ideas off of each other. And it's always good to be able to devise different strategies for education amongst your peers.

Mrs. Goodrich believes that when a common mentality is shared practices will naturally be shared as well, she responds:

Researcher: So what has made it easier for you or your school to become a PLC?

Goodrich: Having co-workers who have the same mindset and have the same goals for the students has made it a lot easier.

R: And why do you think this is?

G: Because we all have the same concerns. We all want to see our kids do well on these tests. It's almost a waste of time to get to the AP exam and not be successful at it especially if they've been exposed to it since the ninth grade. It's almost embarrassing if it does not happen so that's why it's so important.

Mrs. West agrees with her colleague and believes sharing boosts critical thinking which teachers then share with students. She comments:

Researcher: Why do you think it's important to have a professional learning community (PLC)? Or, why is there a need for a PLC in your school?

West: I think that the best reason is because we learn better by exchanging ideas, we establish criteria we make judgments so it takes us to a critical thinking level and then we can also develop things at that same level for our students.

R: What has made it easy for your school to become a PLC and why?

W: Well I think there was a willingness of teachers to do that, I think that we have had a couple of programs implemented in instructional pedagogy that helped, it has also presented new ideas and new things to talk about amongst ourselves.

The interview responses of the PLC suggest that the success of a learning community depends heavily upon the level of dedication from its members.

CHAPTER 6

ANALYSIS, CONCLUSIONS, AND IMPLICATIONS

The purpose of this action research study is to investigate the influence that professional learning communities have on teacher efficacy as well as advanced placement practices. This project seeks to answer the following questions: (a) how is teacher self efficacy influenced by participation in a PLC?, (b) in what ways do teachers engage in the process of collaborative learning through a PLC?, and (c) how does participation in a PLC affect teacher practices in an AP classroom? This chapter will provide implications derived from an action research project that was conducted at Heritage High School. Moreover, this chapter features a summary of the findings and conclusions, as well as suggestions for further research.

Summary of Findings

The research questions framed the methods of this study and provided the means for the AR team to reach findings regarding the effect of PLC participation on teacher efficacy and advanced placement classroom practices. Because the PLC is the main intervention for this study, researcher observations of meetings, interview protocol, as well as Teachers' Sense of Efficacy Scale results provided data on the AR team's ability to improve the efficacy and practices of AP teachers at Heritage High School. At the center of this study is Heritage, a high school in a large district that is trying to establish an exceptional AP program. The principal identified a perceived efficacy drop in teachers as a result of improved AP exam participation, in the absence of improved AP exam results. Using the frameworks of social constructivism and

teacher efficacy, the principal and researcher desired to improve AP practices and teacher efficacy by presenting teachers with an opportunity to participate in a PLC. Since a PLC embodies the collaborative context by which action research attempts to bring about personal and organizational change, the PLC served as the action research team (Reason & Bradbury, 2001).

The PLC in this study was found to be a successful vehicle for improving teacher efficacy. Specifically, the results of the Teacher Sense of Efficacy Scale results show improvement in the three areas that the scale is meant to measure: student engagement, instructional strategies, and classroom management. The smallest increase and the highest efficacy category was classroom management, which can possibly be attributed to years of experience. Since all but one of the participants in the PLC have double digit years in the profession it is expected that they would have a high efficacy in classroom management. The most growth was seen in student engagement, which is encouraging because the aim of all educational research should be to benefit and engage our students. The instructional strategies category showed an increase as well. These results suggest that PLCs have a positive impact on teacher efficacy.

Additionally, in answering the first research question there was a finding that teachers must be allowed opportunities for organic discourse. This is not to say that PLCs should not use agendas, however, taking 5-10 minutes out of a 40-minute session can provide teachers with a chance to debrief. These occasions are rare during a school day when teachers spend so much time with students, and they are even rarer outside of school where teachers are tending to their personal lives. Teachers mentioned how grateful they were to be able to vent or discuss issues several times throughout the work sessions, as documented by the researcher's observations of

the PLC meetings. This finding does not suggest that structure or some oversight is not required at times, instead, if conversation is allowed to occur organically and unregulated it can often prove beneficial in expanding a teachers zone of proximal development.

