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The Role of Internal and External Coaches in Supporting Implementation of Proficiency Based Learning at the Secondary Level

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THE ROLE OF INTERNAL AND EXTERNAL COACHES IN SUPPORTING

IMPLEMENTATION OF PROFICIENCY BASED LEARNING

AT THE SECONDARY LEVEL

By

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A DISSERTATION

Submitted in Partial Fulfillment of the

Requirements for the Degree of

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May 2022

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THE ROLE OF INTERNAL AND EXTERNAL COACHES IN SUPPORTING

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By Katie M Thompson

Dissertation Advisor: Dr. Ian Mette

An Abstract of the Dissertation Presented
In Partial Fulfillment of the Requirements for the
Degree of Doctor of Philosophy
(in Educational Leadership)
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The goal of this study was to investigate teacher perceptions of the role of internal and external coaching on implementation of proficiency-based education, a school-wide reform initiative. The conceptual framework for this qualitative multi-site comparative case study is a combination of the Double-Loop Learning Model (Argyris, 1976) and Vygotsky's Space model (Gallucci, 2008). Data were collected and compared from four secondary schools in Maine for this study: two with internal coaches assisting in implementing proficiency-based education and two with external coaches assisting in implementing proficiency-based education. Seventeen teachers, four coaches, and four principals were interviewed as the primary source of data collection. Data from interviews were coded and analyzed through an open coding process. Findings were then examined and described in relation to the two theories framing this study, namely by using the stages of Vygotsky's Space model of socio-cultural learning: appropriation,

transformation, publication, and conventionalization. Key findings include: (a) External coaching has more influence over teacher learning in the initial stage of implementation (appropriation), providing whole-staff professional development and conventionalization, providing guidance around a common vision; and (b) Internal coaching has more influence over teacher learning during transformation and publication, with coaching happening in a one-on-one setting, helping teachers reflect upon strategies they are trying out and problem-solving as they practice components of the initiative. In addition, leadership approaches, structures present for coaching support, and challenges associated with the PBE initiative all play a role in each school's approach to implementation.

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INTRODUCTION

Teacher professional development is most effective when it is ongoing, intensive, and collaborative in nature (Darling-Hammond et al., 2009; Miller & Stewart, 2013). Coaching has become more common as schools and school districts work to provide this level of quality professional development. Throughout Maine and across the country schools are increasingly hiring site-based instructional coaches and external school coaches in an effort to help build teacher capacity and improve instructional practice (Forde et al., 2013; Knight & Cornett, 2009; Poglinco et al., 2004). Coaching in education began gaining popularity through the 1980's after a series of studies by Joyce & Showers indicated that regular, job-embedded peer coaching resulted in transfer of teaching practices into classroom use (Showers & Joyce, 1996; Killion et al., 2012). The 1983 publication of *A Nation at Risk* caused a heightened awareness of the need for a rigorous, standards-based curriculum and increased the pressure on school leaders to provide instructional support (Killion et al., 2012). Through the 1980's and 90's, as standards-based school reform efforts ramped up nationally, there was an increased demand for ongoing professional development focused on skill-building for teachers in order to improve student learning (Showers & Joyce, 1996; Killion et al., 2012). Coaching was one method to provide targeted, job-embedded, continuous support and professional development for educators in schools and school districts (Showers & Joyce, 1996; Fogarty & Pete, 2010; Woulfin, 2014; Vermont Agency of Education, 2016). In addition, coaching has increasingly become a lever for implementation of district policies and school-wide reform efforts (Woulfin, 2018).

Coaching brings together ongoing support by giving teachers a partner to aid in reflection and targeted professional development by maintaining a focus on instructional practices (Knight,

2006). Coaches work with individuals or groups of educators to learn collaboratively and develop both skills and knowledge around best practice. Educators learn from each other, from coaches, from practicing independently, and from sharing their practice with others (Gallucci et al., 2010). This collaborative process of co-constructing skills and knowledge with other teachers helps an individual teacher to internalize the information and strategies aligned with the reform and put them into practice (Neufeld & Roper, 2003).

Instructional shifts such as those introduced with the standards-based reform effort and development of the Common Core State Standards require teachers to engage in skill-building professional development to improve their practice (Killion et al., 2012). Coaches can provide ongoing support and expertise, along with modeling of certain practices and providing feedback to aid in teacher reflection (Showers & Joyce, 1996). Schools often design or plan for some form of professional development to assist teachers in implementing policies that are passed at the state or local level (Elmore, 2008). Sometimes policy implementation comes with guidance from state agencies, instructional leaders or coaches. When schools have them, coaches often serve as the conduit through which teachers learn about and begin to practice elements of policy (Woulfin, 2014; Coggins et al., 2003). As a result, coaches are seen as a valuable asset in many schools and school districts are spending significant amounts of money hiring coaches as a form of professional development (Knight, 2006; Midzimiri et al., 2014). According to a report published in 2003, Boston Public Schools had spent almost $6 million on coaching support (Russo, 2004), and in a study of the MATCH Teacher Coaching program in New Orleans schools, Kraft and Blazar (2017) estimated the cost of coaching to be roughly $9,000 per teacher, based on a 10-to-1 teacher-to-coach ratio. Elmore (2008) suggests that states invest in "intermediary institutions," or external partners with particular expertise, that could help build

teacher knowledge and skills around an initiative or policy, increasing the likelihood of success. Many schools across America have partnered with some of these types of intermediary institutions - non-profit organizations, for-profit organizations, independent contractors - to provide expertise, guidance and external coaching around the implementation of a particular policy directive. However, an important question remains, how much does it help?

School leaders have increasingly used financial resources to provide coaching over more traditional teacher workshops, namely due to the ability of the coach to improve instructional and institutional practices that positively impact student learning on a daily basis, and therefore have started hiring coaches as a form of professional development for educators (Knight, 2006; Knight & Cornett, 2009; Mayer, Woulfin & Warhol, 2014; Midzimiri et al., 2014). The intended outcome of hiring a coach is widely viewed as improving instructional and institutional practice to positively impact student learning (Knight, 2006; Mudzimiri et al., 2014). Coaching in schools serves to improve teacher practice or efficacy in general and is sometimes aimed at improving teacher skills, knowledge and practice around a particular initiative (Akhavan, 2015; Coggins et al., 2003). In some districts, coaches are hired on a full-time basis and are integrated into the school community, providing continuous professional development to improve teacher instructional practice, while other districts contract with outside consultants to provide less frequent, but ongoing coaching services related to an initiative (Knight, 2019; Vermont Agency of Education, 2016).

In the State of Maine and across New England school districts are hiring coaches to assist in the shift to proficiency-based education, a school-reform effort that requires graduation based on student demonstration of a set of state-determined standards rather than credit accumulation or seat time (Silvernail et al., 2013). The core elements of proficiency-based

education include advancement based on demonstration of mastery of standards, flexible pacing, and instruction to meet students where they are in their learning (Le et al., 2014; Steele et al., 2014). This reform represents a significant philosophical shift for teachers and leaders from the traditional model of education focused on seat time to a model where students are assessed and progress based on what they know and can do in each content area (Le et al., 2014; Silvernail et al., 2013). Emphasis on college and career readiness, cross-curricular skills and work habits, and increased technology and personalization are also central to a proficiency-based system (Stump et al., 2016; Le et al., 2013).

For many teachers, personalizing student learning requires a pedagogical shift, one that embraces increased student voice and flexible pathways toward mastery of standards (Silvernail et al., 2013). Teachers must be skilled at planning for a differentiated classroom with learners at various places and at developing formative and summative assessment options that allow learners to demonstrate knowledge and skills in a variety of ways when they are ready (Le et al., 2014). A proficiency-based classroom requires that teachers organize their time and classroom space differently, relying on technology, conferencing, mini-lessons, and project-based learning opportunities for their students to gain the knowledge and skills indicated in the standards (Le et al., 2014). The implementation of proficiency-based education requires a multi-faceted system change from the structures and practices in schools to the established beliefs of educators, making it a difficult initiative to implement with fidelity (Silvernail et al.,2013). In order to implement proficiency-based education, it has been documented that "substantial professional work" is necessary for teachers, especially professional development focused on the components of the state mandate (Stump et al., 2016, p.21).

With a state mandate established in 2012 that applied pressure to schools to implement a proficiency-based approach, there has been an upward trend in Maine schools seeking external coaching support, increasing the need for research in this area. While the mandate was repealed in Maine in 2018, there are still schools and districts in Maine and across the country working to implement proficiency-based or competency-based learning to varying levels of success (Surr & Redding, 2017). The research question in this study is: How do secondary schools use internal and external coaches to support implementation of proficiency-based education, a schoolwide reform initiative? This paper outlines research and subsequent findings that will help to describe the phenomenon of coaches working with teachers within secondary schools to implement proficiency-based education, a school-wide reform initiative. The theoretical underpinnings of the research are described next, followed by justification for the study. Chapter 2 includes an extensive review of the literature in coaching, with specific emphasis on professional learning and coaching toward school-wide reform efforts. Chapter 3 provides a description of the research design and methodology. Chapter 4 describes the findings of this qualitative case study and Chapter 5 discusses the findings in relation to practice, theory, policy, and future research in the field.

Theoretical Framework

Coaches facilitate teacher learning in a way that encourages discussion of practice, examination of data to identify areas of need, and challenges underlying beliefs and assumptions of teachers and school leaders to ignite system-wide change. Bloom et al., (2005) discuss the importance of changing individual beliefs in order to change actions or practices that lead to sustained change. Two theories are helpful to frame this learning for system-wide change: Argyris' (1976) double-loop learning model and Vygotsky's Space model (Gallucci, 2008), a

version of sociocultural learning theory (Vygotsky, 1978). The two theories are described

separately here, in the context of coaching and then connections are made between the two

theories for the purpose of this study.

Argyris' (1976) model of double-loop learning provides a context for looking at coaching

as a form of professional development for teachers. Argyris defines learning as "the detection

and correction of errors" (p. 365). Single-loop learning occurs when practices change to correct

an error, but the underlying beliefs and assumptions remain intact (Argyris, 1997). In contrast,

double-loop learning occurs when the underlying beliefs and values change resulting in changes

in practice that align with those beliefs (Argyris, 1997). In order to promote learning or growth

of an individual, it is essential to uncover errors or areas where 'what we are doing isn't

working', however, existing norms and beliefs within an organization can prevent underlying

assumptions and values from shifting. By contrast, double-loop learning helps an organization

transform. The focus in double-loop learning is on individual growth through changes in beliefs

and values, which, Argyris theorizes, occurs through reflection, uncomfortable conversation, and

collaborative examination of data. In order for a shift to occur from a single-loop model to a

double-loop model, Argyris asserts that changes in individual behavior and reasoning must occur

and that, "no changes will occur toward a double-loop model unless the individuals change their

current theories-in-use" (p. 371). Double-loop learning, therefore, is essential to school

transformation.

Figure 1.1

The Vygotsky Space Conceptualization of Learning
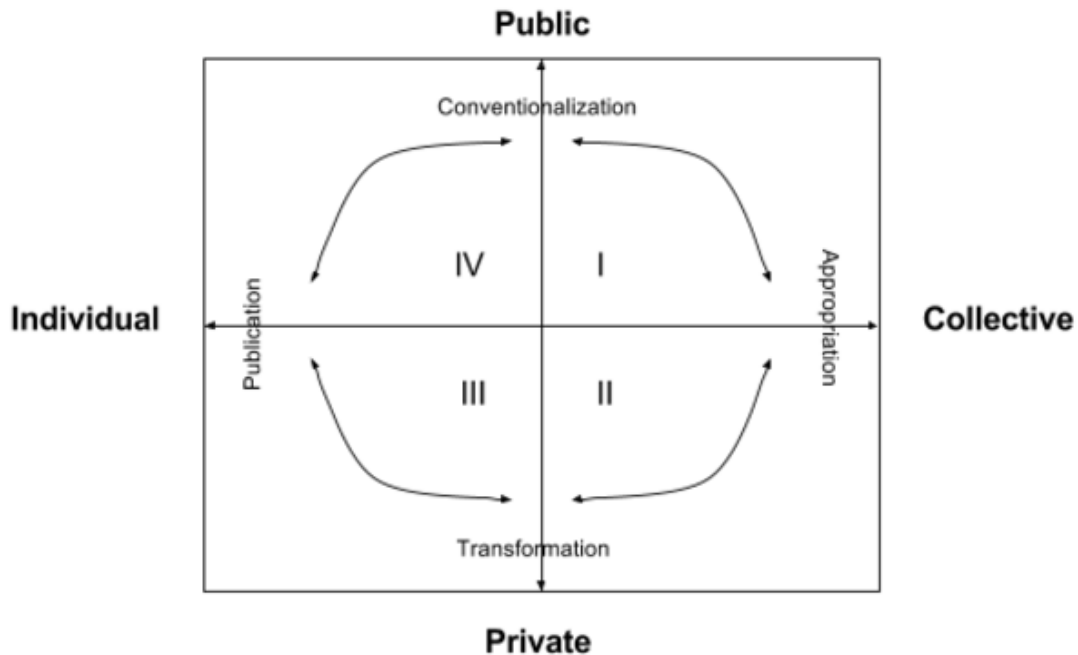
An iteration of Sociocultural Learning Theory, Vygotsky Space (Gallucci, 2008; Vygotsky, 1978) (Figure 1.1) complements Argyris' Double-Loop Learning Model to form a theoretical framework for this study. Through the lens of the Vygotsky Space theoretical model, teachers learn collectively, practice independently, discuss their practice with each other, and eventually acquire more refined and effective teaching strategies as a result (Gallucci et al., 2010). Throughout this learning process, teachers struggle with their beliefs about their own teaching practice and student learning, engaging in a double-loop learning cycle (Argyris, 1991).

Coaches facilitate teacher learning in a way that encourages discussion of practice, facilitates examination of data and teaching practice to identify areas of need, and challenges underlying beliefs and assumptions of teachers to ignite change in individual teacher practice and system-wide reform (Knight, 2019; Woulfin, 2018). This study will, therefore, explore how internal instructional coaching and external coaching from an outside expert play a role in teacher acquisition of knowledge and skills, reflection and refinement of practice, and understanding of beliefs and principles surrounding a reform initiative.

Considering the Vygotsky's Space model in an educational coaching context, educators working in collective groups make sense of new information (appropriation), take their new learning back to their classrooms and try some things out in their classroom practice (transformation), bring their experiences back to their colleagues through informal conversation or formal meetings (publication) and then fine-tune the practice(s) until it becomes a habit or part of their everyday planning or teaching (conventionalization), leading to a more institutionalized practice (Gallucci et al., 2010). Vygotsky Space (Gallucci et al., 2010) and Double Loop Learning (Argyris, 1991) will be used as theoretical frames through which data are interpreted in this study.

Problem Statement

Schools are increasingly funding coaching as a primary means of professional development for teachers, but much uncertainty exists around what types of coaching (internal or external) and what coaching strategies are most effective in changing teacher beliefs and practices. Schools must comply with policies at the state and national level and educators are locally responsible for determining how to implement new initiatives (Elmore, 2008). Many schools turn to different forms of professional development, one of which is coaching (Knight,

2006; Miller & Stewart, 2013). The problem is that schools are investing money into hiring coaches, while little evidence exists as to the effectiveness of different types of coaches (internal vs. external) or specific coaching practices that lead to sustained change. From my own position as a school coach working for an external service provider, I have seen many examples where coaching was a success in helping a school implement an initiative and also instances where coaching was not as effective. In my experience, I have perceived both a difference in how internal and external coaches work with teachers in frequency and types of strategies used, as well as a difference in the successfulness of implementation between schools that have internal coaching support and those that do not.

There is agreement in the literature on the components of effective professional development, but less agreement on the most effective form of professional development or how it should be structured (e.g., coaching, professional learning communities, consulting) (Fairman & Artesani, 2016). There are a considerable number of studies pointing to the benefits of instructional coaching (Knight, 2006; Akhavan, 2015; Elish-Piper & L'Allier, 2011) and a select number of studies that have reported positive results of collaborative or team coaching methods (Miller & Stewart, 2013; Neufeld & Roper, 2003), but many of these studies have focused exclusively on literacy or math instructional coaching and do not address the roles of various types of coaches or the use of coaching to implement a comprehensive school-wide reform initiative outside of a specific content area.

While there is a large body of evidence supporting instructional coaching as an important component in improving teacher practice (Akhavan, 2015; Elish-Piper & L'Allier, 2011; Grissom, Loeb & Master, 2013; Knight, 2006) and emerging evidence that supports collaborative professional development for teachers (Darling-Hammond et al., 2009), there is

less evidence supporting external coaching of teachers in an effort to lead school-wide change (Mayer, Woulfin & Warhol, 2015). This study combines research on both internal and external coaching and adds the component of coaching toward implementation of a school-wide initiative. The role of coaching as a professional development strategy in various school systems to support implementation of a school-wide reform initiative is an area in need of further research (Fairman & Artesani, 2016; Woulfin, 2018; Yager & Yager, 2011). A "system of support" guides and assists teachers and leaders in their learning at various stages of PBE implementation. Based on prior research, additional evidence is needed to help explain how external coaches work collaboratively with teachers and internal coaches as part of a "system of support" for professional development in schools implementing a reform (Gallucci et al., 2010, p. 956).

Research is also needed to clarify and describe the practices and routines of coaches in various roles (internal and external), and the structures present in the system that contribute to teacher learning at different stages of PBE implementation (Woulfin, 2018). Additional studies are needed to help educators and coaches determine which coaching practices will best improve teacher practice and why (Wise & Jacobo, 2010). A particular need identified by Woulfin (2014) is research around various coaching models in one district as well as comparisons of roles of coaches across districts as a way to gain clarity around structures and routines of coaches and their interactions with other educators. This study investigated the use of internal and external coaches to support teacher learning and change in practice within the context of a school-wide reform initiative to implement proficiency-based education in four different districts and high schools. This study aimed to describe the ways in which internal and external coaches work and interact with teachers, and how coaching time is structured across schools. This exploratory

study will help coaches, schools, school districts, and coaching organizations to understand more about the types of coaching (internal and external), coaching strategies, and system structures that are most promising during PBE implementation so that schools and districts can make more informed decisions about hiring and utilizing coaches.

Purpose

The purpose of this study was to describe the phenomenon of coaches working collaboratively with teachers within Maine secondary schools to implement proficiency-based education. A goal of the research was to examine the use of different types of coaches (i.e., internal/instructional coaches and external/system coaches) to support teacher collaborative and independent learning in the context of a state-mandated proficiency-based education initiative. Additionally, this study aimed to ascertain teacher perceptions about which types of coaching and specific coaching practices contribute most to their learning and changes in their practice aligned to PBE implementation, as well as which types of coaching strategies and structures were most helpful, from an educator perspective, in moving the school toward the goals of the initiative.

Research Question

The central research question in this study was: How do secondary schools use internal and external coaches to support implementation of proficiency-based education, a schoolwide reform initiative?

Significance

This study provides information to teachers and school leaders about the role of internal instructional coaches and external coaches in implementing school-wide reform. A key contribution of this study is to help district and school leaders identify which type of coaching

support best enables teachers to make the leap in aligning beliefs and practices to the elements of a reform initiative. This study also examines structures and strategies that best support coaching during the implementation phase of system-wide change (Fullan, 2007) for improved teacher practice through collaborative and independent learning. The findings of this study can inform school leaders as they make decisions about hiring an external coach with expertise or an internal instructional or facilitative coach to lead implementation. Additionally, this study provides information to school leaders about where funds would be best allocated for professional development. The findings may also be pertinent to state education agency leaders in determining particular rules to set around educational policies, providing guidance to school leaders, and supporting schools as they implement state mandates. While this study was qualitative in nature and dependent on teacher perception data, it could serve to inform future studies designed with larger comparison or control groups. A review of the pertinent literature in teacher professional learning and coaching follows, setting the stage for the research design.

CHAPTER 2

LITERATURE REVIEW

In this chapter, the research around the topic of coaching in schools will be explored in depth and the literature surrounding educational coaching and school reform will be discussed. The chapter begins by outlining the research behind the most effective characteristics of teacher professional development, and then focuses on coaching and the research surrounding various approaches to coaching. Delineation will be made between external or third-party coaching, and internal or site-based coaching. Next, school reform will be investigated through the lens of coaching and capacity building. Finally, the research around proficiency-based education will be explored with a deeper look at the movement in the State of Maine.

Teacher Learning Through Professional Development

Significant research has shown that teacher professional development is most effective when it is ongoing, job-embedded, content-focused, and collaborative (Garet et al., 2001; Darling-Hammond et al., 2009; Russo, 2004; Weiss & Pasley, 2006). The National Staff Development Council (n.d.) defines teacher professional development as, "sustained (not stand-alone, 1-day, or short-term workshops), intensive, collaborative, job-embedded, data-driven, and classroom-focused." Teachers benefit most from sustained and intensive professional development that connects their curricular content, assessments, standards, and pedagogy (Darling-Hammond & Richardson, 2009; Weiss & Pasley, 2006). In a study of an NSF-funded, nation-wide effort to provide sustained and content-specific professional development to math and science teachers, researchers found that teachers who participated in 60 or more hours of professional development (workshops or coaching) were more likely to indicate that the experience had "influenced their selection of instructional strategies" (Weiss & Pasley, 2006,

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p.6). Evaluators also determined that teachers who had fewer hours of professional development were more likely to misuse materials or not fully implement the materials and practices provided in the workshops (Weiss & Pasley, 2006).

Meta-analyses of teacher professional development efforts have found evidence to support the notion that working in collaborative groups helps individual teacher learning, and can lead to a change in classroom practice (Darling-Hammond et al., 2009). This finding is consistent with sociocultural learning theory, which establishes learning as a social and individual process (Vygotsky, 1978); teachers benefit from learning with and from one another and by making their practice public by sharing it with others (Gallucci et al., 2010). Vygotsky Space, as described by Gallucci and others (2010) asserts that learning together, practicing independently, and sharing collectively, can ultimately lead to "conventionalization" or common practice among teachers in a school.

Professional development for school leaders and teachers in support of school-wide initiative or reform efforts are becoming more common (Garet et al., 2001; Yager & Yager, 2011). Teacher professional development tied to comprehensive school reform rather than pockets of professional development in isolation lead to fewer discrepancies in teaching practice (Darling-Hammond & Richardson, 2009). Moreover, collective and ongoing participation in professional development directly related to reform efforts correlates with improvements in teacher knowledge, skill, and practice (Garet et al., 2001). When confronted with a school-wide initiative, individuals within a school must develop both a collective understanding of the meaning behind the initiative and a shared moral imperative in order for full implementation to occur (Fullan, 2007). Sustained collaborative work can help to develop a shared sense of ownership surrounding a project or initiative and is effective at improving teacher practice

(Coburn, 2003; Coggins et al., 2003; Fullan, 2007). However, reforms cannot be sustainable until changes in practice, fueled by beliefs about teaching and learning, and the underlying norms and principles of the reform are realized at various levels and throughout an organization (Coburn, 2003). This kind of shared responsibility is a result of teachers working together to construct meaning and build momentum to keep the initiative alive. Garet et al. (2001) state:

> Professional development activities encourage professional communication among teachers who are engaged in efforts to reform their teaching in similar ways. An ongoing discussion among teachers who confront similar issues can facilitate change by encouraging the sharing of solutions to problems, as well as by reinforcing the sense that, with time, improvement is possible. (p. 928)

Teachers working collaboratively to examine their practice, analyze data, and discuss classroom dilemmas will, theoretically, be more likely to internalize the skills and knowledge and use them to improve their own classroom teaching (Coburn, 2003; Gallucci et al., 2010). As a result, schools are increasingly turning to various models of coaching to provide this job-embedded, ongoing, and collaborative solution to professional development (Knight & Cornett, 2009; Kraft & Blazar, 2017; Miller & Stewart, 2013; Walpole et al., 2010).

Professional Development Through Coaching

Coaching can provide ongoing professional development that can contribute to building capacity of leaders and teachers in a school, which can lead to improved outcomes for students (Wise & Hammack, 2011; Hagen & Aguilar, 2012). Building capacity is defined as, "the development of skills and knowledge in both individuals and in the organization as a whole" and includes building instructional leadership, structures for management of resources, coaching of teachers, and teacher capacity to provide support to each other (Coggins et al., 2003, p.5).

Coaching helps build capacity because teachers are likely to adopt strategies they've learned

through professional development if they are coached by a peer or an expert while practicing the

new strategies (Showers et al., 1987). Coaching itself is not a one-size-fits-all strategy for

providing professional development, as coaching approaches are varied across schools and

contexts and can be differentiated based on teacher needs (Knight, 2019; Reddy et. al, 2019).

While coaching is one method of professional development that is widely used by schools today,

there is an overall lack of rigorous research pointing to the effectiveness of coaching over other

types of professional development (Knight & Cornett, 2009).

Although the term "coaching" is very familiar, a common definition is difficult to find, as

there are a variety of types of coaches and variation in roles (Walpole et al., 2010). Brown et al.

(2005) define coaching broadly as "a term used to describe a number of related strategies for

improving performance" (p. 4). Thus, the authors insist coaching can be thought of as a process

of development that involves discourse, collaboration, questioning, goal-setting, and reflection

and can be directed at individuals or entire organizations. Importantly, coaching is not seen as

evaluative. In a study of coaches' roles in policy implementation, Woulfin (2018) noted that

coaches were explicit in setting boundaries that allowed for support, but not supervision.

Coaching is described as "a helping relationship" where two parties are working toward agreed

upon goals (Preston & Goldring, 2013, p.507) and as "a process, a powerful, confidential

relationship, a strategy and dozens of skills and techniques that support an individual or an

organization through a change process" (Reiss, 2007, p.12). Unlike consultation, coaching

implies a continuous process of professional development (Reddy et al., 2019). Coaching is

multi-layered and both instructional and facilitative in nature; it helps people to change their

thinking and, in turn, change their behaviors because of it (Bloom et al., 2005; Reiss, 2007).

Coaching is a method of professional development aimed at supporting teachers and school leaders in thinking about things differently in order to change their actions or practices and ultimately increase effectiveness (Bloom et al., 2005; Reiss, 2007). Knight (2019) adds that coaches support teachers in setting and reaching student-focused goals. More specifically in the context of coaching to implement school reform, Walpole et al. (2010) defines coaching as "a site-based PD [professional development] initiative designed to develop theory and use demonstration, observation, and feedback to improve classroom practice" (p.118). For the purposes of this paper, coaching as a general term will be defined using Walpole's definition of coaching in the context of school reform.

In a 2014 study on developing a valid and reliable assessment for school coaching, Howley et al. defined coaches in two ways: "change coaches" that focus on whole-school improvement efforts, and "instructional coaches" that focus on a specific content area (p. 780). In order to investigate the dynamics that exist when implementing a school-wide initiative with various levels of coaching support, two types of coaches will be distinguished in this paper: Internal (site-based) coaches and external (third-party) coaches. These terms were selected by the researcher as a way to clarify the discussion of various roles of coaches throughout this study. The primary difference in defining characteristics between internal coaches and external coaches is that internal coaches are on-site at the school daily and function as instructional coaches of teachers through modeling, observing, conferencing and providing classroom-level instructional support (Neufeld & Roper, 2003; Bloom et al., 2005; Knight, 2006; Elish-Piper & L'Allier, 2011) whereas external coaches are generally third-party entities hired by the school or district to provide periodic but ongoing professional development and expertise around an initiative (Feldman & Tung, 2002; Weiss & Pasley, 2006; Mayer, Woulfin & Warhol, 2014).

While internal and external coaches may engage in similar coaching strategies, the frequency of contact with teachers and the relationships internal coaches form with teachers as a result of proximity and frequency delineate these site-based internal coaches from third-party external coaches. Recent studies have suggested that frequency of coaching matters less than quality and content of coaching (Kraft et al., 2018). The structure and content of the ways in which external and internal coaches interact with teachers are a primary focus of this study. The following sections provide an overview of the research on each type of coaching.

External (Third-Party) Coaching. External coaches work with school leaders and teachers to build capacity around practices aligned with a particular reform effort. External coaches are sometimes referred to as "intermediary coaches" or external experts assisting a school with improving instructional quality and institutional effectiveness in a substantive way (Mayer, Woulfin & Warhol, 2014). As external facilitators in school reform, intermediary coaches act as a "guide to the school change process" (Feldman & Tung, 2002, p. 12). External partners function as the experts in a particular field, practice, or reform initiative (Feldman & Tung, 2002; Weiss & Pasley, 2006). They provide support and professional development for teachers and leaders that align with those practices, and they help establish organizational structures that are necessary to sustain the reform efforts (Weiss & Pasley, 2006).

External coaches in a study by Mayer and colleagues (2014) had three primary objectives: to create buy-in and ownership of the reform; to develop structures that support the reform; and to build capacity of staff so that the expertise could be transferred and owned by the staff as a whole. The work of the intermediary coach is a joint enterprise in that the coach has the expertise, but all educators within the school need to be involved in the reform from the beginning, including in helping to shape and implement it, in order to own and sustain the work

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(Mayer et al., 2014). This idea of the external coach working to build capacity among staff is echoed in a study by Feldman & Tung (2002). The external coaches in this case worked with teachers during group meetings and had regular one-on-one meetings with the principal with a focus on building a collaborative culture. It was atypical for these external coaches to model lessons or observe teachers in their classrooms, suggesting that these coaches may not play as much of a role in the transformation phase of teacher learning where teachers practice using their new knowledge or skills in their classrooms (Feldman & Tung, 2002; Gallucci et al., 2010). Findings from coaching logs indicated that coaches reported spending only about 4% of their time in classrooms, while 50-60% of their time was spent with groups of teachers. During their work with groups of teachers, coaches most often set the agenda and facilitated the meetings. Feldman and Tung (2002) reported that while teachers felt coaching led to change, they reported a stronger connection between coaching and school change than coaching and change in classroom practice. Teachers in the study realized the importance of the coach as a capacity-builder and an expert in the reform, helping to guide and support the school through its transition. Administrators in the study had a better understanding of the connection between the reform model and coaching than did the teachers, which Feldman & Tung attribute to teachers focusing more on their own day-to-day needs. In schools where more teachers realized the connection between reform efforts and external coaching, more changes were experienced in school-wide and classroom practices (Feldman & Tung, 2002).

In contrast, a study done by Milton (2019) gathered teacher perception data on literacy coaching from an external coach/consultant as part of a broader school-wide initiative and showed a link to changes in classroom practice. Qualitative data illustrated that 11 of the 15 teachers interviewed adjusted their practice from a direct-instruction model to a literacy

workshop model as a result of working with the external coach. The same study also reported that the coach interactions varied from teacher to teacher. Some teachers reported the value of the coach modeling guided reading practices, while other teachers did not report modeling happening in their interactions with the coach. In this case, the work of the external coach was tied tightly to a prescribed initiative and grant with specific guidelines and expectations, and the coach was considered the expert in the knowledge and skills needed for effective implementation of the initiative.

Based on this research, one relationship that may be uncovered is that external coaches engage with teachers primarily in the appropriation phase (acquisition of new knowledge and skills) as experts delivering workshops and in the publication phase (collaborating with other teachers around practice and learning) as facilitators in the collaborative process. The research on external (third-party) or intermediary coaching is limited in scope and in scale. There are few studies that consider the strategies used by intermediary/external coaches, or the effectiveness of those strategies (Mayer et al., 2014).

Internal (Site-Based) Coaching. Internal or site-based coaches often fall into the category of "instructional coaches" which provide expertise in a specific field and support classroom instructional practices (Bloom et al., 2005). The research on instructional coaching is more extensive than that on external coaching, and numerous studies, especially in literacy and math coaching, have shown that instructional coaching can lead to a higher frequency of teacher implementation of new instructional strategies (Knight & Cornett, 2009; Elish-Piper & L'Allier, 2011).

Internal coaches often engage in one-on-one coaching sessions with teachers and use modeling, observation, reflection, and feedback strategies to work with teachers to improve practice (Knight, 2006; Elish-Piper & L'Allier, 2011). Jasso (2018) surveyed 116 teachers in six states and found that 94% of respondents agreed or strongly agreed that coaching motivates them to try new things in their practice. In a study of the Bay Area School Reform Collaborative, researchers found that what they called "internal reform coaches" were "often the key determiners of the direction of the school's instructional reforms, in concert with the principal" (Coggins et al., 2003, p. 17). In a randomized control trial with instructional coaches, Kraft and Blazar (2017) found that teachers who worked with a coach roughly 50 hours per year scored 0.59 standard deviations higher than the control group in ratings of effective teacher practices. Research supports the claim that internal or site-based instructional coaching improves teacher learning and practice in schools, especially when focused on literacy or math instruction and concentrated over a period of time (Akhavan, 2015; Grissom et al., 2013; Elish-Piper & L'Allier, 2011). Following a national survey of 247 teachers and a series of teacher focus groups, Akhavan (2015) concluded that coaching had a positive impact for teachers and that "a teacher who has received more coaching than other teachers has statistically significant positive changes in student achievement" (p. 37). In a study of the impacts of literacy coaching on student reading gains, Elish-Piper & L'Allier (2011) found a correlation between the number of hours coaches spent conferencing, discussing assessments, modeling and observing with student reading gains in second grade.

In addition to math and literacy coaching, peer instructional coaching can improve teacher practice. Showers and Joyce (1996) reported that "nearly all" teachers involved in peer coaching implemented new classroom practices. In collaborative coaching models, whereby

coaches and teachers work together in established groups and fixed cycles throughout the year, teachers in year two of the cycle reported an increased knowledge in the instructional model they were using as well as a perceived value in the coaching model as a form of professional development (Neufeld & Roper, 2003). In a similar model where teachers were coached using a "side-by-side" model of instructional coaching, teachers who received coaching had higher student achievement scores than teachers who did not receive coaching (Akhavan, 2015). The "partnership approach" described by Knight (2006; 2019) substantiates this idea that internal coaches serve as an equal learning partner rather than a supervisor or outside expert, providing choice in teacher learning, engaging in collaborative dialogue that can enhance the learning of both parties, and helping teachers plan for revising or adjusting practices based on their particular context. In a pilot study of a video-based coaching model where coaches and teachers watch a recorded lesson to identify strengths and challenges to set goals, Knight, Hock, Skrtic, Bradley & Knight (2018) found that teachers who collaborated with a coach increased their use of research-based practices compared with teachers who did not work with a coach. Based on this research, we might expect to find that internal coaches engage with teachers primarily in the transformation stage (learning from modeling, independently practicing, receiving feedback, and reflecting) and conventionalization stage (practicing, receiving feedback, reflecting, revising and internalizing) (Gallucci et al., 2010).

In a study of 82 teachers in a coaching program, Knight (2005) reported an 85% implementation rate when workshops were combined with instructional coaching. While the benefits of continued one-on-one instructional coaching are clear, there is less evidence in the literature describing the influence that one-on-one internal coaching combined with external coaching has on teacher practice. In addition, much of the research on instructional coaching

effectiveness focuses on math and literacy, with an emphasis on elementary school level coaching. Instructional coaches can be employed full time in the coaching role, or serve part time as teachers and part time as coaches. While coaching seems to have been more prevalent at the elementary level, secondary schools are starting to employ internal coaches in a range of roles. In addition to instructional coaching, schools may also engage teachers in a coaching role to support school improvement initiatives, school culture, professional collaboration, and parent engagement. Little empirical research exists on instructional coaching at the secondary level. Based on the assumptions that internal (site-based) coaching improves teacher practice and external (third-party) coaching could guide schools in the change process to implement reform practices, in schools where internal or external coaching is happening to facilitate PBE implementation, deeper teacher learning and internalization of practices related to the reform should be evident. Based on this research, we might expect to find that schools with both internal and external coaching have teachers who have more readily implemented changes that align to the school-wide reform. The next section will provide a review of literature on coaching toward school-wide reform.

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<u>Coaching Toward School-wide Reform</u>

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Due to policy changes without specific rules or resources for implementation at the school or classroom level, schools are sometimes asked to implement programs with sometimes little guidance or consideration of the local context and, as a result, the policy in practice looks much the same as the practice before the policy. Coburn (2003) speculates, "Reforms can be adopted without being implemented and can be implemented superficially only to fall into disuse" (p.6). Policy and practice have maintained "parallel relationships" in that educational policy has changed little of what is happening in classroom practice (Elmore, 2008, p. 212).

