

INSTRUCTIONAL LEADERSHIP IN PROJECT-BASED LEARNING:
CULTIVATING SUPPORTIVE CULTURES, OVERCOMING BARRIERS, AND
LEADING CHANGE

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by

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The Undersigned, appointed by the dean of the Graduate School, have examined the dissertation entitled

INSTRUCTIONAL LEADERSHIP IN PROJECT-BASED LEARNING:
CULTIVATING SUPPORTIVE CULTURES, OVERCOMING BARRIERS, AND
MEASURING SUCCESS

Presented by Megan Thompson, a candidate for the degree of Doctorate of Education, and hereby certify that, in their opinion, it is worthy of acceptance.

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DEDICATION

I would like to dedicate this work to my family – especially to my mom, dad, and sister, Haley. They have always been my biggest cheerleaders in life, but especially through this degree program. The support, grace, encouragement, hugs, and confidence you have shown me have helped bring me to the finish line. To my niece, Aspen, your arrival in this world brought new meaning to the work I do each day. Your giant spirit and creativity continue to push me to be better for all kids each day. Lastly, to my dog, Savvy, who endured far fewer walks and belly rubs as I put the finishing touches on this dissertation. Your constant presence at my feet as I typed each word brought comfort during the most stressful moments. Words cannot express my gratitude for each of you.

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Abstract

Instructional leadership in project-based learning involves cultivating supportive cultures, overcoming barriers, and leading change. The purpose of this research was to examine the role of instructional leadership in implementing and sustaining project-based learning. This qualitative study utilized interviews, focus groups, and document analysis. Establishing a clear vision, creating a culture of risk-taking, trust, and celebration, understanding PBL as a methodology for learning and workforce preparation, embracing servant leadership, and removing barriers of time and resources were key findings of the research and can be used to navigate complex change in project-based learning.

SECTION ONE
INTRODUCTION TO DISSERTATION IN PRACTICE

Introduction to the Background of the Study

“The competencies needed in today’s knowledge-based economy require students to develop the ability to use knowledge in ambiguous, social, and dynamic situations. Today’s workforce puts a premium on employees who have the ability to solve problems, understand and use data, and engage in team-based situations.” (McDowell, 2017, p. 14) Thus, it is crucial that schools develop students who possess the ability to apply their knowledge and skills to each new task or challenge they encounter. To achieve this, students must be engaged in surface, deep, and transfer learning (McDowell, 2017).

Compared to schools from a generation ago, most classrooms serve a more diverse population, with students from varied life circumstances and who are not motivated in conventional ways (Vander Ark, 2002). While an abundance of research in practice and pedagogy, along with hours of teacher professional development, has been conducted over the last 30 years, student achievement on assessment scores has not improved (nationsreportcard.com, 2022). The Nation’s Report Card shows that assessment scores of fourth- and eighth-grade students were the same in 2022 as they were in 1992, with 39 percent of fourth graders and 32 percent of eighth graders in public schools scoring below basic in reading. Likewise, 36 percent of fourth graders and 38 percent of eighth graders scored below basic in mathematics (nationsreportcard.com, 2022). Despite an abundance of efforts, the achievement gap between white and minority students continues to increase.

While basic skills in reading and mathematics are faltering, technology and access to the global economy have propelled the world forward at an increasingly rapid pace. Yet most of our schools operate in the same way they did decades ago. According to Tom

Vander Ark, “Our schools are not failing – they are obsolete” (Vander Ark, 2002, p. 56). By preparing only 33 percent of students for college, our current school system is fulfilling its intended purpose - educating some and organizing the rest for the work of the industrial age. Except the industrial age is over, and those jobs are now operated by robots. Today’s workforce must have mastered foundational skills in reading and math, coupled with 21st-century skills of collaboration, communication, critical thinking, creativity, and the will to continuously learn and adapt (McGowan & Shipley, 2020; Vander Ark, 2006). According to McGowan and Shipley (2020), those who consistently embrace learning will be at the forefront in the times ahead. While our current education and employment systems follow the approach of learning first and then applying, the future demands a shift in this approach. Thus, education requires a change. Traditional paths of students mastering a skill and workers accumulating experience for predefined career steps may not suffice in an uncertain landscape. In a future where every step is unknown, where degrees and experience hold less significance, thriving requires the skill of perpetual learning. If the key to success in the future workforce is a commitment to continuous learning, how we teach students must change. Students and organizations must continually engage in a state of learning, unlearning, and relearning. Adaptability is key, and teachers and organizations must be willing to let go of traditional approaches and begin to reimagine how education might look in the future (McGowan & Shipley, 2020).

Reimagining learning and designing school systems that work for all students and prepare students for a quickly changing world is America’s biggest challenge, and many states and districts across the nation are taking steps to rethink education (Martin, 2018).

In many micro-schools and reimagined elementary schools, project-based learning has been a primary driver of student learning, as it creates endless opportunities for community partnerships, collaboration, real-world problem-solving, and design thinking. Through carefully and thoughtfully designed projects, students can progress through the curriculum in ways that provide a clear understanding of what they are learning, with implications for applying their learning in the world around them (Martin, 2018; McDowell, 2017).

Current educational practices produce one-third of the student population and the eventual workforce as being below basic in reading and math. School leaders must shift mindsets to help teachers align the learning experience with authentic tasks that develop the knowledge, skills, and dispositions needed in the future workforce (Martin, 2018). In today's intricate world, educational institutions, including schools and school districts, encounter four central challenges: elevated standards, emerging technologies, a more diverse student body, and evolving market demands. Those schools that have effectively addressed these hurdles have a common trait: they boast resilient, competent, and enthusiastic leaders (Vander Ark, 2000). These schools are led by strong leaders who focus on maintaining a clear vision and facilitating curriculum design that aligns with that vision (Vander Ark, 2002). We are not just talking about building principals. Successful schools redesigning education implore everyone to carry out the shared vision. To have success at every level there must be a shared vision and shared leadership at every level (Vander Ark, 2000).

Many of these schools are implementing project-based learning teaching methods to engage students in authentic, real-world problems. According to McDowell (2017),

schools that primarily use project-based learning as a teaching method outperform students in more traditional school settings on state and national tests. This is mainly due to the amount of deep learning that occurs in project-based learning (Hattie, 2008; McDowell, 2017). When implemented effectively, project-based learning has the potential to foster deep understanding and meaning for students, while also contributing to the development of a growth mindset, assessment capabilities, and collaboration skills (McDowell, 2017). “One of the greatest challenges for a classroom teacher is in interpreting each criterion and then deciding how to design a project that makes a substantial impact on learning” (McDowell, 2017, p. 21). With this challenge, how can school leaders help teachers consistently implement and sustain projects over time?

The persistent lack of progress in student achievement, coupled with widening disparities and outdated educational methods, underscores the urgent need for reform. As Vander Ark (2000) rightly asserts, our schools are not failing; they are obsolete. To prepare students for a rapidly changing world where adaptability and continuous learning are essential, educational leaders must adopt innovative approaches, such as project-based learning, and foster collaborative leadership (Martin, 2018). This transformation is not just a challenge; it's essential for equipping students with the skills they need to succeed in the 21st-century workforce and ensuring our nation's future prosperity (Martin, 2018; McDowell, 2017; McGowan & Shipley, 2020). In the following sections, background information on this problem of practice is discussed along with greater dialogue for the purpose of the study. Additionally, the study's design and theoretical and conceptual frameworks are presented.

Statement of Problem

Contemporary educational leaders encounter a multitude of challenges. Traditional teaching methods, as noted by VanderArk (2022), are proving ineffective in motivating students who often find them uninspiring. Furthermore, the landscape is dynamically shaped by the rapid evolution of technology, profoundly impacting workforce requirements (McGowan & Shipley, 2020). In the midst of these changes, the teaching profession faces a concerning trend of educators departing due to demanding workloads and insufficient support (Dove, 2004). Compounding these issues, assessment scores reveal a disconcerting pattern of schools struggling to meet expected standards (McDonough, 2015). Together, these challenges paint a complex picture, underscoring the pressing need for innovative and adaptive approaches to learning in the face of a rapidly evolving educational landscape.

Since the publication of "A Nation at Risk" in 1983, which brought attention to the shortcomings of the American education system, various attempts have been made to reform education. However, despite three decades of reform initiatives, progress has been limited. Shockingly, over one-third of students continue to perform below basic levels in reading and mathematics, with some urban areas experiencing as much as 90 percent of students performing below the basic standard (nationsreportcard.com, 2022). The challenges facing U.S. schools, such as high standards, the impact of new technologies, diverse student populations, and market pressures, are proving to be formidable obstacles to improvement (Vander Ark, 2000). The struggles are particularly evident in urban schools, as highlighted by McDonough (2015). Despite substantial reform efforts at both state and federal levels, significant achievement gaps persist, underscoring the ongoing

complexities and difficulties in achieving comprehensive educational improvement (Dove, 2004).

The quality of a teacher is a paramount factor influencing student achievement, as noted by Steinberg and Sartain (2015). Hattie (2008) reinforces this by underscoring the crucial role teachers play in shaping student outcomes. His research provides evidence that effective teaching practices wield a substantial impact on learning, empowering teachers to make a significant difference in student success. Key elements, such as collective teacher efficacy, teacher clarity, and comprehensive instructional programs, are identified as having a large effect size on student achievement (Hattie, 2008). Despite this potential, the teaching profession faces challenges, with teachers leaving due to burdensome mandates, inadequate professional development, and insufficient support in aligning with school goals (Dove, 2004). This alarming trend persists, with a notable 20% of teachers exiting the profession within the first three years (Dove, 2004), posing a significant problem, particularly in urban areas where there is a pressing need for quality educators (Clotfelter, Ladd, & Vigdor, 2006). Recognizing the need for transformative change, Martin (2018) emphasizes the necessity of adjusting the methods and approaches employed in teachers' learning processes to revolutionize the way students learn.

Another prevailing issue in education is the lack of student engagement in authentic, meaningful, and rigorous tasks (Martin, 2018; VanderArk, 2022). The irony lies in the fact that authentic learning, which fosters genuine understanding and application of knowledge, often clashes with the expectations imposed on teachers. These expectations center on covering, assessing, and documenting achievements in alignment with state standards and accountability measures (Martin, 2018). This emphasis on meeting

predefined standards can inadvertently hinder the cultivation of authentic learning experiences. To truly enhance education, it is imperative to shift the focus from a mere adherence to standards to an environment that sparks and sustains curiosity and passion among students, fostering a love for learning rather than extinguishing it (Martin, 2018). To carry out the high demands of education, we need high-quality and expertly trained teachers. However, many teachers are not adequately trained to teach deep learning skills, and instead have been trained in models that focus on the students memorizing facts and information (Garet, Porter, Desimone, Birman, & Yoon, 2001). To shift to a more balanced approach requires new teacher learning. While a substantial body of literature discusses best practices for professional development, research indicates that there is often a lack of transfer from professional development to the classroom (Garet, Porter, Desimone, Birman, & Yoon, 2001).

To address various educational challenges, many schools have undertaken the task of reimagining their approach to education. This reimagining process is grounded in instructional leadership, where schools and leaders strive to ignite passion, curiosity, and wonder in students by engaging them in rigorous problem-solving activities. A specific method employed is project-based learning, characterized by key principles of student-centered learning, authentic problem-solving, and learner agency (McDowell, 2017). This shift in mindset and pedagogy necessitates that school leaders also take on the responsibility of providing ongoing professional development and support specifically tailored to project-based learning. Martin (2018) emphasizes the importance of transforming the methods and approaches used in teachers' professional learning processes to affect a fundamental shift in how students learn. Martin (2018) emphasizes

not only changing teaching practices but also redefining the learning experiences for both teachers and students.

The problem lies in the ineffective application of project-based learning. Therefore, a critical analysis of the strategies employed by instructional leaders in developing and supporting teachers in project-based learning is necessary. This analysis aims to deepen our understanding of how to support and retain teachers, who are undeniably the most valuable and impactful resource in education. Simultaneously, it aims to examine instructional leadership as it relates to rich, authentic, and engaging learning experiences for students, equipping students with the essential skills, knowledge, and dispositions needed to thrive in a rapidly changing world. The focus of this study is to examine instructional leadership practices that foster a project-based learning environment that not only values, equips, and supports teachers but also ensures students are well-prepared for the challenges of an evolving global landscape.

Purpose of Study

The purpose of this study was to identify the instructional leadership characteristics that differentiate schools that thrive in project-based learning environments from those that struggle, despite having received comparable levels of training in project-based learning. The focus centers on key aspects, including real-world learning, teacher professional development, student achievement, curriculum design, learner agency, and community engagement. By investigating instructional leadership within these areas, the research aims to provide valuable insights into the effective leadership practices that support the implementation of project-based learning in educational settings. Understanding how instructional leadership aligns with these crucial

elements can provide a comprehensive perspective on fostering a conducive environment for both educators and students within the context of project-based learning schools.

The effectiveness of schools, as identified by Brookover and Lezotte (1982), is often associated with principals who excel as strong instructional leaders. John Hattie (2008) defines instructional leaders as individuals who prioritize learning for both students and adults, fostering a culture of excitement and enthusiasm. He emphasizes their vital role in eliminating distractions, maintaining clear priorities, and setting high expectations for students and teachers. In line with this, Jenkins (2009) emphasizes that "instructional leadership requires principals to free themselves of bureaucratic tasks and focus their efforts on improving teaching and learning" (p. 34). However, despite this recognized need, Stronge (1988) found that principals spend only 10% of their day on instructional leadership, with the majority of their time consumed by managerial and paperwork tasks. This raises concerns about the actual implementation of instructional leadership within the daily responsibilities of school leaders.

In Hattie's 2009 research on 185 factors that impact student achievement, 8 out of the top 10 factors with the most significant impact were directly related to the quality of teachers and the methods they use in their daily instruction. According to Hattie (2009), collective teacher efficacy and teacher credibility have a higher-than-average impact on student achievement. Knowing that quality teachers are the single most important factor in student achievement, understanding the support and professional development provided to teachers in implementing project-based learning is crucial. By examining these instructional leadership practices, we can gain a deeper understanding of how to support teachers best and, consequently, students engaged in project-based learning. The

purpose of this study is to examine the instructional leadership practices and professional development characteristics of schools that regularly implement project-based learning.

Research Question

What leadership tools and traits do building principals use to effectively and organically implement project-based learning into the school building? A study investigating instructional leadership practices within project-based learning is needed to better understand how we can develop our teachers and prepare our students for a changing future. Research questions for this study include:

1. What instructional leadership practices are employed in schools that have successfully implemented project-based learning after receiving extensive PBL training?
2. What barriers or challenges do leaders identify when attempting to sustain project-based learning practices?
3. How do instructional leaders in thriving and struggling schools differ in their use of systems, structures, and resources to support PBL implementation?
4. How do school leaders in thriving PBL schools describe their approaches to supporting teacher collaboration, professional learning, and instructional coherence?
5. How do instructional leaders align and balance project-based learning initiatives with broader educational goals, standards, and student outcomes?

Theoretical Framework

As the researcher examines the role of leadership in project-based learning environments, it is essential to establish a theoretical framework for leadership. The

theoretical framework of leadership provides a guide for understanding how leaders' practices can impact those they manage and lead. Four leadership theories were considered for use as the conceptual framework: authentic, team, sustainable, and transformational leadership theories (Northouse, 2016). Authentic leadership centers around the genuine and authentic qualities of a leader. Successful authentic leaders demonstrate excellence in self-regulatory practices and rely on an internal moral compass to guide their actions and decision-making (Northouse, 2016; Walumbwa et al., 2008). Team leadership was also considered. The fundamental principles of team leadership assert that the leader's role involves overseeing the team and ensuring its overall effectiveness (Hill, 1982; Northouse, 2016). Sustainable leadership was also considered. Sustainable leadership places significance on fostering profound and extensive learning, as well as making decisions and implementing changes that positively influence the greater good, both in the present and for the future (Hargreaves & Fink, 2004; Northouse, 2016). Lastly, transformational leadership was considered. Transformational leaders seek to influence individuals, organizations, and cultures by engaging and connecting with others. They aim to inspire and motivate, fostering a positive culture. The goal is to encourage individuals to exceed expectations and reach their full potential, resulting in higher levels of satisfaction, engagement, and overall organizational performance (Bass, 1985; Northouse, 2016).

To narrow down to a single leadership theory, three theories had to be excluded. Authentic leadership was ruled out because it is more about the genuine nature and moral compass of the leader when making decisions, rather than the vision and strategies they implement. The next theory considered was team leadership. Hill's 1982 definition of

team leadership emphasizes the role of leaders in facilitating and coordinating the efforts of team members to achieve common goals. According to Hill, team leadership entails guiding and supporting team members, fostering collaboration, and ensuring that the team's activities are aligned with the organization's objectives. In this context, the leader acts as a facilitator who promotes communication, resolves conflicts, and empowers team members to contribute their skills and expertise effectively towards achieving collective outcomes. Although schools require much collaboration among team members around common goals, it was ultimately ruled out because there is a risk of groupthink, and teammates could prioritize agreement and unity over innovation and critical thinking — two skills needed for sustained innovative practice in project-based learning. Sustainable leadership, according to Hargreaves and Fink (2006), involves creating and maintaining improvements over time by caring for people and systems to ensure lasting, environmentally responsible, and socially just impacts. Sustainable leadership was also ruled out because sustainable leadership relies on continuity and stability in leadership, which can be disrupted by turnover or changes in leadership direction.

For the purpose of this study, transformational leadership (Bass, 1985; Northouse, 2016) will be used to provide understanding and analysis of the leaders' behaviors because it is a leadership style where leaders inspire and motivate followers to exceed their own expectations and achieve significant positive changes by fostering a vision, trust, innovation, and personal growth. Transformational leadership would be used with teachers to inspire and motivate them to enhance their teaching practices, collaborate effectively, and drive significant improvements in student outcomes and school

performance by aligning their personal and professional growth with the school's vision and goals (Bass, 1985; Northouse, 2016).

Bass (1985) summarized transformational leadership within 4 key factors. The first factor, idealized influence, characterizes leaders as role models for their followers. They inspire others, garner immense respect, and motivate their followers. By building trust and gaining respect among teachers, transformational school administrators are more likely to gather support for continuous learning in the implementation of project-based learning. The second factor in transformational leadership is inspirational motivation. Through this characteristic, transformational leaders inspire and motivate their followers by capitalizing on their emotions. Transformational leaders clearly articulate goals and expectations, and they utilize hopefulness, passion, and encouragement to encourage and uplift their teams (Bass, 1985). A strong vision for project-based learning, coupled with enthusiasm and motivation, fosters the effective implementation of new teaching strategies. The third factor is intellectual stimulation. Transformational leaders stimulate creativity, innovation, and outside-the-box thinking. By encouraging critical thinking, problem-solving, and innovative ideas, leaders encourage challenging assumptions to create an environment where followers are empowered to implement new ideas (Bass, 1985). Project-based learning requires critical thinking, problem solving, and innovative solutions, both from the teacher designing the learning experience and the students working to solve authentic problems (McDowell, 2017). The last factor of transformational leadership is individualized consideration. Transformational leaders genuinely care about their followers' needs and development (Bass, 1985). Hence, they work to create a supportive environment tailored to the

individual needs of each person. The leader can tailor support and professional development to teachers' needs and interests. These factors describe the behaviors of transformational leaders. Transformational leaders are able to achieve positive change and outcomes with their organizations by leveraging their ability to inspire, motivate, challenge, and support their followers (Bass, 1985; Northouse, 2016).

Design of the Study

The design of the study employed social constructivism as a worldview to guide the research. Social constructivism lends itself to a qualitative study, with the goal of analyzing and making meaning of multiple and complex viewpoints (Creswell, 2014). Using this worldview, the researcher relies heavily on broad, open-ended questions and participant viewpoints (Creswell, 2014). The goal of a qualitative research study is to answer the research questions through a process of data analysis.

Research methods were chosen based on best practices as outlined by Creswell (2014) and Merriam and Tisdell (2016). Participant sampling, site description and selection, methods, and coding procedures were all carefully selected for the study design. For this qualitative study, data collection and triangulation included document analysis from each school's building improvement plan, interviews with school leaders, and focus groups with teachers. These methods are characteristic of effective qualitative studies (Creswell, 2014).

For the purpose of this study, four schools, along with their instructional leaders and teachers, were selected for interviews and focus groups. According to Merriam and Tisdell (2026), focus groups and interviews are the primary source of data for qualitative research. Teachers from each building were invited to participate in focus groups. Only

teachers who had completed the three-day training in project-based learning (PBL) with PBLworks were selected to participate. The focus groups provided the researcher with diverse perspectives on the actions and practices of instructional leaders (Kruger & Casey, 2009). The focus groups were approximately 25-60 minutes. A total of 17 teachers participated in focus groups, and the researcher used a set of flexible questions to guide the conversation. Additionally, four principals, two assistant principals, and four instructional coaches participated in interviews. Interviews lasted between 20-45 minutes and used a set of questions similar in structure to those of the focus group questions. Questions did vary between the building principals and the instructional coaches.