This case study also sought to find ways in which teachers use a PLC to engage in collaborative learning. First, the PLC highlighted that in the education setting, the learning community is demonstrated by people from all backgrounds, at all levels, collaboratively and continually working together. Such collaborative work is rooted in insightful discussion, in which staff members engage in dialogue about students and teaching and learning, identifying related issues and problems. The participants in this PLC revealed this in several instances. During the meetings and in interviews the teachers voiced an appreciation for the opportunity to collaborate with their colleagues. They enjoyed the feeling of creating a product with other professionals.

Second, the PLC revealed that modeling a collaborative culture, as well as, shared and supportive leadership is essential for collaborative learning. Therefore, learning communities should resemble how the principal constructs, sustains, and embraces a healthy rapport with teachers to share leadership, power, and decision-making. Leaders can no longer function as merely managers; leaders must be educators.

Third, this finding derives from interviews as well as researcher observations. Based on this qualitative data the finding uncovered via the action research process. Two factors are evident when discussing supportive conditions within a PLC. Both physical conditions and people capacities must be acceptable in order for a PLC to flourish. Physical factors that support learning communities include: a designated and respected time to meet and talk, small in number

and physical proximity of the staff to one another, reciprocal teaching roles, strong communication, school autonomy, and teacher empowerment.

Finally, the third research question was answered using researcher observations as well as data from participant interviews. Participants in this PLC were more than willing sharers. This was evident in their meetings as they were determined to visit each other's classrooms. Participants created lessons and regularly used their planning period to witness lessons put into practice. The following benefits were observed: (a) there was no pressure since there was a level of trust present among the teachers, (b) teachers had the opportunity to see the different levels of students and what their struggles are and could devise ways to address them, (c) teachers receive critique through a safe, familiar, unique, and practical lens, and (d) teachers were allowed to borrow ideas from each other they may not have been discussed in the meeting. The participants seemed to appreciate every opportunity to see each other in action and on several occasions invited their coworkers into their room so that they could be critiqued.

Conclusions

Several conclusions can be drawn pertaining to the research purpose and questions at Heritage High School. Notably, in my role as the research facilitator, I was in the unique position to gauge the work of the PLC as well as my role in this study.

Conclusion 1: Professional Learning Communities Improved Teacher Efficacy

At their core schools have two purposes, teaching and learning. Teacher efficacy was perceived to be low by the principal of Heritage High School because students were not displaying their learning through the English AP exams. If the perception of the teachers is that the PLC was beneficial to the success of their students then one could easily draw the conclusion

that their efficacy was improved due to their participation in a PLC. This belief was clearly outlined in the exit interviews when asked if they believed that their participation in a PLC has affected their student's achievement. The unanimous positive answers from the PLC coupled with the fact that every area of efficacy improved according to their Teacher Sense of Efficacy Scale results strongly suggests that professional learning communities have a positive influence upon teacher efficacy.

Conclusion 2: When Teachers are Granted Autonomy They Will Engage Each Other Frequently and With Great Variety

In this study, leadership played a major role in granting legitimacy to the PLC. By allowing teachers to have virtually full autonomy Mr. Clarkson empowered PLC members to take ownership of the PLC. As a research facilitator, I noticed that when granted this authority teachers assume responsibility to make sure the PLC is successful. This was confirmed by the teachers in their interviews when asked what the role of a school administrator should be in a PLC. Every teacher's response reflected that they appreciated Mr. Clarkson's approach of being informed instead of being in control. One of the major themes of the pre- and post- interviews was that teachers were apprehensive about the time required to participate in the PLC. However, the teachers agreed to participate and with their responsibility they found ways to be flexible and to attend all of the meeting times even if they had to be rescheduled. True professionals, all of these teachers were motivated by the underperformance of their students and they wanted to improve as practitioners. As a result, they navigated the scheduling issues and truthfully engaged their colleagues in research and discussion about how they could improve as teachers. This collection of teachers displayed many of the criteria for an effective PLC: they shared with each other, they were collectively creative, they established a culture of support, and they all shared

common vision and values (Hord, 2009). I posit that these traits will occur naturally if teachers are allowed the autonomy to facilitate this growth. Once this occurs, under Vygotsky's theory, the learning becomes more genuine because the teachers have participated in the creation of it which in turn boosts their efficacy.