Instead of a leverage point to improve student learning, some policies become something schools just have to comply with. In response to education policy, schools have had the ability to determine how the policy would look in practice, leading to what some might call superficial acts of compliance but with no substantial change in classroom practice or student learning (Elmore, 2008). In order for these reform initiatives to trickle down to the level of student learning, a different level of thinking, reflecting, and teaching is required (Elmore, 2008). Administrators may rely on coaches to fulfill the role of translating the components of a policy or initiative into practice at the classroom level (Woulfin, 2018).

Administrators and teacher leaders gaining knowledge of the beliefs and pedagogical principles of the reform is essential in shifting ownership of the reform (Coburn, 2003). Before lasting change in practice can occur, beliefs about the practice and individual teacher assumptions about learning have to change (Bloom et al., 2005; Reiss, 2007). In order to sustain the beliefs and practices of a reform initiative and to spread them to school-wide pedagogy, leaders and coaches foster a shared responsibility among staff for implementation of the initiative (Coggins et al., 2003; Fullan, 2007). External reform initiatives often have experts outside the school with the knowledge and skills to implement the initiative (Feldman & Tung, 2002; Weiss & Pasley, 2006). Coaches can serve as vehicles for change, assisting in implementation of reform initiatives by supporting the creation and practice of a common vision and shared understanding of the ideas and practices central to the initiative (Woulfin & Rigby, 2017). The key is to shift the ownership for that knowledge to the individuals (i.e. teachers, leaders) within the building so that the practices are sustained once the external support is removed (Coggins et al., 2003). One way to shift this ownership and sustain school improvement

is through establishing school-wide structures for collaboration such as peer learning groups or professional learning communities (Mayer et al., 2015; Showers & Joyce, 1996).

Coaches can help build sustained, collaborative learning environments amongst teachers within a school called "communities of practice" (Miller & Stewart, 2013, p. 161). These communities of practice serve as a system of professional development focusing on curriculum, collaboration, high quality instructional practices, and instructional improvement (Gallucci et al., 2010; Mayer et al., 2015; Poglinco et al., 2004). In a 3-year study of coaching in urban school reform, Mayer et al. (2015) found:

> genuine collaboration and trusting relationships were required for staff to commit to engaging in the work of implementing TI (reform). More importantly, productive collaboration was also required to maintain the work of the inquiry teams and to take their work beyond simply surface-level changes in practice. To this end, we found that Esther (coach) worked with staff in school-wide meetings to teach them the process for building consensus in school-wide decisions. Esther also negotiated with principals and district administrators to create more opportunities during the school day for collaboration. (p.115)

When discussing types of coaching, instructional coaching, facilitative coaching, and cognitive coaching are distinguished from one another based on the types of practices and strategies used in each. Instructional coaching is defined as facilitating and guiding "content-focused professional development for a school's teachers" (King et al., 2004, p. 1). Instructional coaching tends to focus on classroom practices related to a particular content area. Instructional coaches serve as experts in the field, a source of resources and guidance when designing classroom instruction (Bloom et al., 2005). Facilitative coaching, by contrast, focuses on the

processes of questioning, reflecting, and providing feedback (Bloom et al., 2005). Facilitative coaching can be used to build the capacity of groups of teachers to collaborate and learn processes that allow them to identify and discuss problems of practice (Killion et al., 2010). Groups of teachers working together with a coach can build a collaborative culture, increase teacher confidence, promote innovation in teaching practices, and establish structures that will last beyond the coaching sessions. A study of teachers working in collaborative groups with coaches to learn new literacy strategies, for example, showed that teachers were able to successfully implement those practices in the classroom (Miller & Stewart, 2013). Facilitative coaches may coach a teacher or leader on structures that help them review or reflect upon situations or their own assumptions. Finally, cognitive coaching combines teacher or leader learning with long-term goals, trust, and individual autonomy (Costa & Garmston, 2002). Cognitive coaches are skilled questioners, whose objective is to pose questions that allow the teacher or leader to reflect deeply about their own assumptions and challenge their own thinking (Costa & Garmston, 2002). In general, no matter the type of coaching, the purpose is widely viewed as enhancing or improving performance and effectiveness, either of an individual or a group of individuals. Teachers can benefit from professional development that is based on sound educational theory and demonstration of practices, provides hands-on learning and practice for teachers, and provides a structure for feedback and reflection (Showers et al., 1987).

The sustainability of any school-wide initiative rests on a number of variables, including policy, leadership, professional learning opportunities, and structures in place that support professional growth (Coburn, 2003). Coburn (2003) states, "Teachers are better able to sustain change when there are mechanisms in place at multiple levels of the system to support their efforts" (p.6). External coaching that provides ongoing, collaborative professional development

related to a reform initiative could result in increased teacher learning and a greater likelihood of sustainability over time (Coggins et al., 2003; Garet et al., 2001; Elmore 2008). Some of these mechanisms and ongoing supports might be intentionally built-in collaborative time with structured facilitation, support of school leadership, or one-on-one follow-up coaching (Coburn, 2003).

Follow-up support

The inclusion of follow-up support in the research around effective teacher professional development makes a case for internal (site-based) coaches to aid in PBE implementation. In a meta-analysis of approximately 200 research studies, Showers et al. (1987) found that follow-up was key to transfer; in studies where teachers had coaching following workshops, the practices were more likely to be implemented in their classrooms. While this meta-analysis was done quite some time ago when coaching research was limited in scope, research by Beverly Showers and Bruce Joyce is cited regularly in coaching literature as some of the earliest and informative in guiding subsequent research in the field of coaching. In a more recent meta-analysis of research in coaching, Kraft et al. (2018) noted a 0.31 standard deviation larger effect size on instruction when coaching is paired with group professional development. Allen et al. (2011) found in a randomized control trial that teacher practice improved, as evidenced by improved student test scores the following year, after teachers in the test group engaged in an introductory workshop followed by 20 hours of individual coaching by an external coach throughout the course of a year.

To have a lasting impact, the focus of the coaching must be on system-wide staff development, including content knowledge, pedagogical skills, and a process in place for practice and feedback (Showers et al.,1987). In a study of the Community Cohort Coaching

Model, Miller and Stewart (2013) found that teachers reported an increase in knowledge and skills around literacy instruction and improved student learning of literacy concepts in their classrooms. Teachers credited modeling from the coach, "rethinking their beliefs" and "developing new insights" among other things that lead to their improved instructional practice (Miller & Stewart, 2013, p.295). This questioning of beliefs and developing one's own thinking aligns with components of cognitive coaching (Costa & Garmston, 2002) and Argyris' (1976) model of double-loop learning. Double-loop learning is grounded in the idea that organizational change can only occur if beliefs and assumptions are questioned in the learning process. Coaching that combines expertise and advice with questioning, reflecting, and metacognition may lead to more sustainable school-wide improvement. Weiss and Pasley (2006) elaborate on that idea, stating, "extended PD opportunities aligned with curricular content and accompanied by onsite follow-up support can produce significant changes in classroom practice and benefits for students" (p.1). External coaches can provide the professional development expertise during the appropriation stage, while internal coaches can provide the more sustained follow-up support necessary for changes in practice to occur.

Capacity building

System-wide capacity-building is a primary goal of external (third-party) coaching (Feldman & Tung, 2002; Mayer et al., 2014), while building capacity in individual teachers is often primary goal of internal (site-based) coaching (Coggins et al., 2003; Forde et al., 2013; Knight & Cornett, 2009; Poglinco et al., 2004). Coaches use particular skills and strategies that can be effective to help build the capacity of individuals and groups of people within a system. Huguet et al. (2014) identify six common capacity-building intervention practices: assessing teacher needs, modeling, observing, providing feedback and sharing expertise, dialogue and

questioning, brokering; and two artifacts: using tools and establishing norms; which coaches use to drive change in an organization (Huguet et al., 2014, p. 6). Findings from their in-depth case-study of four coaches included evidence that coaches rated by teachers as most "effective" in shaping their use of data used all of the identified capacity-building practices regularly in their interactions with teachers and administration. Coaches rated as "developing" in this study included those that used a limited number of capacity-building practices or used these practices inconsistently (Huguet et al., 2014). Considering research of internal instructional coaching, modeling, observing, and providing feedback are cited as practices that are often aligned with the role of internal coach (Knight, 2006; Elish-Piper & L'Allier, 2011) while research on external reform coaching highlights sharing expertise, brokering, using tools and establishing norms as practices often aligned with the role of external coach (Huguet et al., 2014; Mayer et al., 2014; Weiss & Pasley, 2006; Woulfin, 2018). When implementing a new school-wide reform initiative, having both an internal instructional capacity-building coach partnered with an external system-wide capacity building coach could facilitate teacher learning and change in practice in a more comprehensive and efficient way.

Using the Vygotsky Space theoretical model (Gallucci et al., 2010) as a lens to view these capacity-building practices, each phase of the learning and implementation process could be aligned with the realm of work of either the internal or external coach, or both. During the appropriation phase teachers learn collectively about research-based practices from experts in the field. In practice, this might look like an external coach facilitating a workshop or small group session on a particular component of the reform initiative. In such a setting, teachers have the opportunity to engage with the rationale behind the practices as well as consider implications for their own classroom. During the transformation phase, teachers take the new learning back to

their classrooms to practice. Internal coaches might model the practice for some teachers, observe the teachers trying the practice, and provide feedback to teachers as they utilize the practice. During the publication phase, teachers share their experiences with one another and discuss what they've learned. External coaches might facilitate these workshops or small group sessions that allow teachers to collaboratively reflect on their practices and consider refinements. During the conventionalization phase, teachers continue to practice and refine their skills until the desired practice becomes part of their repertoire of effective skills in their classroom instruction. Internal coaches play an integral role in engaging in ongoing cycles of observation, reflection, and feedback with teachers as they adopt these new reform practices as their own. Both internal and external coaches working together could provide the structure needed to facilitate teacher learning through all phases of the Vygotsky Space model. This structure could also facilitate double-loop learning by providing tools, norms, and processes for teachers to reflect critically on their practices and consider their espoused theories-in-action vs. their theories-in-use with regards to their teaching practices.

Factors Influencing Coaching Effectiveness

While there is support for coaching as a form of professional development, it should not be viewed as the silver bullet to solving professional development needs or the only way of implementing an initiative (Russo, 2004). There is a need for more research on various professional development strategies, such as coaching, to determine which have the greatest potential to improve teacher practice (Knight & Corbett, 2009; Fairman & Artesani, 2016). Instruments that have been developed to collect data on coaching effectiveness are few and limited in scope or generalizability (Howley et al., 2014). In an effort to create a more comprehensive tool to measure coaching effectiveness, Howley and others (2014) conducted an

extensive review of the literature in coaching and landed on ten effective coaching practices that appear throughout research on cognitive, instructional, and managerial coaching. In Howley et al. (2014) the term 'managerial' is used to describe a type of coaching that is closest to facilitative coaching and includes expertise in a particular area in combination with interpersonal skills. The ten effective coaching practices they synthesized from the research include: providing feedback; using relationship skills; providing guidance to others; modeling instructional practices; asking difficult questions; engaging in reflective inquiry; coordinating and structuring activities; and dealing with conflict (Howley et al., 2014).

Coaches regularly adjust their strategies to meet the needs of the individuals they are coaching, which may increase coach effectiveness (Huguet et al., 2014), but it remains unclear which strategies are most effective for coaching teachers during PBE implementation. The strategies coaches employ may depend on the stage at which the group is in the work at hand, and the readiness of the individuals for coaching (Hackman & Wageman, 2005). Instructional coaches rated as "effective" by teachers were observed to have more strategies and used them as necessary over time, whereas less effective or "developing" coaches were observed to have fewer strategies and used them all at the very beginning of the coaching relationship (Huguet et al., 2014). Coaches often fluctuate between instructional and facilitative coaching (Bloom et al., 2005). In a study of novice principals, coaches used different strategies to support principals depending on individual needs (Lochmiller, 2014). While coaches in different types of coaching roles may have particular practices and strategies they use in their setting, coaches in the same roles may also fluctuate in the practices and strategies they use (Walpole et al., 2010) and teacher perceptions of the effectiveness of these strategies may vary from teacher to teacher or school to school (Huguet et al., 2014).

Results of internal instructional coaching tend to vary depending on training and skills of the internal coaches (Weiss & Pasley, 2006). In a study of teacher professional development during school reform, Weiss and Pasley (2006) found that the preparation and training needed for teacher-leaders (internal coaches) was significant, resulting in "many missed opportunities for deepening teacher understanding of content and pedagogical strategies" (p.5). Although there was external support provided by experts, the site-based internal reform coaches were sometimes not equipped with the facilitation skills necessary to interact with teachers or they were spread too thin to provide the one-on-one support needed for teachers (Weiss & Pasley, 2006). It is a frequent misconception that those who are effective teachers will transition into being effective internal instructional coaches without much additional training (Chval et al., 2010). In some cases, coaching models have been established whereby internal coaches are trained by expert external providers in an effort to provide support to the coaches as well as the teachers in the school (Coggins et al., 2003).

Coaches have to navigate their roles carefully, especially when they are entering the coaching role after spending time in a teaching role, or while simultaneously working in a teaching role. Teachers are often not used to discussing their practice the way they might with a coach, and teachers that move into a coaching role are often ill equipped to make the transition (Russo, 2004). An experienced teacher, for example, cannot be thrust into a coaching role and expected to succeed; the role of a coach is different and the strategies used are learned over time (Poglinco et al., 2004; Gibson, 2005). Teachers making the transition sometimes struggle crossing into a coaching role, building trust with colleagues while serving in a different capacity. Other barriers, including a lack of clarity in the vision, lack of trusting relationships, principal

support, or not enough time built into the schedule to meet can all impede progress that a coach could make with a school (Kise, 2012).

The International Coach Federation established four core competencies that they consider best practice for effective coaching in any arena:

A) Setting the Foundation- this includes meeting ethical guidelines and professional standards as well as establishing a coaching agreement

B) Co-creating the Relationship- this involves establishing trust and intimacy with the client and having a coaching presence

C) Communicating Effectively- Active listening, powerful questioning, and direct communication

D) Facilitating Learning and Results- Creating awareness, designing actions, planning and goal setting, and managing progress and accountability. (Core Competencies, coachfederation.org)

Relationship building, particularly establishing trusting relationships, is a competency that is echoed throughout the literature as an essential component to a successful coaching partnership (Bloom et al., 2005; Killion et al., 2012; O'Bree, 2009; Psencik, 2011; Reiss, 2007). Coaches must work to build trust with their coachee. "One cannot enter a coaching relationship and expect trust to occur immediately. It takes time and a safe environment to develop trust" (Wise and Hammack, 2011, p.456). Setting ground rules or norms for working together and maintaining confidentiality can help to establish this trust (Bloom et al., 2005; Wise and Hammack, 2011). Setting short-term, manageable goals early on in a coaching relationship can also work to facilitate a climate of trust between coach and coachee (Reiss, 2007).

While both internal and external coaches must work to establish relationships and build trust among staff within the school, it is reasonable to assume that this process might be easier for a coach that was present in the school daily with regular access to teachers. This may also vary by situation and how the coach is used or viewed among staff, as there is research to suggest that coaches used as administrative liaisons are not perceived as trusting allies by teachers (Huguet et al., 2014). Research supports the idea that teachers often view external coaches as facilitating change within the school, but not necessarily change in their classrooms (Feldman & Tung, 2002). Time teachers have spent with a coach has also been positively associated with changes in practice and improved student outcomes (Akhavan, 2015; Grissom et al., 2013; Elish-Piper & L'Allier, 2011), however, in a meta-analysis of coaching research, Kraft, Blazar & Hogan (2018) found no evidence of a consistent relationship between positive instructional outcomes and frequency of coaching. With these considerations in mind, it would seem that internal coaches might have a role that more naturally lends itself to both building trusting relationships more quickly and spending more time one-on-one with teachers, but that the quality and outcome of coaching may vary based on a number of factors.

The job of a coach can be made much more difficult if leadership support and organizational culture in the school are not ripe for coaching (Killion et al., 2012; Fixsen et al., 2005). Administrative support or lack of support for coaching can be the determining factor in whether or not the coaching is successful (Huget et al., 2014; Russo, 2004). Huguet and others (2014) reported that coaches who were used as "brokers" between the leaders and the staff were less effective overall (as reported by the staff) than coaches who were fully supported by building leaders. A "broker" or go-between might find it difficult to establish a trusting relationship with the leader or the teachers and may find themselves in a difficult position

between the two (Huguet et al., 2014), however, in some cases, this conduit could be an essential link between teachers implementing the work and districts planning for the work, resulting in a spread of ideas and practices across schools and grade levels (Coggins et al., 2003). Research suggests that because principal support for coaching is such an important leverage point for coaching success, researchers should consider the type and level of principal support for coaching when embarking on studies of coaching effectiveness (Walpole et al., 2010).

A commitment from principals and other district leaders to set aside time in the schedule for coaching sessions and make coaching a priority is imperative to a successful ongoing and job-embedded coaching program (Fixsen et al., 2005; Russo, 2004). Time (hours spent) engaging in professional development activities and time span (duration) of the professional development overall tend to improve teacher learning and skills, likely because they include more opportunities for teachers to observe others, plan for implementation, and demonstrate their learning actively and collaboratively (Garet et al., 2001). In a case study of teacher participation in literacy coaching activities, it was concluded that larger schools with one coach received, on average, fewer coaching sessions per teacher than smaller schools with one coach, which equated to less professional development time for teachers from the larger school (Atteberry & Bryk, 2011). Time spent engaging in new learning throughout an initiative can increase the likelihood of success of a reform (Joyce & Calhoun, 1996). In a case study of school reform in one urban district, Joyce & Calhoun (1996) found that the reform efforts were least likely to succeed in schools with limited technical assistance and in schools where staff were not engaged with new learning. They concluded, "school renewal can begin with substantial changes in curriculum and instruction provided that the initiatives include considerable amounts of staff development and technical assistance" (Joyce & Calhoun, 1996, p.6). Within-district support is necessary both at

the building and central office level to sustain changes established during implementation of a reform (Joyce & Caloun, 1996).

In a review of the literature on coaching, the Vermont Agency of Education (2016) noted three characteristics of systems that support coaching for systematic improvement: Time and structure provided for established coaching sessions; reflecting on data and using them to inform instruction and decision-making; and a culture of professional learning. If the conditions do not exist that support coaching throughout PBE implementation, the likelihood of teacher practices changing are slim. Using a systems model of coaching assists in aligning the structures and processes to a common goal, and functions alongside an instructional coaching model to improve teacher practice (The Vermont Agency of Education, 2015).

In summary, studies in coaching have focused more on content coaching, such as literacy coaching and math coaching, and less on reform coaching or third-party external coaching (Mayer et al., 2014). While there is some evidence supporting instructional coaching, peer coaching, and cognitive coaching (Knight & Cornett, 2009), the evidence that exists is largely self-reported and observational data from qualitative case studies (Howley et al., 2014). There is little empirical evidence in the literature on coaching for school reform, external, or intermediary coaching, and many studies in coaching have led to inconclusive results, perhaps due to a range of activities that are called "coaching" throughout the literature (Howley et al., 2014). The empirical research in coaching for school reform that does exist has been focused primarily on large-scale initiatives, such as the Reading Recovery and Reading First Initiatives, and has largely been limited to primary school level studies with a focus on early intervention coaching for math and literacy (Howley et al., 2014; Kraft et al., 2018). This study will investigate both external (third-party) coaches and internal (site-based) coaches during PBE implementation in

order to clarify the roles of each and the perceived influence on teacher practice aligned with an initiative. The proficiency-based diploma policy in Maine will provide a common context for investigating the role of coaching in school-wide reform efforts. The next section describes the background for the case, including the proficiency-based diploma statute and the implications for teaching and learning in Maine high schools.

Background for the Case

Proficiency-based education is part of the progressive education movement that has grown over time from the work of John Dewey in the early 1900's, who argued for a real-world, hands-on approach to experiential learning (Le et al., 2014; Steele et al., 2014). An early experiment in 1919 in Winnetka, Illinois allowed students at an elementary school to progress through workbooks at their own pace as a way to individualize their learning and in the 1960's the idea of open classrooms was introduced as a way for students to engage in hands on learning and explore areas of interest to them (Le et al., 2014). Over time, these ideas merged with the idea of mastery-based learning, a concept conceived by Benjamin Bloom, which focuses on meeting individual students where they are at in their learning and working with them toward established learning goals (Le et al., 2014; Steele et al., 2014). In 1983, the National Commission on Excellence in Education's report *A Nation at Risk* called for higher standards and expectations for students (Surr & Redding, 2017). Following the recommendations in this report, states and national organizations established learning standards, or what students should know and be able to do, in each content area (Le et al., 2014; Surr & Redding, 2017). Over the next two decades the stakes continued to rise for schools and educators with the implementation of No Child Let Behind (NCLB), which turned the focus to measuring student progress on the identified educational outcomes, or standards, using standardized testing (Steele et al., 2014). As a result of

NCLB, each state in the U.S. established a set of standards and a system for assessment of those standards (Silvernail et al., 2013). States, like Maine, have continued to grapple with how to best identify, teach, and assess standards or common learning expectations accurately (Silvernail et al., 2013). Proficiency-based education, or PBE, has taken hold both in response to the high-stakes testing that has been implemented across the country, and as a way to locally determine what students will know, be able to do, and how they will demonstrate their mastery of college and career-ready standards (Le et al., 2014). Proficiency-based education focuses on identifying standards or learning outcomes, ensuring there are multiple ways for students to learn and demonstrate those outcomes, and allowing students to progress when they've demonstrated mastery (Silvernail et al., 2013; Surr & Redding, 2017). In 2008, New Hampshire became the first state to move to a statewide competency-based system, where students receive credit based on mastery of standards rather than seat time (Le et al., 2014). According to the Aurora Institute, in 2012 less than half of the states in the U.S. had some sort of flexibility in state policy allowing for seat time waivers or competency-based learning task forces. This number surged to 48 of 50 states in 2017 (Frost, 2018). Similarly, the number of documented schools using competency-based education rose across the country from 20 in 2012 to more than 500 in 2017 (Krauss, 2017). Today, there are schools and school districts across the country that are in various stages of implementing a proficiency-based education system.

Definitions for proficiency-based education can vary widely, but most often include students demonstrating mastery of a set of standards (Le et al., 2014). Mastery-based learning and competency-based learning are often terms that are used interchangeably with proficiency-based education (Le et al., 2014; Proficiency-based learning, 2016). The modern version of proficiency-based education has a deliberate focus on students' college and career readiness (Le

et al., 2014; Surr & Redding, 2017). The Rand Corporation defines competency-based learning as, "education that meets students where they are academically, provides students with opportunities for choice, and awards credit for evidence of learning, not for the time students spend studying a subject" (Steele et al., 2014). A similar definition for proficiency-based education can be found on the Maine Department of Education's website. They describe proficiency-based learning as a system of education that is, "based on students demonstrating mastery of the knowledge and skills they are expected to learn before they progress to the next lesson, get promoted to the next grade level or receive a diploma" (Maine Department of Education, 2017).

Each of these definitions focuses on students demonstrating evidence of the knowledge and skills they have learned and both definitions emphasize the importance of progressing at a pace that meets the needs of the learner. In a study of four regions implementing a competency-based learning model, the Rand Corporation used three criteria to define competency-based learning: Instruction meets students where they are (flexible pacing); Students have choices to personalize learning; Students are evaluated on evidence of proficiency (Steele et al., 2014, p.xv). Mastery, pacing, personalization, and instruction to meet student needs are common elements of a proficiency-based system (Le et al., 2014). For the purposes of this study, we will define proficiency-based learning as education that is based on student demonstration of mastery of knowledge and skills across content areas (Maine Department of Education, 2017).

In 2012, the Maine Legislature passed LD 1422, a statute requiring high schools to graduate students based on demonstration of proficiency of the standards identified in the Maine Learning Results beginning with the graduating class of 2018 (An Act to Prepare Maine People for the Future Economy, 2012). As schools scrambled to implement the new law, the state

quickly realized some schools would need more time than others and extended the timeline to the graduating class of 2021. This meant that schools in Maine rushed to make adjustments to comply with state expectations, leaving secondary schools at different stages of implementation: some already implementing a proficiency-based system, some beginning to implement, and some that maintained a traditional system (Stump & Silvernail, 2015). At the time the data were collected for this study, according to Maine statute, high schools had to verify student proficiency in English, math, science, and social studies in order to issue a diploma to students in the graduating class of 2021 (An Act to Implement, 2015). In summer of 2018, a repeal of the proficiency-based diploma statute passed in the Maine legislature, rolling back the requirements for schools to implement a proficiency-based system (An Act to Repeal, 2018). The data for this study were collected prior to the repeal. Also, important to note, the interviews were conducted prior to the Coronavirus pandemic. All data collected and analyzed do not reflect teacher perceptions as a result of remote teaching or teaching during a pandemic.

In a study of schools implementing proficiency-based education in Maine, Silvernail and others (2013) found that "common collaborative professional time was also necessary for further work to implement standards-based education and proficiency-based education" (p.33). This finding lends support to the potential for teachers working collaboratively with coaches to implement proficiency-based education in their school or district, or the publication stage of teacher learning (Gallucci et al., 2010). In addition, positive effects of coaching on school-based leadership teams during reform efforts have been documented (Yager & Yager, 2011). When comparing four schools of similar size and socio-economic status implementing the same initiative, Yager and Yager (2011) found that the schools with the leadership teams that received coaching in the initiative had a higher rate of implementation and were better able to predict their

own progress toward implementation goals. Additional research is needed to determine if these findings hold true in schools receiving support in implementing a different initiative (Yager & Yager, 2011). A goal of this study was to collect qualitative data on the implementation of the proficiency-based education initiative by schools that are using internal and external coaches to facilitate the process. The next section will outline the research design, including the conceptual framework, research questions, methodology, and data analysis.

<div align="center">

Conceptual Framework

</div>

The conceptual framework for this study (Figure 2.1) is based on both the double-loop learning theory (Argyris, 1991) and the Vygotsky Space Framework (Gallucci, 2005).

Figure 2.1

Conceptual Framework
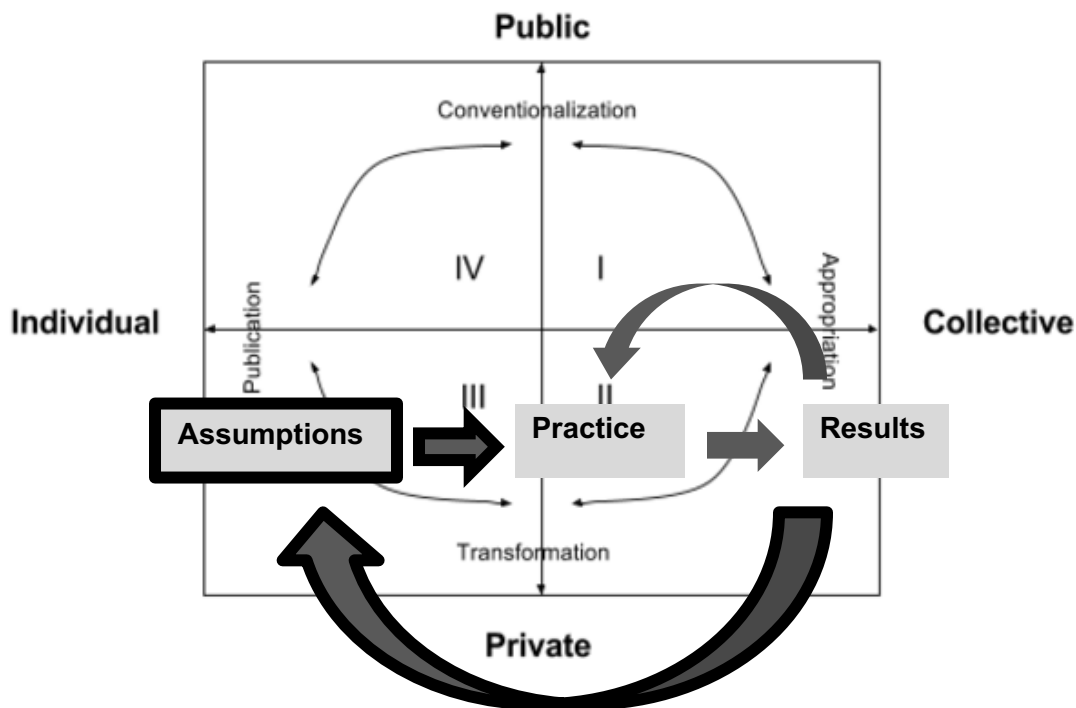
The Vygotsky Space conceptualization of learning as collective, individual, public, and private. Adapted from Gallucci, DeVoogt Van Lare, Yoon & Boatright, 2010 (Originally

adapted from Gavelek & Raphael, 1996; Harre, 1984; McVee, Dunsmore & Gavelek,

2005); Double-Loop Learning (Argyris, 1976) Creative Commons Attribution 3.0

License https://sites.google.com/site/reflection4learning/double-loop-learning

The Vygotsky Space diagram (Figure 2.1) provides a conceptual model from which to

consider the process of teacher learning and PBE implementation. During phase I, educators

process new ideas presented to them and consider which ideas align with their beliefs (Gallucci,

2008). The presentation of new ideas could be from formal professional development or other

forms of information gathering, and could be done in public, as in a whole school PD or for-

credit course, or in private, as in information gleaned from reading a book. During phase II,

educators may choose to take up, or put into practice, some of the ideas presented in phase I

(Gallucci, 2008). This is often done independently, or by an individual, as in a teacher trying

something new out in their classroom. In phase III, educators reflect on the practice to determine

whether or not it worked, and whether or not they should continue with the practice. This is

where an educator may wrestle with how the practice aligns with their beliefs, and whether they

want to take ownership for the practice (Gallucci, 2008). This reflection can be done in isolation,

but in a district that is trying to implement an initiative that requires a transformational change,

Gallucci (2008) asserts that a transformation of practices is more likely if the reflection is done in

collaboration with others. Phase IV involves conventionalization of practices across a school or

district. The extent to which transformational change is realized at a large scale is dependent on

whether individual learning and changes in practice are shared widely to influence schoolwide

practice or policy (Gallucci, 2008). This framework for transformational change within an

organization is related to the individual change framework of double-loop learning, explained next.

Argyris (1991) defines two types of theories-of-action: espoused and actual. An espoused theory-of-action is what people believe (or say) their actions are based upon whereas an actual theory-in-use is the set of beliefs that are evident based upon a person's actions. In most cases, there are inconsistencies between the espoused theory-of-action and the actual theory-in-use (Argyris, 1991). Based on his research, Argyris claims that there are four values that individuals generally base their actions on: "1. To remain in unilateral control; 2. To maximize "winning" and minimize "losing"; 3. To suppress negative feelings; and 4. To be as "rational" as possible— by which people mean defining clear objectives and evaluating their behavior in terms of whether or not they have achieved them" (p. 8). In other words, changing structures alone will not change how individuals behave or how a group interacts and therefore, will not correct the errors or weaknesses the organization is experiencing. Generally speaking, structures may change, but if individuals within the structure are still operating with a theory-in-use that does not align with the underlying principles of the desired change, it is unlikely any sustainable change will occur.

Single-loop learning (Figure 2.1 gray boxes and arrows without outlining) allows professionals to avoid the discomfort associated with looking critically at their own data, determining the root causes or areas of weakness, and having a real conversation about how to get better. In Argyris' work, most people, when operating with a single-loop framework, will look at their negative performance data and blame it on the clients or the manager. They may change something they are doing, but they don't investigate the root cause or underlying assumptions and beliefs that created the issue. A common problem, Argyris posits, is that in

organizations such as businesses and schools, "valid information appears to be more easily generated for less important and less threatening decisions" (p. 367). Data, he says, are easily found and analyzed in areas that are not uncomfortable to discuss, and, therefore, do not call into question the fundamental values and structures of the organization. Analyzing this relatively safe data, however, limits learning of the participants in the organization and leaves them in a cycle of single-loop learning (Argyris, 1976, p. 367).

This phenomenon is easily witnessed in schools and school districts. Educators, just as other professionals, resist looking at their own performance because they might be embarrassed by what they find. Teachers sometimes place the blame on students (they are coming to us with huge gaps), parents (they aren't valuing education), or administration (they don't give us the resources we need) for their lack of performance on test scores or adherence to the curriculum. This tendency can be referred to as defensive reasoning (Argyris, 1991). Defensive reasoning allows for educators to act on the four basic tenets: they remain in control, they win, they don't have to face any negative feelings, and they can come to rational conclusions (Argyris, 1997). Providing space and structure for an individual to recognize inconsistencies between their espoused theory in action and actual theory in action can help to alleviate the defensive reasoning and promote learning and continuous improvement (Argyris, 1991). Double-loop learning (Figure 2.1, boxes and arrows with bold outline) occurs when individuals seek to understand the difference between their beliefs and their actions and use their reflection as a learning opportunity (Argyris, 1991). Double-loop learning can lead to a new way of thinking and therefore can alter how one reacts to certain conditions or situations (Wise & Hammack, 2011).

Collaborative teacher learning and individual changes in practice supported by internal and external coaching can help to advance implementation of an initiative, and can promote reflection and learning in a double-loop learning cycle through the transformation and publication stage of teacher learning. The goal of coaching is to improve teacher practice. This change in practice can only occur with teacher learning. Changing instructional practices with students or collaborative practices with colleagues often requires a shift in mindset and beliefs (Argyris, 1976; Bloom et al., 2005). As teachers learn collaboratively, they begin to change their practices (Miller & Stewart, 2013) and as they reflect on their practices, they begin to change their beliefs (Argyris, 1976). These changes in practices and beliefs are what moves the school into different stages of implementation toward school-wide reform, or conventionalization (Elmore, 2008; Gallucci et al., 2010). As educators within the building begin to understand more about the initiative and start to embrace and own the work, they shift their practices. The publication stage occurs as teachers become more comfortable with the new practices, "as coaches and principals work together over time and a culture of collaboration grows within a school, teachers will more routinely share information about their practices" (Killion et al., 2012, p.105). This phenomenon was noted in Neufeld and Roper's (2003) collaborative coaching and learning model where, after two years of participation, researchers observed progress in teachers' abilities to reflect on the work of themselves and their peers. Coaching may be an integral part of this process of teacher learning and PBE implementation. As practices change, the school collectively moves forward in the stages of implementation. Relationships represented in the conceptual framework (Figure 2) under investigation in this study include a) internal and external coaches engage with teachers in different ways and at different times throughout the appropriation, transformation, publication, and conventionalization phases; and b) double-loop

learning occurs when teachers have coaching support through each phase of the Vygotsky Space model.

The appropriation phase of learning occurs through sharing of expertise, tools and artifacts, and other social learning experiences among coaches and groups of teachers (Gallucci, 2008; Gallucci et al., 2010; Huguet et al., 2014). External coaches work as experts in the reform initiative and help to establish structures for professional learning, norms for sharing practices, and tools and resources that teachers can use to implement the practices in their classrooms (Feldman & Tung, 2002; Mayer et al., 2014; Weiss & Pasley, 2006). It would follow that an external coach, acting as an outside expert in a facilitative coaching role might be more involved in the appropriation aspect of teacher learning. As teachers practice implementing their new knowledge and skills in their classrooms during the transformation phase, internal coaches can provide additional support through modeling, observing, and providing feedback on their classroom instruction (Knight, 2006; Elish-Piper & L'Allier, 2011). It might be expected that the internal coach, acting in more of an instructional capacity and conferencing one-on-one with teachers about their practice, might be more heavily involved in the transformation stage of teacher learning. Working with colleagues toward implementation encourages a change in practice by attempting methods in the classroom, and then sharing and reflecting on the experience (Gallucci et al., 2010). External coaches continue to provide support for professional learning in facilitating teacher sharing of practice in small group or large group collaborative sessions throughout the publication phase. Teacher collaboration with coach support is essential throughout school reform initiatives to align teacher practices to the common goals of the reform effort (Walpole et al., 2010). It might be expected, then, that external coaching would play a more significant role using facilitative coaching strategies in the publication stage of teacher

learning. Institutionally, PBE implementation school-wide will be evident through consistent practices aligned with the goals of the initiative, a result of ongoing, site-based internal coaching support through the conventionalization stage. Internal coaches understand the context of the school and are able to push the work of the initiative further by weaving the particular practices of the initiative into the existing structures of the school (Coggins et al., 2003). Internal coaching might play a more prominent role in the conventionalization stage of teacher learning because of this ongoing and systematic approach to professional development.