Study Setting

The research questions were addressed within the context of four elementary schools in the Sunnydale School District, where project-based learning has been implemented for the past seven years. Two of those schools were selected based on their experience with project-based learning, and two were chosen based on their limited implementation of project-based learning. Within the Sunnydale School District, there are 11 elementary schools, four middle schools, and two high schools working on project-based learning initiatives. Two elementary schools were prioritized for the study based on their commitment to and momentum for project-based learning, while two schools were chosen based on their lack of progress with project-based learning. Teachers in these schools underwent a comprehensive three-day training on project-based learning facilitated by PBLWorks. This initiative is specifically designed to equip educators with the essential tools to foster profound and enduring learning experiences for students. The

primary goal is to instill a genuine passion for learning and establish a meaningful, authentic, and personal connection to each student's academic journey.

The four elementary schools selected for the study vary in terms of population and demographics. The student population ranges from 300 to 850 students. Additionally, the number of classroom teachers in each building varies from 12 to 48 regular education teachers, spanning kindergarten through fifth grade. The free and reduced lunch population ranges from 5% to 45%. All four schools are predominantly white, with a variation of 81% to 85% white. The average years of experience for professional staff in each building range from 14 to 17 years. Besides school population, demographics among students and teacher experience are similar. Notably, the researcher's current school was deliberately excluded to prevent potential conflicts of interest.

To involve the schools in this research, the Director of Assessment and Research for Sunnysdale School District provided consent for the study's scope and signed the gatekeeper consent form. Subsequently, a proposal was submitted to the Institutional Review Board (IRB) at the University of Missouri. Upon obtaining approval from the IRB, data collection for the study commenced.

Study Participants

To address the research questions, three participant groups were identified. Leaders, including building principals and assistant principals, were invited to take part in qualitative interviews. Pseudonyms were assigned to the participating districts, schools, and individuals involved in interviews and focus groups to protect confidentiality.

A total of eight administrators were approached, constituting a purposeful sample designed to secure the most valuable data for the study (Merriam & Tisdell, 2016;

Creswell, 2014). The researcher personally contacted each participant through phone or email to request their involvement. Of the 8 administrators approached, 7 participated in interviews including 4 building principals and 3 assistant principals. Interviews were audiotaped and transcribed verbatim.

Additionally, instructional coaches were also invited to participate in semi-structured interviews. A total of four instructional coaches (one from each building) were approached, and all four participated, constituting a purposeful sample. The researcher personally contacted each participant via email to request their involvement. Interviews were audiotaped and transcribed verbatim.

Simultaneously, a typical sample of five to ten teachers from each school building was selected and invited to participate in separate qualitative focus groups (Merriam & Tisdell, 2016). These teachers were asked to provide insight into and knowledge of the instructional leadership practices of administrators and instructional leaders in their respective buildings—this separation from administrator interviews aimed to encourage teachers to express their thoughts openly and truthfully. The researcher personally contacted each participant through phone or email to request their involvement. A total of 17 teachers participated. A total of 4 focus groups were held, one at each school building. Focus groups were audiotaped and transcribed verbatim.

(Table 1)

<i>Interview Participants</i>			
Pseudonym	Years of Experience	Position	School
Debbie	12	Assistant Principal	Willow Creek
Charlotte	20	Principal	Willow Creek
Brady	6	Assistant Principal	Willow Creek
Carly	20	Assistant Principal	Meadowbrook
David	22	Principal	Meadowbrook
Jessa	19	Principal	Cedar Grove
Thomas	21	Principal	Maple Ridge
JoAnn	23	Instructional Coach	Meadowbrook
Don	22	Instructional Coach	Maple Ridge
Caroline	31	Instructional Coach	Cedar Grove
Anna	24	Instructional Coach	Willow Creek

(Table 2)

<i>Focus Group Participants</i>			
Pseudonym	Years of Experience	Position	School
Ava	23	teacher	Willow Creek
Lola	25	teacher	Willow Creek
Amanda	3	teacher	Meadowbrook
Kayla	15	teacher	Meadowbrook
Sylvia	17	teacher	Meadowbrook
Kathryn	14	teacher	Meadowbrook
Janet	4	teacher	Meadowbrook
Megan	24	teacher	Cedar Grove
Lucy	17	teacher	Cedar Grove
Layla	16	teacher	Cedar Grove
Monica	10	teacher	Cedar Grove
Ginny	5	teacher	Maple Ridge
Wanda	14	teacher	Maple Ridge
Finn	11	teacher	Maple Ridge
Samantha	21	teacher	Maple Ridge
Mary	5	teacher	Maple Ridge
Haley	10	teacher	Maple Ridge

Data Collection

The principals, assistant principals, and instructional coaches of each building were interviewed as part of this study. The decision to conduct interviews stems from the researcher's aim to comprehend the narrative underlying the school and school district's commitment to prioritizing project-based learning as an educational approach (Seidman, 2013). Each interviewee holds a significant role in shaping the professional development and learning experiences of teachers within the building. Interviewing these individuals,

given their roles as instructional leaders, is crucial to gaining insights into their perspectives and contributions.

The researcher created an interview protocol designed to address the research questions. The majority of the questions were open-ended, requiring respondents to provide narrative responses. The analysis of these conversations will help identify major themes, and to ensure the credibility of the findings, the researcher will employ member checking by consulting with those who were interviewed (Creswell, 2014).

The researcher conducted a focus group at each institution, comprising four to seven classroom teachers who regularly use project-based learning pedagogy. This approach aims to provide insights into teacher perceptions of instructional leadership (Creswell, 2014; Krueger & Casey, 2015). The focus group discussions will include questions about instructional leadership, professional growth, perceived student impact, and job satisfaction. Through these focus groups, the research aims to gain a deeper understanding of how instructional leadership influences teachers' thoughts, feelings, perceptions, and overall implementation of project-based learning (Krueger & Casey, 2015).

A focus group protocol was established to gain insight into teacher perceptions. Protocol questions will be developed to stimulate conversation, engage participants, and encourage them to reflect on and recall personal experiences. Focus group questions will allow for thick, rich narrative to be created, and will give a comprehensive understanding of teacher perceptions (Creswell, 2014). The conversations were audio-recorded and transcribed verbatim. After analyzing the transcripts, the researcher identified themes and

shared them with focus group members for member checking. This enables control and accuracy in the findings (Creswell, 2014).

While interviews and focus groups with teachers and instructional leaders are crucial for the findings, the research will also draw valuable information from various documents (Merriam & Tisdell, 2016). Documents offer insights that cannot be directly observed since the events have already occurred (Merriam & Tisdell, 2016). Furthermore, utilizing written evidence provides an unobtrusive way to gather data (Creswell, 2014). Among the most informative documents for this study are building improvement plans and professional development calendars. Both of these documents from each school building offer stable and unaltered information, unlike focus groups and interviews, where the presence of the researcher may influence responses (Merriam & Tisdell, 2016). To ensure accuracy, the authenticity of the documents will be established by investigating their history, authorship, purpose, authorship bias, and source (Merriam & Tisdell, 2016).

Data Analysis

The utilized document analysis, focus groups, and interviews. Audio recordings from the focus groups and interviews were transcribed and coded for further analysis and interpretation. Through a careful coding process, the researcher thoroughly analyzed the data over time to identify common themes (Creswell, 2014; Merriam & Tisdell, 2016; Seidman, 2012). In the final coding step, the researcher analyzed and interpreted the data to establish findings and answer the research questions (Creswell, 2014). Triangulating this data provided a comprehensive understanding of how project-based learning methods were implemented and sustained over time. This approach, as suggested by Merriam and

Tisdell (2016), enhances credibility and internal validity. Findings will be triangulated through detailed analysis of interviews, focus groups, and document analysis.

Limitations and Assumptions

This study had several limitations. Each school building is overseen by different administrators with distinct expectations and guidelines. Although the initial training from PBLWorks, formerly Buck Institute for Education, was consistent for all teachers, subsequent development at the building level varied across schools. Another limitation was the personal connection the researcher has with the organization due to her employment with the district (Merriam & Tisdell, 2016). This potential bias has the potential to influence the researcher's approach to the study, leading to the exclusion of her own school from the investigation.

Design Controls

Several controls were implemented to mitigate bias in the research process. To address potential bias stemming from the researcher's position within the organization, her own school was deliberately excluded from the inquiry (Merriam & Tisdell, 2016). Additionally, a measure to reduce bias involved using only open-ended questions during interviews and focus groups. This approach aimed to elicit participants' opinions and views without being influenced by the researcher's perspective (Merriam & Tisdell, 2016). The deliberate exclusion of the researcher's school and the use of open-ended questions were strategic measures to enhance the study's objectivity and impartiality.

Definitions of Key Terms

Definitions and key terms are provided to offer a deeper understanding of the concepts.

Collective Efficacy: A shared belief among a group of teachers that through their combined efforts, they can positively influence student outcomes (Hattie & Zierer, 2018).

Deep Learning: Deep learning is the ability to relate learning to multiple ideas and contexts. It involves understanding how different concepts and skills are linked together. At the deep level, learning is applying knowledge and skills (McDowell, 2017).

Far Transfer: Far transfer refers to the ability of learners to apply their knowledge and skills to solve complex problems across and between varying contexts (McDowell, 2017).

Innovation: The collision of ideas across different fields that results in refined changes for the purpose of a better solution (McDowell, 2021).

Instructional Leadership: A leadership model in which leaders set clear goals around instruction, allocate resources to curriculum, and monitor the implementation of lesson design to promote growth in student learning (Jenkins, 2009).

Learner Agency: Students' capacity to own and influence their learning through the beliefs, skills, and actions that make them active participants in the learning process. Agency occurs when students know what they are learning and why, and they can assess their own learning and decide what to do next (Hattie & Zierer, 2018).

Near Transfer: Near transfer refers to the ability of learners to apply their understanding within the same context (McDowell, 2017).

Project-Based Learning: A teaching method in which students learn through active engagement around real-world, meaningful, and authentic projects (McDowell, 2017; PBLWorks, n.d.).

Real World Learning: Learning designed to prepare students for the future by providing immersive learning experiences through projects or internships with community business partners and organizations. Through this learning, students acquire practical skills and gain early exposure to career pathways, enabling them to make meaningful progress toward their professional goals (Kauffman Foundation, 2024).

Surface learning: Surface-level learning refers to the ability to build knowledge and skills by understanding one or more ideas within a specific context (McDowell, 2017).

Transfer Learning: Transfer learning refers to the ability of learners to apply their understanding to complex problems (McDowell, 2017).

Significance of the Study

The current body of research is relatively limited in establishing a direct link between instructional leadership and project-based learning. While there is substantial independent research on innovative leadership practices and project-based learning, a significant gap remains in understanding how specific instructional leadership practices can influence crucial aspects such as professional growth, job satisfaction, and the broader implications on student engagement. Moreover, there is a compelling need for research that delves into the ripple effects of instructional leadership in preparing students for the demands of a rapidly evolving world. In a future where continuous learning is in high demand, there is a critical need to explore and comprehend the intersection between instructional leadership and project-based learning for the holistic development of young scholars.

Scholarship

Extensive research has been conducted on project-based learning (PBLWorks, n.d). However, most of the research has focused on student achievement outcomes. Additionally, most research on project-based learning has also been conducted with high school and college-level students. Very little research has been conducted on the implementation and professional development practices surrounding project-based learning, particularly in relation to instructional leadership at the elementary level.

Practice

Ongoing research into instructional leadership through project-based learning holds significant implications for educators and school leaders worldwide. Suppose this research identifies effective leadership practices related to project-based learning that provide valuable support and development for teachers, fostering profound and continuous learning for students. In that case, its findings can serve as a valuable resource for instructional practices in schools and teacher-preparatory programs globally. Understanding and implementing the best instructional leadership practices to support and cultivate teachers' excitement and enthusiasm for teaching and learning will contribute to the retention of quality educators within the field of education. Furthermore, providing instructional guidance that equips teachers to engage students in relevant, real-world problem-solving will result in the development of adaptable, quick-learning students prepared for the demands of a fast-paced workforce.

Findings

Following a thorough analysis of documents, interview data, and focus group transcripts, several key themes emerged as particularly meaningful. Both teachers and

instructional leaders conveyed their views on instructional leadership and its impact on project-based learning within their schools. These discussions offered detailed and nuanced insights, giving the researcher a well-rounded and in-depth understanding of their experiences.

Themes

The research participants' descriptions enabled several themes to emerge through analysis. There were often distinct differences between schools that thrived in project-based learning and those that struggled. Themes of strong building culture, prioritized goals, buy-in versus implementation, servant leadership, and time were common.

Building culture plays a pivotal role in determining the success of any new initiative as the shared beliefs, norms, and relationships within the organization shape how change is perceived, embraced, and sustained. A culture of trust, risk-taking, and celebration was extremely evident in the two elementary schools that have established standard practice around project-based learning. One school administrator even stated that they have very low teacher turnover because of their culture. David shared, “It’s the teacher collective efficacy, efficacy mixed with the synergy that has happened because we’re thinking differently about making learning authentic.”

Culture of Trust. Trust was a phrase that kept recurring with teachers and leaders about project-based learning. Kayla stated, “I feel like they trust us to get it all done.” Lucy said, “Trusting us in the decisions that we’re making in our room...They understand what we’re doing. So, they’re able to give us the freedom to make those choices based on what our kids are saying.” Another teacher, Layla, gave a great example of how her building leader promotes trust. Layla said,

The ability to be just trusted us as educators. Like if the district teaches narrative writing in quarter one, but if it's a better fit with the project that you're doing in quarter three...they trust us to get done what we are supposed to teach...but you don't have to follow what everyone else is doing.

Likewise, Janet brought a unique perspective to this work, as she has taught at both schools that have successfully implemented project-based learning. She shared, "Just being supportive and trusting us as teachers to make the right decisions...has been great." Additionally, trust was also a common theme in the conversations I had with building leaders. Jessa, the building principal of Cedar Grove, said, "I think that it is really knowing your staff and creating that trust." Another building principal, David, stated, "There's a very strong culture of like collective teacher efficacy here. In this building, teachers are never satisfied with doing the same thing twice. They always work to tailor it to each group that comes through." There were many times throughout the interview that David said, "Let's do it together because it's good for kids." This demonstrated belief and trust in his teachers and that they were doing the right work. Through these conversations, it was evident that when trust is present, collaboration flourishes and challenges become opportunities.

Culture of Risk Taking. With any new initiative, especially project-based learning, creating a culture of risk-taking is crucial. Throughout discussions with the teachers and leaders of schools that were thriving in project-based learning, there was an overwhelming sense that taking risks and trying something new was not only acceptable but also encouraged. Megan, a first-grade teacher, said, "I think about even in our own building, some of us when a new initiative comes, some jump in feet first, and some of us

just try little things at a time, get your feet wet.” Second-grade teacher Monica shared that it’s nice that they (administration) don’t push “everybody to look exactly the same”. Encouraging risk-taking requires creating a safe environment where people feel supported. Monica went on to state, “they’re always willing to let us try it... they never are like I don’t think that’s going to work. Like they’re always like, let’s give it a go and see what happens. If we fail, we fail.” One instructional coach stated, “it always starts with a relationship. I have to build some sort of relationship... And it takes a minute to figure out what that looks like when new teachers come in.” The notion that failure is okay is a driving force for continuous improvement and discovery. Caroline went on to share that it often goes back to

a little bit of the Apple philosophy of “Yes, and?” and “What if?” because for some, I don’t think as much as all of us know there’s no one way. Some leaders say this is the way you do it. Then I’m like, well, I can show you three other ways it could happen.

As the instructional coach of the building, helping support teachers, her mindset of multiple ways to do something helps encourage boldness in decision making. When asked about building risk-taking, Caroline shared,

If it’s not going to work the way that they think it’s going to work, I usually don’t put a stop to it.... What I’ll do is often say, what if you try this... because being confident to me is also being in the mistake space. It’s okay to take that risk, but what you don’t want is them to fail so deeply that they’re like, well, forget that, I’m never doing that again.

Balancing boldness and thoughtful decision-making are challenging. Jessa said,

As a leader, it's crucial to know your staff I know them well. It's that balance of how much do you push, how much do you support, and where is that kind of you know, happy medium? Because you can easily caudle too much for fear of making them uncomfortable, and equally, you can push too hard.

It was evident that risk-taking was prevalent because the building leaders had created a safe environment where people felt supported. Assistant principal Carly shared, "We're in this together. We try really hard to, like, build a lot of safety." She went on to share that there is a lot of safety because the leaders in the building are planning right alongside the teachers. So, the teachers know they have their unconditional support. Carly stated, "We try to encourage any step into the real-world learning. Real-world learning is the right step." JoAnn, an instructional coach, shared,

They're not afraid to try it, which I think allows them to naturally build confidence in a very authentic capacity. I don't think that I see teachers struggle with it because they have a growth mindset. Like they're very willing to try new things.

JoAnn also shared the notion that taking just one small step can "open a door to other opportunities." When risk-taking is supported, individuals feel empowered to explore new ideas.

Culture of Celebration. A third common factor in creating a strong culture revolved around celebration. Celebrating successes, whether big or small, boosts morale and motivation. "I learned very quickly that the best way is to always just celebrate, to encourage, and then again build that relationship enough so that at some point they begin to open up to more opportunities," said Caroline. Building principal David stated one of

the leadership actions he focuses on is “naming and claiming the amazing work that teachers are doing. And by naming and claiming what they’re doing...we are able to connect the dots... when it applies to real world learning and or partnership opportunities”. David went on to share his belief that “this team celebrates growth from start to finish, and we always say wherever they’re starting point is, let’s celebrate their growth...because celebrating growth is the means toward proficiency.” Regularly acknowledging achievements helps maintain a positive and energized environment.

While celebrating together can strengthen relationships and build cohesion, Caroline also shared that she often sees celebrations go sideways. Therefore, school leaders must be intentional in their celebrations. Caroline stated, “If someone’s getting all the praise in the building, someone else doesn’t want to try anything because they’re like it doesn’t matter what I do.” These ideas were evident in the schools that were struggling with implementing project-based learning. One teacher at Willow Creek Elementary shared that teachers need more words of affirmation from their building leaders. Ava shared, “We always start our team meetings on the negative. How about we flip that and start talking about things that were good or that worked, or what’s to be celebrated? Before we dive into what can we fix?” She went on to share that celebration should not just be a blurb in the weekly newsletter or on social media. Ava said, “actually take the time to showcase those people. What are they doing? Get people into their classrooms.” Finding the right balance of celebration ensures recognition feels meaningful without overshadowing the work of others.

It was evident that schools’ culture serves as the foundation for successful implementation, influencing how staff respond to, engage with, and ultimately carry out

new initiatives. A strong school culture fosters a shared sense of purpose and helps build collective efficacy.

Focus. The most significant distinct difference between the schools that flourish and those that flounder in project-based learning was the idea of focus. Through conversation and document analysis, it became clear that two schools had prioritized project-based learning for several years, while one school had not made it a focus at all, and another school was just starting to make it a more significant focus. Upon analyzing building improvement plan goals over the last three years, Meadowbrook Elementary and Cedar Grove Elementary had clear building goals and action steps around project-based learning. In fact, for both schools, their goals rarely changed from year to year – helping to create a vision, focus, consistency, and time to excel at the work.

On the other hand, Maple Ridge had a single goal related to project-based learning over the last three years, specifically targeting special education students, rather than a building-wide initiative. Willow Creek was unique in that it listed real-world learning, a component of project-based learning, as a goal for the last three years; however, when delving into the specific action steps to support this goal, it was weak. The action steps listed included one team meeting on PBL per quarter and posting on social media. There were clear action steps outlined in the building improvement plan for this year, which align with the teachers' thoughts in that building. Ava, a teacher at Willow Creek Elementary, shared,

I'd say even though we've been taking this journey for a long time, we're still at the very beginning. I'd say in fifth grade, I can't even think of a project we did

last year.... but this year, it's a whole different story. As a fifth-grade team, we're committing to doing two really big projects to try and integrate all the subjects.

Lola reinforced this notion by stating, "Having come from a school that was more project-based learning, more real-world learning. I would say that here it's in its infancy stages."

At Cedar Grove Elementary, teachers shared that they are always in a project with their students. Jessa, the principal at Cedar Grove, shared project-based learning,

It's just embedded. It's very natural here. It's not one more thing. It's truly what we do here. I feel like for newer staff, maybe there's a larger learning curve, but overall, that is the culture of Cedar Groove – with families, students, and staff. It's not something new or extra.

Jessa went on to share,

I think that everything goes back to the vision and the intent....and Cedar Grove being founded on that (project-based learning), I think that is why we always start our pre-service with vision...it's what we always go back to when I feel like we are kind of drifting. I feel like the vision is what anchors us back to what we're doing in PBL. It's so deeply embedded into that vision. That has been helpful as kind of our bumpers for getting us back on track.