Conclusion 3: Professional Learning Communities Encourage Educators to Adopt Democratic Practices in their Classrooms

PLCs are designed to increase the knowledge base of their participants by consistently exposing them to several sources of knowledge while activating and questioning their own knowledge. It is a democratic undertaking that elevates the participants considerably as noted by their responses in the interviews. The teachers greatly appreciated this process as they credited the other group members with the success of the community. This democratic culture carried over into several classroom practices as well. During several sessions while re-aligning AP standards, points were made about changes teachers made to their classroom processes. One of these changes was the decision that all classrooms would be arranged in groups. Other practices that were noted include offering more student choice on assignments, assigning group roles to facilitate more collaboration on assignments, increasing the relevancy of assignments to facilitate engagement, and the elimination of traditional hand raising in favor of a randomized call and response culture. An effective PLC serves as a potent model for teachers of the influence a democratic approach to education can have.

Implications

Because this action research study was limited in scale and only addressed a problem at a specific school, implications for future research are limited. Other schools with similar

demographics could benefit from the work of this AR team with the AP program at Heritage High School. Considering that the national trend is that Black students perform worse than their counterparts on AP exams, it is likely that teachers in other parts of the country will experience a decrease in their level of efficacy. Furthermore, the strategies employed in this study could be applied to virtually any school setting. Additionally, this AR study supports the work of Darling-Hammond (1996) and suggests that practices shown in this study could be beneficial in the private business sector. Nevertheless, the work of the AR team has influenced the current and future practices at Heritage High School.

For Teachers

The teachers who participated in this action research process have all claimed that they are better teachers because of their experience. Throughout the process they were constantly challenging their ideas or concepts. Working together to fix problems at Heritage has truly inspired these teachers. After participating in this study they are now interested in other ways that action research can be employed in a school. The PLC process does not lessen the importance of the individual teacher. If the classroom teacher remains the most important factor in student learning, the challenge facing schools is, “How can we persuade our teachers to embrace more effective instructional strategies?” The most powerful strategy of persuasion is presenting teachers with irrefutable evidence of consistently better results (DuFour, 2009). As one research study determined, “Nothing changes the mind like the hard cold world hitting it in the face with actual real-life data” (Patterson, Grenny, Maxfield, McMillan & Switzler, A, 2008 p.51). The transparency of results from the frequent common assessments will serve as proof to the effectiveness of the PLC model. The full impact of this project will not be seen until the summer of 2018 when AP English scores are released. When teachers see that students taught by

a coworker consistently perform at a high level, they become more open to changes in their personal practice. Moreover, the positive peer pressure of the collaborative team process fosters improvement because no teacher desires to be labeled as a weak link.

For Leaders

The implications of this study on building-level leaders are weighty. Leadership was a major theme that developed during the course of this action research project and the participants gave insightful comments via their exit interviews. Mrs. Goodrich believes that there should be a gradual release of the PLC model on a school where the PLC culture is either weak or non-existent.

Researcher: Do you have any recommendations for leaders looking to implement PLCs within their own school?

Goodrich: My suggestion would be for a leader to take his strongest department and implement it there then let it be used in departments as it's perfected with the strongest group.

Ms. Johnson suggests that leaders explore ways to present teachers with designated time during the workday to engage in collaborative learning, she states:

Researcher: Do you have any recommendations for leaders looking to implement PLCs within their own school?

Johnson: Yes I think that it would be great if we had common planning! If we all had the same planning period that would be awesome because it would be so much more convenient to meet for a PLC. When you have offset planning periods, leadership team, parent teacher conferences before or after school there is so much that it is so hard to find

the time to meet. So even if administration could block off time after school it would good if I were not allowed to do anything except PLC for given time on a given day.

Mrs. West believes that leaders should model collaborative behavior not only by including the faculty in the administrative decision-making process, but by volunteering to model what they expect to see in classrooms by teaching a lesson or mini-lesson.

Researcher: Do you have any recommendations for leaders looking to implement PLCs within their own school?

West: I think they should research models that don't have a lot of pre-work. Teachers know what they need to do. They know where they are, they know where they stopped two weeks ago, and they know where they stopped last week leaving a whole unit that they thought they were going to finish. They have things to talk about that are directly impacting students immediately. And then modeling. Sometimes, especially when students get familiar with stuff, we do the same thing. If an administrator comes in and models it's a fresh lens to look through. We can say, "hey they just pulled in something that we never talk about, that was a great discussion we should make sure we do that next time." And teachers always remember that "next time" moment because teachers love good ideas.