Individual teacher learning continues as the teacher collaborates with others, the coach(es) applies different coaching strategies, and the teacher practices new skills in their classroom. Based on their study of coach learning during implementation of school-based reform, Gallucci and others (2010) posit that "individual and collective aspects of learning are always at play in reforming districts, even when they are not consciously considered in professional development designs" (p. 955). The extent of teacher learning is dependent upon the success of the collaborative work of the teacher groups, and therefore also dependent upon the particular coaching strategies – cognitive coaching, instructional coaching, facilitative coaching - employed by the coach(es). The learning of each individual teacher also, in turn, contributes to the dynamic of the teacher group and can influence the direction of the implementation, the stage of implementation of the team, and the coaching strategies that are used (Huguet et al., 2014). If internal and external coaches interact with teachers in different ways and at different stages throughout implementation of PBE, it is important to determine which type of coach might best fit specific needs of a school as they embark on implementation of PBE. The following chapter will discuss the methodology used in this study.

CHAPTER 3

METHODOLOGY

This qualitative study began with a constructivist approach, or the assumption that truth is socially constructed and influenced by individual perception and interpretation of situations (Charmaz, 2006; Goodrick, 2007). The research design used a modified form of case study methodology, by selecting distinct school sites for study and including interview data from participants with multiple job roles and perspectives. This qualitative multi-site study explored how schools used internal or external coaches to support teacher learning and change in practice during implementation of proficiency-based education (PBE). Case studies are often used to help "understand complex social phenomena" (Yin, 2014). Coaching relationships within an organization, and the impact coaches have on teacher practice within an organization are complex phenomena teaming with a variety of individual and group dynamics. Understanding how coaches in different roles and working within different school contexts impact teacher practice is a question that would not easily be answered by a survey, but is better suited to in depth qualitative methods such as interviews (Yin, 2014).

The voices of the teachers, administrators, and coaches involved in the implementation of proficiency-based education are important and each tell a distinct story that contributes to the larger phenomenon. According to Argyris (1997), when investigating individual learning, "Conversation is one of the most potent types of data because it is the best window into the causal reasoning (defensive or productive) used by the actors" (p.13). In order to capture espoused theories as well as theories-in-use, conversations with individual teachers are critical to the data collection process. To ensure representation of teacher voice and perception of learning

and coaching through the implementation of proficiency-based education, interviews were the primary vehicle for data collection in this study.

Research Question

The central research question in this study is: How do secondary schools use internal and external coaches to support implementation of proficiency-based education, a schoolwide reform initiative?

Research Methods

A qualitative, multi-site research design was used as a means to identify the influence of internal and external coaches on teacher learning during proficiency-based education implementation in a set of Maine high schools. A case study methodology was adapted for use in this study, with the goal of describing each school case, along with the commonalities and differences across cases. Although difficult to generalize to a larger sample, a single or multi-site study can often serve as a step toward a more formal theory (Glaser & Strauss, 1967; Stake, 2006). The inclusion of multiple cases for comparison strengthens confidence in the findings and opportunities for transferability (Yin, 2014).

In this case, the focus of the research was to collect data about the perceived teacher learning and change in practice as a result of internal and external coaching support throughout the process of implementing proficiency-based education. All four cases in this study represent high schools in Maine that, at the time of the study, were implementing proficiency-based education with coaching support. Multiple sites were considered for comparison of four bounded, but diverse systems: two schools implementing proficiency-based education with internal coaching only and two implementing it with external coaching. The secondary schools chosen for participation in this study represented three different counties and ranged from a

student population of 500 to nearly 1,000. Stake (2006) recommends a diverse selection of cases to investigate the phenomenon across various contexts. Considering contrasting cases will help to highlight the hypothesized contrast between schools working with internal coaches and those working with external coaches (Yin, 2014).

In this study, qualitative data were collected primarily through interviews with twenty-five participants including teachers, principals, and coaches working in schools to implement proficiency-based education. In addition, a short survey was administered to the principals, teachers, and coaches in each of the four schools, primarily as a strategy to recruit teachers for interviews and determine school implementation status. Interviews were recorded, transcribed, and coded. The data were coded according to standard coding methods for qualitative research, beginning with open coding using descriptive and process codes, followed by pattern coding and broader categorization, and finally developing broad findings and themes from the coding (Saldana, 2016; Miles et.al, 2014). Broad findings and themes were considered in each case, as well as similarities and differences across cases (Stake, 2006; Creswell, 2015). Data collection procedures were replicated according to the standard case study methods using a semi-structured interview protocol (Appendix B) to ensure consistency across the cases, strengthen reliability and allow for analytical generalizability to the other cases (Yin, 2014).

Many schools in Maine have been engaged in implementing the proficiency-based education initiative due to the proficiency-based diploma law established in 2012 (An Act to Prepare Maine People for the Future Economy, 2012). After the completion of the interviews for this study, the statute was repealed, however, some schools across the state continued to move forward with this initiative. This particular initiative was chosen as one criterion for sites in the study because it provided a consistent and clear initiative to compare across sites and a rationale

for schools to use internal or external coaches to support school-wide change. The focus of this research is on the use of coaching to support teacher learning and change in practice aligned with PBE implementation. The phenomenon of focus is the role of coaching in teacher learning and change in practices during PBE implementation. The unit of analysis is high schools implementing this school-wide reform. Importantly, the participants in this study were interviewed prior to the Coronavirus pandemic.

At the time of the study, there were 124 public schools in Maine that include secondary grades 9, 10, 11, and 12 (2014-2015 Summary), all of which were at some stage of implementation of proficiency-based education (PBE) at the time of data collection due to the legislation requiring schools to implement graduation based on proficiency by 2021. Sites were selected in a two-phase approach (Yin, 2014). Archival data from the State of Maine Department of Education were reviewed early in the study to determine a list of potential sites based on schools' indicators of readiness to implement PBE. Each high school had to submit a proficiency-based education self-assessment and either an extension request or letter of readiness to the Maine Department of Education by July 1, 2015. Schools that had submitted letters of readiness were among the first schools considered for the study.

School/Case Selection

In this study, each school represents a case. Cases were selected that represented the phenomenon of study and exhibit the characteristics under investigation (Merriam, 2002; Stake, 2006). The characteristics these sites exhibited included: (a) implementing the proficiency-based education initiative; and (b) working with an internal or external coach. Implementing was defined as putting PBE into practice. School leaders identified their schools as either 'initiating (planning),' 'implementing (starting to put into practice)' or 'performing (full school practice)'.

Schools that were in the 'initiating (planning)' stage were not selected for this study. Data from the Maine Department of Education were used to determine which schools indicated readiness to implement proficiency-based education in the fall of 2017 or earlier. Only schools that indicated they were ready to implement proficiency-based education in fall of 2017 were considered, as the criteria were that the sample should reflect schools that are at the implementation or performing phase of the initiative rather than the initiating stage (Fullan, 2007). From this group, schools were contacted directly by the researcher through email to request participation in the study (See Appendix C). Schools that were not working with coaches were eliminated, as were any schools where the researcher was coaching at the time of the study. From the remaining schools, sites were selected purposefully based on their exhibited characteristics of the phenomenon of study, and their willingness to participate (Creswell, 2015).

Each of the four secondary schools is considered a "case" for this multi-site study. The study is limited to four cases due to the time-intensive methods to complete the study as well as available resources. Stake (2006) asserts that a rich multi-case study should have no fewer than four cases, while Yin (2014) suggests researchers should have at least two cases. Multiple-case sampling can increase confidence in findings as data from multiple sources can help a researcher distinguish between findings that are true in some cases and not necessarily in others (Charmaz, 2006; Miles, Huberman & Saldana, 2014). Although qualitative case study research lacks strength in its generalizability (Merriam, 2002), this research design and findings allow for detailed descriptions of the phenomenon and analytical generalizability (Yin, 2014).

Individual schools were selected based on these criteria: (a) teachers working collaboratively with coaches to implement proficiency-based education; (b) school/teacher willingness to participate in the study; (c) leadership turnover; and (d) coach experience. Factors

known to impact coaching effectiveness were considered in site selection. First, leadership turnover and administrative support for coaching were considered, as it is a key variable in coaching effectiveness (Fixsen et al., 2005; Huget et al., 2014; Russo, 2004; Walpole et al., 2010). Schools were selected with principals that have been in the position at least two years. Second, coach expertise and experience were considered, as evidenced through leader recommendation, training, or participation in professional development to improve their coaching practice. Research supports the idea that the type or effectiveness of coaching can vary depending on training and skills of the internal coaches (Weiss & Pasley, 2006). Conversations with school leaders prior to selection of the site for participation were necessary to determine leadership support for coaching and coach expertise. This thorough selection process allowed the researcher to select two schools with internal coaches and two schools with external coaches that best represented the desired characteristics while limiting variability of coaching effectiveness and administrative turnover. This allowed for a literal replication of two cases for each of the two coaching roles (internal vs. internal and external vs. external) and a theoretical replication for comparison of the two different approaches (Yin, 2014). In this report, pseudonyms are used to refer to all school cases and participants to maintain confidentiality.

Participant Selection

Once school sites were selected, teachers, coaches, and principals were sent a short questionnaire (Appendix D) to aid in selecting participants for interviews. The questionnaire asked participants to identify their school, role, subject area, grade level, and years in their current position to help with selecting a range of participants from across content areas and experience levels. In order to gain an understanding of the school's status with regards to implementation of PBE, participants were asked to identify the stage they were at in

implementing proficiency-based education into their classroom (initiating, implementing, or performing). Participants were also asked about their interactions with the coach at their school, including how often they worked with a coach, what they saw as the value of working with a coach, and whether there was broad leadership support and time built in for coaching. Finally, participants were asked if they would be willing to participate in an interview. The questionnaire collected email addresses in order for the researcher to contact participants that agreed to interviews. In order to capture a broad picture of the phenomenon of study at each site, principals and coaches were interviewed, along with teachers from a variety of content areas that have regular experience working with a coach and who agreed to participate. All selected participants had engaged in professional development around proficiency-based education and worked with the internal or external coaches at their site. Teachers, principals, and coaches were contacted via email to request participation in the study (Appendix C) and were provided with an informed consent letter prior to starting the interview.

In order to increase reliability of findings at each site, and to gather more robust data about coach influence on teacher learning, participants were selected that reported to have worked with the coach regularly or significantly as indicated on the questionnaire, and who were willing to be interviewed. Out of roughly 70 teachers at Valley High School, 17 responded to the questionnaire and six agreed to an interview. At Fairview, of roughly 50 teachers, seven teachers responded to the questionnaire and four agreed to an interview. At Highland, of roughly 40 teachers, four teachers responded to the questionnaire and three agreed to be interviewed. At Northeast, of roughly 30 teachers, eight teachers responded to the questionnaire and four agreed to be interviewed. From each of the identified schools selected, at least one principal, one coach, and three teachers who have worked closely with the coach were interviewed. In total, four

principals were interviewed, one from each site; four coaches were interviewed, one from each site; and 17 teachers were interviewed, seven from internally coached sites and 10 from externally coached sites. The list of participants, their roles, and experience is listed in Table 3.1.

Table 3.1

List of Participants

Sites	Participants n=25	Content Area	Experience
Valley (ext. coach)	Principal		Veteran
	External Coach		3-5 years with district
	Teacher 1	Health	Veteran
	Teacher 2	Science	Less than 3 years
	Teacher 3	Science	Veteran
	Teacher 4	Math	Less than 3 years
	Teacher 5	Special Education	5-10 years
	Teacher 6	Social Studies	5-10 years
Fairview (ext. coach)	Principal		3-5 years
	External Coach		3-5 years with district
	Teacher 1	Technology	3-5 years
	Teacher 2	Math	5-10 years
	Teacher 3	Math	3-5 years
	Teacher 4	Support Staff	5-10 years
Highland (int. coach)	Principal		3-5 years
	Internal Coach		Veteran
	Teacher 1	Math	3-5 years
	Teacher 2	Social Studies	5-10 years
	Teacher 3	Science	3-5 years
Northeast (int. coach)	Principal		Veteran
	Internal Coach		Veteran
	Teacher 1	Allied Arts	5-10 years
	Teacher 2	Science	Veteran
	Teacher 3	Science	3-5 years
	Teacher 4	World Language	Less than 3 years

Data Collection Procedures

Data on each case were collected primarily through the qualitative method of interviewing. Participants from various roles within a school were selected for interviews. Field notes were recorded during visits and immediately following interviews to capture researcher perceptions and observations, and to help limit researcher bias. A semi-structured interview protocol was used and interviews lasted 60-90 minutes with each teacher, coach and an principal at each of the four selected sites (Appendix A). Interview questions were created to target specific components of the research question and broadly ask about PBE implementation and teacher experiences with their internal or external coach. More specifically, participants were asked to describe practices and strategies used by the coach, teacher perception of the effectiveness of the strategies, and teacher and coach perceptions of how coaching influenced teacher beliefs or practices around proficiency-based education. Interviews were recorded and transcribed. Transcripts from interviews were de-identified, and pseudonyms were used for site names and participant names. Names were removed from all data sets and individuals were assigned an alpha-numeric code to ensure confidentiality. Memos and field notes provided the researcher with context and perspective as the data were collected and analyzed (Strauss & Corbin, 1990; Yin, 2014). As data were collected, reflections on researcher thoughts and understandings of ideas around the research questions were organized into typed notes, as well as any thoughts about emerging patterns or connections between cases (Saldana, 2016).

Data Analysis Methods

Standard qualitative data analysis methods were used in this study. Each case was analyzed on its own as well as compared with other cases using a within-case and cross-case

analysis process (Creswell, 2015; Stake, 2006; Yin, 2014). The Vygotsky Space model combined with double-loop learning provided the theoretical lens through which to establish analytic generalizations (Yin, 2014). With these two theories in mind, I explored two relationships: (a) how internal and external coaches engaged with teachers in different ways and at different times throughout the appropriation, transformation, publication, and conventionalization phases; and (b) how teacher learning was influenced by coaching during PBE implementation.

Data from all interview transcripts were coded using NVivo coding software. A round of open coding was done by hand with a sample of transcripts, in order to familiarize the researcher with the data and to generate ideas for the codelist. One teacher interview from an internally coached site and one teacher interview from an externally coached site were coded by hand using an open coding process in order to create an initial code list. All interviews were then uploaded to NVivo for first-cycle coding. First-cycle coding consisted of a round of descriptive coding, using codes generated in the pre-coding process, followed by process coding to identify actions, interactions, and dynamics described in the schools' implementation of coaching and PBE (Saldana, 2016). There were 79 codes across interviews after the first cycle coding was completed. Descriptive codes generated in pre-coding included codes such as observation, change in practice, beliefs, autonomy, leadership, vision, and challenges. Process codes described actions that coaches and teachers were taking, as well as interactions between the two. Examples of process codes in this first cycle coding included helping, seeking feedback, pushing to try something new, implementing and building relationships. The data were then coded through second cycle coding using pattern coding in order to determine higher and lower-level codes and, ultimately, broader categories (Miles et.al, 2014; Saldana, 2016). Second-cycle pattern coding was used to group like codes and explore connections between existing codes

(Miles et.al, 2014; Saldana, 2016), which resulted in 23 parent or broader codes. Examples of these broader coding categories included collaborating, improving, vision, and change in practice. Pattern coding allowed for grouping and regrouping of codes and categories, until a list of eight larger categories emerged. The eight related categories included coaching interactions, coaching dispositions, coaching structure, ineffective coaching, challenges, change in practice, collaborating, and factors influencing PBE implementation. A codebook list included a short description of each code, and functioned as a way to reference and group like-codes during pattern coding (Saldana, 2016).

In order to analyze each of the cases independently, a hierarchy chart of files was used in NVivo. This feature allowed the researcher to view a tree map of the various codes in comparison to one another for each of the four sites in the case study. Within each of the eight large groupings, the hierarchy of codes based on frequency was noted for each case. In addition, the researcher reviewed summary data to determine whether the codes were spread evenly across interviews or used primarily in one data source. For each of the eight larger categories, additional tree maps were created to aid the researcher in distinguishing the frequency of that code among interviews from each site. Comparison charts within NVivo were used to identify codes that were present across interviews in the two internally coached schools and then again to identify codes that were present across interviews in the two externally coached schools.

Field notes and analytic memos aided ongoing record keeping of emerging ideas in each case (Strauss & Corbin, 1990). Field notes were used in writing each of the case narratives as a way to confirm or clarify any of the patterns that emerged in the coding process for each site. Analytic memos, tables, and diagrams were created for each of the broad categories emerging during pattern coding as well as across cases comparing the emerging findings and themes and

their relationships (Charmaz, 2006; Strauss & Corbin, 1990; Saldana, 2016). Findings and themes from similar cases (literal replication) were compared to provide evidence of patterns in those cases. Findings and themes across presumably different cases were compared (theoretical replication) to determine whether there is evidence to support or refute these relationships (Yin, 2014). Broad assertions were generated by examining each case critically and comparing themes and patterns across cases (Stake, 2006; Yin, 2014). Finally, themes and patterns were considered through the lens of the theoretical framework in order to situate the findings within the context of existing models for teacher learning and implementation of school-wide reform.

Trustworthiness

The principal researcher for this study is a school coach, employed by an organization that provides external school coaching, and coaching in proficiency-based education across the state of Maine. No schools were selected that the researcher was coaching at the time of the study, but the two external coaches were individuals that worked for the researcher's employer. It is also possible that the researcher may bring an implicit bias toward the effectiveness of internal or external coaching. To combat this bias, the researcher looked for disconfirming evidence within the data and used memoing to illuminate her thinking and question her assumptions. The use of memos to discuss and acknowledge the experience the researcher is bringing to the study was kept separately from the field notes and data analysis as a way to compartmentalize the thinking and assumptions of the researcher from the objective data (Corbin & Strauss, 2008).

In order to maximize trustworthiness of the data collected, the researcher asked questions during the interview to clarify statements that the participants made to ensure clarity of meaning. For example, "What it sounds like you are saying is…, is that correct?" The inclusion of a

research question investigating the "how" also allows for a descriptive case study that has increased external validity (Yin, 2014). Internal validity was determined based on how closely the emerging patterns in the data align with the predicted relationships (Yin, 2014). Field notes and memos were kept separately to ensure thoughtful consideration of themes and to acknowledge ideas and relationships without influencing the findings of a single case (Corbin & Strauss, 2008; Saldana, 2009). The questionnaire provided a useful set of information to confirm or disconfirm any emerging patterns within cases. Finally, completing analysis and a case narrative of each case helped to ensure that attention to detail and specific themes were identified that are unique to each individual case (Stake, 2006; Yin, 2014).

Limitations

Although this study could help inform the way schools and educators support the implementation of proficiency-based education in Maine, the results are reflective of the particular cases involved in the study and not necessarily generalizable to other contexts. Creswell (2015) points out that choosing multiple cases to investigate instead of focusing on just one can result in a more superficial analysis. However, Stake (2006) makes the counter-argument that while a single case is indeed important, it is not alone in exhibiting specific characteristics of a larger phenomenon, so there is value in learning about how the aspects of the phenomenon interact at various sites. While findings of a specific case can't be generalized to a population, an analytic generalization at a more conceptual level is possible with multiple-case study findings (Yin, 2014). Miles et al. (2014) agree that multiple-case sampling can increase confidence in findings when observed in a variety of settings. In this case, it was important to have multiple cases to compare in order to uncover the range of roles coaches play and the diverse strategies and practices coaches might use to facilitate teacher learning during PBE implementation.

CHAPTER 4

FINDINGS

Chapter 4 will describe the findings from this qualitative, multi-site study that took an in-depth look at four secondary schools in Maine that were utilizing coaches as one of the levers to implement a school-wide reform initiative, proficiency-based education. The central research question in this study was: How do secondary schools use internal and external coaches to support implementation of proficiency-based education, a schoolwide reform initiative?

Through interviews with four principals, four coaches, and 17 teachers across four secondary schools in Maine, a comparison can be made of the coaching interactions between internal and external coaches, as well as structures for coaching that supported teacher learning and change in practice during PBE implementation. In the first part of this chapter, each site will be introduced separately to provide the reader with a foundational understanding of the context in each case, including how each of the four sites approached implementation of proficiency-based education, the structure of their internal or external coaching, and the challenges they faced. Following the case narratives, the cross-case patterns will be discussed. The cross-case patterns have to do specifically with the ways coaches worked and interacted with teachers, which will be discussed through the data on coaching interactions and dispositions. While dispositions of internal and external coaches tended to be similar, there were differences in coaching interactions between internal and external coaches. The final finding that will be presented in response to the research question is the coaching methods and structures that led to a teacher-reported change in practice aligned with PBE.

Case Background

Case 1: Valley High School

Valley High School is a large high school (700+ students) in Maine that contracts with an external school improvement coach to assist in implementation of proficiency-based education (PBE). At the time of this study, they were in their second year of implementation of PBE. On the teacher questionnaire administered by the researcher at the beginning of the study, most teachers marked 'implementing (starting to put into practice)' when asked to select what stage they are at in implementing proficiency-based education in their own classroom. Valley High School was led by a veteran principal that worked closely with a leadership team to provide a collaborative vision for proficiency-based education. Teachers reported a high level of autonomy in their classrooms, and perceived a sense of trust from administrators in the building. While teachers noted an effort to provide a collaborative vision, they also described a shifting target and some indecisiveness about what practices were being implemented school-wide and which were optional. Teachers reported that the staff is split with their commitment to PBE practices, with some practices being widely implemented and others not seeming to be prioritized. Similar to the other sites, one of the challenges at Valley High School included the grading system itself, but teachers here also reported resistant staff and community concerns.

At the time of data collection, the external coach had been working with Valley High School for three years and had been working in an external coaching role for more than five years. The external coach at Valley High School worked primarily with the administration and leadership team members, but also facilitated full school professional development aligned with proficiency-based education. The principal at Valley High School explained that the benefits of working with an external coach included intentionality of planning and professional development

throughout the year, as well as providing protocols and models to help teacher leaders carry the work within their departments. The principal at this site viewed the external coach as a personal support and cheerleader, and as someone to serve as a guide, questioner, and critical friend when needed. On the questionnaire, teachers referred to "ideas from the outside," "strategies to help improve your skills," and "see(ing) your practices through another person's eyes" as things that were valuable about coaching. More than half of the respondents to the questionnaire indicated that there was no time built into the schedule to access coaching support. Most respondents were unsure whether or not there was broad leadership support for coaching. From researcher field notes and interview data, there was a theme of coaching through administration at Valley High School. Teachers, principals, and the coach all discussed the connection between administration and the external coach. Multiple teachers mentioned that the external coach would sometimes facilitate staff meetings and they noticed structures put into place at staff meetings as a result of the principal planning with the external coach. The external coach in this situation seemed to serve as a capacity builder for the administration and leadership team, with limited interaction with most teachers. One teacher who declined to be interviewed reflected on the questionnaire that the external coaching support was "once in a blue moon," suggesting that the coaching support for teachers was infrequent, which was confirmed in teacher interviews. Teachers recalled that support provided by the external coach seemed to happen only occasionally and to be provided in content groups. More than one teacher reflected on the coaching as being PBE-specific but not content-specific. A math teacher reflected, "it's really hard to get help from someone who's not in that content area" (Valley, Teacher 4). Because the external coach at Valley High School did not have regular interactions with all teachers, it appeared a bit easier for

teachers to 'opt-out' of coaching support or not choose to take up some of the PBE practices without repercussions.

Case 2: Fairview High School

Fairview High School is a medium sized high school (500-700 students) in Maine that contracted with an external coach to assist in implementation of proficiency-based education. At the time of this study, they were in their first year of implementation of PBE. On the teacher questionnaire, most teachers marked 'implementing (starting to put into practice)' when asked to select what stage they were at in implementing proficiency-based education in their own classroom. Fairview was led by a principal with 3-5 years experience, in their 2nd year as Principal, who was working to establish a common vision for proficiency-based education. The teachers at Fairview had been moving toward a proficiency-based system for a number of years, but they reported low teacher buy-in and a shifting vision attributed mostly to shifting expectations from the state. Fairview High School teachers had regularly scheduled professional learning community meetings where they worked with peers on practices associated with proficiency-based education, including working on units, assessments, and learning targets. Teachers, administrators, and the external coach at the site reported a lack of clear understanding around the 'why' and a lack of a big picture understanding of PBE. As in other sites, the teachers and administrator at Fairview reported that the grading system was the biggest challenge in implementation of proficiency-based education.

The external coach at Fairview had been working with the school for four years at the time of data collection, and had been working as an external coach for ten years. The administration and leadership team worked with the external coach to develop common practices and expectations aligned with proficiency-based education. Administrators and members of the

leadership team viewed the coach as a support, a thinking partner, and a facilitator. The principal and the external coach at Fairview spent a large amount of time thinking and planning together. Teachers outside of the leadership team generally viewed the coach as someone who worked with the administration to implement PBE and provide them with resources. On the questionnaire, teachers commented that the coach brought an "outside perspective" and "new ideas and strategies" and half of the teachers responded that there was broad leadership support for coaching. All respondents to the questionnaire indicated that there was time built into their schedules to access coaching support. According to interviews with teachers and the external coach at Fairview, the ways in which the external coach worked with teachers was determined by the administration and their perceived needs in each department. Teachers described a somewhat traditional "entrenched" belief system that made it challenging to come to consensus on common proficiency-based practices. From researcher field notes and teacher interviews, there was a feeling of resistance to working with an outsider, as teachers perceived the external coach to be, and one teacher described teachers projecting their feelings about the change (to PBE) onto the outsider (external coach).

Case 3: Highland High School

Highland High School is a medium sized high school (500-700 students) in Maine that employed an internal instructional coach to support teachers in developing high quality instructional practices and assist in implementation of proficiency-based education. At the time of the study, Highland was in its first year of full implementation of PBE, but they had been preparing for implementation for a number of years prior to full implementation. On the teacher questionnaire, most teachers marked 'performing (full school practice)' when asked to select what stage they were at in implementing proficiency-based education in their own classroom.

Highland was led by a principal with 3-5 years experience who shares leadership across the building with content area leaders and instructional coaches. The staff as a whole had engaged in collaborative reading and professional development around common texts, primarily led by an internal coach. According to interviews with teachers, the vision for proficiency-based education was somewhat limited at Highland High School. There were some teachers who had attended workshops and been engaged in summer work that were well versed in proficiency-based practices, and others who were not. Practices across teachers and classrooms were inconsistent, and buy-in for PBE was present in pockets. From researcher field notes and interviews with teachers, Highland High School had experienced significant challenges with shifting technology platforms and trying to determine how to use those programs to calculate grades. Another concern expressed by teachers at this particular site was their ability to assess all standards, given the large number of standards across content areas.

The internal coach at Highland was a veteran teacher in the school district and had been working as an instructional coach for five years at the time of data collection. While the administration supported PBE and all professional development surrounding it, the internal coach at Highland High School was the primary driver behind proficiency-based education. In interviews, teachers described book studies and other professional development led by the internal coach as a means to establish clear and consistent practices and "shift teacher mindset" to better align with PBE practices. On the questionnaire, teachers described the value of coaching as providing, "encouragement and support," and "pushing me to try new things." Internal coaching at Highland happened largely in coaching cycles that lasted about six weeks and often incorporated video reflection and teacher goal setting with a coach. All four teacher respondents on the questionnaire indicated broad leadership support for coaching, but not all teachers had

time built into their schedules to access the coaching support. While there seemed to be support for coaching at Highland, teachers also reported limited accountability from administration for implementing practices associated with PBE. One teacher commented, "I believe in it (coaching)" (Highland, Teacher 3) and another stated, "I asked for help" (Highland, Teacher 1). From researcher field notes, the underlying message during interviews was that teachers who wanted it sought out coaching support, but others were allowed to continue without it, even if their practices were not aligned to the PBE practices the school was trying to implement.

Case 4: Northeast High School

Northeast High School is a small sized high school (under 500 students) in Maine that employs an internal instructional coach to support teachers in developing high quality instructional practices aligned with proficiency-based education (PBE). Unlike the other sites in this study, Northeast High School had been fully implementing PBE for over 5 years. On the teacher questionnaire, all eight respondent teachers marked 'performing (full school practice)' when asked to select what stage they were at in implementing proficiency-based education in their own classroom. Northeast was led by a veteran principal who served as the visionary leader behind their proficiency-based system. While the administrator, coach, and teachers recalled many of their implementation challenges, they also noted that most of the challenges they experienced in early implementation were no longer present as a result of common practices and expectations being established across classrooms and teachers. The principal noted that their grading system had changed early on, which was a challenge, but that they had mostly overcome that hurdle by setting expectations, using clear examples, and having individual conversations with teachers when needed. There was a theme of continuity and clarity expressed at Northeast; teachers, the coach, and the principal seemed to be on the same page with the vision and

expectations. Teachers at Northeast High School reported high teacher buy-in, with many choosing to teach at the school because of their commitment to a proficiency-based system. The teachers at Northeast High School did not cite as many challenges as teachers at other schools in this study. The primary concern teachers here had was time that it took to teach well in a proficiency-based system. Administrators and coaches at Northeast High School also pointed to consistent use of the grading system as an ongoing challenge.

The coach at Northeast High School worked as a teacher in the system for fifteen years prior to taking on the role as internal coach. At the time of data collection, the internal coach had been in the role for eight years. The internal coach worked with teachers primarily on improving instructional practices and strategies that the teachers themselves identified as needs. The coach also worked to ensure that the individual coaching was focused on practices aligned with the overall school vision and clearly articulated practices and expectations for proficiency-based education. On the questionnaire, teachers noted that the coach, "provides constructive feedback," offered, "a different perspective," and, "is willing to listen, ask questions...and helps me grow." Half of the teachers that responded to the questionnaire indicated that there was time built into their schedule to access coaching support. The principal at Northeast High School valued having an internal instructional coach to work with new teachers, build individual teacher capacity, and serve as a resource and support for school-wide professional development. While the internal instructional coach led professional development, the vision and planning came from the principal and leadership team. From researcher field notes and interviews, the coach in this situation seemed to serve more as an intermediary or translator to bring the vision and practices to reality within individual classrooms. The leadership team, not the coach, was the holder of the vision, but the coach played a significant role in helping that vision come alive in classrooms. In

addition to leading professional development, coaching support at Northeast often happened in a one-on-one setting in regular six-to-eight-week coaching cycles. Teacher interviews at Northeast illustrated the appreciation for the non-judgmental coaching approach. Teachers largely reported feeling like they had a trusting relationship with the coach, could approach the coach for just-in-time support, and had control over what they wanted to work on. The following sections will discuss the findings across cases.

Implementation Influences: Approaches and Challenges

This section will describe the details of the first broad finding from the study, the various approaches and challenges each site had in implementation of proficiency-based education (PBE). Although each of the secondary schools in this study, Highland, Northeast, Valley, and Fairview, were implementing PBE, they each had leaders that were approaching implementation differently. All four sites categorized themselves as either 'implementing (starting to put into practice)' or 'performing (full school practice)'. Two of the sites, Highland and Northeast, had coaches that were full time district employees and were on-site each day, while the other two sites, Valley and Fairview, had external coaches, or coaches that worked for external organizations and were only at the schools periodically. Each of the four schools was purposefully chosen because it met criteria desired for inclusion in the study, which included: (a) implementing proficiency-based education; (b) not having a new principal; and (c) working with an experienced internal or external coach. The following section will provide an overview of how each of the four sites approached implementation of proficiency-based education and the challenges they encountered.

Approaches to PBE Implementation

One finding worthy of discussion is factors that influenced PBE implementation. As Table 4.1 illustrates, each site was implementing proficiency-based education, and each administration took a different approach to providing a vision, professional development and support for coaching toward PBE practices. In all cases, some of these implementation influences led to more or less coach involvement in PBE implementation. For example, at Highland, the principal gave responsibility to the coach(es) to shape and lead the initiative, whereas at Northeast, the principal sought teacher and coach input, but made school-wide implementation decisions and outlined them clearly for staff.

Table 4.1

Implementation Influences by Site

Implementation Influences	External Coach		Internal Coach	
	Site A: Valley HS	Site B: Fairview HS	Site A: Highland HS	Site B: Northeast HS
	Size: Large (700+ students)	Size: Medium (500-700 students)	Size: Medium (500-700 students)	Size: Small (under 500 students)
Stage of Implementation	Implementing (2nd yr. PBE)	Implementing (1st yr. PBE)	Implementing (1st yr. PBE)	Performing (5+ years PBE)
Leadership Approach	Consensus building. Principal is visible and available, and asks teachers how they feel "easy going and supportive"	Tightening the reins. Principal uses a mix of top down and teacher input. "somewhat collaborative...we plan what's going to happen"	Delegating. Principal allows coaches to lead the work. "[coach] has been the visionary leader, and our principal has been slow to do that"	Directing. Principal seeks feedback and input, makes the hard decisions "This isn't a democratic approach"
Common Vision, common practices and common language	Common language, some common documents, lack of common expectations. "Can it pass the straight face test?"	Common expectation that the student experience will be similar across teachers of the same course. "We just jumped in...and nobody really had the big picture"	Some common procedures are articulated, but lack of common practice. "We don't have...consistent procedures that all teachers are doing"	Common practices are clearly outlined in the teacher handbook and regularly revisited. "We're all...on the same page as to what's expected of the students."

Table 4.1 continued.

Implementation Influences	External Coach		Internal Coach	
	Site A: Valley HS	Site B: Fairview HS	Site A: Highland HS	Site B: Northeast HS
Role of Coach	Works mostly with admin and leadership team pulling together the vision	Works primarily with admin and leadership team; Provides examples	Works with all staff to build common language and mindsets; works one-on-one with teachers when asked; Leading the work	Works with individual teachers in six-to-eight-week cycles; provides staff PD and teacher support in implementing school vision
Teacher Autonomy, Choice and Buy-in	High autonomy in individual classrooms Some in, some out "they trust us"	Shift from high autonomy to more accountability Low teacher buy-in "we're trying to get ourselves more on the same page"	Accountability from coaches and curriculum directors Buy-in from a select group "I'm not the captain of the ship, I'm a passenger"	High accountability High teacher buy-in "I'm going to hold them accountable. They need to hold me accountable, but we're all going to be working from the same set of information"
Challenges	Grading system. Resistant staff, resistant community. No explicit plan or set of expectations. "lack of clear direction"	Grading system and conversions "Grading...our reporting out system is not working for us"	Shifting technology platforms. No deadlines. Reporting on standards. "We can't assess and record them all (standards)."	Time. Consistent use and communication of the grading system. "the time piece is probably the biggest struggle and it's extra work on top of teaching"

At Northeast High School and to some extent at Valley High School, where a common vision was present, with common practices and language articulated, the coaches reported an easier time of helping teachers with school-wide expectations, and teachers reported that it was easier to ask for coach support within the parameters of the initiative. Similar challenges existed across sites, many having to do with grading and reporting, specifically with changes in software and technology platforms, a component that neither internal nor external coaches reported having worked on with teachers. The following sections will discuss the various implementation approaches and how they were described at each site.

Leadership Approach. Across the four sites, a variety of leadership approaches to PBE implementation were reported. These approaches were evident in teacher and coach interviews and, in most cases, were affirmed in principal interviews. The four approaches I've labeled as: consensus building, directing, delegating, and tightening the reins. Each of the approaches had varying levels of teacher buy-in and autonomy which contributed to PBE implementation, and each site used their internal or external coaches in different ways to aid in PBE implementation.