It was evident in the number of project examples that were given from both Cedar Grove Elementary and Meadowbrook Elementary teachers and school leaders that project-based learning is deeply embedded and expected. David, the principal at Meadowbrook Elementary, shared that it is their focus and responsibility to provide our elementary students with opportunities to explore the world around them. David stated,

“If we at the elementary level can simply expose and let our kids explore within different layers of project-based learning, I feel like we are laying a pretty solid foundation for the experience in middle school and the immersion in high school.”

At Cedar Grove Elementary, the focus is clearly on project-based learning. Principal Jessa shared that the focus of PBL is clearly embedded even in the interview process as they begin hiring new staff. She shared that before the interview, she sends information about the vision of Cedar Grove Elementary to prospective candidates with questions to consider. Jessa shared, “In the interview, our questions are really specifically tailored around our vision, around project-based learning and real-world learning. Just to make sure that we are getting the right candidates...I did have one person in an interview that said, ‘thank you for these questions, I’m realizing I’m not a good fit’.” The intentionality behind the school's vision was evident in all decisions and processes.

On the other hand, at Maple Ridge Elementary, the focus and vision have been different. They have concrete goals in math, reading, writing, and creating a sense of belonging at their school – all of which are extremely important and essential in PBL schools as well. Through dialogue, it became clear that the elements were approached in isolation rather than an interdisciplinary approach to teaching and learning. Wanda, a fourth-grade teacher at Maple Ridge, stated, “It’s not been a huge emphasis. Not saying that it’s not happening and we’re not trying to incorporate some of those things, but it’s not necessarily where like our building goals have been directly tied to currently.” Haley, a fifth grade teacher at Maple Ridge, shared that project-based learning “is definitely encouraged...but our goals have really been to focus on phonics, and last year it was math.” Haley went to share an example of project-based learning that she really loved,

but upon sharing the details of that project, it became evident it was accomplished at a completely different school in a separate school district. Don, the instructional coach at Maple Ridge, echoed this sentiment when he stated that projects at Maple Ridge would not be what we consider high quality and containing all the elements that were shared in the training that was received through PBLworks, but “what I do think is really good here is that those elements are done really well...For example, I would say that the authenticity piece is a very important thing here at Maple Ridge.”

It was very clear that for Maple Ridge principal Thomas, despite being a district initiative, project-based learning is not a focus for him at his school. He emphasized the importance of having a clear vision and focus on math, phonics, and writing instruction, as well as utilizing a guaranteed and viable curriculum to achieve the goals his team has set. Thomas described his vision using the analogy of a racehorse. Thomas said, “Some horses are easily distracted, right? And so, they put blinders on those horses because they don’t want the horse to get distracted from what’s most important, which is straight ahead. Right?... Good ideas can also be major distractors...and then all of a sudden you’re over here...when we’re supposed to be here.” He went on to share that there are some really great projects going on around the district, but there are also projects that seem great, but are distractors and are not constantly reaching the learning intention. Thomas stated,

I think sometimes our job is to be flyswatters. That we kind of have to swat things away at times too, because if you don’t, everybody’s priorities start to come at you, and then before you know it, you’ve lost focus, and now we’ve just added so

many things to our plate that are potential things to interfere with what we really wanted to accomplish this year.

These dialogues highlighted the idea that focus and vision play a crucial role in the work that actually takes place in a school building. Perhaps one of the main reasons why project-based learning has not taken off in every school around the district is that it is not the vision of every school leader in the district. Maintaining a clear and consistent focus is essential for successfully navigating the challenges of complex change.

Buy In vs. Implementation. It was clear through every conversation with teachers, instructional coaches, and building leaders that everyone sees the value and benefit in project-based learning. There was not a single person who felt that project-based learning is detrimental to students. Teachers and school leaders were able to clearly articulate the excitement and engagement they see in students when they are engaged in projects.

Teachers themselves noted that their excitement and joy for teaching increases when they are engaged in project-based learning. Lucy stated, “I will not go to another school. If I leave, I’m quitting because I could not go back to like...you have to teach this curriculum page by page.” Lucy said that when she came to Cedar Grove Elementary, she had been teaching for ten years and was definitely approaching the burnout stage. However, after joining Cedar Grove and adopting the PBL methodology, she became energized and rediscovered her love for teaching. The special education teacher at Cedar Grove shared that when she made the transition from a fourth-grade classroom to the special education setting, not teaching through the PBL lens was the most challenging part of the job. She said, “I miss teaching projects because I went the opposite, where I

am legally mandated to teach XYZ, and it's like here's the curriculum you're going to teach out of." The art of teaching became somewhat lost for her. Although she shared that she incorporates elements of PBL where it naturally fits in the special education classroom, she also helps her students with the projects they are working on in the general education setting. Lola, who has taught fifth grade at both Cedar Grove and Willow Creek, shared that she gets excited to teach through projects, because that is how you learn later on in life. Lola explained,

I'm the kind of person that wants to know why...and so when we're asking the kids to do something, then why aren't we doing it in the way they would really do it in the real world? I don't want to learn something in isolation, because that's not the way I'm going to do it (in life).

The disconnect between buy-in and implementation became apparent when teachers at Willow Creek and Maple Ridge saw teaching core subjects as a separate component from teaching project-based learning, rather than teaching in an interdisciplinary way. Willow Creek assistant principal Debbie shared that her teachers have seen and understand the importance of PBL, but are unsure of how to make it feel seamless and not something separate from everyday learning. Debbie expressed,

I think it (PBL) lends itself well to combining all of that together. I think our job is to just help teachers see the connection so that it doesn't look like one more thing, but that it really is the avenue in which to connect everything and make it stronger and feel more seamless and less like one more thing. But it (PBL) is the thing that connects it all together. I think that's where we're struggling the most right now.

Anna, the instructional coach at Willow Creek, said, “They don’t always see it (PBL) as teaching and learning. They think sometimes it is a separate thing.” She noted that teachers fear taking the time to do project-based learning because it takes time away from teaching. She shared that her role is to help teachers connect the dots between the learning standards and project-based learning – so they see project-based learning as the pathway to teaching the standards.

When asked about what would be helpful to implement project-based learning, Maple Ridge fourth-grade teacher Wanda stated, “I would say, like, having a dedicated block of time. But obviously, when you do that, that takes away from something else, and being able to get kids the skills they need without losing that time is really hard.” An understanding that project-based learning is the learning, and is not separate from math, social studies, reading, or science, is a critical component for helping teachers to implement project-based learning.

Servant Leadership. Servant leadership “emphasizes that leaders should be attentive to the needs of followers, empower them, and help them develop their full human capacities” (Northouse, 2016, p. 253). Northouse (2016) also characterized servant leaders as being good listeners, empathetic, caretakers, and committed to the growth of people. Dialogue with teachers who successfully implement project-based learning said that their school principals and assistant principals were involved in the work with them. They often planned with them, taking care of clerical and behind-the-scenes work such as organizing transportation, managing physical resources, establishing community connections, or securing the funds to bring a project to life. Principal David shared,

We have a learning tab hub that just allows teachers to place ideas of what kids are learning, where they want to take it, and when it happens. Then, from that planning, Carly (assistant principal) and I are able to take those logistics and do the groundwork to bring it to life.

Sylvia, a fifth-grade teacher at Meadowbrook, shared, “They’re always really great about partnering with us.” Kayla said, “They are always supportive of listening to ideas and seeing how we can make it work.” Sylvia provided an example of a robotics project that has been highly effective for her students for several years. However, the robotics parts were wearing out, and they needed new ones, but this was not in the budget. She shared that her building principal was reaching out to other schools, trying to get pieces for them. He was working with the district technology person, seeing what other parts might work. He was even looking for additional funding sources. Sylvia shared that, “we were shut down in various ways.... But I think our administration has that communication piece...how can we help find these resources for you?” The team shared that their principal listens to them. Amanda reiterated, “Yeah, it’s not just I’m hearing you. I’m sorry for this, but hearing and then taking action on it.”

Time. All participants in this research noted time as a common barrier to project-based learning. Time was noted in two key facets: the time available for planning a project and the time required for implementation during the school day.

All participants noted that project-based learning requires a significant amount of planning time. There is no curriculum guide for teaching project-based learning at each grade level. It requires examining all the standards for a grade level and determining how to incorporate a few of them into an engaging project relevant to the students in your

classroom and the current community events. Teachers also noted that while planning takes a lot of time, it will likely have to be repeated the following year, because quality PBL does not look the same every year. It evolves based on the interests of your students and the needs of the community.

Caroline, instructional coach at Cedar Grove Elementary, highlighted the importance of creating time for the brain to play and be creative. She said, “I’ve worked under two different leaders, one with a lot of time and space to play and be creative and one that has tightened things up a bit.” Project-based learning requires time and space to be creative. Creativity is a practice. She went on to share, “So structures and systems that are so tight, and most schools have very tight systems, can make navigating project-based learning really challenging.”

School leaders at Willow Creek Elementary and Maple Ridge Elementary shared that their teachers want to incorporate more project-based learning, but it’s a matter of finding time for teachers to actually implement it. When teachers utilize a resource for teaching, they can spend less time on what to teach and more time on how to prepare and intervene. Fourth-grade teacher, Samantha, shared, “Having a resource in some of our areas that we teach has been super helpful because I can’t. I mean, there’s a reason people make math resources and ELA resources because they have the time to create it.” Maple Ridge fourth-grade teacher Samantha said,

It does take a lot of planning. Yes, and I think the hard part, too, is to make it personalized to each group of kids...I can’t plan in the summer for it. Like, I don’t know what these kids are going to want or be interested in.

Schools that were systematically integrating PBL into their daily practice were getting creative with schedules, scheduling collaborative planning time into what were traditionally school-wide professional development sessions, and utilizing district professional development funds to provide teachers with additional days to plan with their teams. Teachers at Meadowbrook Elementary noted that they are able to take an extra whole day or two half days throughout the school year to plan with their team. Additionally, both administrators indicated that they built in three early Wednesday release days strictly for the teams to work on real-world, project-based learning. The teachers at Cedar Grove Elementary noted that they have two additional professional development days built into their school calendar, and that these days are solely used for team plan time for project-based learning.

The second element of time was the time it takes in class to carry out a project.

The instructional coach at Cedar Grove Elementary shared,

It (PBL) always takes more time than you think... Time is always a barrier. Time is the greatest commodity. However, prioritizing in the planning process what you want to do versus what you need to is something that comes up in conversations.

If teachers are using project-based learning as an interdisciplinary approach to teaching the standards, it works. However, if teachers are teaching the core subjects in isolation and project-based learning is just a bonus, then “what often happens is PBL gets slowly smaller, smaller, smaller,” said Caroline. Wanda stated, “Having a dedicated block of time. But obviously, when you do that, that takes away from something else, and being able to get kids the skills they need without losing that time is really hard.”

Time was substantial barrier to the successful implementation of project-based learning. Limited time often hinders thorough planning and effective execution of initiatives, and the challenge of balancing time demands can obstruct meaningful change and innovation.

Research Question 1: Instructional Leadership Practices

The first research question inquired about the instructional leadership practices employed in schools that have successfully implemented project-based learning after receiving extensive PBL training. Analysis from both school documents and interviews and focus groups revealed that schools systematically implementing PBL have leaders who set a clear vision, foster a culture of collective teacher efficacy, allocate resources (time, money, personnel) strategically, and effectively monitor implementation. Administrators at Meadowbrook Elementary and Cedar Grove Elementary closely monitored the work being done. They both had a digital space to monitor and capture the work being done. These spaces were linked in their building improvement plans. Teachers from both buildings felt like their building leaders were in the trenches with them – that their principals knew what was happening in their classrooms.

A clear vision around project-based learning was evident at both Meadowbrook Elementary and Cedar Grove Elementary. This vision was steadfast and apparent when looking at the history of building improvement plan goals over time. Both schools had maintained consistency in their building goals over the past three years, with little to no change in priorities, allowing for sustained focus, deeper implementation, and meaningful progress toward their objectives.

Collective efficacy was prevalent at both Cedar Grove Elementary and Meadowbrook Elementary. Teachers had an apparent belief that learning can be powerful for all students through project-based learning. David stated, “teacher collective efficacy, efficacy mixed with synergy that has happened because we’re thinking different about making learning authentic.” Lucy shared,

I just feel like so often in kindergarten, it is letters and sounds...and math facts, which we do teach through direct instruction, and there’s a lot of kids that come in struggling with that. But then, through PBL, those kids are the ones that are shining. Like, they can tell you an embryo and all the parts of a seed because of the learning that we’re doing. It just feels like with that, all the kids can find strengths throughout the day that really work for them, and they’re learning.

Teachers and instructional coaches at both buildings noted that building leaders were creative with their use of resources, especially time and money. When asked about how teachers balance the work of project-based learning with some of the state and federal demands, they shared that their leaders create space in the school calendar on early release days and during team meetings to do the work. Sylvia stated, “They secure time to make sure we have those RSPs done.” Caroline said, “We are always slaves to our schedules, specials schedule, all of that. I think one of the things that I’ve watched current leadership do is constantly try to figure out how to maximize time.” Building leader Jessa noted that she and her staff are always writing grants to secure extra funds for resources and field experiences to enhance learning. Teachers at Cedar Grove provided examples of how their building principal sought additional funding sources or connected with various individuals to secure access to robotics components needed for a project.

Research Question 2: Barriers to Implementation

The second research question asked about the barriers and challenges identified to implementing and sustaining project-based learning. Time and resources were noted as barriers by every participant in the research study. Additionally, student behavior, new professional development opportunities, and competition were shared as barriers to implementation.

All participants shared that time was the most significant barrier to implementing project-based learning – this was not just from the teachers and leaders from the schools who were struggling with the work, but also from those who were consistently implementing project-based learning. Teachers shared that PBL requires extensive planning since there is no set curriculum. It is a lengthy, creative process that is time-consuming. As one instructional coach noted, creativity “requires time and space to play,” yet most schools operate within tight structures that limit such flexibility. Leaders at most schools shared that teachers want to do more project-based learning but struggle to find the time, while those who successfully implement PBL were finding innovative ways to create more time for their teachers to collaborate on new projects.

Student behavior was brought up by two groups of teachers as a potential barrier to implementing project-based learning. Ginny shared about a garden project her team is involved with. She stated, “I feel like any connection that these kids can make to what they’re learning is very helpful for them... but these kids came in really, really rough, and I just felt defeated and defeated...it’s just hard to try to teach behaviors and also try to be out in the garden. Like it’s really hard to balance it.”

Competition between teachers was also noted as a barrier to both creating a culture of celebration and collective teacher efficacy. Lola shared, “There’s a competitive nature that is encouraged too, I think, and that’s part of the problem.” These ideas of competition can create a barrier to establishing teacher collective efficacy.

Lastly, new professional development opportunities were also shared, not as a barrier to implementation, but as a barrier to continued growth in implementing project-based learning. Teachers reported that they had all received initial training for Gold Standard PBL through the Buck Institute. They also mentioned that they had attended follow-up sessions with the instructor for two years after their initial training; however, they noted that little additional training had occurred since then. Layla shared,

You can’t find opportunities for us to attend where we’re not the ones that end up teaching. Like, even conferences like the MoreNet conference and the Learning Forward conference in Missouri. You could send people there, but then Sunnydale as a whole is the one teaching the sessions, and you don’t ever feel like you’re being grown professionally.

When you are on the edge of innovation, it can be challenging to find relevant professional development. Knowing that her teachers needed to be continuously developed, Cedar Grove principal Jessa took it upon herself to create a hub for professional development that helps individualize learning for teachers, much like how we individualize learning for children. Jessa shared,

This year, we tried something different with really utilizing more in-house (professional learning) and then subbing them out and covering so they can spend time in other studios to watch from each other. Because yes, there is such value in

getting out of the building, but with Cedar Grove...with our structure, there is nowhere else like that... and you lose sight of the learning and instruction because you're so stuck on the structure of it.

Jessa also shared that through the professional learning hub she created, information is listed to cater to a variety of learning styles, including articles, videos, podcasts, and more. Jessa also shared, "I'll get certain books...I'll put them in their mailbox...if I know they are a book person." She caters to the learning styles of the teachers.

Research Question 3: Differing Approaches to Implementation

The third research question inquired about the differences in how instructional leaders in thriving and struggling schools utilize systems, structures, and resources to support the implementation of project-based learning. The approach leaders took to implement project-based learning stems from prioritizing a clear vision for this approach. That is what differs between the schools. For Cedar Grove Elementary, the school was established with a project-based learning approach. Jessa shared, "Cedar Grove being founded on that (PBL)... I feel like the vision is what always anchors us back to what we're doing in PBL." She said, "It's not one more thing. It's truly what we do." At Meadowbrook Elementary, assistant principal Carly shared,

You know, I'm lucky in that, since I've been here, it's been the norm to have sort of a minimum expectation of sharing out their learning with an authentic audience every year at every grade level. So, that culture was built for me.

She also shared that PBL is a

district initiative...We've been through the PBL training. We have a director of Real World Learning. We're being asked more and more questions about how

we're doing real-world learning at the elementary school level. So, I think that part of that is just trying to align ourselves with the district initiative.

Alternatively, the principal, teacher, and instructional coach at Maple Ridge Elementary shared that it has not been a priority for them. It is not listed as a goal in their building improvement plans. Wanda at Maple Ridge shared, "It's not been a huge emphasis...it's not been necessarily where our building goals...are directly tied to currently." Principal Charlotte from Willow Creek shared, "This year, we said one (PBL) per semester." So, they are starting small this year and trying to build in the future, but it has not been a monitored priority in the past.

Research Question 4: Instructional Supports

The fourth research question asked how school leaders in project-based learning schools describe their approach to supporting teacher collaboration, professional learning, and instructional coherence. Collaboration is key, and those who thrive in PBL create time and space for cooperation. David shared, "Because it's a building goal and a building focus, that automatically grants permission for us to give time for teachers to plan. We have three PD sessions built just around the planning part of it so that they can intentionally craft and ideate, and plan what moments they want to bring to life."

Principals of Cedar Grove Elementary shared that because there was not much professional development to meet the needs of her staff who have been doing PBL for several years, she had to take it upon herself to create a learning hub for her teachers. This professional development website offers a variety of modalities to meet the learning needs of each teacher in her building. It's filled with podcasts, articles, and videos. She shared that she really tries to personalize learning for her teachers. She also shared that

she made a shift this year to have teachers visit the classrooms of other teachers in her building more frequently. Jessa shared that the goal was “so they can just spend time in other studios to watch and learn from each other” because they are the experts in this work.

Lastly, both Cedar Grove Elementary and Meadowbrook Elementary discussed using professional development funds to allocate more time for collaborative planning on projects. These findings underscore the importance of purposeful leadership, focusing on collaboration, professional learning, and coherence, in maintaining the integrity and effectiveness of project-based learning across a school community.

Research Question 5: Balancing Education Goals

The fifth research question asked how instructional leaders align and balance project-based learning initiatives with broader educational goals, standards, and student outcomes. How you interpret project-based learning shapes the answer to this question. Those who thrive in project-based learning view this methodology as the primary means by which students learn. They do not view it as something separate, but rather as something that helps guide learning. It does not mean that direct instruction or typically traditional teaching methods do not occur. They do. It lends relevance and connection to the teaching because it is tied to an overarching project that is interwoven throughout various subject areas. Learning standards are embedded in the projects and learning is deep so that students can transfer their learning to other settings, activities, and challenges, including assessments. Layla shared that before she came to Cedar Grove,

I was on a team of packet printers, and I was getting really frustrated with teaching science standards through a packet or textbook. So, I was trying

different things in my little trailer, and then I realized how engaged my kids were and at a such a deeper level.

Lucy shared that before her work at Cedar Grove, she

came from a workshop model where we had an hour of reading, an hour of writing, and an hour of math every day...It was nice to come here and kind of have the freedom and not be tied to certain curriculums or certain time frames.

Megan echoed this idea, “As a veteran teacher, I was excited to try something new...to have kids immersed in their learning and making things, learning by doing, learning by trying.”

Jessa shared,

I know we talk about the proverbial plate and we try to show how it’s all connected, but teachers are pretty perfectionistic by nature and want to do everything well. I feel like once you fully grasp what it (PBL) is like, that it is the thing, you’re not willing to compromise anymore...Those are the people who fully believe it. Like they’ll rearrange everything else because that’s just how they teach. And they know that’s what matters to get the learning to stick.

Project-based learning serves as the link that connects the dots across education – it embeds standards, cultivates innovation, and affords a flexible way to teach reading, writing, math, science, and social studies making learning both engaging and transferrable.