Chapter five features Mr. Chamberlain's comments that suggests teacher facilitators only should be involved with PLCs and that they in turn should report happenings to administration (similar to this study). Chamberlain does not absolve leadership from their responsibilities as he claims they should sit down with teacher facilitators to receive feedback, discuss next steps and develop loose agendas for the following meetings. His answer is listed below:

Researcher: Do you have any recommendations for leaders looking to implement PLCs within their own school?

Chamberlain: Make sure you're not just meeting to meet. It should be organic. Make sure you're meeting to talk about something. Make sure everything has a focus and that there is a free flow of ideas between participants. Make sure meeting produced concrete strategies and takeaways that clearly lend themselves to teachers improving the academic performance of their students.

Finally, leaders must begin to adopt an approach in which they share the school with their faculty and staff. This may be tough for some as they are ultimately the accountable one for their school building, which can lead to micromanaging and possessive behavior. However, this is not effective leadership and by working in isolation a culture of seclusion will be perpetuated throughout the daily routines of the school. Leaders must now engage as collaborative learners as much as their teachers. They must model the culture they wish to instill in their building.

For Districts

The potential implications for district leaders are present in the study as well. School districts are not entities exempt from benefitting from a collaborative culture due to their size. If this study shows that a PLC improves the efficacy of teachers in theory it should do the same for principals. District leaders must be strict about the evidence of collaborative learning they expect to see in their schools. However, they must allow schools and their principals the autonomy needed implement their vision in a way that best suits that individual site. This would allow for schools to truly engage in a genuine, organic, and democratic process at the building level. There is the potential for transformative power in an effective PLC of high school principals. For example, Laker Public Schools features eight high schools. Imagine if Dr. Buss formed a PLC in

which he and these eight principals met once or twice a month. Success stories from these different schools could be celebrated and shortcomings could be pondered collectively for remedies. If teachers would like to see PLCs modeled it is likely principals (who were once teachers themselves) would like to see this behavior modeled as well. Superintendents in turn model the elements they value. Additionally, by participating in a PLC, principals can observe how they operate, identify potential pitfalls, and plan for these accordingly before they release the model to their faculty and staff. The PLC could truly work wonders for a school system if district leaders were committed to this new vision of collaborative and democratic leadership.

Impact on Future Research

The implications of this action research study are not limited to practice. This project can also impact the existing body of literature that exists for AP educator best practices, teachers' roles in establishing a collaborative school culture, and links between teacher efficacy and professional learning communities. Since a major finding of this study was the impact leaders have on the effectiveness of a PLC, this action research project also contributes to the body of literature concerning educational leaders establishing democratic and collaborative cultures in their respective spaces.

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APPENDIX A

Recruitment Notice

Dear Valued Colleague:

I am writing to invite you to participate in a research study entitled “The Influence of Professional Learning Communities on Teacher Efficacy and Student Achievement.” The purpose of this study is to find out whether the professional learning community positively influences the performance of teaching and learning in our Advanced Placement program.

You’re eligible to be in this study because you are an AP or Pre-AP English teacher at George Washington Carver High School (which is the research site).

Your participation will involve allowing the researchers to use the information/data collected through your involvement in “The Influence of Professional Learning Communities on Teacher Efficacy and Student Achievement” to be included in their research. You will be asked to meet weekly, engage in interviews and surveys at certain points in the research process and no action involved in this research process is expected to exceed 30 minutes. The potential benefits of this study are improvements to teacher efficacy and student performance on AP English exams.

The researcher conducting this study is Kenneth S. Lawrence, under the direction of Dr. Karen Bryant, a faculty in the Department of Lifelong Education, Administration, and Policy, University of Georgia. You may ask any questions you have now. If you have questions later, you are encouraged to contact him at George Washington Carver High School, (706) 748-2499, lawrence.kenneth.s@muscogee.k12.ga.us.

If you do not wish to participate in this research study please respond to this email to discontinue any further correspondence.

Thank you for your consideration!

Sincerely,

Kenneth S. Lawrence

APPENDIX B

Research Consent Form

You are being invited to participate in a research study entitled “The Influence of Professional Learning Communities on Teacher Efficacy and Student Achievement.” This research hopes to find out whether the professional learning community positively influences the performance of teaching and learning in our Advanced Placement program. Your participation will involve allowing the researchers to use the information/data collected through your participation in “The Influence of Professional Learning Communities on Teacher Efficacy and Student Achievement” to be included in their research. You will be asked to participate in two interviews as well as two surveys at certain points in the research process. No interview or survey should exceed 30 minutes.