The principal at Valley, an externally coached school, took a consensus-building approach, "[Principal] is a tremendous consensus builder" (Valley, Teacher 1). The principal at Valley also described their style as supportive and inclusive, saying, "I work really hard to support my teachers in whatever they need," and, "I'm definitely not a top down [administrator]. In fact, probably if anybody could criticize me it's I take too long sometimes to make decisions because I'm spending too much time to get too many people on board with it." This leadership style was affirmed by teachers at Valley, and discussed as both a strength and a challenge during PBE implementation, "That's great that everyone has input, but there's been a lack of clear direction where people have made decisions about what belongs and what doesn't...so that I don't

think we've moved forward as fast as we could" (Valley, Teacher 2). This consensus-building approach was generally appreciated by teachers, and some expressed gratitude for the administration asking for their opinion, "I appreciate the sounding board versus the top-down approach" (Valley, Teacher 5). Support and consensus-building tended to yield more frequent reports of teacher autonomy and a feeling of trust. As one teacher said, "They're not there to make sure that I'm implementing standards, because they trust me as a professional" (Valley, Teacher 4). This idea of less accountability also led to some frustration and what one teacher called 'willing resistance' or a conscious effort on some colleagues to not conform with some of the agreed upon practices. One teacher noted that some teachers at the school might say, "I'm going to stick my fingers in my ears," or, "No one can tell me why we are doing this," (Valley, Teacher 2). The external coach at Valley saw their role as partially assisting the administrator(s) in implementation efforts "to start tying the web together," or focusing coaching "around an outcome that was broadly school related."

At Fairview, an externally coached school, the principal was not new, but had inherited the transition to a PBE system from a previous principal. The researcher labeled this leadership approach as 'tightening the reins'. At this site, they were attempting to make a shift from a previously looser vision of proficiency-based education, under the previous principal, to a more clear, detailed, and slightly more prescribed vision, "I am totally aware that this is my bias, my experience of coming from a more top-down school is that I think there's things that need to be teacher led and then I think there's things that need to be top down" (Fairview, Principal). In the case of proficiency-based education, this principal thought there should be a more clearly defined set of expectations for all staff. Teachers indicated an awareness of this tightening of the reins, "[department chair] has to go by what the higher ups tell her to do" (Fairview, Teacher 3).

Teachers described varying amounts of buy-in for the initiative, "We know that every five years there's a new buzz that's gonna go on and we have to rethink how we're doing this" (Fairview, Teacher 2). Administrators noted that teacher buy-in was the biggest challenge they saw in implementation, "I would say right now our number one struggle is buy-in. Lack of buy-in, lack of full kind of understanding and buy-in here of why we think that this is good for kids" (Fairview, Principal). It was also noted that pieces of the work had been completed and understood, but that the full picture was lacking, "I think people are bought into pieces. It's just putting it all together that some people I think are struggling with" (Fairview, Principal). The external coach in this situation was cited as a key component in progress toward implementation of proficiency-based education:

> I mean if we were a full-blown proficiency-based school, and everything was rolling and we had all our systems in place, we probably wouldn't really need an external coach because we'd just be humming along. Where we are right now, I mean I feel, really feel like we need that coaching. (Fairview, Teacher 4)

Coaches at both Valley and Fairview, externally coached sites, viewed their role as helping the administrator pull all of the pieces together and make sense of the larger vision. At both sites, they hadn't reached a state of 'performing' of proficiency-based education, and teachers weren't all bought into the new system. External coaches at both sites were serving to help continue the institutionalization of common practices aligned with implementation on the initiative.

At Highland, an internally coached site, leadership took the approach of delegating the implementation of proficiency-based education to the coaches and curriculum teams. This approach was noted in a number of interviews. A principal said, "We feel like conceptually and philosophically, it's enough that we like it (proficiency) and we can live with ourselves with it.

So that's how we've approached this transition" (Highland, Principal). There was a sense from the various interviews that while some teachers were invested and understood that a change in practice was required, others did not see a reason, nor feel any pressure to change. The internal coach specifically talked about the transition to proficiency-based education and the approach of the leadership:

> When this came down the pike a lot of the very powerful and established teachers at the school were appalled by the idea that we'd have to do something new. So [administrator] really tried to soft ball it and sort of said, 'No, no, no, it's exactly the same thing as [what we've been doing].' Really that's all it is. (Highland, Coach)

This administration was the most hands-off of the four sites. In fact, Highland hired one of their coaches with the intention of having them work with staff to lead the transition to proficiency-based education, "[Coach] was hired with the intention of implementing proficiency-based education. That's the directive from the state, that's the directive from the superintendent and from the principal. That is [their] job" (Highland, Teacher 2). Teacher buy-in was described as investment by a select group, most of whom were involved with coaching or believed in the initiative. Coach at Highland shared, "I do think that there is a sense of the people who have drunk the Kool Aid, and people who haven't," and went on to say that there has been a lack of clear structures set up for PBE implementation, possibly leading to fewer teachers being completely on board, "It really has to do with some fundamental confusion or misunderstanding or just not yet really setting up the structures for [proficiency]."

Northeast, an internally coached site, appeared to have the most directive leadership approach, which the researcher labeled as 'directing', and was the only site that self-reported as 'performing' PBE school wide. There was a clear theme of administrators and other leaders

seeking out input from staff on implementation structures and challenges, and then developing solutions to the perceived challenges. There were also very clearly defined expectations and practices for all staff and an emphasis on how they might be locally implemented. The principal at Northeast described instances throughout implementation where teachers would find themselves in sticky situations, especially around grading, and those situations would lead to developing more rules or guidelines for teachers so that there was limited confusion about the processes teachers were using. Having a set of clear guidelines and referring back to them regularly, the principal noted, "makes it a lot easier because I'm not the only one holding all this information in my head about how it's supposed to work." Teachers at Northeast did not seem to express as much angst during interviews about the challenges associated with a proficiency-based system, perhaps because the guidelines were established to address problems that they had encountered during early implementation, "Some of them (teachers) are still stuck but they follow the rules. They follow the rules because the rules are very clear" (Northeast, Principal). One teacher discussed the balance they feel of structure school-wide and autonomy within their own classroom, "We definitely do have some structure, but it's nice to be able to work with my students to meet a goal like any way I would like to" (Northeast, Teacher 4), while another teacher mentioned a sense of loss at the move toward conformity, "I think we're are all feeling a little sad that we're losing some of the autonomy" (Northeast, Teacher 1).

Teachers at Northeast relayed the sentiment that the efforts to implement proficiency-based education were embedded in regular practice, "We work a lot with rubrics, standards. We're constantly going back and looking at how we are presenting the standards in class and making sure that what we're asking the students to do aligns with those" (Northeast, Teacher 1), and that continuous improvement was a school-wide commitment, "I think there's a genuine

commitment for people to realize that we're always trying to improve things" (Northeast,

Teacher 2). Coach at Northeast noted that initially, much of the work toward the initiative was

placed on the shoulders of coaches, but that over time, the administration realized that they

needed to hold teachers accountable for practices, "administrators sort of realized that they

needed to kind of be the heavy on this stuff instead of me." The internal coach also commented

that some, but not all of their work with teachers was related to PBE implementation:

> a lot of that work has actually come about in other areas besides proficiency...I was doing
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> that with all teachers in that capacity and then would weave that work into some of the
>
> coaching that I did when it was appropriate

In addition to Northeast being the only site that was fully performing proficiency-based

education, they also seemed to be the only site where internal coaching was really teacher-led

and not initiative-based. Teachers sought out internal coaching support and were encouraged to

set their own goals for improvement, whether or not those goals were tied directly to school wide

professional development.

Rationale for PBE implementation. Within each of the sites, teachers had assumptions about

why they were being asked to implement proficiency-based education. At both externally

coached schools, there was a message that this initiative was being forced upon schools by the

state as one teacher asserted, "The state is mandated that we do this, which might change, but

that's all right" (Fairview, Teacher 2), and, "there's no turning back. Unless something drastically

changes, then this is the direction of the state, and this is the direction we're going" (Valley,

Teacher 1). At Highland and Northeast, however, the interviewees expressed more of a school-

based commitment to the initiative, "I think that it's driven by [ADMIN] in the beginning, and

then it's handed off to us as a department and as an individual teacher to figure out what we want

to do with it" (Highland, Teacher 1). At Northeast, where they have been implementing the initiative for multiple years, Teacher 4 declared, "everything we do, it breathes proficiency-based learning," suggesting that the rationale behind implementation was understood by staff, and that teacher buy-in was high. Although the proficiency-based diploma law was a requirement for all high schools in the State of Maine, Highland and Northeast teachers communicated a common rationale for why they were implementing proficiency-based education, whereas Valley and Fairview contributed the shift mostly to state mandates. At the same time, teachers at Highland, Valley, and Fairview, all expressed a need for a more clearly articulated vision for PBE at their schools. A school-wide commitment to PBE implementation and a vision for what that looks like emerged as an important component in successful implementation and staff buy-in. This will be discussed in the following section.

Common Vision. Vision, including common beliefs, practices, and language, was coded at least once in all twenty-five interviews. When discussing implementation of the proficiency-based education initiative, teachers were clear in their message: A set of common beliefs and practices is essential to successful, school-wide implementation. Of the four sites involved in this study, only one (Northeast) had been implementing proficiency-based education for multiple years. The teachers at that site also expressed more frequently that there were clearly defined expectations and common practices, which may suggest that these expectations and practices become clearer over time as the initiative is implemented. There was a theme of consistency, clear and common practices, and decisions being made by administration about instruction, assessment and grading practices at Northeast, "The administration will set up clear expectations about what we need to have" (Northeast, Teacher 1). The principal at Northeast remembers the transition into

administration and the efforts that were made to get staff on the same page, committed to a common set of beliefs and practices:

> It was a very divided faculty and there were camps of people with perceptions and ideas and we sort of were able to get rid of that and just say, "Let's all talk from the same set of information and then what are we going to do with that information?" (Northeast, Principal)

Interviewees at other sites commented on the need for a shared understanding of the initiative, "There's not a lot of shared understanding" (Highland, Coach), including a cohesive vision and more defined common practices, "What we found now is that we don't have really good procedures set up, and consistent procedures that all teachers are doing" (Highland, Teacher 3). In sites that were just beginning implementation, interviewees reported a lack of a clear vision and some confusion about who was responsible for providing that vision:

> I don't think that there was ever really a great deal of clarity around how this was going to unfold, how it was going to look, whose responsibility it was and how much responsibility there was to have consistency within the school. (Valley, Teacher 3)

Interviewees at all sites noted efforts at communicating some kind of vision or clarifying practices with teachers, parents, and students, while at the same time acknowledging that what they were doing didn't seem like enough, "We developed a [handbook], we had a couple parent meetings, but it just wasn't enough. We needed more...we needed to do more with them, we also needed to do more with the staff too, I would say" (Fairview, Teacher 4). While it seems that Northeast has the most clearly defined guardrails to PBE implementation, interviewees also admitted there is still work to be done, indicating that it is a continuous process of refinement:

I think that whole getting kids on board, getting parents on board, that seems to be the messy part, and then doing a really good job of educating teachers of what does proficiency look like and what do we mean by that, and it's an ongoing process so that we get a little bit better every year. (Northeast, Teacher 3)

There was evidence of both a desire to have common practices, "We all want to be on the same page about what we're doing" (Highland, Teacher 4), and an awareness from all of the sites that setting guidelines and expectations around implementation of the initiative was an ongoing process, "We've got the philosophy. But the real deep understanding isn't beginning until just now" (Highland, Principal). In addition to the idea of common practices being shaped over time as initiatives are implemented, there was also a component of chaos or confusion that was interwoven throughout the implementation process. One administrator described the process as 'messy' and stated that some staff might say there has been little direction, even when some has been provided, "I think they'd says it's messy, that it has been messy and that it's happened in spurts, and at times they feel lost, and they feel like at some points they don't have direction when they've been given [direction]" (Valley, Principal). A teacher at Valley reflected on the mixed messages the staff have received throughout implementation, and how shifts in practices along the way have brought the staff closer to a more common vision:

I think that the expectations are changing a lot, because we just don't know what this looks like yet. So, we get told something, and we try to implement it. And then we hear from another source, that that's not how it's supposed to look. So, I think everyone's trying to do the best they can, and we're getting closer to a shared goal. (Valley, Teacher 4)

While there was overall concern for not having a clear, shared vision for PBE implementation across somes sites, there was also optimism expressed for the work that had been accomplished. A part of the vision that was mentioned numerous times was the importance of a shared language that teachers could use with each other and with students as they communicated key aspects of the initiative. Some participants noted successes in having shared language that was evident among teachers and, in some cases, students:

> I think the biggest success as far as globally over the whole school system is we're starting to talk the same language. When a student comes in, all of our content areas are pretty close to the same. We're all talking the same language. (Valley, Teacher 1)

The internal coach at Highland recounted a conversation she was able to have with one student due to the use of common language with students by teachers throughout the school:

> I think that being able to have common conversations, where a kid can come into me and say, 'I need help with this standard.' You know, 'I need help. I know what I'm trying to do in this task. I have to show this, I have to show that, I have to show the other thing.' And that is different. Rather than just saying, 'I got a C on my paper, and I need to get a B or I can't take driver ed.' You know, that's a really crucial shift. And it's starting to happen.

Common vision, common practices, common language and leadership approach were all factors influencing PBE implementation. Teachers, coaches, and administrators at Highland, Valley, and Fairview all mentioned the need for more clarity and consistency in their approach to implementing PBE, whereas participants at Northeast felt as though many of their PBE practices were clearly articulated. Participants also noted additional challenges that interfered or slowed

progress toward implementation of proficiency-based education. Challenges will be discussed in the next section.

Challenges During PBE implementation

All twenty-five of the interviewees noted some form of challenges during implementation of proficiency-based education, and the 'challenge' category captured 10% of total codes. These challenges were coded into five broad categories illustrated in Table 4.2: Grading and reporting, changes in technology, student and parent concerns, time, and teacher burnout. The most frequently reported challenge with implementation had to do with grading and reporting, which was the primary challenge discussed at Valley, Fairview, and Highland.

Table 4.2

Implementation Challenges by Site

Challenges by Site	Valley	Fairview	Highland	Northeast
Grading and Reporting	x	x	x	
Changing Technology	x	x	x	
Student and Parent Concerns	x	x	x	
Time	x	x	x	x
Teacher Burnout	x	x		x

<u>Grading and Reporting</u>. A primary challenge across sites with the transition to proficiency-based education had to do with grading and reporting. It was a clear theme across sites that teachers were feeling the weight of changing from a traditional grading system (0-100) to a standards-based system, with some schools opting to stay in both worlds. Teachers across sites expressed some concern with how final grades were calculated for report cards and transcripts,

and administrators at Valley, Fairview, and Highland all noted community concerns with changing their grading and reporting systems.

At Fairview, an externally coached school, all but one of the participants cited grading and reporting as a major challenge in their efforts to implement PBE, "We talked about this convoluted system of converting these standard scores into numerical scores, and it was just astounding to me" (Fairview, Teacher 1). Recalling the actual process of entering grades, one teacher explained the added time required in their new process:

…when you put three standards on it, you put three grades on it, and I've got to look for three different things, and it's just, oh my gracious, it's a lot more. It's like it's more time spent on that. I know that I put a lot of grades in the grade book. I know some people don't put as many grades in the grade book because it's a lot to just generate all these grades. (Fairview, Teacher 2)

The process for calculating a grade in their current system seemed to cause some frustration and concern among teachers, "We're going to assess student learning with this convoluted system that we've got going on, that it's wearing people down" (Fairview, Teacher 1). One teacher expressed some frustration at the inconsistency across teachers in the school, due to the confusion of the process of calculating a grade, even though individual teachers knew whether a student met or didn't meet a standard, it was still difficult to figure out how to convert that to a score, "I know right now we're all struggling with how to go and make a conversion. I think overall I think people kind of get it. It's like this student knows how to do this. I think there might be some fudging going on" (Fairview, Teacher 2). When talking with students about grades, one teacher noted, "They (students) have a hard time understanding their grade when

they look at it. And, we have a hard time looking at them (grades) and understanding them" (Fairview, Teacher 3).

Five of the eight participants at Valley High School cited grading as their main challenge in PBE implementation, "For me, the biggest change is the grading piece. We've decided to go standards, so we're using our standards, but...we have a dual thing" (Valley, Teacher 1). Participants at Valley talked about community push back to changing the grading system, and a need to take the change slowly. The Principal at Valley discussed how they were dealing with the community push back by implementing a dual grading system, "this idea that I'd still get a traditional grade in addition to my standards somehow was comforting in a transition" (Valley, Principal). The external coach at Valley noted the difficulty a dual system can have, "it takes so much time to grade in a dual system" (Valley, Coach), and a teacher asserted that the decision was a bureaucratic one, "the decision was made that for the ease of the bureaucracy of reporting out the grades, that we just needed to do one thing at a time" (Valley, Teacher 3). While there was not a clear indication of whether or not teachers were in favor of a change in grading systems at Valley, it was evident in interviews that this was an area they were treading lightly due to community concerns.

Two of the teachers at Highland expressed overall frustration with the number of changes made to the system, the number of standards being assessed, and how a grade was derived, "I feel like there was definitely a lot of disappointment or struggle in that first transition. It just feels like it's just been, we keep changing like how we enter the grades, and we keep adjusting, and shifting" (Highland, Teacher 3). One piece of grading and reporting that seemed particularly challenging was how to derive a grade from a set of scores on standards and the amount of work that dual grading, or entering both standards grades and numerical scores, put on teachers. "I

think a lot of teachers are really bogged down with the reporting side of it and making sure that all the standards are accounted for" (Highland, Teacher 2).

At Northeast, where proficiency-based education had been established for more than five years, the administrator referenced a controversy with grading and reporting that happened early on, "when we messed with grades, we had parent uproar" (Northeast, Principal), but noted that establishing clear criteria for teachers to use in the grading process helped alleviate the challenges they faced during early stages of implementation. None of the teachers at Northeast mentioned issues with the grading and reporting system.

This grading and reporting challenge was often compounded or conflated with issues related to technology or programs that did the reporting. Teachers described a level of frustration not only with how to grade, but also with new programs that teachers were expected to use. The next section will discuss the challenge of changing technology programs in more detail.

Changing Technology. Each of the sites had some kind of structural changes, primarily in software that influenced PBE implementation. All sites had at least two participants mention changing technology, however, teachers at Northeast, which had been implementing for a number of years, mentioned a new program they were using to house their curriculum, but did not cite it as one of their challenges. A pattern across the remaining three sites of technical changes leading to frustrations was evident in teacher interviews, with all but two teachers at the sites beginning implementation mentioning specifically grading software as an obstacle to fully embracing proficiency-based education. All six participants from Fairview, five of eight participants from Valley, and four of five from Highland mentioned challenges with technology. Sites sometimes introduced new programs only to switch programs later, or introduced multiple new programs to teachers. An administrator at Valley described a new version of their online

gradebook that actually had two gradebooks where teachers entered grades, one traditional and one standards-based. One teacher summed it up, "There seems to be a lot of things going on at the same time with this change to proficiency-based grading" (Highland, Teacher 3). Navigating new programs or changes in programs sometimes led to confusion and frustration, "we've also had the traditional technology struggles, where suddenly we shifted technology platforms (be)cause the promises made by one, 'Oh, we're not gonna be able to do that'" (Highland, Coach). Other sites reported the same challenge of shifting to a different grading program only to realize that the jump was too much, too soon, "so we started the year using [program], and saying kids were on a one to four scale and quickly realized our teachers were not ready for that. They weren't trained on [program] and were using it on the first day of school" (Fairview, Principal). These technology changes coupled with changes in grading practices seemed to cause people to throw their hands up in frustration, "It's not meant to do what we're asking it to do. It was never meant to do that. It's not the right database for it" (Fairview, Teacher 1). One teacher noted that the two programs the school switched to couldn't necessarily do what they were asking it to do, creating a system that was 'cumbersome' and proved difficult to even enter grades into, "And then going through every screen, you got the little thing that goes round and round...They just took time loading. So, the infrastructure of the program couldn't support necessarily what we're doing and I think it was a little bit cumbersome" (Highland, Teacher 2). The challenge didn't exist only for teachers, though. Administrators expressed a level of frustration with software changes as well, noting that it was a challenge, "making sure [the program] actually does what we want it to do and will actually keep up with the philosophy" (Valley, Principal). From the perspective of those in the school, students and parents had their own concerns with the shift to proficiency-based education. Most of those concerns were also

expressed around grading and reporting. Student and parent concerns that surfaced are described in the next section.

<u>Student and Parent Concerns.</u> During implementation of proficiency-based education, teachers and administrators talked about the pushback from parents and students being a significant challenge, "Where the pushback came so strongly from was from the parents," with one site acknowledging in retrospect the need for more engagement with parents and students to build understanding, "I don't think we did enough with parents. Developing, you know, explaining the rationale, how it was going to work" (Fairview, Teacher 4). The external coach at the same site agreed that the level of community engagement was low, and asserted that any programmatic changes should involve some level of discussion and knowledge-building with community, "I think there clearly has not been enough focus on the importance of community engagement when it comes to programmatic changes" (Fairview, Coach).

In addition to a lack of communication and transparency, teachers at other sites mentioned issues arising with class rank, GPA, and college acceptance:

> Parents of the higher-level kids (ask), 'Is a 4 going to tell Harvard that my student can go to Harvard?' Is Harvard looking at a standards-based grading system, or are they still looking at valedictorian of a 104% average or whatever. That's the concern of a lot of parents, I think. (Valley, Teacher 1)

At some sites, teachers seemed to be struggling with students not adhering to the expectations set up within the proficiency-based education system. For example, some schools did not count formative assessments, like homework, toward the grade, which removed a leverage point those teachers previously had for students to complete work, "students do not take things seriously. If there is no point value associated with it, they don't take things seriously"

(Valley, Teacher 2). One teacher at the same site noted that the challenges students were expressing seemed to also come from a lack of information or understanding, "it's because they just don't understand the change. So that's more of the pushback is just that pushback of not understanding change" (Valley, Teacher 6). This particular teacher described the transition as students, 'figuring out how to play the game'. The rules around grading shift in a proficiency-based system to account for learning instead of work completion and students, "don't know how to play this game yet and I think they're still trying to scramble to figure out how to do that" (Valley, Teacher 6).

At Northeast, where they have sustained the initiative over time, teachers reported that students come to understand the system more, "A lot of my students aren't even familiar with the older traditional way of grading things" (Northeast, Teacher 4). This sentiment of gaining understanding by sticking with a practice over time was echoed by a teacher at Highland:

> Last year and the year before in particular, I heard a lot of students saying, 'Why aren't we doing the traditional way,' because they're so used to it. But this year I'm starting to hear more and more that they like the standards and they like the opportunity to reassess. They like knowing clearly what their standards are and what they're shooting for.
>
> (Highland, Teacher 1)

While teachers at some sites reported that students and parents expressed concern and confusion about the adjustments to the grading and reporting systems, this study did not ask students or parents directly for their perceptions. The pushback teachers in some schools experienced from students, parents, and the community seemed to lead to some frustration and a feeling of trying to make grades work in a system they didn't fully understand themselves and the comments tended to be coupled with challenges around grading and reporting. This constant navigating

around obstacles and challenges led to many teachers noting some concern for their colleagues and suggesting a level of fatigue among staff, both around the amount of work required and the time it was taking. A somewhat eternal challenge in education that surfaced was around time. Time to do all of the work, time for teachers to collaborate, and time available for teachers to work with coaches was coded in multiple interviews. The challenge of time will be discussed in the following section.

Time. Teachers expressed concern with time consistently across all sites: a lack of time, time for coaching support, time to grade assignments, and the extra time it took to implement the components of the initiative. Even at the Northeast, where proficiency-based education had been established over time, teachers expressed some concern about the time and effort, on top of day-to-day classroom teaching, that the initiative took to implement well, "The one difficulty with the number of different structures is the time it takes to prove yourself to all of them…and it's extra work on top of teaching" (Northeast, Teacher 4). In this particular case, some of the structures this teacher refers to were not necessarily components of the proficiency-based education initiative, but were school-based expectations around curriculum development, professional learning, and collaboration. The same teacher mentioned that the professional development was valuable, but, "sometimes it seems like the time spent doing that isn't always worth what you get out of it" (Northeast, Teacher 4). This response was echoed by Teacher 3 at Valley, "we waste a tremendous amount of time on things that we should not be wasting time on based on different ways that we could be approaching the preparation." Whether it was time spent on professional development, time spent learning new programs or structures, or time spent coming to consensus around how to approach various aspects of the initiative, it was clear that time was limited and there were pressures and demands that caused teachers to feel like there was never enough time

to accomplish everything. One thing that seemed essential in PBE implementation was collaboration, yet there was limited time for it. As one teacher at Valley described, time is precious, and it didn't seem like anyone had the perfect recipe for balancing collaborative time, professional development, and normal day-to-day teaching, "How you do that in this big of a school with limited time to get together, I have no idea. And that's the challenge that we are talking about all the time, is how do you spread it" (Valley, Teacher 5).

Time for coaching also came up as a challenge, especially at internally coached sites. At Highland and Northeast, both teachers and coaches reported either a lack of time or schedule conflicts that interfered with regular coaching. The internal coach at Northeast described their scheduling challenge with one teacher, "(the teacher) and I don't have much common planning time, which is a struggle, and (the teacher) does things after school and I do things after school so finding that time is a problem." At Highland, where coaches were trying to do regular 6-week instructional coaching cycles, "scheduling became a conflict" (Teacher 1). Another teacher at Highland recalled a helpful session where a coach came into their classroom to observe, and then they debriefed the class together, however, also noted "I get a sense (coach) didn't have a lot of time to do that on a regular basis, but it was definitely good" (Highland, Teacher 3).

Externally coached sites didn't mention scheduling conflicts with external coaches, but did note that the periodic sessions sometimes felt rushed, were not frequent, and were usually aligned with whatever professional days the school district had allocated for the year. Some teachers expressed that the professional development sessions sometimes felt like additional things instead of time to do the work they needed to do. The following section will address the theme of teacher burnout.

Teacher Burnout. There was a theme amidst the challenges of teachers having a tough year. Again, it is worth mentioning that these data were collected prior to the Coronavirus pandemic, so this theme does not have to do with remote learning or areas of burnout as a result of the pandemic. At least two participants from each of the four schools spoke about 'burnout,' being 'fried' or simply being tired and feeling like there was a lot on their plates. Implementing proficiency-based education, to some, seemed overwhelming.

At the externally coached schools, Fairview and Valley, participants spoke of PBE as just one more thing that is on an already overfull plate. One principal described a sort of initiative-fatigue, "I just think that to me we're not in a place to do that right now with so many different kinds of initiatives that's on our plate" (Fairview, Principal). The administrator at Valley described the frustration in making adjustments as the school year was underway and the challenge that presents, "it always feels like you get going on something or get working on a piece and then you're off and you got to do something else. It's challenging to do all of that while school continues to run." Teachers didn't necessarily describe it as initiative fatigue, but they did talk about all of the moving components and how disheartening it was to know that they were being asked to do something that was not being asked of other school districts around them, "I think the fact that some schools say they're doing proficiency, but they're really phoning it in...so that makes it challenging" (Fairview, Teacher 1).

At the internally coached sites, Highland and Northeast, teachers and coaches expressed a level of burnout associated with the fast pace and high expectations of the job. A teacher at Highland shared that although some things need to be implemented and practiced before they can identify problem areas, it left colleagues feeling unappreciated and resentful to be asked to do so much work on top of an already challenging job:

We can't really know the problems until we try it, but it feels like it's been a lot of work on the teachers, and I think that really is making people feel tired, and a bit underappreciated, and a bit resentful. (Highland, Teacher 3)

Although at both Highland and Northeast there was professional development provided in the form of internal coaching and other training surrounding the initiative, teachers also commented that it sometimes added to the fatigue, "I can't talk for anybody else, but I think there's just a little bit of a level of burnout about professional development. You've got to walk fast to walk among the people here" (Northeast, Teacher 2). Internal coaches were sympathetic to what was being asked of teachers and talked about how difficult the job of teaching is in general, and how the stakes seem to keep getting higher, "I think for people walking in, there is just so much to do well, in any school right now, this is a hard time to be a teacher, it's a really hard time to be a teacher" (Northeast, Coach). The theme of coaches being caring and empathetic is discussed at length in the section on coach dispositions. Overall, the theme of teacher burnout came through in multiple, although not all, interviews, but seemed important to include because it was expressed at each site and from participants in each of the roles. Administrators understood that their teachers were feeling overwhelmed, teachers expressed frustration and fatigue, and coaches realized that they were there to support it all, even when some teachers weren't up for the support.

The primary challenges that surfaced across cases have been discussed in this section: grading and reporting, changes in technology, student and parent concerns, time, and teacher burnout. One additional challenge that came up at Fairview was the idea of administrator turnover. While the principal at Fairview had been there for two years, one of the teachers, the principal and the external coach mentioned administrative turnover as one challenge they faced

during the school's transition to proficiency-based education. The principal at Fairview shared their worry and hesitancy for starting over with a clear vision, "I feel like I came in and I didn't want to undo what people had done and I think in some places, we should have. We should've started over and said, 'All right, let's go all the way back to square one'" (Fairview, Principal). One teacher at Fairview confirmed that the administrative turnover had led to lack of a clear vision and perhaps a lack of buy-in to PBE among staff, "It's been a struggle. In the years (I've been here), I've had (numerous) principals and superintendents. Just the administrative change and the directions that we've gone with proficiency-based learning have changed because of that" (Fairview, Teacher 1). This somewhat regular upheaval led to a relative lack of investment in the proficiency-based education initiative. It was clear from interviews at other sites that administrative consistency was helpful in seeing an initiative through to implementation. The finding here supports previous findings that administrative support for coaching and PBE implementation is essential to its success. In the following section, comparisons between internal and external coaches and their approaches to working with teachers to implement proficiency-based education will be analyzed.

Coaching Comparisons: Internal vs. External Coaching, Interactions and Dispositions

The second area of findings in this study has to do specifically with how internal and external coaches interacted with high school teachers during implementation of PBE. While coaching interactions and dispositions have been well researched at primary grade levels and with math and reading specifically, there is less literature on coaching at the secondary level. This finding is important in illustrating how internal and external coaches approach the work with teachers at the secondary level and also the ways in which internal and external coaches play a role in teacher professional learning and change in practice during implementation of

proficiency-based education. The assertions presented in the conceptual framework for this study postulate that internal and external coaches work with teachers during different phases of teacher learning. Uncovering the ways that each type of coach works with teachers provides evidence to illuminate the specific roles internal and external coaches play in internalization of practices aligned with the PBE initiative.

When coding the data from the 25 interviews, patterns emerged that described both the interactions coaches had with teachers and the dispositions teachers thought coaches had. Interactions can be defined as the ways in which a coach worked with a teacher. Primary interactions included providing professional development, reflecting on practice, planning support, pushing to change practice, and providing expert knowledge. Dispositions can be defined as the ways that coaches' behaviors were perceived by teachers. Dispositions are qualities or characteristics of the coach that teachers described, which included coaches being helpful, nonjudgmental, credible, in it together with the teacher, and caring. This section will break down these interactions and dispositions, making comparisons between external and internal coaches in the sites studied.

Coaching Interactions

Coaching interactions, or the ways in which coaches worked with teachers, was a primary focus of the semi-structured interview protocol. Specific interactions that were mentioned were coded individually at first, and then nested under broad categories that best described the nature of the interaction. For example, 'using protocols' was a process code used 56 times, and was nested under the broader category of 'providing professional development'. Child codes are listed in parentheses under the broader parent codes or categories in Table 4.3.

Table 4.3

Internal and External Coach Interactions

	Valley High School (ext. coach)	Fairview High School (ext. coach)	Highland High School (int. coach)	Northeast High School (int. coach)
Providing Professional Development (using protocols; connecting to school-wide initiatives)	x	x		x
Reflecting on Practice (questioning)	x		x	x
Planning Support (goal setting, agenda creation)		x	x	
Push to Change Practice or Try Something New (strategies)			x	x
Expert Knowledge (giving advice)			x	x
Observing and Providing Feedback			x	
Building Leadership Capacity	x			

Table 4.3 compares the coaching interactions coded for internally coached schools and externally coached schools. Internally and externally coached sites differed both in the types of interactions described and how often these interactions were mentioned by participants. Overall, internal coaches engaged in more of the coded interactions than did external coaches. Included in Table 4.3 are the codes that represented more than 10% of total codes in each case. 'Providing professional development' was a primary code in three of the four sites, as was 'reflecting on practice'. At the externally coached schools, Valley and Fairview, 'providing professional development' emerged as a primary coaching interaction. At the two internally coached schools, Highland and Northeast, 'reflecting on practice,' 'pushing to change practice or try something new,' and 'expert knowledge' were all top themes that emerged. In addition, the interaction of 'observing and providing feedback' was coded as a frequent interaction at Highland High School

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and 'building leadership capacity' was coded as a frequent interaction at Valley High School. These seven coach interactions will be described in the following sections.

Providing Professional Development. Providing professional development, which includes use of protocols, training teachers in professional learning group facilitation, and connecting coaching to bigger picture, school-wide initiatives, was the most frequently coded interaction in terms of total codes used across both internally and externally coached sites. Providing professional development is most closely related to Phase I in the Vygotsky Space model, where individuals, in this case teachers, engage in a collective experience aimed at conveying new information or learning (Gallucci et al., 2010; Gallucci, 2008). Twenty-three out of twenty-five interviews (both internal and external combined) mentioned that the coach provided, facilitated or designed professional development at their school. This code was used more frequently with externally coached sites than internally coached sites, and was most frequent among coach interviews.

Professional Development by Internal Coaches. At both Highland and Northeast, internally coached sites, it seemed common practice that the administration relied on the internal coach or coaches to both provide professional development (PD) during release or inservice time, and also to make an explicit connection between the whole school PD and their one-on-one coaching sessions. Internal coaches functioning as a change agent, as the principal's 'right hand' or as a vehicle for professional development around PBE implementation has been described in the literature. Woulfin (2018) noted that across schools in a case study, instructional coaches performed duties ranging from providing professional development to menial tasks like photocopying materials designed for a priority initiative. Principal at Northeast used similar words when describing their coach as their 'right hand' when it came to providing PD.

Professional development was coded in all but one of the internal coach site interviews, suggesting that this was a common practice for coaches to be engaged in at both internally coached schools. Coach from Northeast gave an example of how PD connects directly to the instructional coaching role:

> Part of my job has been doing the professional development for staff and running that...And the primary focus of my work in that area was working on (unit design), so really, we worked really hard on (unit design). I was doing that with all teachers in that capacity and then would weave that work into some of the coaching that I did when it was appropriate. And I still do that now, there's a teacher that I'm working with now and saying...I want to help you build a unit from scratch because you haven't done that, you haven't had that opportunity, so let's get in there and do that.

Teachers, coaches and administrators at the two internally coached sites in this study all reported the importance of the role of the internal coach in implementation of the components of the proficiency-based education initiative. Teachers described working with coaches on units, lesson design, curriculum, and instruction. At both internally coached sites, teachers viewed their internal coaches as experts in the PBE initiative and as people they could turn to with questions. Teachers also noted the importance of this connection between whole staff professional development and their individual coaching. At one site, the school had a common focus for their work each year. As this teacher asserts, having the coach connected to the whole staff sessions made it easy to follow-up with the coach later on for help with specific, related strategies.

> This year, we're doing assessments, so I think that it works really nicely because it seems that when we're doing the common staff development that it's always like, oh, well I could get better at that. I'm going to go ask [coach] what are some things I could do. The

staff development makes you think about how you could use the coach to help you get

better in whatever section we're working on. (Northeast, Teacher 3)

Another teacher described ways that their coach used faculty meetings as one forum to model strategies for grouping, discussions, and engagement with staff. Based on the descriptions from teachers and coaches at both internal sites, the internal coaches generally spent more time with teachers one-on-one, however, they were also usually involved in or facilitating the whole-school professional development that happened during workshop days or staff meetings. It was clear across sites that teachers were aware of the connection between what the coach modeled in faculty meetings and workshops and what the coach worked with them to implement one-on-one.

There were also multiple references to the use of protocols with teachers, which were categorized as a type of professional development. Teachers described using protocols with a coach to look at their assessments, sort through dilemmas, and develop rubrics. In most cases, the reference to protocol use also happened in group settings, and served as a way for multiple voices to be heard around one topic in a short period of time. In one specific example, a teacher described a protocol that the internal coach used to help her content team move forward when they were spinning their wheels.