Recommendations

Manage Time

District and building leaders should allocate dedicated time for collaborative planning to support project-based learning. “Time is a commodity,” and there is never enough of it. Without adequate time to plan, teachers will often feel frustrated with their work instead of enthusiasm, which can lead to burnout. If the school district's goal is to transition from traditional to authentic, real-world, hands-on, and immersive learning experiences, this should be reflected in the building improvement plans. Subsequently, clear action steps should be outlined for implementing this. Complex change takes time. The research showed that schools successfully implementing PBL had consistent building improvement plan goals year after year. So instead of creating short-term one-year plans, consider moving toward long-range planning with building goals centered around 3-5 years. This allows time for change to occur and for leaders to remain steadfast in their work.

Consensus of Vision

Throughout this research, it was very clear that not all building leaders are on the same page when it comes to innovative practice and reimagining schools. While that is the district's priority, steps should be taken to build consensus on the vision in every building within the district. As Lippitt, Watson, and Westley (1958) share, a clear vision creates purpose and scope. With an ambiguous vision, confusion arises, and complex change does not occur. Developing collective skills and a shared vision clarifies district priorities and aligns understanding around the expectations set forth by district leadership.

Provide Continuous Teacher Development in PBL

Project-based learning is challenging work. It utilizes methods that teachers were not taught in their college teaching programs. Create adult learning structures for interdisciplinary teaching. Allow teachers from other schools to observe in classrooms that are fully immersed in project-based learning. Allow them to spend chunks of time in classrooms so they can see how each subject is woven into a project. Building teacher skills will reduce stress and anxiety. Additionally, find, create, or provide ongoing professional development for teachers who have been immersed in the work for several years and are seeking to further their development.

Align Action Plans with Vision

Create building improvement plans that align with the district's vision, rather than creating plans that operate in isolation, focus solely on short-term goals, or merely meet mandates. Consider creating long-range action plans for building, so teachers and administrators have time to become experts and to actually accomplish the goal before moving on to something else. Taking this action would stop the cycle of going around in circles and instead create consistency and steadiness in the work.

Build Cultures of Trust and Risk Taking

The need to build a culture of trust, risk-taking, and celebration around innovative practices is critical for teachers to feel comfortable trying new teaching methods or adopting innovative teaching strategies. When teachers feel supported and know that their efforts are valued, they are more likely to experiment, reflect, and grow in their practice. Creating an environment where mistakes are viewed as opportunities for learning rather than failures encourages teachers to take bold steps in designing meaningful learning

experiences for students. Affirmation and praise help reinforce that innovation is not only permitted but expected and appreciated. This culture of encouragement and recognition serves as the foundation for sustained instructional improvement and collective growth throughout the school community. Ava said, “Actually take the time to showcase those people. What are they doing? Get people into their classrooms.” Finding the right balance of celebration and ensuring recognition feels meaningful without overshadowing the work of others. Cultivating this culture empowers teachers to embrace innovation with confidence, resulting in lasting change.

Summary

This study aimed to evaluate the instructional leadership characteristics in schools that implement project-based learning, focusing on real-world learning, professional development, student achievement, curriculum design, and community engagement and utilizing transformative learning as the theoretical framework for its goal-focused nature and emphasis on knowledge construction. The study's design incorporated social constructivism, utilizing interviews, focus groups, and document analysis. The study setting involves four elementary schools whose teachers were trained to utilize a project-based learning framework for instruction. Two of the elementary schools were implementing project-based learning system-wide, while two schools were not. Data analysis required transcription, coding, and triangulation of interviews, focus groups, and document analysis. The study contributes to the understanding of instructional leadership in project-based learning schools, informing educational practices globally, and addressing the challenges of fostering a supportive environment for both teachers and students in a changing academic landscape.

Through the triangulation of data, the researcher found several themes. Time was considered the biggest barrier to implementation. Servant leadership was a trait found in building the leadership of schools implementing PBL. Prioritizing a focus on PBL and fostering a culture of risk-taking, trust, and celebration was key. Ensuring that teachers have both buy-in and a clear understanding of what PBL is, what it is not, and how to implement it was a critical component to successful implementation.

Based on the findings, several recommendations were made to help school leaders navigate complex change. This included building a culture of risk-taking, trust, and celebration, as well as creating a consensus of vision around innovative practices in PBL. It also included creatively managing time and finding or creating more opportunities for teachers to plan around PBL collaboratively. It was also recommended that school action plans align to the vision of innovation set by the district, and it was also recommended that three to five year action plans be considered versus one-year action plans. Lastly, providing continuous professional development around PBL is needed.

SECTION TWO
PRACTITIONER SETTING FOR THE STUDY

Introduction

Section Two of the dissertation-in-practice includes a history of each school organization, and, more specifically, how project-based learning was envisioned. It also includes an analysis of each school organization in relation to the research study. There will be additional discussion focused on the leadership structure within each organization. Finally, implications for the study will be explored.

History of the Organization

Sunnydale Public Schools

Sunnydale Public Schools is committed to fostering well-rounded graduates equipped with academic, personal, cultural, professional, and entrepreneurial skills. The district places a strong emphasis on real-world learning, providing students across all grade levels with opportunities to engage in project-based learning, Project Lead the Way, and various professional and career-focused programs, including Northland Career Center, Northland CAPS, Network53, and Collegiate Nursing Academy. As a member of the League of Innovative School Districts, Sunnydale Public Schools collaborates with the Kaufman Foundation on initiatives related to real-world learning. The district's vision for 2025 includes ensuring that all high school students graduate with both marketable assets and a diploma, positioning them for success in future work and continued learning.

Sunnydale Public Schools is a suburban public school district located in northwestern Missouri. Sunnydale Public Schools serves approximately 12,500 students across 1 early childhood center, 11 elementary schools, 4 middle schools, 2 high schools, and one alternative school. The student body represents a diverse mix of backgrounds, with 75.5% identifying as White, 6.1% as Black, 8.7% as Hispanic, 2.7% as Asian, 6.6%

as multiracial, and less than 1% as American Indian and Pacific Islander. The district has a 20.4% population eligible for free and reduced lunch, and a 1.1% dropout rate. The professional staff has an average of 15.9 years of experience, and 82% hold advanced degrees.

Sunnydale Public Schools values educating the whole child. It recognizes the need to personalize learning and help students develop the skills and dispositions necessary to thrive in a rapidly changing world. These skills and dispositions are outlined in the district graduate profile. Sunnydale Public School's graduate profile states that every student will be competent in cultural, professional, academic, personal, and entrepreneurial skills. Within the cultural domain, students are expected to graduate high school being able to interact, work, and develop authentic relationships with people from diverse backgrounds. Collaboration, communication, and self-direction skills are utilized in the professional domain to enable students to contribute effectively to a work environment. Curious, goal-oriented, critical thinkers who apply academic skills to solve problems are attributes found within the academic domain. Additionally, the district seeks to cultivate students who are reflective learners with a growth mindset, enabling them to manage their personal well-being. Lastly, it is the goal that every graduate implores divergent thinking while growing an entrepreneurial spirit. This includes being creative, developing networks, and being adaptable. While implementing multiple tiers of support to address the academic and behavioral needs of each student, the district also seeks to provide all students with access to real-world learning opportunities through project-based learning experiences.

Integral to the success of its learners is the direct relationship between teaching and learning. With these goals in mind, professional learning for teachers is a priority and embedded through professional learning communities, conferences, workshops, coaching, job shadowing, and externships. Regarding project-based learning, all elementary teachers in the district are trained in this approach through PBLworks, formerly The Buck Institute. This 3-day training is considered the gold standard model of project-based learning professional development. This comprehensive approach is designed to ensure that educators are equipped to foster an effective project-based learning environment for their students.

Cedar Grove Elementary

Cedar Grove Elementary, established in 2014 with its vision on empowering creativity, equipping students, and engaging the community. The core of this vision is continuous project-based learning infused with 21st-century skills integrated into all learning processes. Specifically, the school's project-based learning approach revolves around emerging world technologies, local and global challenges, and real-world problem-solving. While Cedar Grove Elementary operates within the Sunnydale Public Schools system, enrollment is determined through a lottery system, ensuring equal representation from each neighborhood within Sunnydale Public Schools. The school accommodates 300 students spanning kindergarten through fifth grade and adopts a co-teach model, featuring two teachers for every 50 students in a studio/classroom setting.

Cedar Grove Elementary demonstrates strong academic performance, with 86% of students achieving proficient or advanced levels in English Language Arts, 95% in mathematics, and 93% in Science. The student demographic has remained consistent over

the nine years since Cedar Grove's inception, comprising 85% white, 7% multi-racial, 3% Hispanic, 2% Black, and 1.7% Asian students. The school maintains a low percentage of free and reduced-eligible students, consistently around 5%. Additionally, 7% of the student body is enrolled in the gifted education program. The teaching staff at Cedar Grove Elementary boasts an average of 17 years of experience, with 82 percent holding advanced degrees. Cedar Grove Elementary has a leadership structure of one building principal and one half-time instructional coach.

Willow Creek Elementary

Willow Creek Elementary School is dedicated to the mission of "Identify greatness. Develop confidence, and Create the Leader," aiming to cultivate an environment where every child in grades kindergarten through fifth can develop a lifelong passion for leading and learning. Situated within the Sunnydale Public School District, Willow Creek Elementary boasts a diverse student population, with 81% white, 5% Hispanic, 3.7% black, 3.1% Asian, and 6.7% multi-racial students. Approximately 6% of students qualify for free and reduced lunch. The teaching staff is experienced, with an average of 14.6 years of teaching, and 79% hold advanced degrees. In terms of academic performance, 67% of students achieved proficient or advanced levels in English Language Arts, 65% in mathematics, and 57% in science. The school's vision centers on creating an engaging learning community that fosters a passion for both leadership and continuous learning. Willow Creek Elementary has a leadership structure of one principal, two assistant principals, and one half-time instructional leadership coach.

Meadowbrook Elementary

Meadowbrook Elementary is committed to its mission of going above and beyond to prepare each student for their personal best. Guided by a set of core values, the school emphasizes professionalism in education, where learning takes precedence, respect is the norm, excellence is expected, collaboration is ingrained in the culture, and integrity serves as the foundation. As a Missouri public school serving students from kindergarten through fifth grade, Meadowbrook Elementary caters to a diverse community of approximately 550 students. The student population consists of 81.7% white, 5.3% Hispanic, 8% multiracial, 1.2% Asian, and 3.4% black students, maintaining consistency in demographics over the past 5 years. Additionally, 15.4% of the student body is eligible for free and reduced lunch. Academic performance indicators reveal that 43% of students scored basic or above in English Language Arts, and 55% achieved basic or above in mathematics. The dedicated staff contributes to the school's success, with 49% holding advanced degrees and an average of 14.5 years of teaching experience. Lewis & Clark has a leadership structure of one principal, one assistant principal, and one half-time instructional leadership coach.

Maple Ridge Elementary

Maple Ridge Elementary values relationships, inclusivity, and a sense of belonging. They understand the importance of strong connections between school, families, and the community. Their goal is to create a nurturing and supportive learning environment that enables students to reach their full potential. Maple Ridge Elementary is a kindergarten through fifth-grade public school in Missouri. It is home to about 350 students, 72% of whom are white, 8% are Hispanic, 8% are black, 1% are Asian, and 8%

are multi-racial. Additionally, 45% of the student body is eligible for free or reduced lunch, and the school is a Title 1 school. Academic performance indicators reveal that 32% of students scored at or above the proficient level for math, and 37% scored at or above the proficient level in reading.

Organizational Analysis

Sunnydale Public Schools is a large public school district in the state of Missouri, servicing over 13,000 students and just under 2,000 employees. There are two high schools, one alternative high school, four middle schools, eleven elementary schools, and one early childhood center. Additionally, there is a multi-layered administrative structure. Analyzing the organization of the school district can help bring some clarity to the challenges regarding the transfer of professional development and the continuous training and retention of employees. The following sections will analyze the organization through the human resource, political, and structural frameworks (Bolman & Deal, 2013).

The human resources frame exists to align organizational and human needs. The training and retention of highly qualified staff are critical. While employees need opportunities, salary, and benefits in their careers, the school district needs them for their talent, ideas, and energy (Bolman & Deal, 2013). To achieve this successfully, organizations must develop and implement a comprehensive human resources strategy, including hiring, retaining, investing in, empowering, and promoting diversity among their employees (Bolman & Deal, 2013).

“Organizations exist to serve human needs” (Bolman & Deal, 2013, p. 117). A school district does this on two primary levels. They provide learning environments and academic knowledge for students, while also offering fulfilling careers and competitive

salaries for staff. Beyond the basic needs provided by a school district are smaller details that can greatly enhance human resources. For example, within Sunnysdale Public Schools, the district has a well-established health and wellness program for all staff members. This program provides a comprehensive range of resources to help employees establish and maintain a healthy lifestyle. Many areas of focus within this program include diet and exercise, preventive care, and 24-hour mental health care – especially focused on managing stress. Education is one of the most fulfilling yet stressful careers. In providing this service, the district is showing staff that not only are we grateful for the work you do, but we also recognize you as individuals and want to ensure you are taking care of yourself. The ethical responsibility for caring for employees and creating a safe environment has been established. This district-driven initiative certainly helps satisfy Maslow’s idea that once basic needs are met, individuals progress up the hierarchy of needs, eventually reaching self-actualization (Bolman & Deal, 2013). In addition to physical and mental health, professional development opportunities, including conferences, professional learning communities, and various training sessions, are encouraged and provided, demonstrating the organization's commitment to staff development (Bolman & Deal, 2013). This not only enhances individual performance but also will ultimately improve the organization.

Additionally, “people and organizations need each other” (Bolman & Deal, 2013, p. 117). The organization ceases to exist without the employees. Sunnysdale Public Schools has a reputation for hiring the right people and retaining them—teachers who come to the district stay in the district. There is an established sense of pride and loyalty in being a high-performing, well-rounded school district in the state of Missouri. Loyalty

stems from district administration, parents, and stakeholders caring for all staff. A few examples of this include a district educational foundation that teachers can write grants to and strong parent-teacher organizations that provide field trips, school equipment, and community engagement. Leaders who acknowledge long-term career goals in staff, offer opportunities for individual growth, and promote from within demonstrate investment in and empowerment of their staff (Bolman & Deal, 2013). Even though the existing culture promotes loyalty within the district, the need for transformative change from the traditional school model will require innovative thinking, adaptive leadership, and a commitment to embracing new educational practices and technologies. This requires creative instructional leadership and cutting-edge professional development (Martin, 2018). Cultivating this new approach to learning requires delicate care to the culture of each individual building, as “overall, organizational culture is one of the largest predictors of the successful use of team by companies” (Levi, 2014, p. 267). From this analysis, it is evident that the district's culture fosters a positive environment that enhances overall morale and a sense of value, ultimately keeping people loyal to the district.

According to Bolman and Deal (2013), distress ensues for both the organization and the individual if the working relationship between the two parties does not work for one or both parties. This is the most significant area of where the dilemma lies within the human resources frame. A challenge to traditional methods and beliefs around education will necessitate a reevaluation of current policies, a shift in organizational culture, and a willingness to adopt more flexible and inclusive approaches to teaching and learning. This is a feat that will inevitably cause some distress, discomfort, and resistance among

employees who are accustomed to established norms and practices and are satisfied with the status quo. In addition to teachers, building leaders must also challenge convention while inspiring innovation. These new ideas may not be the perfect fit for every employee and could result in unsatisfied workers who may choose to leave the district (Bolman & Deal, 2013).

However, when both the individual and the organization have a trusting, open, and fulfilling relationship, it benefits all parties involved (Bolman & Deal, 2013; Lencioni, 2002). The current success of the school district lies within the district's focus on the vivid vision and mission. Every person in the district understands and is committed to the common goals (Levi, 2014; Lencioni, 2002). It is transparent that district decisions have been made with those goals in mind, and district administration has been very transparent. Additional opportunities for teachers and staff to voice opinions are welcomed through the employee advisory board and community focus groups. Overall trust and openness is currently a reality. However, change creates anxiety, and there is a sense of anxiety among staff in keeping up with the demands of future decisions regarding curriculum and instruction and professional development. This sense of uncertainty creates stress, hurts morale, and could impact the working relationship between individuals and the organization.

Looking through the political lens, challenging traditional educational norms and restructuring the way students learn could become a battle if coalition members have different values, beliefs, interests, and perceptions of reality around education (Bolman & Deal, 2013). According to Bolman and Deal (2013), an organization comprises diverse groups and individuals with various interests (Bolman & Deal, 2013; Bolman & Deal,

2010). Within this study, we have different interest groups, including students, teachers, parents, instructional coaches, building administrators, school board members, and district-level leadership. Each person in these groups has a unique educational history and their own set of beliefs about learning. The most challenging aspect, through a political lens, is implementing project-based learning while being held accountable to state standards and state-mandated assessments. Balancing innovative teaching methods with the requirements set by policymakers is difficult, and many educators might struggle to navigate these conflicting demands (Bolman & Deal, 2013).

Furthermore, when considering professional development in a district as large as Sunnydale Public Schools, the organization must carefully consider how it allocates resources and decides who receives what, as this could have a significant impact on teaching and learning (Bolman & Deal, 2013). Teachers continue to lobby, along with their teacher unions, for higher salaries, additional funding for supplies, and improved curriculum resources. Project-based learning, focused on authentic, real-world work, requires access to experts, fieldwork, and materials for projects, all of which necessitate an increased budget. Building principals also solicit more professional development funds and access to more instructional coaches, and, in general, more time for teachers to work within their professional learning community. All of this occurs while the technology department seeks funding to enhance and upgrade technology, the maintenance department keeps the administration abreast of facility needs and upgrades, and special programs seek resources to increase opportunities for students, such as athletics, fine arts, and robotics. Central office administration and school board members

seek the allocation of money to be dispersed in the most effective way possible, hoping that the most essential stakeholder they serve, the students, will benefit the most.

Additionally, according to Bolman and Deal (2013), “scarce resources and enduring differences put conflict at the center of day-to-day dynamics and make power the most important asset” (p. 189). Each stakeholder in this dilemma is seeking something different, which creates conflict and can put a strain on relationships. Ultimately, the group with more power achieves its goals. In this study, expert, legitimate, and informational power (Bolman & Deal, 2013; French & Raven, 1959/2005; Levi, 2014) originates from central office administration and is then disseminated to building administration. In addition, as managers of the district at the strategic apex (Mintzberg, 1979/2005), decisions are made with a strong focus on meeting the district's overarching goals (Bolman & Deal, 2013).

Through a structural lens, Bolman and Deal (2013) posit that organizations exist solely to achieve their set goals and objectives. The goals and objectives for Sunnydale Public Schools are clearly outlined in the district’s vivid vision, and a pathway to success with action steps is outlined within the district's continuous improvement plan. The plan also includes a timeline for implementation and the persons responsible for the work. Completion of the action items is carried out through the five basic components of an organizational structure (Mintzberg, 2005).

According to Bolman and Deal (2013), organizations are more efficient when there is a division of labor. According to Mintzberg (2005), every organization has five basic labor components. These components include the strategic apex, middle line, operating core, technostructure, and support staff. The operating core consists of those

who are actually doing the work and performing the operations to produce goods or services (Mintzberg, 2005). In our study, the participants would mostly be teachers. The strategic apex consists of those who are in charge of the organization as a whole. The perspective informs their thought process and decisions on how they affect the entire organization (Mintzberg, 2005). In this case, the superintendent, assistant superintendents, chief financial officer, and chief operating officer make up the strategic apex. The strategic apex also leverages its legitimate power as program leaders to exert influence (French & Raven, 2005). Middle-line managers would be the building principals and assistant principals, as they pass down information from the strategic apex and ensure that the operating core functions are based on the decisions made at the top of the hierarchy (Mintzberg, 2005). This requires direct supervision. The technostructure would include department directors, who analyze data and information, design, and redesign the work performed by the operating core. They train the operating core and middle-line managers, but they never do the work themselves (Mintzberg, 2005). The last component is the support staff. Although the roles of these staff members are essential, they do not have a direct impact on the production of goods or services. Examples of support staff would include legal counsel, payroll staff, mailroom staff, receptionists, office assistants, and research and development teams (Mintzberg, 2005).

Leadership Analysis

According to Bolman and Deal (2013), organizations utilize various methods to tie local initiatives to system-wide goals. In a school district with 19 individual schools, vertical and lateral methods are in place to support day-to-day operations and the district's overall vision.