Your participation, of course, is voluntary but would be greatly appreciated. You may choose not to participate or to withdraw your consent at any time without penalty or loss of benefits to which you are otherwise entitled. If you agree to participate in this research project, please simply sign on the line below; if you do not agree, you can still participate in the professional learning community. Your employment or performance evaluations will not be affected by your decision about research participation. If you decide to stop or withdraw from the study, the information/data collected from or about you up to the point of your withdrawal will be kept as part of the study and may continue to be analyzed.

The results of the research study may be published, but your name or any identifying information will not be used. In fact, the published results will be presented in summary form only. Researcher Kenneth S. Lawrence will have access to your information/data for the duration of the study. The information/data collected will remain confidential and individual identifiers will be removed six months, or less after completion of the study. There are no known risks associated with this research. The findings from this project may improve teacher efficacy, academic engagement, and the overall performance of the Advanced Placement program.

The researcher conducting this study is Kenneth S. Lawrence, under the direction of Dr. Karen Bryant, a faculty in the Department of Lifelong Education, Administration, and Policy, University of Georgia. You may ask any questions you have now. If you have questions later, you are encouraged to contact him at George Washington, (706) 748-2499, lawrence.kenneth.s@muscogee.k12.ga.us. Questions or concerns about your rights as a research participant should be directed to The Chairperson, University of Georgia Institutional Review Board; telephone (706) 542-3199; email address irb@uga.edu.

Research Subject’s Consent to Participate in Research:

I have read the above information, and have received answers to any questions I asked. I consent to take part in the study.

Kenneth S. Lawrence
Name of Researcher

Signature

Date

Name of Participant

Signature

Date

Please sign both copies, keep one and return one to the researcher.

APPENDIX C

LPS Permission to Conduct Research Letter

Research, Accountability
and Assessment

•
Director

July 27, 2016

Mr. Lawrence,

Your request to conduct the research project entitled "The Influence of Professional Learning Communities on Teacher Efficacy and Student Achievement," has been approved as written. Future changes will require a resubmission for review and reapproval. A finalized copy of your research results should be filed with our office upon completion of the project. Good luck to you!

Director, Research Accountability and Assessment

APPENDIX D

Heritage Permission to Conduct Research Letter

October 12, 2016

To Whom It May Concern:

This letter is to confirm that Mr. Kenneth S. Lawrence has been granted permission to conduct his action research project entitled "The Influence of Professional Learning Communities on Teacher Efficacy and Student Achievement." I am aware that he will be meeting with AP and Pre-AP English teachers throughout the school year with the goal of improving teacher efficacy and student performance on the AP exams in English subjects. This research study could prove extremely useful to our school and can be performed without hassle by Mr. Lawrence as he currently serves as the AP Coordinator here at _____ High school.

Principal

APPENDIX E

Teachers' Sense of Efficacy Scale

Teachers' Sense of Efficacy Scale¹ (long form)

Teacher Beliefs	How much can you do?								
Directions: This questionnaire is designed to help us gain a better understanding of the kinds of things that create difficulties for teachers in their school activities. Please indicate your opinion about each of the statements below. Your answers are confidential.	Nothing	Very Little	Some Influence	Quite A Bit	A Great Deal				
1. How much can you do to get through to the most difficult students?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
2. How much can you do to help your students think critically?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
3. How much can you do to control disruptive behavior in the classroom?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
4. How much can you do to motivate students who show low interest in school work?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
5. To what extent can you make your expectations clear about student behavior?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
6. How much can you do to get students to believe they can do well in school work?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
7. How well can you respond to difficult questions from your students ?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
8. How well can you establish routines to keep activities running smoothly?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
9. How much can you do to help your students value learning?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
10. How much can you gauge student comprehension of what you have taught?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
11. To what extent can you craft good questions for your students?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
12. How much can you do to foster student creativity?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
13. How much can you do to get children to follow classroom rules?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
14. How much can you do to improve the understanding of a student who is failing?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
15. How much can you do to calm a student who is disruptive or noisy?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
16. How well can you establish a classroom management system with each group of students?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
17. How much can you do to adjust your lessons to the proper level for individual students?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
18. How much can you use a variety of assessment strategies?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
19. How well can you keep a few problem students from ruining an entire lesson?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
20. To what extent can you provide an alternative explanation or example when students are confused?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
21. How well can you respond to defiant students?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
22. How much can you assist families in helping their children do well in school?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
23. How well can you implement alternative strategies in your classroom?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
24. How well can you provide appropriate challenges for very capable students?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)

Directions for Scoring the Teachers' Sense of Efficacy Scale¹

Developers: Megan Tschannen-Moran, College of William and Mary
Anita Woolfolk Hoy, the Ohio State University.