[our coach] is incredibly brilliant. I think that she's our biggest asset here. I mean, so

many different protocols we use just to own work together. We green lighted things, we

yellow lighted things. These things need improvement. We red-lighted some things, like

[specific units of study], definitely needs some work. And then what are we going to

create that's new? And that was an incredibly helpful protocol. Like that was the first

thing that we did and that was just great. (Highland, Teacher 2)

A series of teachers at Northeast discussed a common set of protocols that the coach provided to curriculum teams that they would use to review and refine their assessments.

> So, once I've designed something or an assessment, it goes through a protocol, so that it makes sure that it actually is an assessment that matches the curriculum and matches the learning targets and the standards. (Northeast, Teacher 3)

In the case of Northeast, it was evident during the interviews that some of these protocols have become institutionalized in practice, with teams using them regularly without coaching support. In cases where teachers talked about using these protocols with teams, further questions were asked of respondents to inquire about the source of the protocols. Protocol use at Northeast was attributed to practices that the coach helped to establish.

Professional Development by External Coaches. External coaches described nearly all of their interactions with teachers within the codes associated with professional development. The interactions between teachers and external coaches were almost exclusively in group settings where the coach either facilitated protocols, provided examples, or provided resources that were aligned with the proficiency-based education initiative. Administrators and teachers noted the connections made by external coaches to larger school-wide initiatives. The principal at Valley reflected on the role of their external coaches in implementation of proficiency-based learning:

> Well, the whole piece about actually developing graduation standards, that was quite a bit of professional development even to have that happen. So honestly for a couple of years that really took up a huge amount of our professional time in order to do that. Much of what the role of the coaches were, were kind of helping people through that process.

Administrators at both externally coached sites relied on their external coaches to provide professional development aligned with proficiency. In some cases, the administrators recalled

co-facilitating with the coach while in others the coach would lead the work during whole school or small group sessions. There was a sense that the external coach was picking up some of the instructional leadership duties that the principal would have needed to do independently otherwise. The principal at Valley described the difficulty of being an instructional leader and running the school on a day-to-day basis, "it always feels like you get going on something or get working on a piece and then you're off and you got to do something else. It's challenging to do all of that while school continues to run." At Fairview High School, the principal discussed relying on their external coach for professional development, but also co-facilitating with the coach as a way to alleviate some of the pressure from shouldering all of the facilitation duties, especially during small group content area work. "And then when it's been a (professional learning) day, like an extensive day, then we've co-facilitated. When she's worked with departments...she facilitates" (Fairview, Principal).

Teachers at both sites described the types of professional development support that external coaches provided, many of them referring to the role of the coach in working with a content specific group or department on their implementation of the PBE. External coaches provided models of the various elements of proficiency-based education, and facilitated groups through protocols that allowed them to develop particular components of the proficiency-based system. "When we as a department started to talk about proficiency, she was very involved in going to individual departments and participating in conversations around what was it going to look like" (Valley, Teacher 3). In their work with individual content areas, the work of external coaches seemed to focus most on development of standards or rubrics for a course, and teachers noted the importance of the focus being specific to a content area. "When she comes here to, for instance, work with our department, she's been helping us with our standards and I guess kind of

drilling down a little bit more, finer focus on where we're going, with just our content area"
(Fairview, Teacher 2). From interviews with both external coaches, there was a clear model for
proficiency-based education that these coaches were working to help establish. Whole-school
professional development focused on making connections to the bigger picture, while small-
group and content-specific professional development tended to focus on doing more detailed
work on units, assessments, and rubrics as they related to the broader model for proficiency-
based education.

Tying the coaching work to the bigger picture emerged as a theme primarily in external
coach site interviews. Administrators, teachers, and coaches discussed the role of the external
coach in maintaining momentum in a direction, or considering the larger district, school, or state
plan in guiding the work forward. As one administrator put it, their coach helps them to see, "the
forest for the trees" (Valley, Principal). Both administrators talked at length about the ability of
the external coach to help them situate each of the discrete activities, like unit and assessment
design, within a broader picture or vision for proficiency-based education. Coaches did this by
providing graphics that depicted the components and by working closely with leadership to
remain abreast of all of the initiatives and work that the school was trying to accomplish. It
seemed important to coaches that the work of the initiative be infused across all of the work in
the school. At both sites, teachers were able to tie the work of the external coach directly to the
school-wide initiatives, and noted that coaches could often see the bigger picture. "I think that
she's pushed a lot of this work forward in ways...kind of got an eye on bigger picture things like
curriculum, standards, strategic plan, like that kind of stuff...much more bigger picture kind of
thing" (Valley, Teacher 4). Teachers also noticed that some of the tools and models provided by
the external coach helped teachers see how the smaller tasks related to the big picture, and how

their individual work fit into the initiative. For teachers, it was important to know where they were as individuals and content areas in the work toward the school-wide initiative. External coaches kept them on track working on the smaller components while the building as a whole was working toward the broader goals, maintaining some consistency across departments and teachers.

The use of protocols was also a theme in the area of professional development at external coached sites. External coaches served as trainers for the use of protocols in professional learning groups (PLGs) at one external site, and modeled the use of various protocols with teachers at both sites. Formal training in the use of protocols was an effort made at Valley to improve facilitation skills of content leaders, "...so the coach actually did all the (PLG) training and all the...protocols...because we really wanted department leaders to have a little more focus going in their departments" (Valley, Principal). At Valley, the coach provided an extensive professional learning group training, which was discussed at length by teachers and the coach, "And my job is to just go in and do refreshers on different kinds of protocols...And we do like a tuning, or a protocol, that uses their work aligned to proficiency" (Valley, Coach). In comparison, at Fairview, the coach had not done any kind of formal professional learning group training in protocol use, but did use protocols in the work with teachers. Teachers at Fairview recalled coaches modeling protocol use during professional development sessions, helping them to implement them more effectively during their meetings.

> She taught us a lot about protocols, the professional development thing. Because we'd get sidetracked and whatever, but she modeled the protocols. She taught us those protocols, which led us to our PLG groups. It's just been a process. (External Coach Site A, Teacher 1)

External coaches at both sites were assisting in teaching skills and processes that teachers could use together and individually when the coach was not there. Teacher 3 at Valley had not been involved in the formal PLG training, but had participated in the groups when protocol use was modeled. Teacher 3 discussed that these protocols impacted how teachers engaged in work together, describing the experience as a, "Tremendous relief...not only that we got to participate, but that we got to be heard" (Valley, Teacher 3). External coaches not only trained and modeled protocol use, but also built upon the capacity of the existing staff, some of whom had previously used protocols. While teachers at Fairview didn't mention formal training around protocol use, one teacher noted, "Some of us were accustomed to using protocols because we had been part of Critical Friends," and recalled that the coach, "was able to coach us to get everybody else using them" (Fairview, Teacher 1).

Coaches also reflected on the ways in which they provided professional development to the staff at each site, noting their role in maintaining a focus on the big picture and tying the work of the smaller groups to the work of the school-wide initiatives. During their work with coaches, teachers also engaged in reflective practice. This theme will be discussed in the next section.

Using Questioning to Reflect on Practice. Across sites in this study, reflective practice was a common theme that emerged as one of the ways both internal and external coaches interacted with teachers and administrators. While reflection was often cited as an activity during one-on-one coaching sessions, there were also opportunities for teachers to engage in reflection during small group sessions with coaches. Teachers recalled coaches using questioning, observation, video and data as ways to help them reflect. The practice of reflection that participants in this study described involved considering strengths and weaknesses, being prompted by questions

from a coach, sharing reflections with others, and considering changes to practice as a result. All of the interviews coded from internally coached sites (11) and externally coached sites (14), including teachers, administrators, and coaches, have at least one 'reflecting on practice' reference. Reflecting on practice was the most frequent code among internally coached sites, and the second most frequently coded interaction overall. The following sections will describe how reflection happened in greater detail when teachers worked with internal coaches, and then when teachers and administrators worked with external coaches.

Reflecting with Internal Coaches. At internally coached sites, individual teachers discussed the importance of reflecting on their teaching practice with a coach, after individual lessons and at the end of units or courses. Reflections included highlighting strong practices, as well as indicating areas in need of improvement. Often, at internally coached sites, reflections happened as a result of an observation or watching a lesson that had been video recorded. The way teachers described these sessions made them feel both easy and difficult at the same time. While teachers were being challenged to think critically about their practice, they were also comfortable with the coach, making the processing of the event easier. Teachers in general found their reflective sessions with a coach to be helpful and thought-provoking. Questioning techniques were regularly used by coaches at internal sites as a prompt for reflection. Teacher 1 at Highland mentioned that the coach asked questions like, "What was good about this lesson? What are you seeing? What suggestions do you have that could make it more effective with the kids?" which allowed the teacher to take further action and strategize around ways to better impact student learning. These reflections, prompted by questions posed by the coach, then opened the door to meaningful planning and seeking out resources that could support the teacher as they tried new strategies.

Reflective conversations prompted teachers to think critically about their practices and, in some cases, also served as a form of accountability. Teacher 2 at Northeast recalled sessions they would have with a coach, "so then we'd sit down and have discussions about whether or not I followed through, or what I did to follow through on the days that they weren't there." The reflective practice described by teachers and coaches at internal sites showed evidence of a cycle of teachers learning, making adjustments, and internalizing new practices and strategies as they tried them out multiple times, over time, in their classrooms.

Building a habit of consistent reflection embedded into practice, was cited by teachers as one of the benefits of working with an internal coach. Teachers and coaches at internal coach sites highlighted examples of coaching relationships where questioning, reflection, and learning were continuous and resulted in perceived classroom improvements. Teacher 3 at Highland noted that their newly formed habit of reflecting on practice at the end of a lesson or unit, "was one of the biggest benefits...or the biggest accomplishments that I had in working with a coach." Improvements initiated by reflective conversations that teachers noted included increased confidence with curriculum, more detailed and intentional planning, and strategies for engaging students. For one teacher, these reflection sessions with their coach helped them to think differently about the curriculum, "I think that really helped me think about curriculum and how to design it in a different way than I had previously thought" (Northeast, Teacher 3). In internally coached sites, the process of reflection was often combined with observations and feedback in a coaching cycle, modeled after the University of Kentucky's Impact Cycle (Knight, 2019). This cycle can be unique to individuals, but is centered around the idea that coaches work with teachers to identify goals, support them in learning about strategies, and reflect with them as they work to improve practice. Teacher 3 at Northeast reflected on the process they engaged in with a

coach, "So for six weeks, (they) observed me a few different times, then we would talk about it within the next day or so and talked about what (they) saw, how I was feeling the class was going." This same cycle can be applied whether observations are in person or via video. At Highland, teachers would video their lessons to serve as the subject of reflection. Together, the coach and teacher would watch and reflect on a particular lesson. "I video recorded a lesson of myself, and then [coach] watched it and I watched it. We talked about what we saw, what was good, what was rough" (Highland, Teacher 1). As this teacher reflects, processing their practice with a coach in this way, with someone who knows what to look for is perceived to be helpful in improving teacher practice. The focus of these reflective sessions was not necessarily PBE related and ranged from improving formative feedback to managing classroom behaviors. Teachers across internally coached sites valued the time spent with internal coaches reflecting on their practice. At internally coached sites, the reflective sessions seemed to be intentional, structured as an integral part of the coaching cycles that internal coaches engaged in with teachers. In comparison, there was no evidence that external coaches purposefully planned reflective sessions, although reflection was a common interaction mentioned between external coaches and others. Reflective practices with external coaches will be discussed in the next section.

      <u>Reflecting with External Coaches</u>. Reflecting on practice with an external coach seemed to take on a slightly different type of structure, one that also included administrators reflecting on their practice. In contrast to the teachers who talked about reflecting on practice with an internal coach, the mentions of 'reflection on practice' at externally coached sites did not directly refer to whether a particular instructional strategy worked. Instead, teachers at externally coached sites discussed a reflection of broader curriculum, assessment practices, or department-

level work that were components of their proficiency-based system. The coach at Fairview recalled one coaching session with a specific content area department, "They looked at their assessment and they recognized, "Oh, this is what the standards were that we said, but these were the assessments that we actually give, so these assessments wouldn't necessarily tell us whether our kids have met that standard" (Fairview, Coach). One teacher from Valley similarly described how the work with an external coach helped her to think differently about assessing standards during a unit.

> Sure, it's made me really think deeply, within the units that I do, where is the most appropriate place to assess that standard? How are my students doing something that is close to assessing that standard? How can I modify what I'm doing, to then assess that standard in the way that I am supposed to? I have spent a reasonable amount of time doing that. I mapped out where I thought I assessed all the standards, tweaked some rubrics, added some things to what I'm testing, and plan to do that more this summer. (Valley, Teacher 2)

Another teacher noted that as a result of their work with the external coach, their content team took the opportunity to reflect on the progress they had made and where they needed to concentrate their efforts moving forward.

> So, we did a reflection using [program], and they had to put down things they thought that were working, things we had accomplished, things that needed to be looked at and maybe tweaked, and then things they wanted to spend more time on. (External Coach Site B, Teacher 1)

This practice was also mentioned at Valley, "And, we take about 10 to 20 minutes, to really like self-reflect on what we would do. And then, we share out. And then, we talk about what was

helpful, and what wasn't" (Valley, Teacher 4). One of the administrators postulated that sometimes the sessions with the external coaches actually prompted further reflections or 'breakthroughs' as a result of individual teachers engaging in the coaching sessions and then thinking about the work on their own, later on.

> The breakthroughs haven't always happened when they've been with the coach. I think
>
> the breakthroughs have happened when they've had a chance to kind of think through,
>
> when they have a chance to sit back and reflect. (Valley, Principal)

One theme that was unique to the externally coached sites is the role of the coach in helping the administrator reflect on their leadership practices. One principal commented, "[Coach] just helps me to be reflective of what we've done and then really plan on for how to address it with staff" (Fairview, Principal). One coach specifically talked about the use of questions in helping administrators reflect. After staff meetings, or professional development sessions run by the administrator, the coach recalled a series of questions they would use to prompt the leader to reflect on how it went and consider ways to improve for next time. Reflection was a significant theme that emerged through analysis of the interviews in this study, and both internal and external coaches aided in the reflection process by asking questions that prompted teachers and administrators to consider adjustments in practice and beliefs. In the next section, the ways coaches planned with teachers and administrators will be discussed.

Planning to Support PBE Implementation. Planning support was referenced in twelve of the fourteen external coach site interviews and in ten of the eleven internal coach site interviews. While providing planning support was a common theme, the planning described by teachers and coaches at externally coached sites varied from the type of planning described by teachers and coaches at internally coached sites. The type of planning described at internally coached sites

focused on planning for lessons, units, and classroom-based dilemmas with teachers, while most of the references to planning support from external coaches describe assisting in long-term action planning or strategic planning.

Planning Support with Internal Coaches. At internal coaching sites, teachers described experiences of co-planning units and lessons with a coach. All three of the teachers at Highland mentioned a time when an internal coach helped them make a plan, whether it was a plan to get ahead of the class they were teaching, plan for a new teaching assignment, or planning for content that aligned with standards in upcoming units. Teacher 3 at Highland recalled, "This one particular Tuesday I talked to (coach) about doing the plan for the week and how that was going." Teachers at internally coached sites seemed to view the internal coaches as a support in their classroom instruction in a way that did not come through in the external coach site interviews. Teacher 2 at Northeast planned units with the internal coach, "another time we sat down together before we introduced the unit…we wanted to see what kids knew." In addition to planning day-to-day lessons and units, internal coaches supported teachers in goal setting and monitoring progress. Teacher 4 at Northeast recalled sitting down with the internal coach and creating goals that they revisited throughout the year to check-in on progress, "We had goals. During our first meeting we had made like a couple. Not like we're gonna report out on these goals…it was more informal." For this particular teacher, through the goal setting and planning process, "I was able to make better decisions about what was working for me or what wasn't." Planning with internal coaches focused more on one-on-one (teacher to coach) planning and strategizing. These plans may have fit within the larger school framework or action plan, and in some cases may have been focused on components of PBE, however, the teachers at internally coached schools described this planning support as much more individualized, need-based, and

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centered around classroom practice. In contrast, external coaches provided planning support mostly aligned with PBE and broader school goals.

Planning Support with External Coaches. External coaches aided teachers and administrators in planning for professional development, prioritizing goals or action steps within an existing plan, or serving as a thought partner for an administrator or leadership team member as they plan for upcoming work surrounding the PBE and other school priorities. One external coach summarized, "At the end of the first year, we initiated a strategic plan, so each year in my work with the leadership team, it was about checking back in on that plan, refining that plan and revising it as needed" (Fairview, Coach). One teacher at Fairview, who is also a member of the school's leadership team, described their work with an external coach:

> [Coach] has also been working a lot with our leadership team in terms of helping kind of make you know, bigger picture kind of goals and strategic plans, developing those. Just kind of developing that team as a kind of more cohesive kind of team. Yeah, so we've developed a strategic plan with [coach]. (Fairview, Teacher 4)

The principal at the same school described the coach's work similarly, noting that the coach assists the leadership team in planning and facilitating an annual retreat where they reflect on the prior year and plan for the work they have in the year ahead, "[Coach] worked with the leadership teams to make the strategic plan...like data-driven kind of real nitty gritty work with the strategic plan" (Fairview, Principal). The external coach at Fairview added that coaching support there focused on, "co-designing some of the professional development activities with not only the administrators but with the leadership team, and it became more about facilitating their planning processes" (Fairview, Coach). Prioritizing goals and action steps, or work that needed to be done next, with leadership team members and administrators was something that external

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coach site interviews referenced often. These goals were often focused on the components of proficiency-based education and involved prioritization. One teacher remembers a session with a coach as a member of the leadership team and how important the prioritization and intentional planning became.

> I didn't realize it at the time until I worked with the coach was "What do you let go of?" Because that's a really, really important thing as you move into leadership roles that I found is that, you have to find ways to really identify what's most important to you and to simultaneously understand people's behavior in terms of, what's most important to them and how do you value that? (Valley, Teacher 3)

At Valley, the principal commented on the intentionality of the planning that he and the coach did together, a process which resulted in charting out a big picture plan and allowing content teams to work toward more defined action steps.

> [Coach] and I sat down and worked through a process of planning out a year, which professional development-wise is something that kind of sketch(ed) some things out, but it had never been so...everything, every day that we had was planned, it had a purpose, it had a connection. The intentionality of it, and so it really continued to move forward. ...kind of helped us with working on mini action plans for departments, really having them plan out what is it that they want to accomplish in the next five or six meetings and kind of having them map out their meetings and then report back to each other on those. (Valley, Principal)

Charting out a broader plan for the school then allowed the external coach's planning work with content teams to be more focused. The external coach at Site A recalls asking department leaders, "Okay...let's think about what's important, what do we need to get done? Which outcome

do we need to prioritize? And then they kind of picked one and we were able to do that" (Valley, Coach). The planning references in almost all of the external coaching interviews involved planning with administrators, leadership team members, and entire departments or content teams, and were mostly focused on planning for components of PBE. There were not any references to an external coach helping an individual teacher with instructional planning, as there were in the internally coached sites. Internal coaches were also coded more frequently as pushing teachers to change practice or try something new, which will be discussed in the following section.

<u>Strategies to Encourage Change in Practice</u>. In each of the internally coached sites, both teachers and coaches discussed the role of a coach in pushing teachers to try something new. All eleven of the internal coach site participants, including teachers, coaches, and administrators, mentioned something related to a push to change practice. Thirteen of the fourteen external coach site participants discussed ways in which the coach encouraged them to try new strategies, or provided them with something they could use. The teachers coached by internal coaches tended to discuss ways in which their coach would prompt them to try a new strategy, sometimes repeatedly, whereas the teachers at external coach sites usually mentioned a strategy they picked up from a coach. Teachers at external sites did not express the kind of constant prodding or reminders that it seemed that internally coached teachers received from their coach.

 <u>Push to Change Practice from Internal Coaches</u>. At Northeast, the coach talked about 'cajoling' teachers, or trying to persuade them to implement a new strategy, sometimes through constant reminders and relying on existing relationships.

 I was like, 'hey, come on, its right here, it says you're gonna do this, and because (I

 know you), I'm going to push you a little bit and say, you gotta do it. I know you think

this is stupid'…. And I'm like, 'let's just give it a try' so sort of that cajoling kind of thing. (Northeast, Coach)

Another coach describes this intentional approach as 'push-pull coaching' and notes that the approach requires some finesse and knowledge of the individual teacher they are working with.

You can push, but we call it push-pull coaching. You might push a little bit…But it's that pressure, but it's a push-pull where you're gauging where your learner is and you're backing off when you need to, but then you come back and push...and maybe I push a little more than I pull. (Highland, Coach)

All of the seven teachers interviewed at internally coached sites talked about this push, sometimes in the form of gentle pressure and sometimes as consistent goading, "But she's really persistent about, 'Did you try that strategy? Did you try that yet?' So it keeps it in the front of your mind if you haven't" (Highland, Teacher 1). While the reminders and nudges encouraged teachers at internally coached sites to try new practices, some teachers recalled that their coach would also suggest a specific structure and timeline for implementation, adding to the level of accountability.

there's a lot of specific strategies you can try and she would recommend like, why don't you try these? Out of these three, try one this week, or for two weeks and then come back and talk to me, and then maybe we'll try another one. (Northeast, Teacher 3)

Teachers at both internally coached sites mentioned that coaches would sometimes suggest strategies they hadn't thought of themselves, and then would provide some structure while they experimented with the new strategy. "She just would give it to me and it was structured and concrete. And she's like, 'Try it.' And that was great" (Highland, Teacher 2). In some cases, the strategies were aligned to components of PBE, and in other cases they weren't. Often, texts were

referenced as resources to pull relevant and effective strategies. One coach recalled that she and a coach would, "read about, talk about and then implement it in class" (Highland, Teacher 1). In other cases, these strategies would come from a collaborative brainstorming session between the teacher and coach, in response to a problem of practice that was either noticed during an observation, or was one that the teacher shared as an area they wanted to work to improve.

> I was often brainstorming with her ways to mediate that [student behavior] ...So that was the first step and then she would just suggest, 'Well have you tried this?'...She was always able to say, 'Have you tried ...' and she'd list a few things and usually there was at least one thing that I hadn't even thought to try. (Northeast, Teacher 4)

This push to try something new was often coupled with some kind of problem of practice, as in the previous example, or after some reflection on practice. One teacher noted how the experience working with a coach forced them to do some reflecting that eventually led to a realization about the intentionality of their own instructional planning.

> So, it pushed my practice that way I guess in terms of realizing, 'Wow, if I'm going to have kids read things, then you've really got to spend time to make sure that it's worthwhile and it's going to be accessible to kids so that everybody can get something out of it.' I mean I think what happens is we just get so side-tracked about what's going on that, I think by making that choice, it really just did make me look at something that I would not have looked at before. (Northeast, Teacher 2)

In each case these 'pushes' seemed to be welcomed by the teachers. One teacher noted that it helped them to 'take the next step', suggesting that otherwise they may have leaned on comfortable practices or strategies and not ventured to try something new.

There's always that dynamic of taking that next step that you're not taking automatically. ...It was really sharing. In other words, it would be, 'Oh, I have these suggestions. What do you think? Give it a try,'...What [coach] is doing is helping you out and saying, 'Well, you can do this. You could try this. You could try this and see how it works.' (Northeast, Teacher 1)

Internal coaches tended to have more frequent and targeted interactions with the teachers they were supporting, and used that proximity to encourage teachers to try something new in their classrooms. In contrast, external coaches provided strategies but were not present to encourage teachers to put those strategies into practice.

Push to Change Practice from External Coaches. Interviews from External Coach Sites expressed less prompting to change practice, but teachers and administrators at Valley and Fairview noted the use of strategies provided by the external coaches. The data showed some evidence that teachers were attempting to put into practice some of the strategies that external coaches had suggested were part of the proficiency-based education initiative. The external coach at Fairview explained that where shifts in practice have happened, it had generally been because teachers wanted to change their practice, "I think the teachers where I've seen shifts…it's been because they've genuinely wanted…they've recognized that what they had been doing wasn't working and they were willing to take a risk to try something different" (Fairview, Coach). The same coach noted that without consistent prodding, the school would likely not have a professional learning community structure in place, "I don't think they'd have PLCs if I hadn't kept pushing on that…Just that persistence was necessary to get them" (Fairview, Coach). Teacher 1 at Fairview noted that while working with the external coach in professional learning communities, they would sometimes "write some hypotheses and try some strategies in our

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classrooms, [then] come back and share with the whole group what happened." Again, from the teacher interviews at externally coached sites there did not seem to be much pressure outside of these meetings to actually adopt any changes in classroom practice. The Principal at Valley said that the external coach, 'plants the seed' and then teachers take the ideas back to their classrooms or content area meetings to run with them. Teacher 3 at Valley recalled an experience where the external coach was, "coming in to push us to participate in [peer observations]." The same teacher noted that although the external coach encouraged all teachers to engage in a peer observation protocol as a way to make practice across the school more public, it was not well received and the practice did not end up gaining traction. Teachers at externally coached sites did not report feeling a consistent pressure from external coaches to change their practice, but the teachers interviewed did appreciate that external coaches provided them with ideas and resources they could use to make adjustments if they decided to. The next section will further explore the theme of imparting expert knowledge as one of the interactions between coaches and teachers.

Advice Giving to Impart Expert Knowledge. Knowing what to look for assumes a level of experience, knowledge, or ability to notice particular best-practice strategies in action. At internally coached sites, 'expert knowledge' was coded in all eleven interviews, including both coach interviews. 'Expert knowledge' was coded in nine of the fourteen external coach site interviews, including in one of the two external coach interviews.

Expert Knowledge of Internal Coaches. Teachers specifically relied on the expert knowledge of the internal coaches to suggest strategies and make recommendations to improve their practice. Some of the expert knowledge came from years of experience, "I see her as an experienced teacher, I think that she has a lot of good ideas, and good knowledge about teaching. I guess I respected her knowledge and her experience" (Highland, Teacher 3). Internal coaches

had the ability to use their teaching experience to empathize with those they coached. "She at one point talked a lot about her own experience for when she was a young teacher how she coped with it and also how she copes with it now. So, she talked about her experience (Northeast, Teacher 4). While some of the reverence came from teaching experience, some was also attributed to a perceived access to research and professional learning that the internal coach may have engaged in through the years.

> Just her presence and her knowledge about if I have a problem, like I don't know how to do this, she always seems to be like, 'Oh, I've got something,' or 'I read about that somewhere. Let me find that book and let you read it.' I think that she's just done a lot of research and a lot of her own personal learning to gather that stuff. (Highland, Teacher 1)

Teachers working with internal coaches expressed an inherent trust in them, in their knowledge base and ability. As Highland worked to implement proficiency-based education, a teacher describes the critical role the coach played in the initiative's success:

> I say that she was instrumental because we thought ... it was daunting work changing everything to standards-based and watching her do it so quickly and fluidly, whatever. She was so fluid. I mean, it was quick, focused, fluid work and she didn't mess around, she just did it...And she has so much experience. (Highland, Teacher 2)

At Highland, the coach provided teachers with a clear path forward, a way to accomplish what seemed to be insurmountable work, and made it look easy. The ability of the coach to work 'fluidly' implies that they have internalized the practices and strategies to a point where they seem effortless. The coach's confidence in the practices and the enthusiastic commitment to these practices inspired one teacher to try the strategies the coach was suggesting.

I also think that her enthusiasm and excitement around the stuff and her belief that she thinks that the stuff's actually going to work and it's great for kids and great for learning, I think that really makes me want to do it. Because I want to become a better teacher, and I think that she knows what she's doing. (Highland, Teacher 1)

There was a clear respect for the expert knowledge and experience of the internal coaches at Highland and Northeast and teachers felt confident relying on these coaches for support in all aspects of their classroom instruction, not just those aligned with PBE.

Expert Knowledge of External Coaches. At the externally coached schools, 'expert knowledge' was coded less frequently, however, in the eight teacher and administrator interviews where it was coded teachers and administrators appreciated the expert knowledge, resources, and outside perspective that external coaches brought to the table. Teacher 5 at Valley noted, "There's something about for me learning from an expert." Expertise, especially about the components of proficiency-based education, was mentioned as particularly helpful. Teacher 4 at Fairview described their coach as having "the expertise and resources" to help them implement the components of proficiency-based education. Another Fairview teacher noted, "Sometimes you can get pretty close-minded and you can't see out of your four walls. [Coach] brings that perspective of what's going on around the state and other schools" (Fairview, Teacher 1). This sentiment was supported by a number of teachers at externally coached sites that mentioned that their coach, "just had good ideas" (Fairview, Teacher 3), "brings lots of resources" (Fairview, Teacher 4) and could provide examples from other schools that they could use as models. External coaches used their expertise to assist in building the vision for proficiency-based education at each of the schools. Teacher 6 at Valley recalled that their coach had provided handouts about the "process of proficiency-based education" and also added,

the biggest benefit that I've seen for our building and from the individual as well just to know that there's some group out there, there's some entity out there that's looking specifically just at this one process, just at this one focus and that's really what's driving behind there because there are so many other things. (Valley, Teacher 6)

Teachers seemed to look to external coaches to assist them with the processes and practices aligned to PBE, especially with regards to standards, units, assessments, and rubric creation. While teachers looked to both internal and external coaches for their expertise, the dispositions of coaches tended to influence the types of interactions that occurred between teachers and coaches. The next section will discuss the most prevalent dispositions coaches had, as noted by teachers and administrators.

Coaching Dispositions

The dispositions that coaches displayed during coach-teacher interactions seemed important to separate from the interactions themselves. For example, while teachers noted that both internal and external coaches assisted in reflective practice, they also described the character of internal coaches as helpful and non-evaluative. The nature of internal and external coaches during interactions came through as a clear theme, and provides some insight into the relationships between teachers and coaches, and how those relationships may have supported or hindered the efforts toward implementing proficiency-based education in each school. The most frequently coded dispositions that interviewees mentioned at internally coached sites included 'No Judgment' and 'Helpful' (See Table 4.4). These two codes were somewhat related in that teachers that talked about coaches being non-evaluative, or nonjudgmental would do so in the context of that disposition adding to their supportive, encouraging, or helpful nature. Other codes that occurred less frequently in internally coached sites, but still more often than others include

'Credible,' 'In This Together,' and 'Caring'. At externally coached sites, 'Helpful' was the most frequently coded disposition by far, with 'Credible,' 'In This Together,' and 'Caring' appearing less frequently. 'No Judgment' was coded in only four of the fourteen external coach site interviews, and did not seem to be a significant disposition in external coaching.

Table 4.4

Internal and External Coaching Dispositions

	Valley High School (ext. coach)	Fairview High School (ext. coach)	Highland High School (int. coach)	Northeast High School (int. coach)
Helpful (supportive, encouraging, reassuring)	x	x	x	x
No Judgment (coach identified need vs. teacher identified need, respectful)		x	x	x
Credible (knowledge of context/place)	x	x		x
In This Together (I'm your person, accessible)	x	x	x	x
Caring (comfortable, welcoming, empathizing)	x		x	x

The most frequently coded of all coaching dispositions include Helpful, No Judgment, Credible, Caring, and In this Together. Among internally coached sites, the most frequent internal coaching dispositions included No Judgment, Helpful, and Caring, with Credible and In This Together occuring with less frequently. The most frequently coded external coaching dispositions included Helpful and Credible, with the remaining three dispositions coded less frequently: In This Together, Caring, and No Judgment. Importantly, 'Helpful' was the one coaching disposition coded frequently across all interviews at all sites. The 'No judgment' disposition was freqently coded in internal coach interviews, but not external coach interviews. This will be explained further in the following sections.

Encouraging and Helpful Coaching Support. Helpful, which included sub-codes 'supportive,' 'reassuring,' 'encouraging' and 'good listening skills' was coded as a coach disposition in twenty-one of the twenty-five total interviews. Helpful was coded in 9 of the 11 internally coached school interviews and in 12 of the 14 externally coached school interviews. This theme was coded more often in external coach site interviews than internal coach site interviews and was the second most frequently referenced code overall in the category of coaching dispositions.

  Internal Coaches as Helpful Supports. 'Helpful' was a frequent code in internal coach site interviews from both Highland and Northeast High Schools. These codes or combinations of sub-codes were used between one and eleven times across internal coach site teacher and principal interviews. Together, the passages here tell a story of how internal coaches are clear in their support role and how the internal coaches establish that role with teachers from the start. In an initial meeting, one internal coach discussed their role with a teacher she supported, "at that initial meeting, I am very clear about what my role is, what I see my role being and that I am their champion, I'm their cheerleader" (Northeast, Coach). A teacher from Northeast concured, "she presents herself like, 'This is my job to help you. This is what I'm here for. This is what I want to do'" (Northeast, Teacher 4). A teacher from Highland recalled a similar message she heard during a first meeting with an internal coach. This teacher said that they talked about, "what an instructional coach was, what her goals were, that her goals were really to support me and help me in whatever I wanted to do" (Highland, Teacher 1).

  Embedded in this 'helpful' theme was also some validation and a sense of commitment that teachers felt from the internal coach. One teacher described their coach as, "so supportive, very encouraging," (Highland, Teacher 3) while other teachers mentioned that their coach, "didn't have any agenda of her own," (Highland, Teacher 1) and that they, "never felt like I was

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rushed in a meeting with her" (Northeast, Teacher 4). Ultimately, teachers at Highland and Northeast, both internally coached schools, consistently reported that their coaches were available to them, respectful and supportive of their work, and had no ulterior motive to their coaching. The internal coaches were there to serve as a support and resource to the teachers in any way that was helpful.

External Coaches as Resource Providers. Twelve of the fourteen external coach site interviews had at least one reference coded for 'helpful'. In contrast to the internal coach site interviews, participants at the external coach sites, Valley and Fairview High Schools, found coaches helpful because of their ability to gather and share resources and provide them with perspectives from other schools.

> Without a coach, I think it would have been a lot more work because we would have probably been spending a lot more time probably Google searching other schools, not that we didn't already do that. We did. We'd go online and somebody would say, "This school does it well," so you'd just go onto their website and try to pull out everything that you could, but again, how would I have known that school if I didn't have that person there? I think it would've just been a lot more work. I value their support even more now that I think about it. (Fairview, Teacher 2)

Administrators at both Valley and Fairview described their external coaches as helpful supports and credited progress and growth of the teachers and leaders to the work of the external coach. Valley principal said about their external coaches, "They have been cheerleaders. They have been support people...We wouldn't be where we are right now without the coach and the tools that have been provided" (Valley, Principal). The administrator at Fairview discussed how teachers view the external coach as helpful because of her willingness to provide valuable

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resources, "(coach is) really very proactive in getting people resources. So, if they mention something, (they'll) then send an article or send something that they can look at" (Fairview, Principal). One teacher also described the value of the external coach in providing resources from other schools and templates for content teams to work from, making their work seem a little easier.

> I think it would have taken longer. I mean already it's taken a long time, but it would have taken even longer because we just wouldn't have had the resources that (the coach) has access to...You know, examples of rubrics, different policies and grading scales, and you know all the different kind of, those sources have been, that (they) brought to the table have been really helpful for us to kind of think about, see how other people are doing that kind of thing. (Fairview, Teacher 4)

Administrators at Valley and Fairview perceived the value of the external coach both as helpful to them in their work and as helpful to their content area teams. The coach role in the content teams was varied, but included helping them plan and providing facilitation, even when groups didn't ask for it. One administrator would let teams know that they would have the external coach as a facilitator, and found that it was helpful in the end, "groups here are often apt to say like, 'We don't need a facilitator.' I'm like, 'Well, yes you do.' And then they have a facilitator and they're like, 'That was actually helpful to have a facilitator'" (Fairview, Principal). External coaches tended to work more with groups of teachers in departments or content teams rather than with individuals. One teacher recalled how helpful the external coach was in working with one content area team.

> I think the stuff I have gotten the most out of was when our department by ourselves worked with the coaches...So when (coach) was coming in and we had those

conversations, those are probably the best that I got a lot out of, so that was

really helpful. (Valley, Teacher 6)

Finally, teachers and administrators felt that their external coach was helpful as another set of ears and eyes, someone who might be able to be a critical friend to an administrator or serve as a process observer at a meeting to debrief with them later on. Teacher 1 on the leadership team at Fairview said,

Sometimes (coach is) just an extra pair of ears to take in what's being said, which is sometimes helpful, particularly if it's a discussion and (coach) doesn't want to chime in... Because (they're) a good sounding board, and someone who doesn't ... (they'll) listen before (they) speaks and I think that that's really important.