Sunnydale Public School District uses a vertical leadership method through a formal chain of command (Bolman & Deal, 2013). District administrative leadership is housed at the district administrative center and comprises approximately 30 people. At the helm of the organization is the superintendent of schools. His role is to cultivate a vision for the school district with approval from the elected board of education, to whom the superintendent reports to. The superintendent has five cabinet members to help strategically carry out the vision. The chief operating officer oversees the day-to-day operations of maintenance, grounds, transportation, nutrition services, health services, and facilities. Another member of the cabinet is the Chief Financial Officer. This role oversees and controls the district budget, including individual budgets for departments and schools. The chief operating officer and the chief financial officer both work with the superintendent of schools on bond and levy initiatives. Additional members of the cabinet include three assistant superintendents, one for human resources, one for student equity and access, and one for learning and innovation. The assistant superintendent of human resources oversees the recruitment and retention of employees, as well as the administration of salaries and benefits. The assistant superintendent of student equity and access oversees all student services, including, but not limited to, special education, Title I, diversity and inclusion, and the Children's Services Fund. The assistant superintendent for innovation and learning oversees curriculum, instruction, building-level administration, assessment, core data, instructional coaches, and professional development. The superintendent and cabinet members comprise the strategic apex (Mintzberg, 2005). In addition to the cabinet members, the director of communications and marketing works with all cabinet members to share information with school

stakeholders. Under the Assistant Superintendent of Learning and Innovation are three executive directors: one oversees elementary principals, one oversees secondary principals, and one oversees curriculum, instruction, and accountability. The three executive directors work directly with department directors and building principals, assistant principals, and instructional coaches to ensure that district action steps aligned with the vivid vision are carried out. This organizational structure models the five components of Mintzberg's (2005) organizational structure.

In addition to a vertical method of leadership, the district also utilizes a lateral method of leadership through various committees (Bolman & Deal, 2013). The Curriculum Council, heads of state, and Team Sunnydale are all examples of lateral committees within the district. The Curriculum Council is composed of teachers from all grade levels who play a vital role in ensuring the consistency, relevance, and quality of educational programs within the district. They design and revise curriculum and assessment, and make recommendations for resources and ongoing support. The Curriculum Council shares this information with the Heads of State committee. This group is composed of one grade-level teacher from each grade in each building. The heads of state committee members then take the information back to their grade level teams within their respective buildings. This helps to ensure that all teachers across the district have access to the same information and resources. However, it can often lead to misconceptions, incorrect information, and a lack of knowledge among all teachers as information is passed down from group to group. Team Sunnydale is an additional lateral committee led by the assistant superintendent of human resources and is composed of one member from each district department, such as administrative cabinet, maintenance,

administrative assistants, safety & security, nutrition services, health services, elementary principals, secondary principals, assistant principals, elementary teachers, and secondary teachers. This team works collectively to propose changes to human resource items, such as salary schedules, benefits, and the school calendar. Their proposed changes are sent to the superintendent, who then passes them on to the board of education for final approval. This collaborative structure, while fostering broad participation, also underscores the importance of clear communication among all district staff to ensure accurate and consistent information.

Implications for Research in the Practitioner Setting

Continued research is necessary to understand the role of building leaders and teachers in the effective implementation of project-based learning. Investigating leader attributes in relation to providing adequate and timely professional development is crucial. Additionally, analyzing the actions of instructional leadership that facilitate the transfer of knowledge from professional development to classroom practice is essential. This need is supported by Martin (2018), who emphasized the need to “pay attention to the systems we design and how they impact learning, they can become hurdles to jump over instead of supporting the teaching and learning that they were intended to create.” (p. 50)

Studying instructional leadership and instructional systems in relation to implementing project-based learning is crucial for several reasons, particularly when aiming to build future-ready skills in students. By evaluating strategic planning and innovative change management, we can better understand the steps instructional leaders take to carry out the vision. Additionally, by examining professional development, we

can gain a deeper understanding of the training and support required to implement new methodologies, as well as how leaders build capacity among their employees.

Furthermore, we can understand how leaders blend the implementation of new teaching methods with future-focused and innovative practices while still aligning the work to state-mandated learning standards and accountability assessments.

Summary

In Section Two, the organization's context was provided, including historical details about the school district and individual elementary schools. An analysis of the organization was conducted using structural, political, and human resource frameworks. The leadership framework was also examined, followed by a discussion on research implications.

SECTION THREE
SCHOLARLY REVIEW OF THE STUDY

Introduction

The quality of a student's teacher is the highest factor related to student achievement (Steinberg & Sartain, 2015). Decades have passed and billions of taxpayer dollars have been spent reforming education and creating evaluation systems to ensure student success. Yet, little has been accomplished to diminish the existing achievement gaps, and none of these reforms have changed the way individual teachers are developed. Twenty percent of United States teachers leave the profession within the first three years of beginning their career (Dove, 2004), and the achievement gap between varying subgroups continues to grow (McDonough, 2015), with low-income students averaging 5 years behind in literacy proficiency when entering high school, 14% of Hispanic students dropping out high school, and African-American students scoring an average of 6 points lower on the ACT than white students (National Center for Educational Statistics, 2010; Reardon, Valentino, Kalogrides, Shores, & Greenberg, 2013). These statistics reveal that teachers are not receiving enough support. They do not have the skill set to teach at-risk students, and their feelings of failure and exhaustion guide them to quit (Dove, 2004). If teacher quality is the main factor contributing to student success, what are leaders in American education doing to support and develop teachers that will ultimately increase academic achievement? It is critical that teachers are adequately prepared and continuously trained to meet the ever-changing needs of today's students. By closely examining the instructional leadership methods used to support teachers and instructional practices used to engage students in deep, real-world learning, perhaps educators can begin to uncover a missing component that drives teachers to enhance the quality of their craft.

In the following sections of this literature review, a brief historical background is explained. This is followed by the discussion of the theoretical framework in learning theory, and possible conceptual frameworks are argued. Based on knowledge uncovered through existing research and theory, questions for future research are brought forward.

Historical Background

Since the founding of our nation, the federal government has had a hand in education. In 1787, the *Northwest Ordinance* required each township to set aside land to support education (Cross, 2015). During the 1960s, President Lyndon Johnson's *War on Poverty* made education a priority, giving federal money to poor schools (Cross, 2015). *The Individuals with Disabilities Education Act (IDEA)*, passed in 1975, granted educational access to all children with disabilities, but the release of the *A Nation at Risk* report in 1983 by President Ronald Reagan "was an enormous catalyst for change and school reform" (Cross, 2015, p. 2). Since 1983, American public education has seen continual reform pushed forward by policy makers. Continued research brought on by this report has found astonishing discrepancies between white and African-American students, as well as other subgroups (McDonough, 2017). Subsequent years have brought forth legislation such as *Goals 2000*, the reauthorization of *ESEA*, *No Child Left Behind*, and *Race to the Top* (Cross, 2015). According to Cross (2015), all of these policies and legislation have placed strong mandates for increasing academic achievement on individual states and their respective public education systems. While academic reform has seen minor growth in American education, the achievement gap between varying subgroups continues to grow (McDonough, 2015), and these reforms have done little to improve how teachers are developed and supported. Historically, reform efforts to ensure

quality teachers are in every classroom and that every child receives an equitable education have resulted in mandated teacher evaluation systems (Morgan, Hodge, Trepinski, & Anderson, 2014).

Despite ongoing teacher shortages, addressing poor student achievement in American public schools requires a renewed focus on recruiting and retaining highly qualified educators. A more recent study on teacher retention shows that teacher shortages in K-12 are widespread with 40% of public schools reporting that it is difficult to hire highly-qualified teachers. This was a 23% increase from a decade before. Colleges and universities are also reporting that enrollment in teacher preparation programs have decreased by one third over the last decade (Coleman & Wagner, 2024). Research shows that teacher quality is the most important predictor in student achievement (Hattie, 2009). Project-based learning can offer a promising solution to mitigate the effects of the teacher shortages by increasing student motivation and restoring teacher passion (Coleman & Wagner, 2024).

Project-Based Learning

John Dewey was the first to propose the learning by doing method, and Italian educator Maria Montessori suggested that in a well prepared environment, children can teach themselves and guide their own learning. A half century later, project-based learning was formally developed and mostly used in the medical setting. However, in the late 1980s and early 1990s some began to adapt the practice into a K-12 model. (Thayer-Bacon, 2012; Korkmaz & Kalayci, 2021)

21st century skills such as critical thinking, communication, collaboration, and creativity are essential for modern education (Ferrero, Vadillo, & Leon, 2021). Project-

based learning helps develop these dispositions in learners. Project-based learning is described as active and student-centered where students work to solve real-world challenges. Teachers often act as facilitators. In project-based learning, students usually culminate the project with a method of solving the problem (Ferrero, Vadillo, & Leon, 2021). Historically speaking, project-based learning originated out of necessity for students to be able to apply academic skills into daily practice and make connections with the real world (Ferrero, Vadillo, & Leon, 2021), specifically with medical students and architects. At an undergraduate level, studies have shown that project-based learning improves both academic learning and application of knowledge. The main elements of project-based learning include solving a problem or challenge, collaborative group work, and student learning guided by teachers. Ferrero, Vadillo, and Leon (2021) noted that teachers using this method of teaching must be well-trained and equipped in their teaching strategies and tools in order for knowledge to be adequately scaffolded for learners, otherwise project-based learning may not be successful.

There has been little systematic research into the effectiveness of project-based learning at the kindergarten and elementary level (Ferrero, Vadillo, & Leon, 2021). Ferrero, Vadillo, and Leon (2021) performed a systematic review on the effect of project-based learning on content knowledge at the elementary level, and their results were varied. Of the 11 studies they examined, seven resulted in a positive outcome as a result of project-based learning, two studies did not find a significant difference in outcomes, and the remaining two studies either did not report quantitative data or did not compare the control group to the experimental group (Ferrero, Vadillo, & Leon, 2021).

In 2025, fostering meaningful student engagement means balancing digital innovation with strong relationships and purposeful, relevant learning experiences.

K-12 education post-COVID remains a complex and challenging endeavor.

Student academic recovery has stalled, not yet returning to pre-pandemic levels.

Academic declines have been a significant focus of the conversation; however, multiple indicators of student engagement continue to lag and demonstrate limited recovery, as well. Lower student engagement contributes to learning loss, poor academic development, and lower college and workforce readiness rates.

These impacts are even more pronounced, in typically underserved student populations (Wagner, 2025, p. 2).

Luckily, teachers can have a direct impact on student engagement and PBL is one way to increase student engagement. According Wagner (2025), project-based learning brings authenticity, student voice and choice, motivation, and cognitive challenge to learning, ultimately leading to increased student engagement. When student engagement increases, achievement, grades, motivation, and critical thinking all improve. When engaged in project-based learning, Wagner says students describe their work as “more challenging, interesting, worthwhile, and enjoyable” (Wagner, 2025, p. 4).

Project-based learning is cross-curricular, student-centered, and long-term with an added focus on students learning soft skills such as collaboration, communication, leadership, and creativity, as well as focusing on real-world challenges (Hawari & Noor, 2020). Hawari and Noor (2020) specifically researched project-based learning in an art classroom. A project-based learning art classroom must be holistic, autonomous, and collaborative while promoting creativity, innovation, and design thinking (Hawari &

Noor, 2020). Additionally, within the project-based learning framework, essential questions must be established early to narrow the focus for sustained inquiry. These questions “should spark ideas, inquire students’ knowledge when solving problems, drive and capture project themes, and not easily be solved and answered. (Hawari & Noor, 2020, pg. 105) Hawari and Noor (2020) also noted the importance of meaningful interactions between teachers and students in the project-based learning classroom, as well as the importance of teachers understanding the elements of project-based learning, relevant resources, and teaching strategies. Hawari and Noor (2020) noted that student learning is measured and assessed throughout the project, not just at the culmination of their final project.

Projects should be focused at solving problems in society while students practice and master both academic skills and learner dispositions. Students should leave their education having mastered skills in critical thinking, communication, creativity, problem-solving, and cooperation (Issa & Khataibeh, 2021). In a constructivist approach to teaching and learning, students construct and interpret new knowledge rather than memorize information. Issa and Khataibeh (2021) researched teacher perceptions of student critical thinking skills in a project-based learning classroom. They found a positive statistical significance of project-based learning in contributing to the development of student critical thinking skills.

According to PBLworks (2025), there are seven project-based teaching practices. These include: design and planning, aligning to standards, building culture, managing activities, scaffolding student learning, assessing student learning, and engaging and coaching. In the design and plan practice, teachers create a project that fits the context of

their students. It is planned from beginning to end with plenty of opportunity for student agency. The second practice is aligning the project to standards. Teachers will use the standards to help plan the project, ensuring that it addresses the required learning for the grade level or content area. The third practice focuses on cultivating the culture. Project-based learning is a pedagogy shift. It requires teachers to promote student independence, inquiry, teamwork, and growth. The culture for project-based learning must be built in a classroom over time. The fourth practice is managing activities. Many facets of every project require teachers to help students organize tasks, find resources, create projects, and monitor checkpoints. The fifth practice requires teachers to scaffold students' learning. In this practice, teachers will utilize all the tools in their teacher toolbox to provide instruction to students, enabling them to reach their goals. The sixth practice requires teachers to assess student learning throughout the project, at multiple checkpoints, and in various authentic ways. This could include formative and summative assessments of skills and knowledge, as well as self- and peer-assessments of team or individual work. Lastly, the seventh practice is to engage and coach. In project-based learning, teachers are engaged in the learning right alongside the students. They don't hold all the answers, but they teach, reteach, redirect, and encourage as needed throughout the project (PBLworks, n.d.). According to PBLworks, the following are the seven elements required for gold-standard PBL.

Within the context of project based learning, surface, deep, and transfer learning occurs (Martin, 2018; McDowell, 2017). Surface learning is the building of knowledge and skills. In surface learning, students are building knowledge within one or multiple contexts. Deep learning occurs when learners are able to relate knowledge across

multiple contexts. Transfer learning occurs when students are able to apply their understanding to solve complex problems. Transfer learning can be near transfer or far transfer. Near transfer involves applying knowledge and skills to solve problems within similar contexts. Far transfer occurs when learners apply knowledge and skills to varying contexts (McDowell, 2017). Rigorous learning is the “equal intensity and integration of surface, deep, and transfer-level learning” (McDowell, 2017, p. 98). However, the ultimate purpose of learning is to be able to apply knowledge and skills in real-world situations - transfer learning.

To truly promote transfer learning, educators must support students in becoming assessment-capable learners by designing purposeful, relevant assessments across a variety of platforms and a variety of ways. Coleman and Lane (2025) state that high-quality assessment is engaging and meaningful to students, measures real-world skills and knowledge, and allows students to demonstrate mastery of the content and skills they have learned. “Assessment should not only measure learning- they should further it” (Coleman & Lane, 2025, p. 2). To do this, educators can engage their students in project-based learning performance assessments. Quality PBL has several performance checkpoints throughout each project. These performance checkpoints require scholars to apply knowledge and skills within authentic contexts. They develop and design products that demonstrate their ability to synthesize and apply the knowledge and skills they have learned. As a result, teachers can clearly determine whether students have met the standard (Coleman & Lane, 2025). A well-designed PBL offers students multiple opportunities and varied ways to demonstrate their learning.

How do teachers teach for transfer, and how do instructional leaders provide development and learning for teachers to help them better understand how to design learning experiences that help us reach the end goal of transfer learning? What does it mean to teach for transfer? Transfer learning requires students to think laterally. Learners must be able to utilize knowledge and skills from one context and retool them for use across context in order to solve real-world problems. For transfer learning to occur, students must acquire a diverse set of strategies that enable activation, application, and authenticity in solving real-world problems (McDowell, 2017).

Educators must be equipped with the tools needed to optimize surface, deep, and transfer learning for students. “Dramatic improvements in student learning require promoting adult learning first” (Vander Ark, 2000, p.52). To promote learning among educators, instructional leaders must consider best practices and learning theories.

Professional Development

Educational reform has seen policy makers turn to teacher evaluation to ensure accountability in public education (Morgan et al., 2014). Traditionally, teacher evaluation is based on test scores, student feedback, student work, and supervisor observations. Very little focus has been given to actual teacher growth (Morgan et al., 2014; Roussin & Zimmerman, 2014). Yet, research continues to reveal that how teachers receive and apply professional development is the most effective way to enhance teacher performance and ultimately student learning (Roussin & Zimmerman, 2014). Range (2013) found many veteran teachers exhibit complacency, partly due to the fact that “evaluation methods do not differentiate to meet the diverse needs of experienced teachers.” (p. 67). Martin (2018) also noted that if we want teaching methods to change, we must teach teachers

differently, as well. With school leaders, parents, and policy makers pushing to ensure that a highly-qualified teacher teaches each child, evaluation systems have been created to attempt to accurately measure the effectiveness of teachers (Morgan et al., 2014). This effort has forced principals to be both the supporter and the evaluator, often causing anxiety and mistrust between teachers and instructional leaders (Callahan & Sadeghi, 2015).

According to Coleman and Wagner (2024), there are several things a school district could do to help decrease the teacher turnover rate. Some of these things include increasing teacher salaries and covering the cost of tuition for teacher education programs. Additionally, those solutions are often not on the table, as district budgets simply do not allow for them. However, “teachers are motivated by ample collaboration time, greater feelings of autonomy, supportive and involved administrators, and allocated time for high-quality professional development that is collaborative, individualized, and immediately useful within their classrooms.” (Coleman & Wagner, 2024, p. 2). Specifically, professional development is closely linked to higher teacher satisfaction and improved retention rates. High-quality professional learning encompasses a clear and relevant focus, numerous opportunities for active learning among teachers, and collaboration with other educators. It was also noted that professional learning needs to be long-term, with multiple opportunities to learn and connect across a school year. To support teacher growth and innovation, professional development should prioritize collaborative opportunities for teachers to share ideas and strategies.

If implemented effectively, project-based learning teaching methods can provide a pathway to reignite passion and a love for teaching in educators, but high-quality

professional development is necessary. Professional learning focused on project-based learning through PBLworks provides a learning opportunity that emphasizes collaboration, autonomy, individualized support, and ongoing, engaging development. Engaging in professional development in project-based learning, teacher can learn the gold-standard elements in project-based teaching practices (Coleman & Wagner 2024).

Models for Change

Leaders across all organizations, including schools and school districts, are often tasked with initiating and navigating complex change. Several models for leading change exist. The Lippitt-Knostrer Model and Kotter's 8-Step Model for Leading Change are two models examined. By using models to navigate change, it is hoped that a transformational change in process will occur, impacting how people think, feel, and act (Kotter, 2011; Lippitt, Watson, & Westley, 1958).

John Kotter proposed an eight-step model for leading change (Kotter, 1990; Kotter, 2011). The first step was creating a sense of urgency. Kotter posits that people need to see or feel a reason for change. It moves people from the mindset of we're fine to we can be better. The second step is to build a guiding coalition. Every leader needs people on their team who are influential and highly respected, who can help drive change forward. One person cannot lead change; momentum comes from a trusted group. The third step is forming a strategic vision and initiatives. People need to have a clear understanding of where they are going and how to get there. A clear vision keeps everyone aligned. The fourth step is enlisting a volunteer army. Once you gain momentum, the guiding coalition is no longer enough. Leaders must engage more employees who also share the vision. Significant change requires widespread buy-in. The

fifth step includes acting by removing barriers. Even highly motivated people can get stuck when systems and structures block them from moving forward. Leaders must identify what is blocking people and remove those obstacles. The sixth step is to generate short-term wins. Celebrate small successes often and early. This builds confidence and demonstrates to others that change is possible. The seventh step is to sustain acceleration. Change can fade if it is not continually reinforced. Use wins to keep moving forward. Don't let up. Continue refining and increasing expectations. The last step is institute change. Lasting change requires embedding practices into daily operations. It's how you do business. It's the norm. Kotter's model can provide a clear, people-centered roadman to create lasting, meaningful change (Kotter, 1990; Kotter, 2011).

The Lippitt-Knostr Model posits that for organizations to navigate complex change, six factors must be present. These include: vision, consensus, skills, incentives, resources, and action plans (Lippitt, Watson, & Westley, 1958). A clear vision creates purpose and scope. Without a clear vision, confusion arises. Organization members need a clear understanding of where to go and what to do. Between organizational members, there needs to be consensus. A leader cannot assume they have the power to push through the change until buy-in is created. Without consensus, confusion occurs. Skills are another element of managing complex changes. Do staff members have the expertise or training to facilitate this change? If not, it needs to be provided. Without the proper skills, anxiety and stress will occur. Incentives are also required to entice employees to make changes. Employees must see the value in the idea in order to follow through on it. Without incentives, leaders will face resistance from their employees. Resources are also essential to change efforts. Resources could include people, time, money, space, or

physical objects. Without the proper resources, employees will become frustrated. Lastly, there must be a clear action plan. Action plans are needed to create clarity and a pathway forward. Without it, organization members might feel as though they are on a treadmill, moving quickly, but going nowhere (Lippitt, Watson, & Westley, 1958).

Leadership Theory as a Theoretical Framework

As the researcher attempts to examine characteristics of instructional leadership within the project-based learning environment, it is important to establish a theoretical framework for the investigation. The use of leadership for this study is a guide to better understand how leadership practices are being utilized and how they contribute to the successful implementation of project-based learning in the elementary classroom. The theories of authentic (Walumbwa et al, 2008), team (Hill, 1982), sustainable (Hargreaves & Fink, 2004) and transformational (Bass, 1985) leadership were analyzed within the context of project-based learning implementation and professional development to assess their effectiveness in evaluating current practices and guiding future practices (Northouse, 2016).