Construct Validity

For information the construct validity of the Teachers' Sense of Teacher efficacy Scale, see:

Tschannen-Moran, M., & Woolfolk Hoy, A. (2001). Teacher efficacy: Capturing and elusive construct. *Teaching and Teacher Education*, 17, 783-805.

Factor Analysis

It is important to conduct a factor analysis to determine how your participants respond to the questions. We have consistently found three moderately correlated factors: *Efficacy in Student Engagement*, *Efficacy in Instructional Practices*, and *Efficacy in Classroom Management*, but at times the make up of the scales varies slightly. With preservice teachers we recommend that the full 24-item scale (or 12-item short form) be used, because the factor structure often is less distinct for these respondents.

Subscale Scores

To determine the *Efficacy in Student Engagement*, *Efficacy in Instructional Practices*, and *Efficacy in Classroom Management* subscale scores, we compute unweighted means of the items that load on each factor. Generally these groupings are:

Long Form

<i>Efficacy in Student Engagement:</i>	Items 1, 2, 4, 6, 9, 12, 14, 22
<i>Efficacy in Instructional Strategies:</i>	Items 7, 10, 11, 17, 18, 20, 23, 24
<i>Efficacy in Classroom Management:</i>	Items 3, 5, 8, 13, 15, 16, 19, 21

Short Form

<i>Efficacy in Student Engagement:</i>	Items 2, 3, 4, 11
<i>Efficacy in Instructional Strategies:</i>	Items 5, 9, 10, 12
<i>Efficacy in Classroom Management:</i>	Items 1, 6, 7, 8

Reliabilities

In Tschannen-Moran, M., & Woolfolk Hoy, A. (2001). Teacher efficacy: Capturing and elusive construct. *Teaching and Teacher Education*, 17, 783-805, the following were found:

	Long Form			Short Form		
	Mean	SD	alpha	Mean	SD	alpha
OSTES	7.1	.94	.94	7.1	.98	.90
Engagement	7.3	1.1	.87	7.2	1.2	.81
Instruction	7.3	1.1	.91	7.3	1.2	.86
Management	6.7	1.1	.90	6.7	1.2	.86

¹ Because this instrument was developed at the Ohio State University, it is sometimes referred to as the *Ohio State Teacher Efficacy Scale*. We prefer the name, *Teachers' Sense of Efficacy Scale*.

APPENDIX F

Pre Interview Protocol

1. What do you believe is the number one challenge facing in the AP program here at Heritage High?
2. What suggestions if any do you have to conquer this challenge?
3. How do administrators and teachers in your school district share their personal practice?
4. What is your understanding of what a PLC is?
5. Have you previously participated in a PLC at any time in your career?
6. What do you perceive to be the benefits of PLCs?
7. What do you personally hope to gain from the experience of participating in a PLC?
8. What potential obstacles do you anticipate in the operation of this PLC?
9. Do you believe that participation in a PLC will increase the academic achievement of your students?
10. Organization of school as a Professional Learning Community: a. Describe leadership and how decisions are made in your school. b. How important is leadership? c. Describe the collaboration process in your school. d. How important is collaboration? e. Tell me about your school's professional development program. f. How important is the professional development program? g. What structures are in place to support school improvement efforts? h. How important are these structures?

APPENDIX G

Post Interview Protocol

1. Why do you need a Professional Learning Community in your school?
2. What has made it easy for your school to become a Professional Learning Community? Why?
3. What has made it difficult for your school to become a Professional Learning Community? a. How did you or your school deal with those difficulties?
4. What do you anticipate happening in the next 5 years regarding your school's being a Professional Learning Community? a. What goals do your Professional Learning Communities have for the next 5 years?
5. How might changes in leadership affect your school's Professional Learning Community?
6. How different would your school be if you didn't have a Professional Learning Community?
7. What suggestions or recommendations would you give to another school considering a Professional Learning Community model?
8. Do you believe that your participation in PLCs has affected your students' academic achievement?
9. In your opinion, what is the school administrator's role in PLCs?
10. Do you have any suggestions for improving the PLC that you are currently a member of or recommendations for administrators that are seeking to implement PLCs within their school?