It was clear across sites in both internally and externally coached schools that both teachers and principals viewed their coaches as helpful. Whether it was helpful in planning, finding resources, being a cheerleader, or constant encouraging support, both internal and external coaches were viewed as helpful.

No Judgment Approach to Coaching. No Judgment, which includes sub-codes 'respectful' and 'coach identified need vs. teacher identified need' was the most frequently coded disposition across all interviews. 'No Judgment' was coded in seven out of the eleven internal coach site interviews, and was referenced from one to eighteen times. In comparison, 'no judgment' was only coded in four of the fourteen external coach interviews, so while it was a dominant theme, it was primarily a theme at Highland and Northeast, the internally coached schools. This section will focus on the theme of 'no judgment' in internally coached schools and end with a brief discussion of the 'no judgment' theme at externally coached schools.

Internal Coaching with Integrity. At Highland and Northeast High Schools, the idea of not being judged was clearly communicated by a number of teachers as something that put them at ease and opened them up to having a coach in their classroom, "I don't feel like when they come into my classroom that they're actually being judgmental or like saying, 'Wow, you could do so much more.' They're just there to be like, 'Hey, we'll do what we can do'" (Northeast, Teacher 2). Another teacher noted that it was reassuring to be coached by someone, "who has really no stake in the game. (Coach) was solely there to help me. (Highland, Teacher 1) In some cases, the internal coach explicitly stated that they were not there to evaluate the teachers in any way, "I think that it was kind of nice for me just to know that (coach) wasn't evaluating me, and (coach) made that very clear multiple times, like, 'I am not here to evaluate you'" (Highland, Teacher 1). This non-judgmental approach that internal coaches used seemed to make it easier for teachers to hear the feedback that the coach had for them at the end of a lesson. One teacher admitted:

> it's easier for us or in general for me to take (their) feedback and actually listen to it
> because I'm not too busy thinking about, oh my gosh, like I did that. Oh my gosh, what
> are they thinking? Like that whole idea of not feeling judged or like you're being
> assessed. (Highland, Teacher 3)

This theme did not only appear in teacher interviews at internally coached sites, it was also evident in coach interviews. In the internal coach interview at Highland, 'No Judgment' was coded six times and in the internal coach interview at Northeast, 'No Judgment' was coded eighteen times. It was very evident from the interviews with the coaches and teachers that there was a consistent message being sent from internal coaches to teachers during coaching partnerships. As the internal coaches reflected on their work with teachers, they talked about how

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difficult shifting practice can be, and how empathetic they as coaches need to be as they support

teachers:

> That shift can be really threatening. I think another thing is the idea that the growth
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> mindset needs to extend to more than just the kids. That, and this has been important for
>
> me as a coach, is the idea that I can't get fed up with my colleagues, or somebody I'm
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> working with because they're anxious and freaked out by this idea of changing what
>
> they've done for 15 years. (Highland, Coach)

One internal coach at Northeast High School described their approach as trying to be their 'best

coaching self' when entering into a coaching relationship with a teacher, admitting the challenge

inherent in that approach, "that's a challenge, right, because I think like, one of my things that I

have dealt with in my lifetime is tending to judge. You have to suspend judgment" (Northeast,

Coach). The internal coach at Highland High School discussed the balance that they need to walk

with teachers, especially when a teacher doesn't notice the areas that they need improvement.

For example, "just because it's obvious that classroom management is the issue, it doesn't mean

it's obvious to the person watching the video" (Highland, Coach). The internal coaches at both

Highland and Northeast emphasized the importance of allowing teachers to set their own growth

goals and reflect on their practice before the coach would jump in with any feedback.

Embedded in this 'No Judgment' theme was a feeling of mutual respect between the

coach and the teacher. Teachers at Highland and Northeast specifically noted that internal

coaches treated them with respect, which made the work feel more collegial and less

intimidating. "All the coaches that I've worked with in this building, really they've been like

colleagues, and again, I think that's what's nice, but I've always felt like people have been very

respectful" (Northeast, Teacher 2). This commitment to being respectful and non-judgmental

was what one coach described as 'being a coach with integrity'. The internal coach at Northeast described an observation where there were obvious flaws in teacher practice, but the coach went on to say that those were not things they were going to point out because, they knew from experience, pointing them out would not help the teacher want to improve. "To be a coach with integrity takes some life knowledge...I'm not going to give up my integrity, I'm not going to be disrespectful, I'm not going to lose part of myself in that" (Northeast, Coach).

Non-evaluative External Coaching. Three teachers and one principal at the externally coached sites mentioned that it was clear that coaches were there in a 'non-evaluative' capacity. The principal at Fairview stated that it was "an important element," for teachers to know that, "the coach was not an evaluator." This was reiterated by Teacher 4 at Fairview who commented, "she is in a non-evaluative role. For the most part, I think [staff] trust her." Teacher 4 at Valley recalled that the external coach, "was just very open to it being a collaboration and not evaluative…And there's no pressure of having this being documented and sent away somewhere." It is important to note, however, that the theme of 'no judgment' was significantly more prevalent at internal coach sites and was only coded in four of the fourteen external coach site interviews. This may be related to the types of interactions that internal coaches had with teachers compared to the interactions that external coaches had with teachers. As was mentioned in the coaching interactions section, external coaches tended to work mostly in groups with teachers, either facilitating protocols, providing resources, or providing professional development whereas internal coaches tended to work one-on-one with teachers more frequently. Teacher 4 at Fairview High School commented that teachers are more likely to trust their external coach because the coach, "is in a non-evaluative role." When talking about interactions with the external coaches at Valley and Fairview, teachers did not often talk about instances

where the external coaches were coming into their classrooms, observing them and providing

feedback, which may account for teachers not mentioning that external coaches were non-

judgmental. This comparison of how coaches worked with teachers also plays out in the nuanced

coaching dispositions in the sections that follow.

Coaching Credibility Linked to Knowledge of Context. Credibility was a theme that was

coded more frequently in external coach site interviews than internal coach site interviews.

Credibility, which includes the sub-code 'knowledge of context' was coded in eight of the

fourteen external coach site interviews and in only three of the eleven internal coach site

interviews and was coded from one to eight times per interview.

Internal Coaches' Credibility. Most of the codes for credibility and knowledge of

context at Highland and Northeast, the internally coached sites, came from principal and coach

interviews. At both internally coached sites, the coaches had either been teachers in the district or

had been working as coaches in the district for a number of years. This meant that many teachers

in the school already knew the internal coach prior to them stepping into the role. The perception

of coaches and administrators at internal sites was that longevity and familiarity led to teachers

trusting internal coaches and believing they were capable of helping them improve their practice.

One principal from Highland noted about an internal coach, "She's (got a) reputation in the

district. So, people want to work with her." At Northeast, a teacher discussed how much of their

professional development that is led by their coach feels somewhat 'bureaucratic' and asserts

that internal coaches have to:

> …have a level of credibility asking people to do something that's more bureaucratic and
>
> things like that than if somebody had just come in from outside...We've had other
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> [people] coming in from the outside who were great, really motivated, but in this

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particular case, we're asking to get more corporate, if you didn't have those creds, it

would be a lot more resistance to it. (Northeast, Teacher 1)

An internal coach at Northeast concurred that being an 'insider' was beneficial for credibility in

coaching. The coach at Northeast added that their working knowledge of the building, awareness

of what is going on across classrooms, and having been embedded in the history of the building

has made it easier to coach the teachers there, "I think that people know that I have a pretty good

range of skills and I also have a very good knowledge of this building – of the history, and the

culture" (Northeast, Coach). Internal coaches did not use their position to gain an advantage, but

instead relied on credibility and conveying the message that they were on equal footing with the

teachers they coached.

  External Coaches Lacking Knowledge of Context. At Valley and Fairview High

Schools, the two externally coached sites, the theme of credibility emerged in two ways, one that

led to external coaches being more credible and one that was a detriment to their credibility.

First, teachers and administrators valued the perspective of someone from the outside (the

external coach). A principal from Fairview asserted, "There's something about an outsider who

comes in... If somebody else says it, they (teachers) believe it. If we say it, they think we're

crazy." A teacher from Fairview also noted that although there was a level of trust that had been

built with the external coach, they were still viewed as an outsider, "like she's not someone that

they (teachers) feel threatened by or anything like that. She is an outsider though, and that's just

the way it is" (Fairview, Teacher 1). Alternately, and more often, the thought surfaced that

someone from the outside could not possibly understand the local or internal context enough to

help them in whatever work they needed to do. A teacher at Valley discussed this locally held

perception:

They can't come in here and tell us what to do. And it has nothing to do with best

practice, has nothing to do with what's best for kids. There is an implicit idea that

someone from outside this community has no business saying (Valley,

Teacher 3).

A principal from Valley had a similar observation, recalling that teachers would often question

the credibility of an outsider, "I've been in some meetings where people want to just question

everything that the (external) coach says...or they want to question what's your credibility?

You've never taught this, you've never done this" (Valley, Principal). A teacher from Fairview

discussed the need for external coaches to have 'street cred' and articulated some criteria for

what that meant:

You need a little bit of street cred to pull that whole thing off for one thing. You know,

that's one thing that [Coach] has going for her. She's been around for a while. She's done

schools for a long time, been in a lot of different environments. (Fairview, Teacher 2)

Credibility and 'knowing the context' often went hand-in-hand, and sometimes were tied with

longevity or familiarity. When discussing their external coach, who had been at their site for four

years, Fairview Principal noted, "you have to have a really strong coach that people trust. There's

something about an outsider who comes in and I do think four years in, I think some of that has

worn off," suggesting that the novelty of an outside expert may only sustain an external coach's

credibility for a limited amount of time. One of the external coaches interviewed expressed a

similar sentiment about the importance of knowing the context when engaging in work with

teachers:

because I hadn't been a part of the actual development of the [rubrics] with them, I wasn't

exactly sure what their understanding was and what direction they had been given. So, I

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felt like I didn't have quite enough background to really meet teachers where they were.

(Valley, Coach)

In contrast, coach credibility wasn't questioned in any of the internally coached site interviews. The knowledge of context, existing relationships, and reputation that the internal coaches held at Northeast and Highland High Schools seemed to lend to the internal coaches' credibility. This connects to another frequent theme, 'in this together', which will be highlighted in the next section.

Coaching From the Trenches. The theme of **'In this Together'** included sub-codes of 'accessible' and 'I'm your person'. Together, these codes were referenced in six of the fourteen external coach site interviews and eight of the eleven internal coach site interviews. 'In this Together' was coded the same percentage of times in internal and external coach site interviews, but the coded passages tell a nuanced story. At Highland and Northeast, the internally coached sites, the teachers conveyed messages of collaborative work and finding the answers together with coaches whereas at Valley and Fairview, the externally coached sites, coaches were viewed as more aligned with the administration rather than teachers.

Internal Coaches Partnering with Teachers. Internal coaches reported being very clear about their role as a coach, not a supervisor or evaluator, and that they were there in the capacity of helping the teacher with whatever they needed help with. The internal coach at Northeast reiterated the message she tried to convey to each teacher she worked with, "I am your person, I am your coach...like I'm on their side, that's it...we are working together to improve teaching and learning. We are in it together" (Northeast, Coach). A teacher from Northeast described working with the coach as a close and comfortable relationship with an equal peer, "I think when you actually work with somebody as a colleague, I don't feel like there's that distance between the

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two of you" (Northeast, Teacher 2). This disposition strikes an interesting balance here with the 'Expert Knowledge' interaction that was coded frequently. While teachers viewed internal coaches as individuals with experience and expert knowledge, they also felt like they were on the same level, working with a colleague to improve. Teachers did not have the sense that the internal coach was there to give them instructions or tell them what to do or not to do:

> When we would talk about something, she was very interested in working with me to make something happen, and not just telling me what to do. It was very much like she and I are in this together to make things better for me. It isn't that she's the guru, and I'm the peon, and she's going to tell me what to do. I didn't get that at all. (Highland, Teacher 3)

Another teacher mentioned the coach's willingness to admit that they didn't have the answers and seek them out together, "if she doesn't know something, she's like, 'Oh, let's look it up, or let's find a conference to learn about that.' She's always willing to do that too" (Highland, Teacher 1). The picture that is painted here is one of internal coaches working one-on-one with teachers as equal partners in learning.

External Coaches Partnering with Administrators. In contrast, external coaches were often tied to administrators, as in following through with the work of the administration, or guiding the work school-wide. External coaches were also most often reported to be working with full staff, leadership teams, or content area teams rather than individual teachers. One principal discussed the changing role of their external coach over the years, "It's really changed. It's been interesting, over the time here, you know. I think when I first got here, [Coach] was seen as someone who was on teachers' side in the kind of struggles with the principal" (Fairview, Principal). The principal went on to describe how the coach served as a support system for them

in the transition into building administrator:

> I mean my first year here, she saved me. I would not have stayed here without her, you
> know, because I think she was helping me navigate the staff. So, she was helping me
> paint a picture that I didn't have a complete picture of. (Fairview, Principal)

The account from the external coach at Fairview was similar, recalling that, "The first few years
with the principal that I started working with was primarily to support the principal," and that
gradually, "my role became a little bit more collaborative with the full leadership team." At
externally coached sites, there was an undercurrent of a lack of trust or confidentiality because
there was some uncertainty about whether the external coach was 'one of us' as in, on the side of
a teacher, or 'one of them' as in, on the side of an administrator. "I think it's just this odd no
man's land. Half the people see you as an ally, the other people see you as like an extended arm
of administration and they don't trust (you)" (Fairview, Principal). One teacher at Valley
described the approach of the external coach as more collaborative than authoritative. While the
initiative might be backed by the administration, this teacher didn't see the coach as the person
setting and carrying out the administrative expectations, "But, it's not her driving. She's not
saying this is what I expect.... So, it's not like a top-down approach which I appreciate" (Valley,
Teacher 5). An external coach at the same school relayed a story about a time they were working
with a member of the leadership team that was not as comfortable working with the coach and
was interested in doing content-specific work. The coach approached the teacher with
compassion, "I'm like why don't I meet with you and we'll make a plan that's specific to (your
content area) instead? And she was a little more comfortable...But it's in this collaborative space
so that it's not going to be a top-down approach" (Valley, Coach). While the external coaches at
Valley and Fairview were not seen as evaluative, they were viewed as somewhat aligned with the

administration, which was not the case for the internal coaches at Highland and Northeast, who expressed a feeling of partnership and collaboration with their internal coaches. Caring and empathy were dispositions that were mentioned attributed to coaches as well. The next section will report on instances of caring and empathetic coaching.

Caring and Empathetic Coaching. The theme of caring, including sub-codes of 'comfortable,' 'welcoming,' and 'empathizing' was coded in eight of the eleven internal coach site interviews as an internal coach disposition, but only in five of the fourteen external coach interviews. Overall, this theme was not as prevalent as 'No Judgment' or 'Helpful,' however, there is overlap with both of these themes in that teachers felt like their coaches were offering help from a place of support and empathy rather than judgment or evaluation.

Empathetic Approach of Internal Coaches. The teachers and coaches at Northeast and Highland, the internally coached schools, mentioned caring and empathy in multiple interviews and in multiple ways. Teachers noted feeling a level of comfort with the internal coach and feeling like they could bring any problem or challenge to the coach without reproach. One teacher at Northeast gave a specific example of a time when she needed help, and felt comfortable seeking that help from an internal coach rather than a mentor or administrator.

> That made it easier to be able to come in and feel like, 'Hey, I feel like I really messed this up. What do I do with it?' That was a lot easier to tell her than maybe another one of my mentors and her emotional sensitivity and empathy, showing empathy through facial expressions and repeating understanding back to you. All skills of like appropriate listening skills and interpersonal empathy were built into that...through a place of empathy, like, 'Here are times when I felt this too'. (Northeast, Teacher 4)

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The internal coach from Northeast confirmed the importance of showing empathy, understanding, and caring when teachers vent or share their concerns or mistakes, "I may need to listen to them rant and not say yes our employers suck or anything like that, but say, 'ya, that really sucks, sounds like you got a raw deal and I'm sorry'" (Northeast, Coach). When describing the dispositions of their internal coaches, one building administrator said, "You have to be more patient. You have to be more understanding. You have to be more kind and you have to do the work…If you don't have that empathy and you're judging, you're done. It's over" (Highland, Principal). The internal coach at Highland described how she came from a place of caring and empathy in her work with one of the teachers in the school when she noticed how overwhelmed the teacher was:

> The first couple of meetings we had were basically, I listened to her talk about her frustrations. I mean, it was absolutely typical of a person who's being kind of victimized by PBE because she was working super hard, she was doing all this feedback, which the kids were ignoring…So part of what I did was, be somebody who kept saying to her, 'it doesn't need to be like this. Look at how hard you're working. What's a way we can try to get things more targeted so that you don't have to work as hard and you feel like you're getting a better repayment for your effort.' (Highland, Coach)

While teachers at internally coached sites conveyed that they felt comfortable with the internal coaches, coaches at internal sites provided a more detailed account of how they approach their coaching with empathy and compassion. There was a real sense of concern and caring for teachers that radiated from the internal coach interviews at Highland and Northeast that was not explicitly present in external coach interviews.

Warm Approach of External Coaches. Participants at Valley and Fairview, externally coached sites, referenced the coach's welcoming personality, caring demeanor, and warmness in approach, but did not talk about seeking them out with challenges or sharing their frustrations with the external coach like the teachers at Highland and Northeast had. Teacher 5 at Valley described her first encounter with the exterenal coach was positive in that, "the way that she presented herself didn't instantly annoy me. I didn't tune her out." The teacher went on to share that "the way that she delivers [new information] is just in a very non confrontational, almost like coffee shop kind of chat" (Teacher 5, Valley). Two of the teachers at Fairview mentioned that their coach was 'kind' and often brought candy to meetings, which they saw as a form of caring. "She's also just like, I mean she's just a good person. She's kind and just really easy to get along with" (Fairview, Teacher 4). Although caring is discussed here as a separte code, it is tightly connected to the codes of 'no judgment,' 'helpful,' and, 'in this together.'

Other dispositions coded included validating the good work that teachers were already doing, maintaining confidentiality, and holding high standards. There were also a small number of references to coaches being organized, assertive, and seeking feedback from teachers on their coaching practice.

School Structuring of Coaching Time

There were deliberate structures built into each secondary school in this study that helped to facilitate the time and structure of coach and teacher interactions. These structures both helped and hindered coaching relationships, and seemed to be a factor in teacher perception of their own learning and change in practice as a result of coaching. Table 4.5 compares coaching structures, frequency, and requirements across sites.

Table 4.5

Structure of Coaching Time at Each Site

Frequency, Structure, and Requirements of Coaching Time	Valley High School (ext. coach)	Fairview High School (ext. coach)	Highland High School (int. coach)	Northeast High School (int. coach)
Ongoing, Just-In-Time vs. Periodic and Intensive	Periodic, Intensive	Periodic, Intensive	Ongoing, Just-in-time	Ongoing, Just-in-time
One-on-one vs. Group	Group	Group	One-on-one	One-on-one
Optional vs. Mandatory	Mandatory	Mandatory	Optional	Mixed
Professional Learning Groups	Yes	Yes	Yes	Yes
Book Study	No	Yes	Yes	Yes

In two major ways, Internal Coach Sites and External Coach Sites differed in the way that coaching time was structured. The coaching provided by the external coaches at Valley and Fairview tended to be periodic and intensive, mandatory, and mostly occurring in a group setting on school-wide workshop days, whereas the coaching provided by the internal coaches at Northeast and Highland tended to be ongoing and just-in-time, largely optional and provided in a one-on-one setting. This finding is important as it suggests that structures used by internal coaches are more closely aligned with previous research that connects ongoing, job-embedded, collaborative professional development to teacher learning (Garet, Porter, Desimone, Birman & Yoon, 2001; Darling-Hammond et al., 2009; Russo, 2004; Weiss & Pasley, 2006). External Coaching Sites, Valley and Fairview, reported having periodic, intensive sessions with their external coaches whereas this structure was only mentioned once in an interview with the administrator at Highland. Internal Coaching Sites, Highland and Northeast, reported having an ongoing or just-in-time structure of coaching. All three of the teachers interviewed at Highland

and all four of the teachers interviewed at Northeast reported improving some part of their practice as a result of internal coaching. At externally coached schools, all four of the teachers at Fairview noted improving as a result of coaching whereas four of the six teachers at Valley reported improving as a result of external coaching.

The established collaborative learning structures for teacher learning within schools was recorded across sites in this study. The most common structure among all the schools with both internal and external coaches was the presence of professional learning communities (PLCs) or professional learning groups (PLGs), a structure that was built into a regular schedule for teachers and a structure through which coaching was facilitated. All 14 participants at Valley and Fairview, externally coached sites, mentioned professional learning groups as a regular collaborative structure through which coaching support was provided. At internally coached sites, Highland and Northeast, six of the 11 participants talked about the role of professional learning groups in teacher learning and coach support. Each of the four schools in the study seem to have established a professional learning community structure prior to implementation of PBE, however, teachers and coaches at all sites used the established structure as a vehicle to discuss and learn about components of the PBE initiative. To a lesser extent, book studies were also mentioned as a structure set up by coaches for teacher collaborative learning. This section will begin by comparing the various coaching structures and then discuss which structures were related to teacher perceptions of learning or change in practice.

Comparison of Coaching Across Sites

Each school in this study approached the structure, frequency, and requirements of coaching in different ways and there were some notable differences between the approaches of internally vs. externally coached sites. This section will compare the types of structures coaches

used at internally coached sites vs. externally coached sites. The first section compares the ongoing, just-in-time support at internally coached sites to the periodic, intensive support present at externally coached sites. The second section discusses teacher and coach perception of the one-on-one structure of internal coaching compared with the group setting that external coaching usually occurred in. The third section describes the differences between optional coaching and mandatory coaching. Some of the approaches to coaching time, structure, requirements, and frequency were more closely linked to teacher reports of effectiveness or perceived changes in practice, which will be discussed and related back to the conceptual framework at the end of this section.

<u>Ongoing, Just in Time Support vs. Periodic, Intensive Support</u>. Each of the internally coached sites had a coach available to teachers on a daily basis. The coaching support at internally coached sites was ongoing and just-in-time. If a teacher needed something for their planning session during the day, they could email or seek the coach out in the building to tap into the resource. Much of the coaching that happened at Highland and Northeast, internally coached sites, was also continuous or for a defined cycle of time. The internal coach felt like another teacher in the building, someone that teachers could go to for help with any part of a lesson, assessment, or general question. This was a striking contrast to the way that teachers described the structure of their work with external coaches. Teachers reported seeing the external coach infrequently, and most often for half-day or full-day workshops or content area team work. While teachers reported that the sessions with external coaches were helpful, the agenda for those meetings and work sessions seemed to be set in advance and sometimes influenced by an administrator or the demands of the initiative. Although there was mention of the external coach providing examples and resources when needed, it did not appear that teachers would seek out

daily or regular support for lessons from external coaches. Overall, teachers and coaches at internal sites described their work to be ongoing, embedded, and just-in-time support whereas the teachers and coaches at external sites described periodic and intensive sessions focused on PBE implementation. This comparison is played out in more detail in the following paragraphs.

Ten of the eleven internal coach site interviews referenced coaches being available on an ongoing basis, or providing support when teachers needed it to solve an immediate dilemma or fulfill a need. Teacher 3 at Northeast talked about feeling like the internal coach was always at their disposal, available anytime they needed help or had an idea, "(Coach) was available for me if I said, 'I'm interested in doing this with my students. Do you have any ideas, or can you help me make a template that I could use?'" Teacher 2 at Highland had a similar experience, "It was amazing for me to have (coach) be accessible to come in any block of the day and stay. And then (coach's) also just available with e-mail and on the phone." Internal coaches were utilized for urgent and ongoing classroom-based needs like specific teaching strategies to use with students, or resources teachers could pull from and use right away. The one-on-one support that internal coaches provided seemed to serve as a targeted intervention for teachers. In some cases, coaches would drop everything to help a teacher out, as one teacher at Highland put it, "Just in the nick of time" the teacher went on to explain, "I had one episode this winter where I really needed (them) like right then and (coach) was available. But that happened so many times that first semester 'cause I didn't know what I was doing really" (Highland, Teacher 2).

Teachers and coaches at internal sites also described using a defined coaching cycle, where a single teacher might choose a particular thing to work on and the coach would strategize with the teacher, observe the teacher during implementation, offer feedback, and provide resources. These cycles were intended to last roughly six weeks, "I think that was a six-week

cycle. That was very good. I think part of it was that we were doing it in real time. In other words, it was implementing the changes" (Northeast, Teacher 1). Frequently, teachers and coaches reported that sometimes the coaching cycles lasted longer, even up to an entire year, "we met about roughly twice a month throughout the whole first year" (Northeast, Teacher 4). One coach recalled working with a teacher frequently at first, and then scaling back as the year progressed, in a sort of gradual-release model, "first it was every other week and now it's monthly just to check-in" (Northeast, Coach).

Even some teachers in externally coached sites that had taught elsewhere and had access to an internal coach talked about those internal coaches being, "available like 24-7, but we meet once a quarter" (Valley, Teacher 5). Teacher 3 at Valley also recalled working with an internal coach at another school and having, "almost limitless contact with them. I saw them regularly, I had email and phone contact." Teachers shared this as a way to contrast the differences between having an internal instructional coach and having an external coach that seemed to only work with them periodically. At Valley and Fairview, teachers noted that meetings with external coaches were very infrequent and, while helpful, these meetings were not usually focused on an immediate need, but rather to provide guidance on the next steps in implementation of PBE. In fact, one teacher recalled, "We meet once a month, just for half an hour. (Coach) just goes over, 'This is what we need to do'" (Valley, Teacher 2). Once a month was frequent compared to other teachers that reported that they may have only seen the external coach once in the last year. A number of teachers reported that they would only interact with the external coach at professional development days or when their department had scheduled time with the coach. Teacher 6 from Valley noted that there were only two times over two years that they recalled their coach

working with their specific content area, "not talking about (standards) globally with the whole school but just specifically with us in our department."

Overall, it seemed like access to the external coach was limited, but the sessions were very focused on two particular aspects: 1) guidance on implementation of the initiative and 2) processes teachers could use with each other during collaborative learning time. Teachers at both external coach sites described their work with external coaches as happening on scheduled professional development days, rather than embedded in day-to-day structures, "We had some professional development days, definitely. Like afternoons, they would get subs and a few of us would go and work on that" (Fairview, Teacher 3). The 'that' in this case was curriculum work aligned to the proficiency-based education initiative. This structure of coaching support provided during scheduled teacher inservice days or during scheduled staff meeting time was confirmed by external coaches during their interviews as well. Teachers in both externally coached sites noted that the models, processes, and supports provided during the full or half-day sessions were helpful. Teacher 1 at Valley recalls an 'aha' moment that their team had when their coach was working for a full day with their content area:

> (Coach) worked with us for a full day. I remember it because it was just such a boink, aha moment for a lot of us, and that was a full day. We would schedule [the coach] periodically to come in and work with us.

Coaches and teachers at external sites talked about the importance of modeling or suggesting group processes that external coaches provided. Teacher 6 at Fairview reported that it was helpful, "Having somebody that you can look to and to say, 'I'm lost and confused. Do you at least have a process that you can take us through?'" The time external coaches had with small groups of teachers was infrequent, and was often structured to target specific components of the

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proficiency-based education initiative, to give groups feedback, or to set them on the right track. Group coaching, while not unique to external coaches, was the primary mode by which external coaches interacted with teachers at Valley and Fairview. In contrast to the classroom-focused one-on-one coaching that teachers at Highland and Northeast received, the teachers at Valley and Fairview received periodic group coaching that was more targeted to implementation of proficiency-based education. The next section will compare the structure of one-on-one coaching with group coaching at the four sites.

One-on-One Coaching vs. Group Coaching. At Highland and Northeast, internally coached sites, coaches described working one-on-one with teachers either in their classrooms, watching video together, planning for instruction, or reflecting on practice. Coach at Highland described their coaching model as, "very personalized to the teacher." A coach at Highland and a teacher at the same site described a step-by-step process for internal coaching whereby the teacher would video themselves, the coach and teacher would watch the video together and reflect on what they saw, then the teacher would choose the practice they wanted to improve. This practice may or may not be directly related to the PBE initiative, however, it was usually focused on improving classroom practice. The coach would then provide resources, strategies, and sometimes model practices that could help the teacher see what a new approach could look like. Teacher 2 at Highland reflected on the experience they had with a coach modeling a particular practice in their classroom, "[Coach] came to facilitate...with actually all of my classes. Just watching [Coach], she's so smart...but didn't have to be the expert in the content...just to see the way she facilitated it was amazing." The teacher would then try the practice, the coach would observe, and they would reflect together. The goal, as one coach put it, was to, "get a picture of current reality through video, pick a goal, pick a strategy, evaluate how that strategy worked" (Highland,

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Coach). This individualized approach to coaching seemed to work for teachers involved because it was targeted, specific, and manageable. Teacher 1 at Northeast reflected on the success of their coaching partnership, "I think that it was based on the fact that we were looking to implement something fairly specific. We had an idea of what we were hoping to accomplish." While there was one teacher that described working with a small group during a book study led by their internal coach, the majority of the teachers from internally coached sites relayed one-on-one coaching experiences focused on classroom instruction as the norm.

In contrast to internal coaches who worked more often with individual teachers on their practice, external coaches at Valley and Fairview had limited time with individual teachers. In fact, one external coach noted that their most positive experiences, "have been when I'm working with a small group of people" (Valley, Coach). External coaches were most often noted as working with groups by content area, working with administrators or leadership teams, or leading full staff professional development. Coach at Fairview recalled:

> Most of what I did was full group workshop type style, where I would present an idea and then in small groups, teachers would discuss or think about implications or applications to their own instruction...My time with individual teachers or groups of teachers was pretty limited.

In the small group meetings, external coaches might model a process or provide the group with feedback or guidance on work aligned with the PBE initiative. Fairview, Teacher 3 noted that their external coach, "usually had some sort of activity or whatnot, to kind of focus on" aligned to their proficiency-based education work. And Teacher 6 at Valley recalled that their coach would review, "the process of getting into a proficiency-based system" with the full staff during workshop days. Teachers at external sites also reported that their coach would

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provide their departments with feedback on standards or assessments, examples from other schools, or models to align their thinking. Teacher 4 at Fairview said that the coach, "brings lots of resources with [them]. From other schools that [they] know are doing the same thing." These small group meetings with the external coach seemed to be helpful in gaining collective momentum. Teachers appreciated the structured conversations happening in the group, and the opportunity to share challenges and successes of PBE implementation, "it's (a) very positive experience to get to that point of feeling like I'm not going to be an island. There are going to be other people here whom we can do this with. And we're on the same team" (Valley, Teacher 3).

Optional Coaching vs. Mandatory Coaching. Coaching, by definition, is helping someone improve their performance in something. Coaching is often driven by the person who needs or wants improvement. Across cases in this study, there was a mix of stories of optional coaching relationships, where teachers had the control or sought out the coaching, and mandatory coaching relationships, usually initiated by an administrator. Most of the interviewees at internally coached sites, Highland and Northeast, talked about the coaching being voluntary. Participants appreciated the control, the choice, and the specificity of the work they did with a coach. At both external coach sites, Fairview and Valley, there was some mandatory coaching happening, which, although aligned with the PBE initiative, seemed in some cases to be unwelcome or ineffective.

At both Highland and Northeast, internal coaches described presenting staff with 'opt-in' coaching opportunities. Internal coaches would offer coaching support to everyone on staff and then work with those teachers that responded with interest. At one of the sites, "It was presented to the whole faculty like, 'We have these instructional coaches in the building....If you're interested in working with one of them, please let us know'" (Highland, Teacher 1). In one case,

a coach asked for volunteers to help them practice coaching cycles, which gave the teacher and coach equal footing as learners in the partnership. This model of coach and teacher as equal partners in learning is supported in the research (Knight, 2009). Internal coaches reported that teachers opting into the coaching partnership were more willing and open to coaching, "I think generally, if you are meeting with me because you want to, you are probably more open and less resistant" (Northeast, Coach). Teachers corroborated this perception that opting into coaching made them more willing to engage. Teacher 2, at Northeast, talked about her decision to take advantage of the opportunity presented by an internal coach:

> I just thought, "Okay, wow. Here's an opportunity to have somebody come in and work with me directly so maybe I'll be able to take something away from that and apply some skills on my own in the future." I guess honestly too, is that these coaching opportunities are all ones that I sought out.

Coaches and teachers at internal sites noted that part of what made the coaching relationship successful was that teachers had a say in what they wanted to work to improve, which may only be tangentially related to the implementation of PBE. "You get to choose what you wanted to do...Coaching has always been pretty positive because it's things that I made the initiative (to do)" (Northeast, Teacher 2). One coach summed it up by describing the teachers as learners, and as learners, they want to have a choice in what they learn. "I talk to them about what they perceive their needs are and what their strengths are as a learner, because in this model they are a learner, they're not a teacher here, they're a learner" Northeast, Coach. At Northeast, the internal coach described a few instances where teachers were required to work with them to improve as part of an action plan. In these cases, the internal coach still worked to form a partnership with

the teacher and tried to focus the coaching specifically on teaching and learning and provide the

teacher with some choice about what aspects they wanted to improve.

In a few cases, teachers at Valley and Fairview, externally coached sites, mentioned

asking the principal for release time to work with the external coach as a department, usually for

a half day or full day. Teacher 1 at Valley noted that the administration was "always supportive"

of their requests to work with a coach, "They support us in our work if we need a full day or if

we need a half day, if we need [coach] to come in to help us through something that we're

struggling with." Overall, however, coaching at external coach sites felt less optional and more

administrator-directed. Coach at Fairview noted that the coaching has, "been more targeted

support for individuals or small groups that the principal has determined needed support." There

was a difference in what principals thought teachers needed and what teachers themselves

thought they needed. Teacher 4 at Fairview expressed that some teachers may not welcome the

external coach support, likely because they may not think they need it:

> Some of our teachers just welcome [Coach's] support more than others in terms of, just
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> because they don't feel like they need it. Not because they don't trust [Coach] or anything
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> like that, they just feel like they don't need it.

While teachers at both Valley and Fairview noted that the external coaches were helpful in

providing resources, models, and guidance around the initiative, they conveyed far less

willingness or desire to work with the coach. Teachers felt obligated to attend their content team

meetings with the external coach. As a result of these more forced or mandatory coaching

experiences, teachers felt put out or like the meeting with the coach was one more thing they had

to attend, or one more compliance piece they had to check the box on. Coach at Fairview

reflected:

I think...the teachers see me primarily as someone that the administrators are using to

implement a system that the teachers don't really understand or want to use, but feel like

they have to, and so I think they see me as someone who comes in to tell them what to

do, and then I go away.

The sentiment from teachers at externally coached sites was clear: the coach is here to support

the work of the PBE initiative in each content area and, more specifically, work with the groups

the administrator asks them to.

Teacher control over the focus of the coaching was a structure that seemed to promote a

more positive response from teachers engaging with a coach. Teachers at Highland and

Northeast appreciated the specificity of internal coaching, and that the internal coach did not tell

them what they needed to improve, but worked with them to improve the skill they chose

themselves. A principal at Highland likened self-initiated coaching to losing weight:

You don't tell your spouse, 'You need to go on a diet. Now, I'm signing you up for a

dietician and a gym membership,' and expect to see results. The motivation aspect comes

from within. I mean, it's all from within. Then you provide the support, 'Oh, you want to

do that? I can give you some support.'

External coaching was like the gym membership; helpful, but not always appreciated. Internal

coaching, which was, in most cases, optional, and teacher-directed was more well received by

teachers. It did, however, mean that at internal coach sites, Highland and Northeast, the coaching

was only happening with teachers who sought it out rather than with all teachers. At externally

coached sites, Valley and Fairview, teachers felt more compelled to meet with the external

coaches with their content area team, but expressed less of a feeling of willingness for the

coaching support, although there was an appreciation for guidance aligned with the PBE initiative.