The first leadership theory analyzed was authentic leadership. The authentic leader relies heavily on their ethical and moral compass to guide actions and decision making. Authentic leadership was considered as a framework for this study because high-quality professional learning communities would benefit from leadership that fosters trust and transparency among teams. Trust builds productivity and can lead to greater collaboration and innovative thought (Walumbwa et al, 2008). Additionally, authentic leadership requires upholding honesty and respect, which will contribute to a positive school climate during times of change, uncertainty, and growth. For the purpose of this

study, authentic leadership was ultimately ruled out. It was ruled out because authentic leadership can often bring in personal bias, which would be counterproductive in a project-based learning environment that requires creative and diverse perspective along with out-of-the-box critical thinking to solve the challenging problems of the real world (Northouse, 2016; Walumbwa et al., 2008).

Team leadership was also considered as a framework for this study, as team leadership creates a supportive, collaborative, and growth-mindset environment. These characteristics are important to the functioning of a professional learning community. Fundamental principles of team leadership assert that the leader's role involves overseeing the team and ensuring its overall effectiveness (Hill, 1982; Northouse, 2016). Team leadership also emphasizes the role of leaders in facilitating and coordinating the efforts of team members to achieve common goals. Hill (1982) states that team leadership involves guiding and supporting team members, fostering collaboration, and ensuring that the team's activities are aligned with organizational objectives. This type of leadership would align well while implementing ideas system wide. However, this leadership theory was ultimately ruled out because of the risk of groupthink. Challenging convention is required to reimagine learning opportunities for students, and groupthink and prioritizing agreement could hinder sustained innovative practice (Martin, 2018; Northouse, 2016; Walumbwa et al., 2008).

Within the scope of this study, sustainable leadership was also considered. Sustainable leadership was heavily considered for its focus on long term thinking and behavior, as well as fostering change that positively influences the greater good, both in the present and for the future (Hargreaves & Fink, 2004; Northouse, 2016). Sustainable

leadership focuses on creating a culture of continuous learning and development, which is a key component for the successful implementation of professional development. According to Hargreaves and Fink (2006), sustainable leadership also involves creating and maintaining improvements over time by caring for people. This can foster resilience, adaptability, and the ability to cope with change, all skills needed in the ever-changing world of education and our fast-moving, technologically advanced world (Hargreaves & Fink, 2004; McGowan & Shipley, 2020; Northouse, 2016). Ultimately, sustainable leadership was ruled out because it relies heavily on continuity and stability in leadership, which can be disrupted by turnover or changes in leadership direction, something that occurs often in large districts that promote from within.

Lastly, transformational leadership was considered. Transformational leaders seek to influence individuals, organizations, and cultures by engaging and connecting with others. They aim to inspire and motivate, fostering a positive culture. This leadership style promotes an environment that supports the key components of project-based learning and fosters engaging, innovative, and collaborative practice (Bass, 1985; Northouse 2016).

For the purpose of this study, transformational leadership (Bass, 1985; Northouse 2016) will be used to provide an understanding and analysis of the leaders' behaviors. This leadership theory was chosen for its tenets of inspiring a shared vision, encouraging the exploration of new ideas, and creating an environment where educators feel empowered to take risks. Transformational leadership would be used with teachers to inspire and motivate them to enhance their teaching practices, collaborate effectively, and drive significant improvements in student outcomes and school performance by aligning

their personal and professional growth with the school's vision and goals (Bass, 1985; Northouse 2016).

In the context of the educational setting, idealized influence can positively affect the outcome and implementation of new teaching methods as it fosters trust and respect and creates a supportive and collaborative school culture. Transformational leaders are credible and trustworthy. They inspire teachers to strive for excellence. Their passion ignites enthusiasm in others. Transformational leaders also garner support for continuous learning as they demonstrate their own commitment to professional growth (Bass, 1985; Northouse 2016).

The second factor in transformational leadership, inspirational motivation, is critical for leading the successful implementation of project-based learning (PBL) through professional development. Transformational leaders who demonstrate inspirational motivation can inspire and motivate their followers. By building upon passions and interests, they create an uplifting and driven environment for their team. The transformational leader will motivate through sharing success stories and actively participating in professional development training. They will foster a network of support for ideas, problems, and solutions to be shared. They will celebrate milestones and achievements to boost morale (Bass, 1985; Northouse 2016). By leveraging hopefulness and passion, and providing continuous encouragement, transformational leaders can motivate teachers to embrace and excel in project-based learning.

Intellectual stimulation is crucial to foster creativity, innovation, and outside-the-box thinking. Transformational leaders who engage in intellectual stimulation encourage critical thinking, problem-solving, and innovative ideas. They encourage followers to

challenge assumptions in order to create an environment where followers are empowered to implement new ideas (Bass, 1985). Project-based learning requires critical thinking, problem solving, and innovative solutions, both with the teacher designing the learning experience and the students working to solve authentic problems (McDowell, 2017).

The last factor of transformational leadership is individualized consideration. Transformational leaders genuinely care about their followers' needs and development (Bass, 1985). Hence, they work to create a supportive environment tailored to the individual needs of each person. The leader can personalize support and professional development among teachers based on their needs and interests. These factors describe the behaviors of transformational leaders. Transformational leaders are able to achieve positive change and outcomes with their organizations by leveraging their ability to inspire, motivate, challenge, and support their followers (Bass, 1985; Northouse 2016).

Gaps in the Research

Based on existing research, project-based learning can greatly enhance student learning in terms of both academic skills and dispositions needed for the future workforce. With the lack of implementation from professional development to classroom, continued research is needed to better understand how school leaders can support teachers in the implementation of project-based learning. Research that focuses on understanding how school leaders can best support teachers is needed to ensure teachers remain in the profession, quality teaching practices are utilized daily, and academic achievement improves.

Conclusion

As the desire and necessity for quality teachers in every classroom across America continues to become a priority, the knowledge and understanding of how we develop individual teachers into high-quality teachers becomes increasingly more important (Knight, 2011), especially to ensure that students leave their education prepared for an ever-changing world where adaptability and continuous learning are paramount (McGowan & Shipley, 2020). Continued research on best practices for instructional leaders is needed to ensure that school administrators and other instructional leaders are equipped to utilize methods that will not only develop highly-qualified teachers, but also ultimately enhance and sustain high academic achievement for all students in a project-based learning community. Researchers must look at teachers' perceptions to gain greater insight into how we can continually advance the knowledge and teaching practices of each teacher in order to create an effective and successful learning environment for students.

PLAN FOR SECTION FOUR
CONTRIBUTION TO PRACTICE

Plan for Dissemination of Practitioner Contribution

District level administrators are supportive of this research because of the potential impacts it can have on teaching and learning within the Sunnydale Public School System. District administration in the innovation and learning department at Sunnydale Public Schools are eager to see the results of this research study. By examining the results, district level leaders can work with building level administrators to help build capacity and eliminate barriers to transferring professional learning into the classroom to better support a project-based learning environment. Stakeholders have been updated on this research, and will continue to be notified when the study is complete so that they may analyze the results.

Once this research study is complete and has been approved by the doctoral committee, findings will be shared at a meeting with the administrative leaders in the innovation and learning department. After presenting the findings, I hope they will be disseminated to other building principals and assistant principals throughout the district. This will foster consistency in leadership practices, enhance professional development, and transfer teacher learning into project-based learning environments for students.

Type of Document

The proposed document for the dissemination of research will be a presentation. By discussing findings of the research, the presentation can be utilized to inform, educate, and influence school leaders on best practices for support following professional development.

Rationale for this Contribution Type

This presentation is a necessary step in compiling information that could be beneficial to present and future school leaders. It can offer solutions and recommendations for best practices to support teachers throughout professional development. The intended audience for this document would be school instructional leaders including principals, assistant principals, and instructional coaches. This research could also be influential to district level leaders who make decisions around professional development opportunities and structures for professional learning communities.

Presentation of Dissemination

Instructional Leadership in Project-Based Learning: Cultivating Supportive Cultures, Overcoming Barriers, and Leading Change

Megan Thompson, Ed.D.

Welcome everyone! For those of you who do not know me, my name is Megan Thompson. I am the assistant principal at Oakridge Elementary School in the Sunnydale Public School District. Prior to that, I taught for 14 years at the elementary level, the last six of which were spent at Cedar Grove Elementary, where I immersed myself in the world of project-based learning. This presentation will outline the barriers to PBL and the strategies leaders employ to support it. Let's begin with the reason I began this study.



Why not PBL?

My time spent at Cedar Grove was really the inspiration for my dissertation. I saw the great work that was happening, the engagement with students, and the deep learning that was taking place. However, when I attended district-level meetings, I saw the struggles that other teachers were facing regarding the implementation of PBL. I wondered why with some teachers, the methodology and pedagogy of PBL was catching fire, and with others, it was falling flat. I began to think about leadership. This presentation will shed light on the barriers to PBL, as well as what building administrators do from the instructional leadership side to help create a supportive culture and lasting change around project-based learning.

Statement of the Problem

- **Traditional teaching methods are proving ineffective** (VanderArk, 2002).
- **Global landscape and workforce is rapidly changing** (McGowan & Shipley, 2022)
- **Educators are the single biggest factor in determining student success, but are leaving the profession** (Dove, 2004; Hattie, 2008)
- **A need for redefining learning experiences** (Martin, 2018)

We've been hearing about the struggles with public education for decades now. There have been calls for educational reform due to the nation's poor performance on standardized assessments. Teaching methods are not engaging students or proving to be effective, and there is a need for engaging and authentic learning experiences.

Most currently, we have been told that the future workforce will require a population with a different set of skills. Couple that with an overwhelming number of teachers who are leaving the profession.

So, what do we do to make learning meaningful, relevant, and future-focused for kids, and how do we prepare our teachers to create those learning experiences?

Purpose of the Study

Ineffective application of project-based learning highlights the need to analyze how instructional leaders develop and support teachers in this process.

Purpose:

What do instructional leaders do differently in thriving project-based learning schools?

The purpose of this study is to understand what leaders in high-performing project-based learning schools do differently when it comes to instructional leadership. How do they remove barriers to implementation, and how do they navigate and sustain complex change, which is required for project-based learning?

Design of the Study

Site Selection

Sunnydale Public School District

- Two schools implementing PBL school-wide
 - Cedar Grove Elementary
 - Meadowbrook Elementary
- Two schools not implementing PBL school-wide
 - Maple Ridge Elementary
 - Willow Creek Elementary

Sunnydale Public School District was selected as the site for research, as over the last 10 years, they have trained all their teachers in project-based learning through a three-day training program offered by PBLworks - formerly the Buck Institute for Education. Two schools were chosen based on their school-wide implementation of PBL, and two schools were chosen for not having school-wide implementation of PBL. All four schools were also selected because their principals had served in leadership roles within the district for an extended period.

Design of the Study

Participant Selection

- Process
 - Participant invitation
- Participants
 - 7 school leaders
 - 4 instructional coaches
 - 17 teachers

I invited all of the principals and assistant principals from the schools I chose to participate in an interview. Of the eight invited, seven participated in interviews. I also invited the instructional coach from each building to participate in an interview. All 4 of the coaches invited participated in an interview. I asked building leadership at each school to send me the names of teachers who might be willing to participate in a focus group and had completed the PBL three-day training. Seventeen teachers participated in focus groups, one at each school.

Design of the Study

Data Collection & Analysis

- Interviews
- Focus Groups
- Document Analysis
- Confidentiality
- Transcription
- Coding

Interviews and focus groups were conducted with participants in person and via Zoom, depending on the interviewee's preference and scheduling availability. These conversations lasted between 20-50 minutes. I then transcribed the interviews and focus groups to identify themes. In addition to interviews and focus groups, building improvement plans and a professional development calendar from each school site were utilized for document analysis. For confidentiality, pseudonyms were used for the names of people, individual schools, and the school district.

Design of the Study

Limitation & Assumptions

- Varied professional development
- Researchers personal connection
- Potential for Bias

A limitation of the study was the availability of professional development opportunities.

Although all focus group teachers completed the three-day PBL training, their follow-up professional development varied by school.

An assumption was that I had a personal connection with the school district and schools.

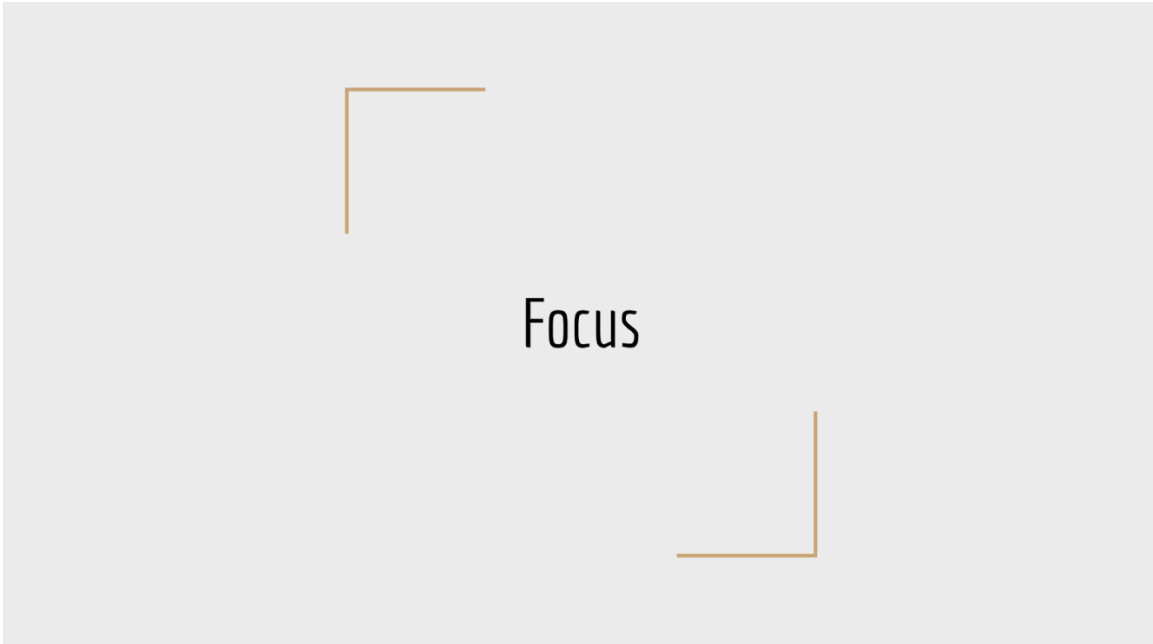
This potentially introduced bias, although structured question protocols were employed to help mitigate it. I attempted to leave my voice out of the interviews and focus groups, instead participating more as an active listener.

Findings

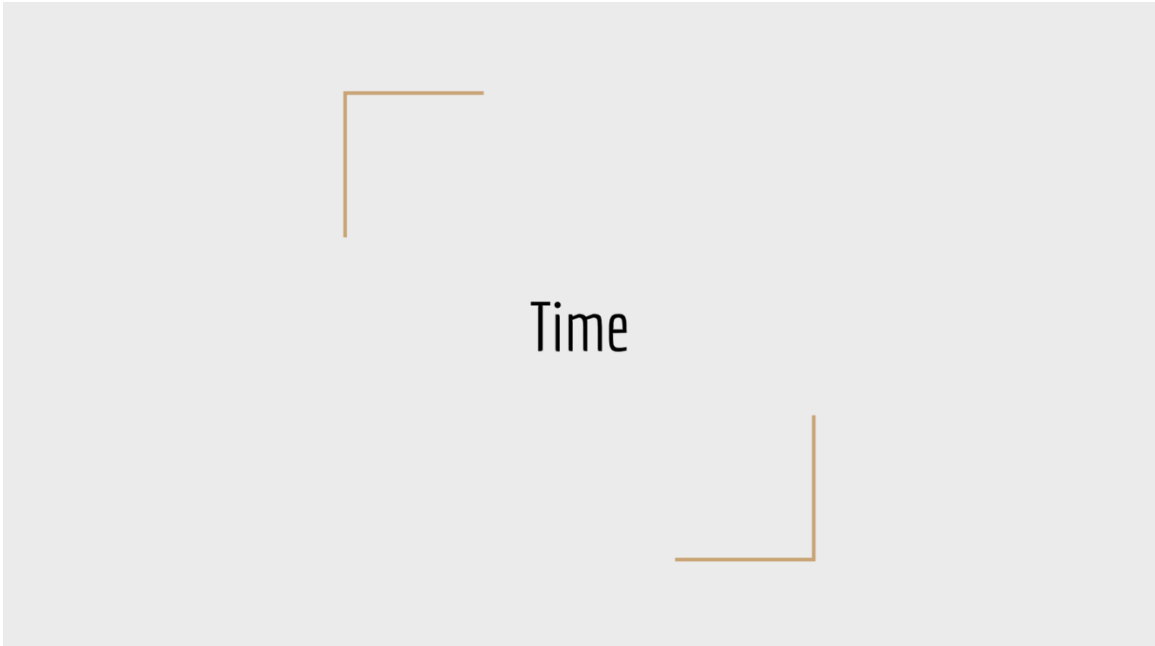
Themes

- Focus
- Time
- Servant Leadership
- Buy-In vs. Understanding & Implementation
- Culture

The findings revealed several themes based on the experiences of teachers and school leaders. These themes were enlightening and helpful as I began to discover differences between the leadership at each elementary school.



Focus was one theme that stood out as a major difference between the schools implementing PBL system-wide and those not. Schools with PBL as a focus had clear building goals around PBL and real-world learning. Their goals were similar from year to year: showcase consistency in the focus of their building, and allow time for teachers to feel confident in their craft. Teachers were also able to give examples of projects they were currently working on or favorites they had done in the past. On the other hand, the two schools not implementing PBL system-wide either did not have any goals listed in their building improvement plans or were loosely tied to one group of teachers in their building. This was also voiced by the teachers in their building. They shared that it was not a priority for the building at the moment. One school leader even spoke to “swatting” things away that did not align with what they were trying to accomplish that year.

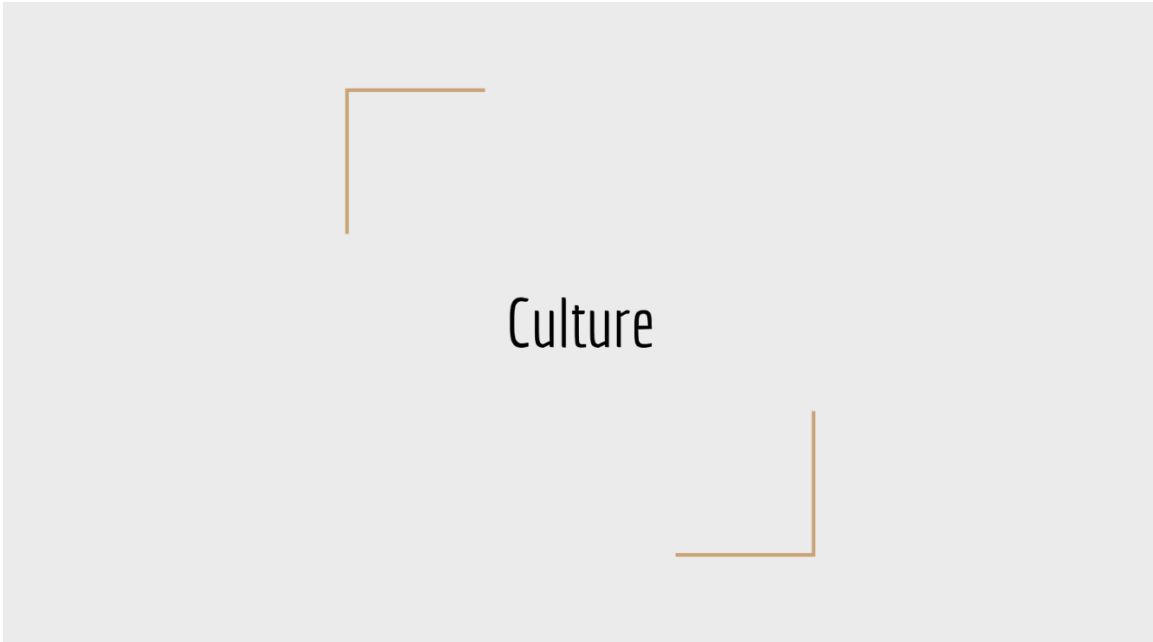


All participants discussed the time barrier in implementing PBL. It was voiced in every conversation. However, leaders implementing PBL system-wide were getting creative in finding time and building it into teachers' schedules to plan around projects collaboratively. They systematically built in early release on Wednesday time for teachers to meet and plan. They used professional development funds to sub teachers out for the day to work on project planning. One school in particular even had two extra professional development days built into its school calendar for the sole purpose of project planning. This was not the case in the other buildings.