Complementary Collaborative Learning Structures

Collaboration and collaborative learning time focused on the implementation of PBE was noted across sites with both external and internal coaches. There were a variety of structures used at each site to facilitate this professional collaboration. At all sites, the schools were engaging in some version of professional learning communities that met regularly with a defined structure and process. In addition, some sites engaged in book groups as one way to improve understanding of PBE and increase teacher collaboration. No matter the structure, one theme that emerged was the fact that each site had dedicated time solely for professional conversations, "We've been really lucky in that the school is helping us, giving us common planning time" Highland, Teacher 1. Thirteen of the eighteen teachers interviewed commented on the importance of this time and structure to their professional learning. Joint ownership, establishing more common practices, learning from one another, and hearing different perspectives were all mentioned as successes that have emerged from the dedicated professional collaborative time.

Holding time for professional conversations, and having a predetermined structure helped to facilitate what one principal called, 'authentic collaboration' associated with implementation of PBE. "The greatest transition too has been from moving from silos to collaboration, like authentic collaboration" Highland, Principal. A teacher from the same site noticed a similar transition to a more collaborative culture among staff at their school, and acknowledged that her own values had shifted, "I think that I value collaboration so much more. Everyone here has so much to teach and so much to contribute. And they don't have to be team partners for me to get something from them and vice versa" Highland, Teacher 2. Teachers across internally and

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externally coached sites were able to provide detailed examples of what their collaborative time looked and sounded like. Some examples teachers provided included discussion questions like "Does that really meet a standard?" (Valley, Teacher 4) and, "What units can we teach these standards in?" (Valley, Teacher 6) and, "What do we really want students to know about this?" (Highland, Teacher 1). External Coach at Fairview reflected, "I suppose the biggest area of success has been a shift to more joint ownership at the department level for what students will learn." Across sites, whether externally or internally coached, there seemed to be agreement that collaborative time was both productive and essential to building understanding and implementing PBE. Teacher 4 from Northeast described the dedicated time as time to 'just do the work' implying that getting some of the work of the initiative done, either alone or outside of dedicated time, would be difficult:

> We do it together, it's in the contract, it's time that is set out and we just do the work and I often learn something new from it or collaborate and learn something new from my peers. So that's been very valuable.

<u>Professional Learning Group Structure</u>. Each school site in the study had some form of professional learning groups or learning communities that met regularly and were pre-determined in composition. At Fairview, Valley, and Highland, these professional learning groups were intentionally interdisciplinary. At Highland and Valley, the groups were organized with grade level peers across content areas. At Valley and Northeast, there were structures in place that allowed teachers to meet within and across content areas. At Valley, teachers talked about extensive learning group facilitator training for the teachers that were running the groups, "We've gone through a process of training (group) leaders, and have entirely revamped...so that we have cross curricular (groups) that meet to talk about instruction" (Valley, Principal) At each

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site there were designated facilitators for the professional learning groups, whether that was a trained group leader, a coach, or someone else that was tasked with the role. These professional learning structures allowed time for teachers to collaborate on the creation of curricular materials, policies, and solving dilemmas that were arising with the implementation of PBE.

Across sites, there was an appreciation for time to meet with colleagues and discuss problems of practice. Teachers noted that the groups allowed them to see that others were dealing with the same dilemmas, and to generate ideas and strategize solutions as a group. One teacher referred to their group's culture as one of sharing common problems of practice, "So, that's the type of culture our PLC has had, is sharing common problems in a classroom, and how we handle them" (Valley, Teacher 4). Having time to discuss 'real' issues or dilemmas, things that were immediately relevant to teachers around the table, seemed to be one of the key elements that teachers appreciated about professional learning communities. Teacher 1 at Valley shared:

> All of a sudden, it was like, holy crap, we're all dealing with the same thing, but we didn't think we were. We thought we were all alone…. We got a chance to consult and share. Everyone got a chance to share their view, and it was a wonderful experience. It wasn't an assessment tuning. It wasn't, but it was a real problem, a real issue, dilemma.

This particular teacher valued tackling a problem that many teachers were dealing with, but also mentions that it 'wasn't an assessment tuning'. Reviewing assessments and rubrics was a common activity that these learning communities engaged in that teachers, coaches, and administrators mentioned across sites, and that helped teachers to build further understanding and consistency around implementation of PBE. Principal at Fairview commented, "last year, PLC... was the thing I was the most proud of...because people did so much great work. Every

single teacher shared an assessment. Every single teacher brought student work to look at with a protocol." Sharing assessments and bringing student work to the table were mentioned as professional learning group activities across sites. At Northeast, Teacher 2 described, "we do critical friends group kind of stuff where everybody was bringing student work and presenting it...so everybody got a chance to do it at least once or twice." The benefit of bringing student work to the table seemed to be that teachers could show examples of things that were working or not working in their classrooms and the group would generate ideas for improvement. Teacher 1 at Northeast said it was helpful to have a group to bring their work to and say, "Well, I'm trying to do this, but it doesn't seem to be working." Teacher 2 noted that their group would take a look at some student work examples and say, "Wow, this is what I got. What do you think I could do to improve?" The time spent in interdisciplinary groups looking at assessments, rubrics, or student work was mostly mentioned in a positive way, with all administrators and coaches and most teachers mentioning that the time was productive.

There were a couple of participants who questioned the use and structure of the time, in particular. Teacher 2 at Fairview said that while, "It's good to see what other people are doing," they questioned, "is this productive time?" The teacher went on to hypothesize that the time in learning groups may be better spent in departments with others who know the content, especially in a PBE system, where they are trying to create rubrics and assessments aligned to content standards. Another participant questioned whether group dynamics and leadership influenced the effectiveness of a group, noting that the professional learning groups were, "much more structured last year, and that I think was group dynamics. That leader last year, for my PLGs, really wanted to adhere very closely to protocols, and we would keep time and everything." The

same teacher went on to mention that in some cases, "Teachers inherently hate those protocols," but that they seem necessary to, "keep things from devolving into just constant complaining."

Internal and external coaches were noted as playing a role in professional learning groups, whether it was leading the groups or providing support and training to group facilitators. Teacher 4 at Fairview noted that their coach has, "had a huge impact in the last two years with PLCs and kind of implementing those." In one case, the external coach had conducted a series of trainings with group leaders to prepare them for facilitating their groups. Coach at Valley recalls, "We worked through thorny issues, and we worked through what does a highly effective PLG look like." Professional learning groups also focused on efforts that were aimed at PBE implementation. Teacher 2 at Highland described group meetings as occurring, "once a week to sort of check in and discuss how standards implementation was working in our class." And at Northeast, Teacher 1 shared that their group was, "working pretty much all year to refine so that everybody's giving the same information to the students," capitalizing on the professional learning time to ensure consistency in implementation and communication of the initiative. Professional learning groups were not the only structure that schools noted as being important factors, book groups were also used as a structure to promote professional learning aligned with PBE implementation. The next section will focus on the role of book groups.

Professional Book Study. To a lesser extent, participants at three sites talked about group book studies as an effective form of collaborative professional learning. At both internally coached sites, the full staff had engaged in reading the same book, sometimes over a year or more, in order to learn about and work to implement common practices. Teacher 2 at Highland shared, "Every year we usually do a book read as a whole faculty." Coach at Highland explained in more detail that they dedicated faculty meeting time throughout the year to read and reflect on a

particular book with all staff. Using faculty meeting time ensured that all staff were engaging in conversation around the concepts presented in the book, even if they hadn't read it. Teacher 1 at Northeast reflected on one of the full staff book-reads they engaged in, "We spent a year reading a book about it, setting it up, practicing it in the classrooms and things like that. That's still an ongoing part of the professional development." At both internal coaching sites, teachers reported a connection between the book studies they did as a staff and the practices they were implementing with coaches in the classroom. Teacher 3 at Northeast noted, "We read a common text and had discussions about it and thought about how we could implement it in our own classroom." In addition to whole-staff book reads, two teachers and the coach at Northeast mentioned participating in optional, small group book reads around topics that they were particularly interested in. These small, optional book groups tended to be coach facilitated. Teacher 3 recalled that during this process, the coach selected the book they would read and provided them with structured reflection questions to guide the discussion. Only one external interviewee mentioned a book study, and that was the external coach talking about engaging in reading a common book with the administrators at the school. Of the variety of structures that were used across sites to facilitate coaching, there were some that emerged as particularly impactful. The next section will discuss how certain structures were more closely related to teacher self-reported changes in practice.

Structures that Support Change in Teacher Practice

In the conventionalization stage of the Vygotsky Space model, practices become internalized when learners make them a habit. Participants across the board at each of the sites, both internally coached and externally coached schools, reported changes in practice as a result of working with a coach. The category of change in practice had three subcategories: Teacher

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practices, improving, and change over time. All of the teachers at both internally and externally coached sites reported a change in practice associated with some type of coaching and some coaching structure. Some of the changes were related to components of the initiative, while others were specific to teacher-identified needs, as in the case of internal coaching. Teachers reported that they had improved assessments and collaborated on rubrics, added tools to their toolboxes, gained confidence in their teaching practice, and engaged in more professional conversations about their practice. Others said that coaching had made their lives easier and reduced stress. Most teachers could cite at least one thing they had changed in their practice as a result of working with a coach. One difference that surfaced between internally coached sites and externally coached sites is that the changes noted at externally coached sites seemed to be almost entirely initiative-focused, whereas the changes noted at internally coached sites were only sometimes initiative-related.

Teachers across sites talked about improving at specific things that they had worked with a coach on. Some of the improvements were around teacher efficacy, "I feel more confident in my classroom management as a result of (coaching)" (Teacher 3, Northeast), while other improvements were more technical in nature, like working on assessments or rubrics, "The biggest successes we've had are around rubrics, and developing those rubrics" (Fairview, Teacher 4). Overall, teachers felt like their work with a coach had provided them with tools, resources, and experiences that helped them to do some tasks or practice a little better than they had in the past. A teacher in her second-year teaching recalled that her work with an internal coach provided her with a 'toolbox' to aid in her teaching, "I feel like I have a toolbox whereas before I didn't even know I needed a toolbox" (Highland, Teacher 2). Teachers also talked about the change in the types of conversations they were having, moving toward more professional,

collaborative interactions, "There's a lot of questions being raised which has started a lot of new professional conversations...that never happened before" (Valley, Teacher 6). Teachers noted that coaching pushed them collectively to focus on implementing some of the professional development that they were getting:

> I think that some of us would have gone and done it, but as our department as a whole, I think that it would've been easy just to sit back and keep doing what we were doing. This coaching has really pushed us into trying new things and implementing this PD (Highland, Teacher 1).

Teachers across sites, both internally and externally, talked about how their assessment practices had changed in terms of questions, focus, rigor, and scoring with the move to proficiency-based education. "We've changed our assessments a lot from the first year. The types of questions I'm asking on an assessment are different" (Highland, Teacher 1). Teachers at externally coached sites mentioned a similar shift in their assessment practices, "The rigor on the assessments themselves is a lot harder because…there's no just rote memorization" (Valley, Teacher 6). In addition to assessments, teachers at externally coached sites described working collaboratively to develop common rubrics, which led to richer conversations about grading with students and among colleagues.

> We're talking about how well kids do and understand concepts. So, I grade differently and actually, to tell you the truth, I think I've found it easier to grade, because when I look at problems the kids have done, I say, "Got it. They're proficient at this," versus I'm nickel and dime-ing points off of there (Fairview, Teacher 2).

As part of their work to improve assessments and rubrics, teachers found themselves thinking critically about their practice, "It's made me really think deeply, within the units that I do, where

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is the most appropriate place to assess that standard? How are my students doing something that is close to assessing that standard?" (Valley, Teacher 2). The professional conversations that teachers engaged in during the shift to proficiency-based learning created a gradual and eventual change in practice.

Change Over Time. Across school sites, the sentiment of change over time or change taking time was prevalent. Even at sites that had been fully implementing proficiency-based practices for a number of years, participants noted that they still had work to do; it took a consistent and ongoing effort that included coach support, investment in professional development, and administrative commitment. At sites that did not take a gradual approach, administrators noted that the shift to proficiency seemed like a much heavier lift, and at least one administrator questioned their quick shift, "This wasn't like a jump, this was a colossal leap and should we have done a staircase to get there?" (Fairview, Principal). Teacher 4 at the same site did not feel as though it was a leap, but did feel a back-and-forth energy that seemed to occur over the span of years, "Well its kind of ebbed and flowed in terms of we've tried some things and then pulled back, tried some things, and pulled back...That's been going on for the last few years." Teacher 4 went on to say that coaching support helped accelerate the change process, because the coach provided resources and guidance along the way. This teacher hypothesized that without a coach, "I think it would have taken longer. I mean already it's taken a long time, but it would have taken even longer because we just wouldn't have had the resources that she has access to."

In each school, there was some concern over the number of teachers that were 'on board' with the initiative, but also a sentiment that the number increased over time with more understanding. Teacher 6 at Valley noted, "We've put the time into trying to learn and... I shouldn't say everybody but I think most people have been willing to be understanding in the fact

that it's a process." This idea of learning more and understanding more as time passed was echoed at internally coached sites. A principal at Highland recalled that it took more than five years and, "a lot of pushing" to get to the point where they were a proficiency-based school. Coach at Highland commented that even after that five-year push, there are still teachers who are not fully practicing proficiency-based education, "I wish, again, that there could be more people involved in it so that...more people understood the basic ideas of [proficiency]. It's coming, but it's coming slowly." At each site, teachers, administrators, and coaches seemed committed to the idea that over time, more and more teachers would develop the skills they needed to be effectively implementing proficiency-based education. Whether it was changing assessment practices, collaborative practices, or instructional practices, there was a strong theme that any change takes time and a concerted and intentional effort. At Northeast, the Coach commented that, "it's not always as fast as I want it to be," but taking it slow and steady was the key, "just that slow integration so that it becomes routine." Practices becoming routine is the final phase of conventionalization in the Vygotsky space framework.

In summary, the broad findings of this multi-site study were that while the leadership's approach to implementation of proficiency-based learning varied across sites, there were commonalities across internally coached sites and externally coached sites in terms of the role coaches played in this process. External coaches were helpful in visioning and system-level planning and large-scale professional development aligned with PBE whereas internal coaches were helpful in individual teacher learning. Internal coaches had more regular interactions with teachers and were more often viewed as providing the 'just-in-time' support that teachers needed. Teachers noted that internal coaches were non-evaluative and caring, dispositions that seemed necessary to build a safe learning space. External coaches tended to have more

interactions with administration and leadership teams, leading planning and reflection with those groups rather than supporting individual teacher practice. Leadership approaches varied across sites and played a role in schoolwide implementation of PBE. Proficiency-based education was most successful in implmentation in the one case with a long-standing principal, internal coach, and clearly articulated vision and expectations. Teachers across internally and externally coached sites reported changes in practice as a result of coaching. These practices included changes in assessments, grading, and how they collaborated within and across content areas. Structures, such as PLCs and book groups supported these collaborative efforts, and time built into the schedule for coaching and work around PBE also facilitated changes in practice. While it wasn't an initial goal of this study, interview data also described a number of challenges associated with PBE implmentation that seemed to have little, if any, relationship with internal or external coaching in these cases. A discussion of the findings and implications for practitioners, policy, and research will unfold in chapter

CHAPTER 5

DISCUSSION AND IMPLICATIONS

The purpose of this qualitative study was to describe the ways in which internal and external coaches worked with teachers to implement proficiency-based education, a school-wide reform, in four districts and high schools in Maine. This chapter describes how the findings relate to the study's conceptual framework, specifically the two theories of Vygotsky's Space model and Argyris' Double Loop Learning model. The chapter includes a discussion of implications for coaching practice, policy, and research, limitations of the study, and a brief conclusion. The research question for this study was: How do secondary schools use internal and external coaches to support implementation of proficiency-based education, a schoolwide reform initiative?

Interpretation of The Findings

The findings from this study show, in these specific cases, that internal and external coaching supports teacher learning and change in practice in different ways, and to varying degrees, within the context of a school-wide reform effort such as PBE implementation. In comparing internal and external coaching, there was evidence across cases that both types of coaches played a role in providing professional development, using and modeling protocols, reflecting with teachers, and assisting in planning. In contrasting internal and external coaching, evidence from these four cases suggests that internal coaches spent a majority of their time providing one-on-one coaching with teachers, helping them to reflect on their individual practice and pushing them to shift classroom practice, whereas external coaches spent much of their time with groups of teachers or leaders focusing on building a cohesive vision for implementation of PBE. Teachers and administrators described both internal and external coaches as helpful in PBE

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implementation. Teachers at internally coached sites emphasized that these coaches were non-judgmental in their approach to support. Each type of coaching seemed to play an integral part in aiding schools in PBE implementation, however, internal coaches were more often described as supporting or influencing teacher change in classroom practice than were external coaches. In terms of PBE implementation, leadership cultural factors that influenced PBE implementation included: (a) leadership approaches: whether the leader was top-down, a delegator, a consensus builder, or in transition; and (b) the clarity of a common vision, common language and common set of expectations. The structural factors that supported and influenced coaching during PBE implementation included: (a) whether the coaching was ongoing and just-in-time or periodic and intensive; (b) whether the coaching was one-on-one or in a group setting; (c) whether the coaching was optional or mandatory; and (d) the use of professional learning groups. The most often cited challenges to PBE implementation included the transition to new grading and reporting practices, the adoption of new technology, student and parent concerns about changes in grading practices, teacher burnout, and time for teachers to plan for and implement new practices.

Coaching interactions with teachers at internally coached schools tended to focus on reflecting on practice one-on-one with a teacher, providing expert knowledge in teaching pedagogy, and providing professional development. Importantly, the professional development and expert knowledge that internal coaches provided at Highland and Northeast was not necessarily directly aligned to the PBE initiative. Teachers at both schools described support from the internal coaches as 'just-in-time' and discussed how they could go to their internal coach with any challenges or needs, whether they were about student behavior (non-PBE related) or help with assessment planning (PBE related). While coaches at Highland and Northeast could

make connections between their coaching work and PBE, it was clear that the coaching interactions at internally coached sites centered on teacher-identified needs rather than an explicit focus on PBE practices. Coaching interactions at externally coached schools tended to focus on providing professional development that was specific in terms of alignment with PBE, reflecting on practice with a group, and serving as a support for big picture planning for PBE implementation. External coaches described their work with teachers and administrators as centered around PBE implementation. Teachers and principals described internal and external coaches as helpful, credible, and caring and had the sense that coaches were there as partners in their PBE work.

Teachers at both internally coached sites and externally coached sites attributed changes in their practice to coaching. At the two internally coached sites in this study, all teachers working with internal coaches reported perceived improvements in practice and more than half reported an increase in confidence related to implementing new practices. These practices, however, could have been focused on student behavior, time management, or any other needs the particular teachers had in their classroom practice. Coaches at internal sites were clear that they were incorporating PBE practices into their coaching of teachers, but also clear that their coaching efforts needed to be driven by teacher needs. Teachers at internally coached sites noted a specific disposition of internal coaches as being non-judgmental in their approach, leading to a more comfortable and trusting learning environment. At the two externally coached sites, over three quarters of teachers reported perceived improvements in practice, with a majority of teachers attributing at least some of their change in practice to independent learning taken on outside of the coaching they received. Teachers at externally coached sites noted the specific connection between the support from external coaches and PBE implementation, which can lead

us to deduce that the coaching provided by external coaches was more aligned with the PBE initiative, whereas coaching provided by internal coaches was more aligned with individual teacher needs. In the sections that follow, theoretical conclusions will be presented along with implications for practice, policy, and research.

Revisiting Vygotsky

Through this study, I hoped to investigate the roles that internal and external coaches play in implementing proficiency-based education. Figure 1.1, the Vygotsky Space theory (Gallucci, 2008), served as the initial conceptual model for this study, to theorize about teacher learning and conventionalization of practices during a school-wide reform initiative implementation. As I examined the data within and across sites, I wanted to understand which types of coaching (internal or external) were most at play during each phase of teacher learning represented in Vygotsky's theoretical model. Through my analysis of the twenty-five interviews at the four different secondary school sites, I found that although external coaches did work with teachers in the appropriation phase (phase I), the external coaches in these cases tended to work more at a system level, helping to set a common vision for the work, while the internal coaches played a more integral role in teacher learning during phase II, III, and IV, which have more to do with teacher change in practice and classroom implementation. The Vygotsky Space (Gallucci, 2008) and Double-Loop Learning (Argyris, 1976) theories will be revisited in this section as a way to organize the discussion of the findings in this study and to revisit the study's initial conceptual model.

The role of an external coach seems to serve a primary purpose of engaging with teachers during Phase I, appropriation of knowledge. External coaches also interact with groups of teachers in other phases, but not in a focused or sustaining way. Interestingly, however, external

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coaches in this study played a larger role than initially anticipated with school leadership in helping to bring the pieces of an initiative into a more coherent model that may contribute to conventionalization (phase IV), or more institutionalized processes aligned with the initiative. Teachers at Valley and Fairview High Schools described their external coach as someone who helps administrators or leadership teams set the vision for PBE implementation. This could suggest that external coaches helped administrators with their own learning during phase I, appropriation. Internal coaches engaged most frequently in Phase II, transformation, primarily through reflection and one-on-one coaching with individual teachers. Teachers described these interactions happening around PBE-specific practices and other classroom practices that stemmed from teacher-identified needs. It was evident that teachers were making sense of new information and incorporating it into their practice as a result of working with an internal coach. Teachers described not feeling judged or evaluated, but instead felt supported and encouraged to try new practices when working one-on-one with internal coaches. There was also evidence that internal coaches provided school-wide professional development during Phase I, appropriation, engaged with teachers in sharing their learning during Phase III, publication, and supported teacher practices aligned with the initiative, which strengthened the use of those common practices across the school during Phase IV, conventionalization. Northeast High School, the one school in the study that had been implementing PBE for over five years, was the only school that showed evidence of all aspects of the four-phase learning and implementation model in action, resulting in conventionalization of practices. This was achieved, in part, with the support of an internal coach. A more in-depth study would be needed to determine the extent to which the internal coach was involved in all phases of the learning and implementation effort from the start. In this study, internal coaches at both Northeast and Highland served to support teacher

learning primarily in Phase II, transformation, but also contributed to Phases I, III, and IV (appropriation, publication, conventionalization) whereas external coaches at Valley and Fairview supported both teacher and administrator learning primarily in Phase I (appropriation) and Phase IV (conventionalization). Figure 5.1 illustrates the connections between internal and external coaching and teacher learning in an adapted model of Vygotsky Space (Gallucci, 2008) combined with Double Loop Learning (Argyris, 1976).

Figure 5.1

Internal and External Coach Influence on Teacher Learning

Note: Adapted from Gallucci, DeVoogt Van Lare, Yoon & Boatright (2010) (Originally adapted from Gavelek & Raphael, 1996; Harre, 1984; McVee, Dunsmore & Gavelek, 2005).
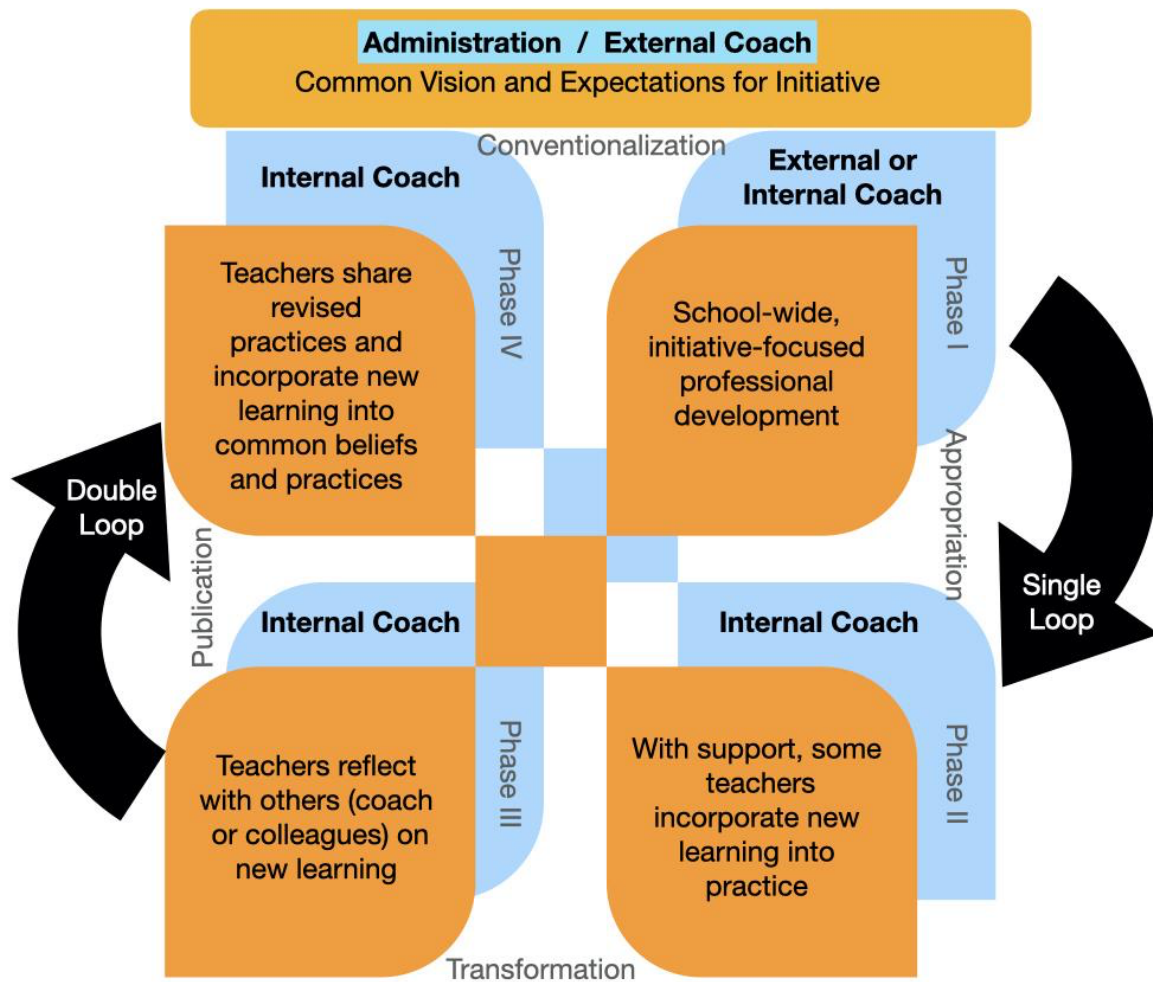
The quadrants in the conceptual model above are aligned with the phases of the Vygotsky Space model (Gallucci, 2008). In this revised model, external and internal coaches provide school-wide, initiative-focused professional development in Phase I. Internal coaches work with teachers to implement new practices in Phase II. Internal coaches work with teachers to reflect

on their newly learned practices in Phase III. Internal coaches work with individual teachers to reflect on changes in beliefs and practices in Phase IV as a result of trying new strategies in their classrooms. Also, part of the conventionalization of the practices surrounding the initiative, the external coach works with leaders and administrators to ensure there is a comprehensive and collective vision that is consistently communicated during implementation. In schools where internal coaching is present, after appropriation of new knowledge and ideas, some teachers may seek coaching support to help them to implement some of the newly learned practices. Absent internal coaching, some teachers may take these new practices back to their classrooms and implement them, while others may implement a revised version or incomplete version, and others may do nothing at all with the new learning. In cases where teachers are not working with an internal coach to implement new practices, a single-loop learning experience is more likely to occur. Through observation, video, and one-on-one conversations, internal coaches can help teachers to view data about their own practice and realize areas that are in alignment or not in alignment with new learning, facilitating a double-loop learning process (Argyris, 1997). Each of these phases will be broken down in the following sections to draw conclusions about the ways in which internal and external coaches support teachers and leaders during PBE implementation.

<u>Initiative Ideas Acquired Through Internal and External Coaching</u>. Large scale professional development, school-wide coaching, and new ideas are introduced during Phase I of the Vygotsky Space model (Gallucci, 2008). Based on the data collected from the four sites in this case, internal and external coaches play a role in providing this professional development. This finding is not surprising, as it has been cited previously by Wise & Hammock (2011) and Hagen & Aguilar (2012) in studies of instructional coaching. Internal coaches themselves described a significant part of their role as providing professional development. External coaches provided

professional development at more of a school-wide and big picture level. The most frequently coded concept in externally coached sites was 'professional development' which included using protocols and connecting coaching to school-wide initiatives. Administrators and teachers valued the role that external coaches played in bridging various aspects of the initiative and tying them to other work already underway at the schools. Teachers described sessions with the external coach that included providing them with structures for proficiency-based education, examples of rubrics and standards from other schools, and modeling processes and protocols that teachers could use in their content area teams to continue the work of the initiative. This perception of the coach 'teaching' protocols is related to Phase I of the Vygotsky Space model where individuals are collectively acquiring new information or skills (Gallucci, 2008). While the findings show that providing professional development was the most frequent interaction that external coaches had with teachers, they also show that internal coaches served as a vehicle for this large-scale professional development. At both internally coached sites, internal coaches worked with the full staff and groups of staff to model new practices and strategies that teachers could then use in their classrooms, but these strategies were not always seen as explicitly tied to PBE. Teachers noted that internal coaches served as experts in the field, providing them with strategies and best practices to try in their classrooms in response to a teacher-identified problem. While internal coaches noted the ways their coaching tied to the larger initiative, teachers at the internally coached sites did not describe seeing the connection. Teachers saw internal coaches as experts in teacher pedagogy, across content areas, and valued their expert knowledge.

Internal Coaches Support Teachers as They Try New Practices. The Vygotsky Space model as described by Gallucci (2008) describes appropriation as "evidence that an individual takes up an idea or practice from a PD event" (p. 552). In this stage, individuals process ideas presented

during Phase I professional development and consider which parts of the new ideas align with their beliefs and practices, and which of the new ideas they could potentially try out. The findings from this study show that internal coaches at the sites studied worked with individual teachers to implement practices in their classrooms more often than external coaches did. Most teachers at internally coached schools noted times when they had been engaged in a one-on-one coaching cycle with the internal coach that largely involved reflecting on their own practice, but also included planning support, brainstorming ideas, and recommending strategies that teachers might try in their classrooms.

Phase II in the revised model, when teachers begin to internalize some of the newly learned material, is a phase that may typically happen in private (Gallucci, 2008). Some teachers may choose to make adjustments to their practice based on the ideas that were introduced, while others may not. At externally coached schools, this seemed to be the case. A principal at an externally coached school noted that teachers don't usually have the breakthroughs in their thinking during sessions with external coaches, but have their 'ah hah!' moments once they've had time to process and think about the ideas provided by the external coach. At internally coached sites, however, teachers didn't always process the new ideas independently as they had support in the form of an internal coach. Internal coaches served as a reflective thought partner, source of inspiration, and support system for individual teachers as they tried out new practices. Teachers described internal coaches as helpful and non-judgmental, dispositions that seemed to create a safe space for learning and growth that teachers needed. Internal coaches also served as the nudge that some teachers needed to change their practice, a push that all teachers at internal coach sites mentioned was helpful. A number of teachers and coaches mentioned that having the coach in the building and accessible to them meant not only could they go to them with

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questions, but that the coach could check-in with them regularly to see how it was going, serving as a reminder. Internal coaches intentionally wove components of the PBE initiative into their one-on-one coaching cycles with teachers, ensuring that the practices were being taken up. While internal coaches reported witnessing changes in teacher practice, additional data observing teacher practice over time would need to be collected to determine if, in fact, teacher practice was changing. This finding suggests that during transformation, teachers may benefit from an internal coach as they work to make sense of and implement the components of the initiative in their classrooms.

Collaborative Reflection Facilitates Double-Loop Learning. The findings from this study show that collaborative reflection on practice, where teachers share new practices they've tried and process them with others, happened frequently at both internally and externally coached sites. Reflection was the second most frequently coded concept overall, and was the most frequently coded interaction at internally coached sites. Teachers at internally coached sites described reflecting on lessons and strategies, what worked and what didn't, with their internal coach. During this process of reflection, teachers start to make sense of the strategies they have tried, make connections between those strategies and their beliefs about teaching and learning, and, in some cases, may start to make some shifts in their thinking. Having a reflective partner in the form of a coach seemed essential during this phase, as it allowed the teachers to process and make sense of what they were learning. Teachers that try the new ideas out and share their practice with others are engaging in what Gallucci (2008) refers to as publication. In this stage, as teachers reflect on the new practices, they also reflect on how those practices align or don't align with their thinking. In order for double-loop learning to occur, Argyris (1997) recommends that data be presented to the learner in this stage as a way to reflect on their practice and that the

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reflection involves discussion. Reflection was most intentional at internally coached sites where teachers and coaches engaged in coaching cycles that often involved watching video of lessons and reflecting together. Teachers also reported reflecting on practice and in-depth conversations with peers about the practices during professional learning group sessions. It is at this point that some teachers begin to shift their beliefs and internalize the practices, while others question or reject them; practices may also be re-interpreted to suit specific context or align with beliefs (Gallucci, 2008).

Processing and reflection also happened at externally coached sites, although these reflections tended to happen more in group settings, such as content area teams or professional learning groups and sometimes happened without the coach present. External coaches asked reflective questions and established protocols for groups of teachers to use that allowed them to reflect on practices together, make sense of what they were learning, and, in some cases, shift their thinking. At one external coach site, group leaders were trained by the external coach to be facilitators, which meant that groups were able to follow reflective protocols together without a coach facilitating the process.

Importantly, the presence of professional learning groups at both internally and externally coached sites seemed to play a role in the publication phase. Teachers reported regular and structured interactions between colleagues in these groups which included wrestling with challenging ideas surrounding proficiency-based education, sharing successes, and brainstorming solutions to problems of practice. Professional learning groups were structures that enabled problem-solving and established a sense of community among teachers. Simply not feeling alone in the challenging day-to-day work was an important factor in teachers continuing to work to implement the initiative.

Institutionalization of Practices Result from Coaching and Administrative Vision.

Across sites, both internal and external coaches engaged in planning and support that aligned individual, team, and school goals to the broader goals of the PBE initiative. It was evident in the four sites in this study that not only did coaching contribute to this institutionalization of practice, but that coaching needed to be combined with a commitment and vision from school leadership. Conventionalization, as defined by Gallucci (2008) can be described as evidence that practices aligned to the initiative have been put into practice at an organizational level. This could be in the form of teachers across a school implementing the same practice or set of practices, a policy being adopted that aligns with the new thinking or learning, or a structure being put in place at the school or district level (p. 552). Only one school (Northeast) in this study had truly reached the conventionalization phase, where they had institutionalized nearly all practices around PBE. This particular site had taken a number of years, and also had consistent administration that shepherded a common vision and common expectations schoolwide. This commitment to the initiative seemed to be essential in the institutionalization of practices aligned with the initiative. While coaches at Northeast played a role in helping the school get to the point of institutionalization of practices, they were not the primary driver of the initiative.

At the other sites (Highland, Valley, and Fairview), where schools were in early stages of implementation, the vision, expectations, leadership style, and turnover in leadership were all factors in getting teachers to the conventionalization phase. At externally coached sites, coaches seemed to be more engaged in defining the common practices and communicating the vision than internal coaches were. External coaches tended to work directly with administrators more often and served in more of an advisory role through implementation. Principals in this study talked about their external coaches helping them to keep the big picture in mind and aligning the

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initiative to other work in the school or district. At one external coach site, the coach assisted the leadership team yearly in creating an action plan that wove multiple efforts and initiatives into a cohesive plan. At the other external site, the coach supplied a model, processes and resources that contributed to a common vision and common language surrounding the initiative. External coaching, in these cases, seems to play a role in conventionalization, or the institutionalization of practices within an organization.