Servant Leadership

Another theme that emerged during the data triangulation was that of servant leadership. Teachers in the schools that were implementing PBL on a regular basis spoke to the “in the trenches” nature of their building leaders. They said their leaders were helping projects come to life by doing some of the clerical, behind-the-scenes work that takes up a significant amount of time. They would organize materials, go shopping, order transportation for field experiences, and make connections with community partners. Teachers overwhelmingly stated that these small things require a significant amount of time. When the leaders help, it saves them time. The leaders of these buildings even spoke to the structures and systems they have in place to help with this work. One building principal shared their learning hub space where teachers can list the work they are doing and how their principals can help. All of these actions reflected their leaders’ servant hearts and their willingness to contribute to the work, enabling everyone to succeed.



A culture of trust, risk-taking, and celebration was also noted as a common theme among the research participants at the two schools implementing PBL. Trust to do the right work, to try something new and maybe fail, but simultaneously know that their administrator and instructional coach had their back. One instructional coach shared that getting teachers confident with PBL sometimes means failing, “because being confident to me is also being in the mistake space.” This obviously also lends itself to creating a culture of risk-taking. One teacher shared that taking risks and trying something new was not only acceptable but also encouraged. Lastly, a culture of celebration was also notable. One building principal shared that his team celebrates growth from start to finish. He stated, “wherever there's a starting point, let's celebrate that growth, because celebrating growth is the means towards proficiency.” Regularly acknowledging the big and little wins helps maintain a positive and energized environment.



Buy-In vs. Implementation

There was clear buy-in around the idea of project-based learning, but a gap existed in understanding how to implement PBL between the school's implementing system-wide and those not. The disconnect between buy-in and implementation became apparent when teachers at Willow Creek and Maple Ridge saw teaching core subjects as a separate component from teaching project-based learning, rather than teaching in an interdisciplinary way. So, if teachers are trying to teach all of the subjects and do PBL in isolation, implementation will be complex, because authentic PBL serves as the bridge that connects all areas of education—it integrates standards, fosters innovation, and provides a flexible approach to teaching reading, writing, math, science, and social studies, making learning both engaging and transferable.



Recommendations

Recommendations:

1. Build culture
2. Create consensus of vision
3. Manage time creatively
4. Align action plans
5. Provide continuous professional development



Build Culture

The need to build a culture of trust, risk-taking, and celebration around innovative practice is critical in order for teachers to feel comfortable trying new teaching methods or innovative teaching strategies. When they are stepping into this work, they need affirmation and praise that it is the right work.

Ava said, “Actually, take the time to showcase those people. What are they doing? Get people into their classrooms.” Finding the right balance of celebration and ensuring recognition feels meaningful without overshadowing the work of others



Consensus of Vision

Throughout this research, it was very clear that not all building leaders are on the same page when it comes to innovative practice and reimagining schools. While that is the priority of the district, steps should be made to build consensus on the vision in every building in the district. As Lippitt, Watson, and Westley (1958) share, a clear vision creates purpose and scope. With an ambiguous vision, confusion occurs, and complex change does not.



Manage Time

Time is a strategic resource. Effective leaders are intentional on allocating it to priorities that directly impact teaching and learning. Teachers need consistent, meaningful time to collaborate. High-quality planning doesn't happen in five-minute hallway conversations. Leaders must create predictable structures for teams to meet, reflect, analyze student work, and plan instruction. Collaborative time directly impacts student outcomes. When teachers plan together, instruction becomes better aligned, more rigorous, and more responsive to student needs, leading to higher-quality learning experiences.



Align Action Plans

If the school district's goal is to transition from traditional to authentic, real-world, hands-on, and immersive learning experiences, this should be reflected in the building improvement plans. Subsequently, clear action steps should be outlined for how this will be implemented. Complex change takes time. The research showed that schools successfully implementing PBL had consistent building improvement plan goals year after year. So instead of creating short-term one-year plans, consider moving toward long-range planning with building goals centered around 3-5 years. This allows time for change to occur and for leaders to remain steadfast in their work.



Provide Continuous Teacher Development

The third recommendation is to provide continuous professional development in project-based learning. PBL is complex work that often requires approaches not covered in traditional teacher preparation programs. Leaders should create adult learning structures that support interdisciplinary teaching—such as giving teachers time to observe fully implemented PBL classrooms and see how subjects connect within projects. These experiences build skills, confidence, and collaboration. Finally, continue investing in ongoing professional growth for teachers already experienced in PBL to help them deepen and refine their practice. This may take some creativity, as professional development for innovative practices can be challenging to find.

Future Research

How do instructional leaders design and deliver professional development to support teachers implementing project-based learning in innovative or emerging contexts?

For future research considerations, I would be interested in discovering how instructional leaders design and deliver professional development to support teachers in implementing project-based learning in innovative or emerging contexts. When schools and school districts are sitting on the edge of innovation, what PD is needed to keep the momentum and sustainability?



Questions?

This was a fascinating topic to explore, and one with many implications for future practice in the Sunnydale School District and beyond. I would like to thank you for the opportunity to do my research in this school district. So many leaders and teachers opened their minds and hearts to me. Thank you all for your time and your interest in my research today. Do you have any questions?

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SECTION FIVE
CONTRIBUTION TO SCHOLARSHIP

Target Journal

The targeted journal for this completed study is *The Elementary School Journal*. *The Elementary School Journal* is a peer-reviewed journal published 6 times a year. The journal accepts submissions year round.

Rationale For this Target Journal

The Elementary School Journal is an ideal choice for research on instructional leadership and project-based learning at the elementary level due to its focus on elementary education. Publishing in this journal allows articles to reach a targeted audience of educators, researchers, and policymakers interested in elementary education practices. Being featured in this respected journal helps research make a difference by sharing new ideas and practical tips that can improve classroom and school practices. It also helps make the research more visible to others in the field. Additionally, articles in the journal cover a wide range of topics including instructional practices and curriculum development.

According to submission guidelines of The Elementary School Journal, the abstract will consist of no more than 150 words and be in a structured format including the following sections: Introduction, Methods, Results, and Implications for Research and Practice.

INSTRUCTIONAL LEADERSHIP IN PROJECT-BASED LEARNING:
CULTIVATING SUPPORTIVE CULTURES, OVERCOMING BARRIERS, AND
LEADING CHANGE

Abstract

Instructional leadership in project-based learning involves cultivating supportive cultures, overcoming barriers, and leading change. The purpose of this research was to examine the role of instructional leadership in implementing and sustaining project-based learning. This qualitative study utilized interviews, focus groups, and document analysis. Establishing a clear vision, creating a culture of risk-taking, trust, and celebration, understanding PBL as a methodology for learning and workforce preparation, embracing servant leadership, and removing barriers of time and resources were key findings of the research and can be used to navigate complex change in project-based learning.

Keywords: instructional leadership, project-based learning, leadership practices, student-centered learning, inquiry, instructional change, instructional coaching, innovative teaching practices, educational leadership

Introduction

Compared with schools from a generation ago, most classrooms are serving a more diverse population with students who have more varied life experiences and circumstances and who are motivated in conventional ways (Vander Ark, 2002). There is a substantial body of research in practice and pedagogy, as well as numerous hours of professional development; however, student achievement on assessment scores has remained unchanged over the last 30 years (nationsreportcard.com, 2022). Reports show that test scores for fourth and eighth-grade students were the exact same in 2022 as they were in 1992. Sadly, those reports also show that only 39% of fourth graders and 32% of eighth graders are scoring below basic in reading, and 36% of fourth graders and 38% of eighth graders scored below basic in math. Although numerous efforts have been made to reform schools, the achievement gap continues to widen.

Most of our schools operate in the same ways they did decades ago, despite the global economy advancing in technology and access. Tom Vander Ark says, “our schools are not failing - they are obsolete” (Vander Ark, 2002, page 56). Currently, we are only preparing 33% of students for college. Our current school system is doing what it was designed to do: educate some and prepare the rest for the work of the industrial age. However, we no longer live in the industrial age. That is over, and robots now operate those jobs. Now more than ever, our workforce must have skills in reading and math, but they also need skills in collaboration, critical thinking, creativity, and communication. They must be able to continuously learn and adapt (McGowan & Shipley, 2020; Vander Ark, 2006). McGowan and Shipley (2020) say that in the coming years, those who can continuously learn, embrace new ideas, and adapt to change will be at the forefront. They

will be the leaders. However, our current education and employment systems follow the approach of learning and then applying. The future demands a shift, so education demands a shift. The future is unknown. Degrees may not matter, and experience will hold less significance because thriving will require the skill of perpetual learning. Students must learn how to learn. They must be in a continuous state of learning, unlearning, and relearning (McGowan & Shipley, 2020). We must reimagine learning and design school systems that work for students and prepare them for an ever-changing global landscape. It is America's biggest challenge.

Many across the nation are taking steps to rethink and reimagine education (Martin, 2018). Project-based learning is one way that schools are reimaging education. In project-based learning, community partnerships, collaboration, real-world problem-solving, and design thinking are the tenets for learning. Through carefully designed projects tightly aligned with state standards, students progress through the curriculum in ways that allow them to develop a clear understanding of what they are learning, with implications for how to apply their learning in the world around them. (Martin 2018; McDowell 2017). McDowell (2017) says that schools that primarily use project-based learning as a teaching method outperform students in more traditional school settings on state and national tests. This is mainly due to the extensive use of deep learning in project-based learning teaching methods (Hattie, 2008; McDowell, 2017). When implemented correctly, project-based learning can foster deep understanding and contribute to the development of a growth mindset, enhanced assessment capabilities, and strong collaboration skills (McDowell, 2017). McDowell says, “One of the greatest challenges for a classroom teacher is interpreting each criterion and then deciding how to

design a project that makes a substantial impact on learning” (McDowell, 2017, page 21). To ensure that project-based learning remains focused on standards, school leaders must provide ongoing support to enable teachers to implement and sustain high-quality projects year after year. This requires a great deal of development and a culture of trust. VanderArk (2020) shares that there is a persistent lack of progress in student achievement. Why? Widening disparities and outdated teaching methods in public education (VanderArk, 2020). To prepare students for a rapidly changing world where adaptability and continuous learning are essential, educational leaders must adopt innovative approaches, such as project-based learning, and foster collaborative leadership (Martin, 2018). This work is crucial in equipping students with the skills they need to succeed in the future workforce (Martin, 2018; McDowell, 2017; McGowan & Shipley, 2020).

Statement of Problem

In 1983, "A Nation at Risk" was published, drawing extreme attention to the shortcomings of the American education system. Since then, many attempts have been made to reform education, but despite three decades of reform initiatives, progress has been limited. School leaders face numerous challenges. Traditional teaching methods have been proven ineffective in motivating students, and the global landscape is dynamically changing due to the rapid evolution of technology (McGowan & Shipley, 2020; VanderArk, 2022). These challenges call for a pressing need for innovative and adaptive approaches to learning in the evolving educational landscape.

A lack of student engagement and the absence of authentic, meaningful, and rigorous tasks are other common issues. The expectations for covering learning

standards, coupled with accountability measures such as state assessments, often clash with the idea of fostering genuine understanding around authentic learning practices (Martin, 2018). Martin proposes that to enhance education and truly prepare students for the future, we must shift the focus from adhering to standards to an environment that sparks and sustains curiosity and passion among students, thereby fostering a love for learning (Martin, 2018). This work requires highly qualified and expertly trained teachers. However, research shows there is often a lack of transfer from professional development for teachers into the classroom (Garrett, Porter, Desimone, Birman, & Yoon, 2001).

To address these educational challenges, we must reimagine schools and reassess our approaches to learning and teaching. A specific method for rethinking teaching and learning is project-based learning. It is characterized by student-centered learning, authentic problem solving, and learner agency (McDowell, 2017). This shift in mindset and pedagogy requires school leaders to take on the responsibility of providing ongoing professional development and support specifically tailored to project-based learning. Martin (2018) states that it is crucial to modify the methods and approaches employed in teachers' professional development to affect a fundamental shift in how students learn. We must redefine the learning experience for both teachers and students.

The focus of this study was to examine instructional leadership practices that foster a project-based learning environment, one that not only values, equips, and supports teachers but also ensures students are well-prepared for the challenges of an evolving global landscape. The purpose of this study was to identify the instructional leadership characteristics that differentiate schools that thrive in project-based learning

environments from those that struggle despite having received comparable levels of training in project-based learning. By investigating instructional leadership, the research aims to provide valuable insights into the effective leadership practices that support the implementation of project-based learning in educational settings. Having a clear understanding of how instructional leadership aligns with these crucial elements can provide a comprehensive perspective on fostering an environment for both educators and students within the context of project-based learning schools.

Hattie's 2009 research on the 185 factors that impact student achievement shows that eight out of the ten most significant factors were directly related to the quality of teachers and the methods they use in their daily instruction. According to Hattie (2009), collective teacher efficacy and teacher credibility have a higher-than-average impact on student achievement. Given that effective teachers are the most decisive influence on student achievement, examining the support and professional development they receive is critical. By examining instructional leadership practices, we can gain a deeper understanding of the most effective ways to support teachers.

Research Questions

A study investigating instructional leadership practices within project-based learning is needed to understand how we develop our leaders, enabling them to support the development of our teachers and prepare our students for a changing future. Research questions for this study include:

1. What instructional leadership practices are employed in schools that have successfully implemented project-based learning after receiving extensive PBL training?

2. What barriers or challenges do leaders identify when attempting to sustain project-based learning practices?
3. How do instructional leaders in thriving and struggling schools differ in their use of systems, structures, and resources to support PBL implementation?
4. How do school leaders in thriving PBL schools describe their approaches to supporting teacher collaboration, professional learning, and instructional coherence?
5. How do instructional leaders align and balance project-based learning initiatives with broader educational goals, standards, and student outcomes?

Theoretical Framework

This research was based on examining the role of leadership in project-based learning. Four leadership theories were considered for use: authentic, team, sustainable, and transformational leadership theories (Northouse, 2016). Authentic leadership centers around the genuine and authentic qualities of a leader. Leaders demonstrating authentic leadership rely on an internal moral compass to guide their actions and decision-making (Northouse 2016; Walumbwa e. al., 2008). Team leadership was also considered. Principles of team leadership include overseeing the team and ensuring its overall effectiveness (Hill, 1982; Northouse, 2016). Sustainable leadership was also considered. Sustainable leaders place significance on fostering profound and extensive learning, as well as making decisions and implementing change that influences the greater good, both for the present and the future (Hargreaves and Fink, 2004; Northouse, 2016). Lastly, transformational leadership was considered. Transformational leaders seek to influence individuals, organizations, and cultures by engaging and connecting with others. They

aim to inspire and motivate, fostering a positive culture. The goal is to encourage individuals to exceed expectations to reach their full potential, resulting in higher levels of satisfaction, engagement, and overall performance (Bass, 1985; Northouse, 2016). Ultimately, Transformational leadership was chosen as a framework for this research. Transformational leaders stimulate creativity, innovation, and out-of-the-box thinking by encouraging critical thinking, problem-solving, and innovative ideas. Leaders encourage challenging assumptions to create an environment where followers are empowered to implement new ideas (Bass, 1985). Project-based learning requires critical thinking, problem-solving, and innovative solutions, both from the teacher designing the learning experience and the students working to solve authentic problems (McDowell, 2017). These factors describe the behaviors of transformational leaders. Transformational leaders achieve positive change and outcomes within their organizations by leveraging their ability to inspire, motivate, challenge, and support their followers (Bass, 1985). Northouse, 2016).

Design of the Study

The study's design employed social constructivism as a global perspective to guide its approach. Social constructivism lends itself to qualitative research, with the goal of analyzing and making meaning of multiple and complex viewpoints (Creswell, 2014). Using this worldview, the researcher relies heavily on broad, open-ended questions and participant viewpoints (Creswell 2014). These research methods were chosen based on best practices outlined by Creswell (2014) and Miriam and Tisdell (2016).

Study Setting

Four elementary schools were chosen in the Sunnysdale School District, located in a suburb of Kansas City. Two elementary schools were prioritized for the study based on their commitment and momentum toward project-based learning, while two schools were chosen due to their lack of progress with project-based learning. All teachers in these schools underwent a comprehensive three-day training on project-based learning facilitated by PBLworks, an initiative by the Buck Institute for Education. The four elementary schools selected for the study vary in terms of population and demographics. The student population varied from 300 to 850 students. Additionally, the number of classroom teachers in each building varied from 12 to 48 regular education teachers, spanning kindergarten through fifth grade. The free and reduced lunch population ranged from 5 to 45%, and all four schools have predominantly white demographics, with variations from 81 to 85% white. The average years of experience for professional staff in each building ranged from 14 to 17 years of experience.

Participants

For this qualitative study, data collection and triangulation included document analysis from each school building's improvement plan, interviews with school leaders, and focus groups with teachers. These methods are characterized by adequate qualitative studies (Creswell, 2014). Four schools, along with their instructional leaders and teachers, were selected for interviews and focus groups. Three participant groups were identified - building leaders, including building principals and assistant principals, instructional coaches, and teachers. Teachers from each building were invited to participate in focus groups. Only teachers who had completed the three-day training for project-based learning by PBLworks (formerly Buck Institute for Education) were

selected to participate. A total of 17 teachers participated in focus groups, and the researcher used a set of flexible questions to guide the conversation. Focus groups for teachers were established in order to provide insight and knowledge of instructional leadership practices in their respective buildings. Additionally, four principals, two assistant principals, and four instructional coaches participated in interviews. Interviews also used a set of questions similar in structure to those used in the focus group. The researcher personally contacted all participants via phone or email. Interview and focus group protocols were designed to address the research questions.

Data Collection & Analysis

The researcher conducted 10 interviews and four focus groups. The researcher created interview and focus group protocols designed to address the research questions. The majority of the questions were open-ended, requiring respondents to provide narrative responses. The analysis of these conversations helped identify major themes and ensured the credibility of the findings (Creswell, 2014). Conversations were audio-recorded and transcribed verbatim.

After analyzing the transcripts, the researcher identified themes and shared them with focus groups and interviewees for member checking. This enables control and accuracy in the findings (Creswell, 2014). The research also drew on valuable information from documents (Merriam & Tisdell, 2016). Documents provide insight that could not be directly observed, since the events had already occurred (Merriam & Tisdell, 2016). The most informative documents for the study are building improvement plans and professional development calendars. Both of these documents from each school

building offered stable and unaltered information, unlike focus groups and interviews (Merriam & Tisdell, 2016).

Through a careful coding process, the researcher thoroughly analyzed the data over time to identify common themes (Creswell, 2014; Merriam & Tisdell, 2011; Seidman, 2012). In the final coding step, the researcher analyzed and interpreted the data to establish findings and answer the research questions (Creswell, 2014). Triangulating this data provided a comprehensive understanding of how instructional leadership impacts the overall implementation of project-based learning. This approach enhances credibility and validity.

Limitations

This study had several limitations. All schools included in the research had teachers who received initial training from PBLWorks, ensuring consistency across all sites. However, follow-up on subsequent development at the building level varied across schools. A second limitation of the study is the researcher's personal connection to the organization, stemming from her employment with the district. Due to this, there is potential for bias in the researcher's approach to the study. To help mitigate bias, several controls were implemented. Because of this, the researcher's own school was deliberately excluded from the study (Merriam and Tisdell, 2016). An additional measure to help reduce bias was the inclusion of open-ended questions during interviews and focus groups. The open-ended questions allowed each participant to express their own opinions without being influenced by the researcher's perspective (Merriam and Tisdale, 2016).

Gaps in the Research

This study is significant because the current body of research is relatively limited in establishing a direct link between instructional leadership and project-based learning. While there is a substantial amount of research on instructional leadership and educational leadership, and a decent amount of research on project-based learning, there's very little research that discusses instructional leadership within the realm of project-based learning. Additionally, there is a need for research that examines the ripple effects of instructional leadership on preparing students for a rapidly evolving world. There is a need to explore and comprehend the intersection between instructional leadership and project-based learning for the holistic development of young scholars. Furthermore, research around project-based learning has focused on student achievement outcomes. Most research has also been conducted with high school and college-level students rather than elementary-aged students.

Understanding and implementing the best instructional leadership practices to support and cultivate teachers' excitement and enthusiasm for teaching and learning will contribute to the retention of quality educators within the field of education. Additionally, providing instructional guidance that equips teachers to engage students in relevant, real-world problem solving will result in the development of adaptable, quick-learning students prepared for the demands of a fast-paced workforce.

Findings

Five themes were established based on the results of interviews and focus groups: building culture, focus, buy-in versus implementation, servant leadership, and time. The researcher found that building culture played a pivotal role in determining the success of

project-based learning in the schools. A culture of trust, risk-taking, and celebration was highly evident in the two elementary schools that have established standard practices around project-based learning. One school administrator even stated that they have very low teacher turnover because of their culture.

Trust was a phrase that kept coming up repeatedly. Lucy said, “Trusting us in the decisions that we're making in our room, they understand what we're doing, so they're able to give us the freedom to make those choices based on what our kids are saying.” Another teacher, Layla, gave a great example of how her building leader promotes trust. Layla said,

The ability to just trust us as educators, like if the district teaches narrative writing in quarter one, but if that fits better with the project that you're doing in quarter three, they trust us to get done what we're supposed to teach. But you don't have to follow what everyone else is doing.