The results of this study show that both internal and external coaching contribute to teacher learning in a variety of ways through each phase of Vygotsky's Space model (See Figure 5.1). Teachers appropriate new knowledge and skills aligned with an initiative as a result of professional development provided by internal and external coaches in Phase I. Internal coaches in these cases tended to support teachers more directly through phases II, III, and IV (transformation, publication, and conventionalization). Internal coaches support teachers as they try to make sense of and implement new practices in their classrooms during Phase II, and then as they reflect on and adjust those practices through transformation. Teachers share their learning publicly with peers or coaches as a way to reflect on their practices and adjust the beliefs they hold during publication. Finally, internal and external coaches support the institutionalization of practices, where components of the initiative become sustained and pervasive throughout the school during conventionalization. The following section will discuss the implications of these findings for practitioners, theory, research, and policy.

Implications for Practice, Research, and Policy

Coaching has become an increasingly popular mode of job-embedded professional development in schools across the United States (Gallucci et al., 2010; Kraft & Blazar, 2017; Reddy et al., 2019). Prior research in teacher professional development highlights the importance

of building a coherent and collaborative system of professional development for teachers, rather than one-and-done workshops (Darling-Hammond & Richardson, 2009). Much of the research in coaching has focused on site-based instructional coaching, primarily in elementary literacy (Kraft & Blazar, 2017). Increasingly, teachers and school leaders at all levels are seeking out coaching to support professional development and improve practice (Knight, 2019). Coaching at all grade levels has become a strategy for building teacher capacity as they work to implement school reform initiatives (Woulfin & Rigby, 2017). This study intentionally sought to illuminate coach/teacher interactions at the secondary level and to compare the interactions of site-based or internal coaches with those of external coaches during implementation of a specific initiative. While the results are not largely generalizable, there are a number of potential implications that result from this multi-site qualitative study. This section will discuss implications for practice, policy, and research.

Implications for Practitioners

Success of implementation of new initiatives rests on a number of factors. Consistent administrators, who have a common vision and clear expectations or criteria for implementation, and time provided for professional learning are both significant factors. In this study, where sites were purposefully selected that did not have first-year principals, the idea of administrator turnover still surfaced in a couple of instances as something that made the transition to PBE more challenging for teachers. Data from this study also show that investing in new programs, especially technology programs that require new learning, at the start of an initiative may lead to greater frustration or that investment in training for new software programs is required for successful implementation, but this idea needs to be studied further. Internal and external coaches can serve in multiple ways to facilitate PBE implementation, including acting in the role

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of expert, providing professional development, serving as a reflective partner, facilitating

collaborative learning experiences, and working with administration to build a cohesive vision

for the initiative. The following sections will discuss the implications for administrators and

coaches as they consider the role of coaching in PBE implementation.

Role of Coaches in PBE implementation. The findings of this study suggest that when

embarking on implementation of a new initiative, school leaders should consider utilizing

coaches for both system design and individual teacher support. Evidence from the two externally

coached sites in this study illustrate that working with an external coach can support planning,

professional development, common language, and clarity in the early stages of implementation.

Evidence from the two internally coached sites in this study suggest that employing internal

coaches can support individual teacher development and change in pedagogy aligned with the

initiative. An administrator's job is multi-faceted and ever-changing. In both externally coached

sites in this study, the administrators relied on the support of the external coach, sometimes in

facilitating professional development, but more often in planning for professional development.

External coaches most frequently engaged in providing professional development, including

using protocols and connecting coaching to school-wide initiatives. External coaches assisted in

providing examples and models that aligned various components of the initiative together and

tied them to other important work teachers were already doing. While teachers found this

valuable, the external coaches seemed to play more of a supporting role with administrators and

other school leaders than with individual teachers. External coaches engaged at more of a system

or building level, whereas the support internal coaches provided was at the individual teacher

level. Schools and districts should consider contracting with an external coach when embarking

on a new initiative in order to help with appropriation of knowledge and skills and with conventionalization of practices aligned with the initiative.

At both of the internally coached sites, there was either an administrator or a coach, or a combination of the two leading the charge of the initiative. It seemed important for someone on the inside to be the resident expert and to answer questions as they came up. Teachers at both of the internally coached sites talked about the internal coaches as experts, providing strategies and resources. In addition, teachers saw internal coaches as supports and reflective partners as teachers tried new practices. At both internally coached sites, it was evident that teachers attributed their improved confidence and adjustments in their practice to the time they spent with internal coaches. While coaching cycles with internal coaches didn't necessarily focus solely on the initiative, coaches stated and teachers noticed the connections between the school-wide efforts and their classroom level work. Having an internal coach helped schools in this study practice the implementation of pedagogy aligned with the initiative, and then reflect on the practices in order to make lasting changes. During PBE implementation, internal coaches are necessary in order for classroom practices to change. Data in this study support previous findings by Fixsen et al. (2005) and Russo, (2004) that administrators need to provide a focused and sustained model of professional development that includes and prioritizes coaching, including dedicated time for staff to work with coaches and time to engage in collaborative reflection. Schools and districts embarking on implementing a new initiative should employ experienced internal coaches to assist with PBE implementation.

<u>Considerations for Administrators</u>. Findings in this study indicate that a clear vision, communicated consistently by administrators and teacher leaders, is critical in implementing a new initiative. Administrator turnover was a factor in mixed messaging and lack of clarity in

expectations surrounding the PBE initiative at at least one site. For successful implementation of a new initiative, a clearly articulated vision and a consistent veteran administrator or leadership team is essential. Across the cases in this study, administrative approach varied widely and it would be important to study a wider range of cases before making broad generalizations. Based on the findings in this particular study, when engaging in a school reform initiative, a comprehensive and long-term approach may yield more positive outcomes. Administrators may want to consider the utilization of external and internal coaching to support both the broad planning and conceptualization of practices and the classroom pedagogy and collaborative reflection required to internalize these practices. In thinking about the role of a coach within a school, it is important to clearly define the role an internal or external coach will play in teacher learning during initiative implementation, and what the accountability mechanism will be for teachers. Role conflict can result, especially for internal coaches, if it becomes unclear whether the initiative is being led by the coach or by the administration. Contracting with an external coach can assist in providing support and guidance around implementation of the initiative, including support in planning, setting and communicating a clear vision, and providing school-wide professional development. Employing internal coaches can target more specific and ongoing teacher learning and change in practice at the classroom level, and support continued collaboration in professional learning group structures. With this recommendation comes obvious financial implications, as both external and internal coaches are additional positions to fund. As school leaders begin to plan for their approach to various school reform initiatives, it would be advisable to consider professional development comprehensively: How will all staff know and interact with the common vision for the initiative? What common language and practices will we use? What types of school-wide experiences are necessary? What small group

collaborative experiences are necessary? What support will teachers need as they work to implement the components of the initiative? In the four sites in this study, coaches were essential components in providing school-wide, small group, and individual teacher professional development aligned with the initiative. While administration shouldn't mandate coaching or drive the content of the coaching, it is important for there to be open communication between the coach(es) and administrators, and a level of support for dedicated time for coaching. Structures administrators may want to consider when implementing PBE include PLCs and book groups, as participants in this study noted the importance of these structures in collaborative learning around PBE. Administrators should consider the ways in which external and internal coaches could support them and their staff in PBE implementation, build time into the schedule for teachers to access coaching, and engage in continuous reflection and data collection around the effectiveness of the coaching.

Considerations for Coaches. Internal and external coaches at the four sites in this study worked with teachers and administrators to implement various components of the PBE initiative. In comparing the externally coached vs. internally coached sites, teachers attributed more individual reflection and change in classroom practice to the internal coaching they received. Coaches at internally coached sites discussed their coaching in terms of a defined coaching model that lasted a set amount of time and focused on improving a definite set of teacher-identified skills. Teachers at internally coached sites reported that these focused coaching cycles led to a change in classroom practice. At the externally coached sites, administrators and teachers attributed the big picture thinking and planning support to the external coaching they received. Coaches at externally coached sites described their coaching more in terms of the components of the PBE initiative and the elements necessary to implement a PBE system. Teachers at both

internally and externally coached sites noted collaborative learning experiences like PLCs and book groups were helpful in building a collective understanding of PBE. While it would be ideal for a school to invest in both external and internal coaching to support PBE implementation, the financial implications may be great. Some criteria that both internal and external coaches should adhere to when coaching at a school include: 1) coaching in alignment with a coaching model; 2) combining whole-school, small group and one-on-one coaching; and 3) building in time for intentional, collaborative, reflective practice.

For external coaches contracting with schools to implement an initiative like proficiency-based education, it would be important to ensure that there is some kind of regular contact with teachers, whether that is through collaborative reflection in small groups or one-on-one reflective sessions. External coaches in the cases studied appear to spend most of their time providing professional development in group settings, whether whole-school or by content area, or working with administration or leadership teams. In situations where there are no internal coaches, this type of coaching may not lead to the changes in teaching practice required to see a level of institutionalization of the initiative. External coaches may want to build their contracts with schools to ensure regular interaction with teachers in individual and group settings, structured in a way that allows for optimal reflection on practices in addition to the planning and school-wide professional development they provide. Establishing a pre-determined coaching model that incorporates whole-school, small group, and one-on-one coaching and collaborative reflection may help to better define the role of an external coach and support teacher learning during the transformation stage.

Internal coaches in the cases studied appeared to spend most of their time with teachers in a one-on-one setting, reflecting on practice, providing expert advice, and providing classroom

level professional development. Internal coaching, based on the data collected in this study, is likely to lead to teachers reflecting on their practice and trying new strategies. Teachers interviewed in this study appreciated the availability of their internal coach, and perceived the six-week coaching cycles as helpful in improving their practice. Internal coaches may want to consider, however, the scale to which these individual changes will contribute to a broader shift school-wide. In larger schools, it may be impossible for a single internal coach to work one-on-one with every teacher. Internal coaches may influence a larger number of teachers through professional learning groups or book studies, which could complement their targeted one-on-one work with a select number of teachers. Internal coaches may also consider using a tiered structure of support, where some teachers get one-on-one intensive support and others receive flexible and facilitative support, as Moody (2019) recommends. In addition, internal coaches should consider how the coaching they are doing fits into the school-wide professional development plan and vision for PBE implementation. If the internal coaches are the main vehicle for implementation at the classroom level, coaches should ensure that there are clearly articulated practices and common language around the initiative that they can use in their coaching. Internal coaches should also be involved in the design and implementation of school-wide professional development to provide cohesion between these sessions and the one-on-one coaching. In order for practices aligned with the initiative to become institutionalized, the public act of sharing practice and reflecting on learning needs to be incorporated into an internal system of professional learning. Importantly, in this study, individual teacher coaching seemed to be better received when it was optional, so while school-wide professional development and small group PD in professional learning groups or book studies may be mandatory, any one-on-one

coaching is likely to be better received if it is either optional or built into an onboarding system as a way to introduce new staff to the common practices in the school.

Finally, internal and external coaches should work with administrators to ensure time is dedicated to coaching support, that the role of the coach(es) is clear to both the coach and the teachers, and to identify the components of the initiative that will be common across the school. Coaches would be well served to advocate for their own professional learning, especially with regards to the specific initiative(s) they are tasked with implementing. Teachers in this study appreciated coaches' expert knowledge and cited coach credibility as an important disposition. Staying current on research and resources will assist coaches in meeting the needs of the teachers they support.

Implications for Research

The conceptual framework for this study rests on the Vygotsky's Space model (Gallucci, 2008) and the Double Loop Learning theory (Argyris, 1976). Teacher learning as described through the Vygotsky's Space model is a cycle of learning, reflecting, and adjusting practices and beliefs. This study adds dimension to Vygotsky's model by overlaying and locating the supports provided by internal and external coaches as teachers progress through the learning process toward implementation of new practices. One component of this study that departs slightly from the Vygotsky's Space model is the work during the transformation stage. This stage, according to the original model, is part of the cycle that typically happens in private, as opposed to happening publicly or collectively. At the internally coached sites in this study, there was evidence to support that transformation can happen and may be more likely to happen when done in a one-on-one partnership with an internal coach. Coaches can support teacher learning through all phases and stages of the Vygotsky model, however, the point at which a teacher

decides to 'take up' a new practice may be influenced by the presence and availability of an internal coach. Teachers in the study reported that internal coaches pushed them to try new practices and supported them as they did, suggesting that perhaps Phase II of Vygotsky's Space model could be more of a collective, or partnership approach to teacher learning. Additional research on internal coaching focused on the transformation stage of Vygotsky's Space model could help to illuminate the role of coaching in implementation of practices aligned with initiatives at the classroom level. Additional research methods, including classroom observations and/or document collection, are needed to study and confirm the kinds of shifts that teachers make in their practice as a result of coaching. Studies that compare the experiences of teachers working with a coach to those not working with a coach could also help us better understand the factors that influence teachers 'taking up' new practices during PBE implementation or other types of school reform initiatives.

In Double Loop Learning Theory, Argyris (1976) asserts that "learning occurs when errors are corrected by changing the governing values and then the actions." Among teachers that participated in this study, teachers that worked with an internal coach were more likely to report a change in beliefs or classroom practices aligned with the proficiency-based education initiative as a result of working with a coach. Based on the revised framework for the study (figure 5.1) we can see that if an external coach serves in the stages of appropriation and conventionalization, there is potential for only single-loop learning to occur. At sites where internal coaches were present, it is more likely for double-loop learning to occur across staff within a school and therefore a potential for more conventionalization of practices within the institution. Internal coaching is also more defined in approach, with many coaches using coaching cycles to meet one-on-one with teachers. There are multiple opportunities to add to the research in external

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coaching, both to understand the variety of ways external coaches influence PBE implementation and change in practice and to investigate specific models of external coaching. Case studies or broader surveys of externally coached schools could add to the literature in terms of identifying and cataloging differnet external coaching models. Additional data should also be collected to determine effectiveness of different external coaching models, such as in Kraft & Blazar, (2017). External coaching research is lacking, especially at the secondary level, and in subjects other than literacy. Additional research is needed on the influence of external coaching on teacher change in practice and on the influence of external coaching on conventionalization of practices aligned with school reform initiatives. Coaches, especially external coaches, often serve in the role of intermediary between administrators and teachers as initatives are being implemented. Further research in the role of coaches as intermediaries during school reform is also needed (Mayer et al., 2014; Woulfin, 2018).

Results of this study suggest that the most effective path to PBE implementation may be to work with a combination of both external and internal coaches. In order for teacher learning to happen in a way that promotes both double-loop learning and conventionalization of practices across an organization, the support of both internal coaches and external coaches would be ideal. Prior research suggests that initial professional development surrounding an initiative, followed by a regular coaching cycle with coaches and teachers working one-on-one improves teacher practice (Allen et al., 2011). Woulfin and Rigby (2017) also suggest that coaches and administrators co-designing professional development and common expectations could result in a more comprehensive approach to implementation of a reform initiative. This study adds to the research in the field by suggesting that schools engaging with an external coach for school-wide professional development, planning, and establishing a common vision and common language

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around an initiative in addition to utilizing internal coaches for ongoing classroom-based support are more likely to have success in conventionalization of institutional practices aligned with the initiative. In future research, an in-depth single or multi- site study investigating a school implementing an initiative with both an external and internal coach would serve to confirm or refute and explain this assertion. While this study did not intend to capture coaching impact on student outcomes, this would also be a worthy phenomenon to investigate, as it could have implications for the cost-effectiveness of using coaching for professional development.

Reflecting on their meta-analysis of the research on teacher coaching, Kraft, Blazar & Hogan (2018) report an over reliance on teacher self-reported beliefs about changes in practice and outcomes as a result of coaching. Research studies that include tools that measure coaching effectiveness are needed, such as the Instructional Coaching Assessments used by Reddy et al. (2019). There is opportunity for more rigorous research to be done in the form of randomized control trials, looking at teacher and student outcomes as a result of a particular coaching intervention. Additional data should be collected regarding the most effective coaching cycles and the most effective combinations of whole-school, small group, and one-on-one coaching. These studies may need to take place over longer periods of time, or also collect data in subsequent years, to take into consideration the time it takes for teachers to build new practices into their routines and the time it might take to have any measureable impact on student learning. Teachers in this study reported that having choice in whether or not to participate in coaching made a difference. Additional studies are needed to determine whether optional coaching actually has a greater impact on teacher learning than mandatory coaching, and whether inducements or incentives for working with a coach lead to teacher learning. Research should also be done comparing implementation of the same initiative across sites of varying size and

demographics with the same type of coaching. In this study, all four sites were implementing the same initiative within the same state, two with internal coaching support and two with external coaching support. This could be replicated to a broader scale by selecting one initiative, limiting the cases to only internally or externally coached schools, and opening up the geographic boundary to include all schools within a state or all schools implementing a specific initiative within a region. Then, a comparison across school contexts could be done of the same intervention (coaching) aligned with one initiative to determine the factors within a school that contribute to more or less successful implementation.

Implications for Policy

As schools and districts work to implement the variety of school reform initiatives that are mandated in policy or taken up by administrators, they should consider how teacher learning is supported in the process. Too often we see policies passed at the state and national level with good intentions, but without adequate support built in for schools and teachers to implement these initiatives. In an analysis of the implementation of PBE throughout Maine, Johnson & Stump (2018), found that teachers reported needing more professional time and resources than they were given to implement the various components of PBE. Teachers also reported that collaborative work was essential in implementing a proficiency-based system, but noted that the time for this was not always provided (Johnson & Stump, 2018). In each of the four sites studied in this study, collaborative time was built into teacher schedules and was utilized by internal and external coaches as time to provide reflective experiences or professional development aligned with the initiative. Teachers at each of the four sites in this study reported benefits to the collaborative learning experiences, including the sharing of challenges and idea generation with peers. Knowing they were not 'in it alone' was an important benefit of collaborative learning. In

addition, teachers appreciated the expert knowledge and guidance aligned with the initiative that coaches were able to provide. Funding for coaching support, including salary for coaches and professional development funds for training coaches, should be incorporated into legislation to ensure educators have access to the support and expertise needed to effectively implement the reform. Smaller and/or rural school districts with limited local funding may struggle to hire and retain coaches and may need more targeted support when implementing a school-wide reform initiative. In addition, departments of education may want to consider efforts to bring coaches and educators together from schools across the state to plan and problem-solve as they implement the new initiative.

When developing an education reform policy, lawmakers and departments of education should be thoughtful about both the demands schools are facing, and also the time and resources schools have to put toward the initiative. Providing a framework for how PBE could fit within existing practices, and areas where change was necessary may have made the initiative seem like a lighter lift. A more focused policy with clearly articulated expectations may have been easier for schools and districts to navigate. As it was written, much of the proficiency-based diploma initiative was left to individual district discretion, which left educators questioning whether their approach was meeting the requirements. One of the teachers in this study noted that other schools were not doing what they would consider to be authentic PBE, leading to educator frustration and increased questioning of the practices their school was implementing. In future educational reform policies, the practices associated with reform should be clearly articulated to limit variability of interpretation across schools and districts (Johnson, 2019). The clearly defined practices should also be educationally sound and research-based practices to ensure that the outcomes being measured in the end are a measure of the implementation, not the practice

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itself (Darling-Hammond, Chung Wei, Andree, Richardson & Orphanos, 2009). While local control is also important in policy implementation, a level of guidance on the practical application of the policy, whether from the rules within the policy, or from the state department of education, would lead to more consistent implementation across schools and districts over time.

As we know, the proficiency-based diploma statute was repealed by the Maine legislature, and became optional (Johnson, 2019). In the fall of 2018, after the statute was repealed, Johnson (2019) surveyed Maine Superintendents to assess the impact of the optional policy. Only one quarter of superintendents reported that they would continue with implementation of proficiency-based diplomas, however, most districts that said they would opt-out also said they would continue some of the practices aligned with the initiative (Johnson, 2019). These data suggest that there were some components of the proficiency-based diploma statute that were beneficial to schools and students, but that some of the challenges associated with the policy were perhaps too great to overcome. The data across the four sites in this study suggest that challenges such as grading and reporting, technology and software changes, and student and parent concerns were significant. When considering new policy guidelines and the rules built into statute, policy makers and state leaders should consider the systems that are present within schools and districts that may need to change as a result. For proficiency-based diplomas, the shift required in reporting student progress on report cards and transcripts brought with it technology challenges and grading confusion that made implementation seem overwhelming. This new way of doing things seemed like 'one more thing' on top of a number of responsibilities and tasks already placed on educators. Educators found the change in grading practices confusing rather than helpful and the way grades were calculated within technology

platforms left teachers wondering how to explain student scores to students and parents. With any policy or initiative, careful consideration should be taken to outline the connection between the new or updated initiative and the work currently happening in schools. A new initiative that seems like 'one more thing' is less likely to take hold and be incorporated into day-to-day classroom practice. In addition, it may be advisable for any policy that has a component related to grading or reporting to also provide access to and training for software that easily aligns with the policy requirements. Learning new technology, and then being disappointed that it couldn't do what was promised, seemed to be a significant hurdle for three of the four sites in this study.

Establishing policies that support time for teacher learning, and funding for professional development surrounding an initiative is essential. Support for teacher learning could be provided at the state level with free or low-cost, content-specific meetings allowing for educators to share ideas, and provided at the district level by way of funding for coaching support. Importantly, coaching should not be mandated by policy. In the four sites studied, coaching relationships that were optional and provided teachers choice were more likely to result in a teacher-described change in classroom practice. At Northeast, the one site in this study that was fully implementing, the district had decided to incorporate the components of proficiency-based education into all of the professional development experiences, as well as the coaching support. While one-on-one coaching remained optional for most staff, all staff received professional development aligned to the initiative during whole-school PD and professional learning group time. Teachers at this site could easily see the connections between school-wide expectations, the professional development sessions, and their coaching experiences. Funding for a structure that supports this comprehensive and connected range of professional development for implementation is essential for full implementation of the reform.

Four years after data collection, it is interesting to note that all four schools in this study continue to implement some components of PBE. Northeast is the only school from the study that had fully implemented PBE school-wide, and continues to do so. Highland, Fairview and Valley have continued work with curriculum and assessments and have courses aligned to standards. Fairview reverted back to traditional grading practices, whereas Highland and Valley have maintained and further refined their proficiency-based grading systems. All of the schools continue to use some form of coaching to support teacher learning and development.

Conclusion

There is a need to learn more about the roles of coaches across contexts, and the structures that support coaching to determine the most effective use of coaching (Woulfin, 2018). This study provides a detailed description of how internal and external coaches worked with teachers during implementation of a school-wide reform initiative at four purposefully selected sites. Teachers and administrators at each of the four sites were working toward implementation of proficiency-based education with the support of either internal or external coaches. While only two internally coached sites and two externally coached sites were studied, they were purposefully selected with the goal of gaining a better understanding of the roles internal and external coaches play during PBE implementation. The data from this study show evidence that many factors within a school contribute to PBE implementation including leadership approach and time built into the schedule for teacher professional development and collaboration. Teachers reported that both internal and external coaching contributed to changes in practice aligned with the proficiency-based education initiative. Data also reveal that internal coaches and external coaches work with teachers in different ways and at different stages during PBE implementation (Figure 5.1). While schools across the country are increasingly investing in

coaches as support for teacher learning, the results from this study suggest that schools and districts should be intentional about the structure of the coaching support they choose to provide. External coaches may be more helpful partners in planning strategically at the school level and providing professional development during appropriation of new information aligned with PBE, while internal coaches are likely more effective in one-on-one coaching and transformation of teacher practices and beliefs at the classroom level.

While conclusions can be drawn about each of these specific sites, one limitation of this study is that each of these sites approached implementation of PBE differently, had a different leadership approach, and structured their coaching time in different ways. It may be difficult to apply these findings generally to other settings, given the differences among sites and the way the leaders of each building went about implementing PBE. However, some degree of transferability in the findings may be possible for comparable school contexts. Another limitation of this study is that it did not collect data on actual change in teacher practice, only teacher perception of changes in their practice as a result of coaching. Additional research should be done that collects observational data on change in teacher practice as well as impact of change in practice on student outcomes. Teachers in this study did self-report changes in practice, ranging from changes in curriculum and assessments to changes in grading, to changes in classroom strategies to engage students. Teachers said that the support both internal and external coaches provided was helpful and encouraging, and noted that internal coaches in particular did not pass judgment on teachers as they worked to incorporate new learning into practice.

Internal and external coaching are essential components in PBE implementation within a school. There are many factors at play that influence the success of implementation of any school reform initiative, however, having a clear vision, well articulated common practices and

expectations, and a thoughtful approach to teacher professional development aligned with the initiative seem to be key aspects. Internal coaching can certainly play a role in helping transform teacher practice at the classroom level and should be a tool used for continuous improvement regardless of initiatives a school is undertaking. When embarking on a new initiative, school leaders should strongly consider employing internal coaches as well as contracting with external coaching partners to most effectively facilitate the process of teacher learning during PBE implementation. External coaches can support administrators and teacher leaders in developing their vision for implementation, connecting the new initiative to other work happening within the school, and articulating common practices and expectations. External coaches also serve as a reflective partner for administrators as they lead the initiative, which may be instrumental in the success of implementation. These findings suggest that both internal and external coaches can be assets in implementation of a school-wide reform initiative and that optimal conditions for teacher learning may occur if both types of coaches are present, but this is an area in need of additional research.

At the outset of this study, Walpole et al.'s (2010) definition of coaching was offered, "a site-based PD [professional development] initiative designed to develop theory and use demonstration, observation, and feedback to improve classroom practice" (p.118). As a result of this study, this definition could be expanded to include reflective practice, collaboration and institutionalization of practices aligned to an initiative. Coaching, then, could be more broadly defined as a type of job-embedded professional development designed to improve teacher practice through ongoing, one-on-one and collaborative reflection leading to institutionalization of practices aligned to an initiative. This study provides evidence that supports the idea that external coaches function as part of a larger system that Gallucci et al. (2010) referred to as a

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'system of support' for schools implementing a reform such as PBE. This study also suggests that further research is needed to determine whether a comprehensive system that includes both internal coaching and external coaching support would be more effective at successfully implementing a school-wide reform. As we continue to place demands on our educators and administrators, let's refocus on the ways in which we can support them. Coaching can act as a primary lever for continuous improvement, providing ongoing support and professional development to aid schools in improving teacher practice and ultimately, student outcomes.

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Appendix A: Semi-Structured Interview Protocols

Semi-Structured Interview Protocol - Teachers

1. Tell me about the work you've done to this point around proficiency-based education.
   a. Walk me through your school's journey toward proficiency-based education.
   b. What kinds of professional development have you participated in around proficiency-based education?
      i. How would you describe your own learning from this professional development?
      ii. What specific professional development experiences have seemed the most beneficial in terms of your own personal learning and growth around proficiency-based education?
   c. What areas of implementation have seemed the most successful? Why?
      i. Talk me through the steps leading to this success.
      ii. Can you think of a way this success impacts your own classroom practice?
   d. What areas of implementation have seemed the most challenging? Why?
      i. Talk me through the work you've done around this challenge.
      ii. Can you think of a way this challenge plays out in your own classroom practice?
   e. How have you implemented proficiency-based education in your classroom?
      i. What are some practices you have changed?
      ii. Why did you make the changes you did?
      iii. What types of support are you receiving?
   f. Describe what you used to think about proficiency based learning compared to what you think about it now.

2. Describe the ways in which your (internal or external) coach works with you.
   a. How is the work structured?
   b. What are the goals of your work with the school coach?
   c. What kinds of strategies does the coach use when working with you individually?
   d. When working with a group of teachers?
   e. In what ways does your work with the coach help you reflect on your teaching practice?
   f. Are there any documents that might help me better understand how the coach works with you?

3. Describe the extent to which any school changes have been made as a result of working with a coach toward proficiency-based education.
   a. What evidence can you point to that changes in practice have occurred?

b. To what extent do you think your own beliefs or assumptions about proficiency-based education have shifted? Do you attribute any shifts to working with a coach?

c. To what extent do you think coaching support has facilitated these changes?

d. Considering where you have been compared to where you are now, to what extent do you think coaching (internal or external) has contributed to your progress toward proficiency-based education? (Repeat question for each type of coach)

4. Describe your own personal experience working with the (internal or external) coach.
    a. What are your interactions like?
    b. In what ways has the work you've done together influenced your beliefs about teaching and student learning?
    c. What differences have you experienced in your collaborative teacher work since working with a coach?
    d. In what ways has working with a school coach shaped, clarified, or changed your beliefs around proficiency-based education or student learning in general?

Semi-Structured Interview Protocol – Coaches

1. Tell me about the work you've done to this point with teachers around proficiency-based education.
    a. Walk me through this school's journey toward proficiency-based education.
    b. What kinds of professional development have you participated in and led around proficiency-based education?
        i.   How would you describe teacher learning from this professional development?
        ii. What specific professional development experiences have seemed the most beneficial in terms of teacher learning and growth around proficiency-based education?
    c. What areas of implementation have seemed the most successful? Why?
        i.   Talk me through the steps leading to this success.
        ii. Can you think of a way this success impacts classroom practice?
    d. What areas of implementation have seemed the most challenging? Why?
        i.   Talk me through the work you've done around this challenge.
        ii. Can you think of a way this challenge plays out in classroom practice?
    e. How would you say proficiency-based education is being implemented?
        i.   What are some practices you have observed that have changed?
        ii. Why do you think these changes occurred?
        iii. What types of support have you provided in these change areas?

f. What kinds of shifts in thinking have you observed as a result of working with teachers toward implementation of proficiency-based education?

2. Describe the ways in which you work with teachers in your role as coach.
    a. How is the work structured?
    b. What are the goals of your work with teachers?
    c. What kinds of strategies do you use when working with teachers individually?
    d. When working with a group of teachers?
    e. What are your interactions like?
    f. In what ways has the work you've done together influenced teacher beliefs about teaching and student learning?
    g. What differences have you experienced in collaborative teacher work since starting to work with teachers?
    h. How have you seen teachers reflect on their practice during your coaching sessions?
    i. To what extent have teacher beliefs and assumptions shifted as a result of coaching?

3. Describe the extent to which any school changes have been made as a result of working toward proficiency-based education.
    a. What evidence can you point to that changes in practice have occurred?
    b. To what extent do you think teacher beliefs about proficiency based learning have shifted? Can you provide an example?
    c. To what extent do you think coaching support has facilitated these changes?
    d. Considering where you have been compared to where you are now, to what extent do you think coaching has contributed to the progress toward proficiency-based education?

Semi-Structured Interview Protocol – Administrators/School Leaders

1. Tell me about the work you've done to this point around proficiency-based education.
    a. Walk me through your school's journey toward proficiency-based education.
    b. What kinds of professional development have your staff participated in around proficiency-based education?
        i. How would you describe teacher learning from this professional development?
        ii. What specific professional development experiences have seemed the most beneficial in terms of teacher learning and growth around proficiency-based education?

c. What areas of implementation have seemed the most successful? Why?
   i. Talk me through the steps leading to this success.
   ii. Can you think of a way this success impacts classroom practice?
d. What areas of implementation have seemed the most challenging? Why?
   i. Talk me through the work you've done around this challenge.
   ii. Can you think of a way this challenge plays out in classroom practice?
e. How has proficiency-based education been implemented in the school as a whole?
   i. What are some practices you seen that have changed?
   ii. Why do you think those changes happened?
   iii. What types of support are teachers receiving?
   iv. How are teachers reflecting on their practice?
   v. What kinds of shifts in practice have you observed as a result of teachers working with coaches toward implementation of proficiency-based education?
   vi. How do you think teacher beliefs or assumptions have shifted?

2. Describe the ways in which your (internal or external) coach works with teachers.
   a. How is the work structured?
   b. What are the goals of the work with the coach?
   c. What kinds of strategies does the coach use when working with teachers?

3. Describe the extent to which any school changes have been made as a result of teachers working with a coach toward proficiency-based education.
   a. What evidence can you point to that changes in practice have occurred?
   b. To what extent do you think teacher beliefs about proficiency based learning have shifted?
   c. To what extent do you think coaching support has facilitated these changes?
   d. Considering where you have been compared to where you are now, to what extent do you think coaching (internal or external) has contributed to your school's progress toward proficiency-based education? (Repeat question for each type of coach)

4. Describe your own personal experience working with the (internal or external) coach.
   a. What are your interactions like?
   b. In what ways has the work you've done together influenced your beliefs about teaching and student learning?
   c. What differences have you experienced in your collaborative teacher work since working with a coach?
   d. In what ways has working with a school coach shaped, clarified, or changed your beliefs around proficiency-based education or student learning in general?

Appendix B: Case Study Data Collection Protocol

(adapted from Yin, 2014, pp.84-85)

Site Identification:

Sources of Evidence (Yin, 2014, p. 106)

Type	Plan to collect	Timeline	Actually collected
Documentation	- Field Notes + Memos	September – October 2017	
Archival Records	- School's proficiency-based education readiness report (MDOE) or application for waiver	September 2017	
Interviews	- 4 teacher interviews - 1 or 2 coach interviews (internal and external) - 1 principal interview - Field Notes + Memos	September – November 2017	

Appendix C: Recruitment Emails

Dear Principal X,

I am conducting a study to explore the dynamics of teacher collaborative work with school coaches focused around the implementation of proficiency-based education. As your school is currently working with a school coach and is in the process of implementing proficiency-based education, the insight of you and your teachers would be relevant and extremely valuable to this field study. I would like your permission to interview a small number of teachers (4-6 individuals) in September – November 2017 who have regular direct contact with your coach and work collaboratively in a team to implement proficiency-based education. Each interview will be approximately 60-90 minutes in length, will be recorded for accuracy purposes, and can be held at your school or a location of teacher choice.

A full description of the study is attached to this email in the "Informed Consent" form, along with the interview questions. I hope you'll agree to participate in this field study and look forward to discussing it with you soon. Please respond by email and indicate a convenient time to schedule a meeting or phone call where I can answer any questions you may have.

Thank you,
Katie Thompson
Ph.D. Candidate
University of Maine

Dear Teacher X,

I am conducting a field study to explore the dynamics of teacher collaborative work with school coaches focused around the implementation of proficiency-based education. Your name was provided on a survey as a potential resource for my data collection, and I'd like to interview you regarding your experiences working with a school coach to implement proficiency-based education. Participation would consist of one 60-90 minute in-person interview with me, the principal investigator in this field study. The interview will be recorded for accuracy purposes, and can be held at your school or a location of your choice.

A full description of the study is attached to this email in the "Informed Consent" form, along with the interview questions. I hope you will agree to participate in this field study and look forward to discussing it with you soon. Please respond by email and indicate a convenient time to schedule a meeting or phone call where I can answer any questions you may have.

Thank you,
Katie Thompson
Ph.D. Candidate
University of Maine
College of Education and Human Development

Appendix D: Teacher Questionnaire

School:
Subject Area:
Grade Level:
Title:
# of Years in this Position:
Email Address:

1. What stage are you at in implementing proficiency-based education in your classroom?
   a. Initiating (beginning/planning)
   b. Implementing (starting to put into practice)
   c. Performing (full-school practice)

2. How would you rate your own participation in professional development and learning while implementing a proficiency-based system?
   a. I am very involved
   b. I am somewhat involved
   c. I do what is expected
   d. I have limited involvement

3. How often do you work with a coach (instructional coach or external coach)?
   a. Daily
   b. Weekly
   c. Monthly
   d. Yearly
   e. Never

4. Briefly describe how you work with a coach (e.g. individually or by department; on curriculum, instruction, or assessment; receiving feedback; classroom support, etc.)

   _____
   _____
   _____

5. What do you see as the value of working with a coach?

   _____
   _____
   _____

6. Is there broad leadership support for coaching?
   a. Yes
   b. No
   c. Unsure

7. Is there time built into the schedule for teachers to access coaching support?
   a. Yes

b. No
c. Unsure

8. Would you be willing to participate in a 60-90 minute interview to discuss your experiences working with a coach?
    a. Yes
    b. No
    c. Maybe

BIOGRAPHY OF THE AUTHOR

Katie Thompson was born in Portland, Maine on September 30, 1980. She grew up in Lisbon and Durham, Maine, graduating from Lisbon High School in 1999. She attended the University of Maine, graduating with a Bachelor's Degree in Biology in 2003. A lifelong student, Katie continued at the University of Maine to receive her Master's Degree in Science Education in the Spring of 2007 and then her Certificate of Advanced Studies (CAS) from the University of Maine in 2011. Katie currently works for Great Schools Partnership, a non-profit organization working with schools across the United States to reimagine public education and work toward educational equity. Katie is a candidate for the Doctor of Philosophy degree in Educational Leadership from the University of Maine in May 2022.