This demonstrated belief and trust in his teachers. Through these conversations, it was evident that when trust is present, collaboration flourishes and challenges become opportunities.

Risk-taking was also a part of the building culture in schools that were thriving with project-based learning. Throughout discussions with teachers and leaders of schools that were thriving in project-based learning, there was an overwhelming sense that taking risks and trying something new was not only acceptable but also encouraged. Megan, a first-grade teacher, said, “I think about even in our own building, some of us, when a new initiative comes, we jump in feet first, and some of us just try little things at a time to get

your feet wet.” Encouraging risk-taking requires creating a safe environment where people feel supported.

This was evident as second grade teacher Monica stated, “They’re always willing to let us try. They never are. Like, I don’t think that’s going to work. Like, they’re always like, let’s give it a go and see what happens. If we fail, we fail.” The notion that failure is okay is a driving force for continuous improvement and discovery.

Caroline went on to share that often,

it goes back to a little bit of the Apple philosophy of 'yes, and?' and 'What if?' I don't think as much as all of us know, there's no one way. Some leaders say this is the way you do it. Then I'm like, well, I can show you three other ways it could happen.

As the instructional coach of the building, helping support teachers, her mindset of multiple ways to do something helps encourage boldness in decision-making. When asked about risk-taking, Caroline shared,

If it's not going to work the way they think it's going to work, I usually don't put a stop to it. What I'll do is often say, what if you try this? Because being confident to me is also being in the mistake space. It's okay to take that risk, but what you don't want is them to fail so deeply that they're like, well, forget that. I'm never doing that again.

Balancing boldness and thoughtful decision-making is challenging, Jessa said.

As a leader, it's crucial to know your staff. I know them well. It's the balance of how much do you push? How much do you support, and where is that kind of,

you know, happy medium, because you can easily coddle too much for fear of making them uncomfortable? And equally, you can push too hard.

It was evident that risk-taking was prevalent because the building leader had created a safe environment where people felt supported. Assistant Principal Carly shared, “We’re in this together. We really try hard to like, build a lot of safety.” She went on to share that there is a lot of safety because the leaders in the building are planning right alongside the teachers. So, the teachers know they have their unconditional support. Carly stated, “We try to encourage any step into the real-world learning. Real-world learning is the right step. JoAnn, an instructional coach, shared,

They're not afraid to try it, which I think allows them to naturally build confidence in a very authentic capacity. I don't think that I see teachers struggling, because they have a growth mindset, like they're very willing to try new things.

When risk-taking is supported, individuals feel empowered to explore new ideas.

The last element of building culture focused on celebration. Celebrating success, whether big or small, boosts morale and motivation. Caroline shared that she learned very quickly that the best way is just to celebrate, encourage, and then build that relationship enough so that, at some point, they begin to open up to more opportunities. Building principal David stated one of the leadership actions he focuses on “is naming and claiming the amazing work that teachers are doing, and by naming and claiming what they're doing, we are able to connect the dots when it applies to real-world learning and or partnership opportunities.” David went on to share his belief that his team celebrates growth from start to finish. And we always say, “wherever there's a starting point, let's celebrate that growth, because celebrating growth is the means towards proficiency.”

Regularly acknowledging achievement helps maintain a positive and energized environment.

On the other hand, schools that were not thriving in the work shared opposite ideas around celebration. Ava shared that we “always start our team meetings on the negative. How about we flip that and start talking about the things that we're good at, or that worked, or what's to be celebrated before we dive into what we can fix?” She went on to share her belief that leaders should take the time to showcase those people, what they are doing, and get other teachers into their classrooms. Finding the right balance of celebration ensures recognition feels meaningful without overshadowing the work of others. It was evident that the school culture serves as a foundation for successful implementation, influencing how staff respond to, engage with, and ultimately carry out new initiatives.

A second theme from the research was around focus. The most considerable distinct difference between the school's flourishing and those floundering in project-based learning was the idea of focus. Through conversation and document analysis, it became clear that two schools had prioritized project-based learning for several years. One school had not made it a focus at all, and the other school was just starting to make it more of a focus. Upon analyzing building improvement goals over the last three years, Meadowbrook Elementary and Cedar Grove Elementary had clear building goals and action steps around project-based learning. In fact, for both schools, their goals rarely changed from year to year, helping to create a vision, focus, consistency, and time to excel at the work.

On the other hand, Maple Ridge had a single goal related to project-based learning over the last three years, specifically targeting special education students rather than a building-wide initiative. Willow Creek was unique in that it did list real-world learning, a component of project-based learning, as a goal for the last three years. However, when examining the specific action steps to support the goal, it was found to be weak. The action steps listed included one team meeting per quarter and posting on social media. There were clear action steps outlined in the building and improvement plan for this year, which aligns with the teacher's thoughts in that building. Ava, a teacher at Willow Creek Elementary, shared,

I'd say even though we've been taking this journey for a long time, we're still at the very beginning. I'd say in fifth grade, I can't even think of a project we did last year, but this year it's a whole different story. As a fifth-grade team, we're committing to doing two really big projects to try and integrate all the subjects.

Lola reinforced this notion by saying that at her school, project-based learning is just in its infancy stages.

The two schools that were thriving in the work had many examples of how project-based learning was embedded into daily practice. Jessa, the principal at Cedar Grove, shared project-based learning:

It's just embedded. It's very natural here. It's not one more thing. It's truly what we do here. I feel like for newer staff, maybe there's a larger learning curve, but overall that is the culture of Cedar Grove with families, students, and staff. It's not something new or extra.

Jessa went on to share,

I think that everything goes back to the vision and the intent, and Cedar Grove being founded on that. I think that is why we always start our pre-service with vision. It's what we always go back to when I feel like we are kind of drifting. I feel like the vision is what anchors us back to what we're doing in PBL. It's so deeply embedded into that vision that has been helpful, as kind of our bumpers for getting us back on track.

Likewise, David at Meadowbrook Elementary shared that it is their focus and responsibility to provide elementary students with opportunities to explore the world around them. David stated,

If we at the elementary level can simply expose and let our kids explore with different layers of project-based learning, I feel like we are laying a pretty solid foundation for the experience in middle school and the immersion in high school.

On the other hand, at Maple Ridge Elementary, the focus and vision have been different. They have very specific goals related to math, reading, writing, and fostering a sense of belonging at their school, all of which are extremely important. Through dialogue, it became clear that the elements were approached in isolation rather than an interdisciplinary approach to teaching and learning. Wanda, the fourth grade teacher at Maple Ridge, stated, "It's not been a huge emphasis, not saying that it's not happening, and we're not trying to incorporate some of those things, but it's not necessarily where, like our building goals have been directly tied to." Currently, Haley, a fifth grade teacher at Maple Ridge, shared that project-based learning is encouraged, but "our goals have really been to focus on phonics, and last year it was math."

Haley went on to share an example of project-based learning that she really loved, but upon sharing the details of that project, it became evident it was accomplished at a completely different school and a separate school district. The instructional coach at Maple Ridge echoed this sentiment when he stated that projects at Maple Ridge would not be what we consider high quality and would not contain all the elements that were shared in the training that was received through PBL works, but “I would say that the authenticity piece is a very important thing here at Maple Ridge.”

Lastly, Maple Ridge principal Thomas shared that project-based learning is not a focus at his school. He emphasized the importance of having a clear vision and focus on math, phonics, and writing instruction, as well as the need to utilize a guaranteed and viable curriculum to achieve the goals his team has set. He spoke to his vision using the analogy of a racehorse. Thomas said,

Some horses are easily distracted, right? And so, they put blinders on those horses because they don't want the horse to get distracted from what's most important, which is straight ahead. Right? Good ideas can also be major distractors. And then all of a sudden, you're over here when you're supposed to be over here.

He went on to share that there are some really great projects going on around the district, but there are also projects that seem great but are distractions and do not always align with the learning intention. Thomas went on to share,

I think sometimes our job is to be fly swatters. That we kind of have to swat things away at times, too, because if you don't, everybody's priorities can start to come at you. And then before you know it, you've lost focus. And now you've just

added so many things to your plate that are potential things to interfere with what we really wanted to accomplish this year.

These dialogues highlighted the idea that focus and vision play a crucial role in the work that actually takes place in a school building. One of the main reasons why project-based learning has not taken off in every school around the district is that it is not the vision of every school leader in the district. Building consensus across all district leaders and maintaining a clear and consistent focus is essential for successfully navigating the challenges of complex change.

A third theme was buy-in versus implementation. It was clear through every conversation I had with teachers, instructional coaches, and building leaders that everyone sees the value and benefit in project-based learning. There was not a single person who felt that project-based learning was detrimental to students.

Teachers and school leaders were able to clearly articulate the excitement and engagement they see in students when they are engaged in projects. Teachers themselves noted that their excitement and joy for teaching increases when they are engaged in project-based learning. Lucy stated, “I will not go to another school. If I leave, I'm quitting because I could not go back to like...you have to teach this curriculum page by page.” Another teacher at Cedar Grove shared that when she made the move from a fourth-grade classroom to a special education setting, not teaching through the PBL lens was the most challenging part of the transition. She said, “I miss teaching projects because I went the opposite way. When I'm legally mandated to teach X, Y, and Z, and it's like, here's the curriculum you're going to teach out of.” The art of teaching became somewhat lost for her.

The disconnect between buy-in and implementation became apparent when teachers at Willow Creek and Maple Ridge saw teaching core subjects as a separate component from teaching project-based learning, rather than teaching in an interdisciplinary way. Willow Creek assistant principal Debbie shared that her teachers have seen and understand the importance of PBL, but are unsure of how to make it feel seamless and not something separate from everyday learning. The instructional coach at Willow Creek said they do not always see it as teaching and learning. They think sometimes it is its own thing. She noted that teachers fear taking the time to do project-based learning because it takes away time from teaching. She shared that her role is to help teachers connect the dots between the learning standards and project-based learning, so that they see project-based learning as the pathway to teaching the standards.

While teachers have the buy-in for project-based learning, they lack the understanding that project-based learning is the learning and is not separate from core subjects like math, social studies, reading, and science. Because they lack this understanding, implementing project-based learning on a regular basis is a challenge.

A fourth theme within this research was servant leadership. Servant leadership emphasizes that “leaders should be attentive to the needs and followers, empower them, and help them develop their full human capacities” (Northouse, 2016, p. 253). Northouse (2016) also characterized servant leaders as being good listeners, empathetic caregivers, and committed to the growth and development of others. Dialogue with teachers who are successfully implementing project-based learning shared their school principals, assistant principals, and instructional coaches were in the work with them. They often planned with them. They took care of clerical and behind-the-scenes work, such as organizing

transportation, managing physical resources, establishing community connections, or securing the funds to bring a project to life.

There were systems and structures in place to organize that work. Sylvia, a fifth-grade teacher at Meadowbrook, shared, “They’re always really great about partnering with us.” Kayla said, “They’re always supportive of listening to ideas and seeing how we can make it work.” Sylvia provided an example of a robotics project that had been highly effective for her students for several years. However, the robotics parts were wearing out, and they needed new ones, but this was not in the budget. She shared that her building principal was reaching out to other schools, trying to get pieces from them. He was working with the district technology person, seeing what other parts might work. He was even looking for additional funding sources. Sylvia shared that their principal listens to them. Amanda reiterated, “It’s not just I’m hearing you, I’m sorry for this, but hearing it and then taking action on it.”

All of these actions embody servant leadership and its principles of attentive listening, responsive action, and the consistent pursuit of small yet meaningful efforts that foster trust, growth, and a shared purpose.

The last theme from the research involved round time. All participants in the research noted time as a common and constant barrier to project-based learning. Time was noted in two key facets: the time available for planning a project and the time required for implementation during the school day. All participants noted that project-based learning requires a significant amount of time, particularly in the planning phase. There is no curriculum guide for teaching project-based learning at each grade level. The learning standards are the guide. It requires looking at all the standards for a grade level,

and figuring out how you can take a few of them and weave them into an engaging project relevant to the students in your classroom and what is happening in the community.

Teachers also noted that while planning takes a lot of time, it will likely have to be repeated the following year because quality PBL does not look the same every time. It evolves based on the interests of students and the needs of the community. Conversation with the instructional coach at Cedar Grove Elementary highlighted the importance of creating time for the brain to play and be creative. Caroline said, “I’ve worked under two different leaders, one with a lot of time and space to play and be creative, and one who has tightened things up a bit.” Project-based learning requires time and space to be creative. Creativity is a practice. She went on to share that structures and systems that are so tight, most schools have very tight systems, can make navigating project-based learning really challenging. Schools that were systematically integrating PBL into their daily practice were getting creative with schedules, scheduling collaborative planning time into what were traditionally school-wide professional development sessions, and utilizing district professional development funds to provide teachers with additional days to plan with their teams. Teachers at Meadowbrook Elementary noted that they were able to take an extra whole day or two half days throughout the school year to plan with their team. And both administrators noted that they built in three early Wednesday release days strictly for the teams to work on real-world, project-based learning. Teachers at Cedar Grove pointed out that they have two additional professional development days built into their school calendar, and that these days are solely used for team plan time for project-based learning.

The second element of time was the time it takes in class to carry out a project. Instructional coach at Cedar Grove Elementary shared,

PBL always takes more time than you think. Time is always a barrier. Time is the greatest commodity. However, prioritizing in the planning process what you want to do versus what you need to do is something that comes up in conversation. If teachers are using project-based learning as an interdisciplinary approach to teaching the standards, it works. If teachers are teaching the core subjects in isolation and project-based learning is just an added bonus, then “what often happens is PBL gets slowly smaller, smaller, smaller,” said Caroline.

The first research question inquired about the instructional leadership practices employed in schools that have successfully implemented project-based learning after receiving extensive training in PBL. Analysis from both school documents and interviews and focus groups found schools systematically implementing PBL have leaders who set a clear vision, create a culture of collective teacher efficacy, allocate resources strategically, and monitor implementation.

Both Meadowbrook Elementary and Cedar Grove Elementary closely monitored the work being done. They both had digital space to monitor and capture the work being done. These spaces were linked in their building improvement plans. Teachers from both buildings believed their building leaders were in the trenches with them, that their principals knew what was happening in their classrooms.

A clear vision at both Meadowbrook Elementary and Cedar Grove Elementary was established. The vision behind project-based learning was steadfast and apparent when examining the history of building improvement plan goals over time. Both schools

had maintained consistency in their building goals over the past three years, with little to no change in priorities, allowing for sustained focus, deeper implementation, and meaningful progress toward their objectives.

Collective efficacy was prevalent at both Cedar Grove Elementary and Meadowbrook Elementary. Teachers had an apparent belief that learning can be powerful for all students through project-based learning. David stated, “Teacher collective efficacy, efficacy mixed with synergy. That has happened because we're thinking differently about making learning authentic.” Lucy shared, “With PBL, it just feels like with that, all the kids can find strengths throughout the day and really work for them and their learning.”

Additionally, teachers and instructional coaches at both buildings noted that building leaders were creative with their use of resources, especially time and money. When asked about how teachers balance the work of project-based learning with some of the state and federal demands, they shared that their leaders create space in the school calendar, on early release days, and during team meetings to do the work. Sylvia stated, “They secure time to make sure we have those RSPs done.” Caroline stated, “We're always slaves to our schedules, specials (art, music, P.E.) schedule, all of that. I think one of the things that I've watched current leadership do is constantly try to figure out how to maximize time.” Additionally, building leader Jessa noted that she and her staff are always writing grants to secure extra funds for resources and field experiences to enhance learning. Teachers at Cedar Grove provided examples of how their building principal sought additional funding sources or connected with various individuals to gain access to the robotics components needed for a project.

The second research question addressed barriers and challenges encountered in implementing and sustaining project-based learning. Time and resources were noted as barriers by every participant in the research study. Additionally, student behavior, new professional development opportunities, and competition were shared as barriers to implementation. Teachers shared that PBL requires extensive planning since there is no set curriculum. It is a lengthy and creative process that is time-consuming, requiring time and space to think and play creatively. Leaders at most schools shared that teachers want to do more project-based learning, but struggle to find the time, while successfully implementing schools were finding innovative ways to create more time for their teachers.

There were other barriers of note. Two groups of teachers brought up student behavior as a potential barrier to implementing project-based learning. Competition between teachers was also noted as a barrier to both creating a culture of celebration and collective teacher efficacy. Lola shared, “There's a competitive nature that is encouraged too, I think, and that's part of the problem.” These ideas of competition can create a barrier to establishing teacher collective efficacy.

Lastly, new professional development opportunities were also shared not as a barrier to implementation, but as a barrier to continued growth in implementing project-based learning. Teachers reported that they had all received initial training for the gold standard PBL through PBLworks (formerly the Buck Institute). They also shared that they had follow-up sessions with the instructor for two years after their initial training, but there had been little training since then. Layla shared,

You can't find opportunities for us to attend where we're not the ones that end up teaching, like even conferences. You could send people there, but then Sunnydale as a whole is the one teaching the sessions, and you don't ever feel like you're being grown professionally.

When you are on the edge of innovation, it can be challenging to find relevant professional development. Knowing her, teachers needed to be continuously developed. Cedar Grove principal Jessa took it upon herself to create a hub for professional development that helps individualize learning for teachers, much like how we individualize learning for students.

The third research question inquired about the differences in how instructional leaders in thriving and struggling schools utilize systems, structures, and resources to support the implementation of project-based learning.

The approach leaders took to implement project-based learning stems from prioritizing a vision for project-based learning. This is what differs between the schools. For Cedar Grove Elementary, the school was established with a project-based learning approach. Jessa shared that Cedar Grove was founded on PBL, "I feel like the vision is what always anchors us back to what we're doing in PBL," She said, "PBL, it's not one more thing, it's truly what we do." At Meadowbrook Elementary, assistant principal Carly shared,

PBL is a district initiative. We've been through PBL training. We have a director of real-world learning. We're being asked more and more questions about how we're doing real-world learning at the elementary school level. So, I think that part of that is just trying to align ourselves with the district initiative.

Alternatively, the principal, teachers, and instructional coach at Maple Ridge Elementary shared that it has not been a priority for them. It is not listed as a goal in their building improvement plans. Principal Charlotte from Willow Creek shared that this year, they are doing one PBL per semester. So, they're starting small this year and trying to build for the future, but it has not been a monitored priority in the past.

Research question four asked how school leaders and project-based learning schools describe their approach to supporting teacher collaboration, professional learning, and instructional coherence. Collaboration is key, and those who thrive in PBL create time and space for collaboration. David shared, “Because it's a building goal and a building focus, that automatically grants permission for us to give time for teachers to plan. We have three PD sessions built just around the planning part of it, so they can have time to intentionally craft an idea and plan what moments they want to bring to life.”

The fifth research question asked how instructional leaders align and balance project-based learning initiatives with broader educational goals, standards, and student outcomes. How you interpret project-based learning shapes the answer to this question. Those who thrive in project-based learning view this methodology as the primary means by which students learn. They do not view it as something separate, but rather as a guide to learning. Project-based learning lends relevance and connection to the learning because it is tied to an overarching project that is interwoven throughout various subject areas. Learning standards are embedded in the projects, and learning is deep, allowing students to transfer their knowledge to other settings, activities, and challenges, including assessments. Principal Jessa shared,

I know we talk about the proverbial plate and we try to show how it's all connected, but teachers are pretty perfectionistic by nature and want to do everything well. I feel like once you fully grasp what PBL is, what it's like, that it is THE thing, that it is the thing you're not willing to compromise anymore. Those are the people who fully believe it, like they'll rearrange everything else because that's just how they teach, and they know that's what matters to get the learning to stick.

Project-based learning serves as the link that connects the dots across education and the needs for the future work force. It embeds standards, cultivates innovation, and provides a flexible approach to teaching reading, writing, math, science, and social studies, making learning both engaging and transferable.

Implications for Research and Practice

This study aimed to evaluate the instructional leadership characteristics in schools that implement project-based learning. It contributes to understanding instructional leadership in project-based learning schools, informing educational practices globally, and addressing the challenges of fostering a supportive environment for teachers and students in a changing academic landscape. Based on the findings, several practice recommendations are presented. The first recommendation is to allocate more time for collaborative planning. District and building leaders should allocate dedicated, collaborative planning time for project-based learning. Time is a commodity, and there is never enough of it. Without adequate time to plan, teachers will often feel frustrated with their work instead of enthusiasm, which can lead to burnout or a lack of implementation.

The second recommendation is to build consensus on the vision across all district leadership. If the district has a vision for teaching and learning, they need to ensure that building principals also share the same vision. Building a clear vision helps eliminate confusion over district priorities.

The third recommendation is to provide continuous teacher development in project-based learning. PBL is challenging work. It utilizes methods that teachers were not taught in their college teaching programs. School leaders must establish adult learning structures to support interdisciplinary teaching and learning. Specifically, allowing and making time for teachers to observe classrooms fully immersed in project-based learning enables them to spend extended periods in the classrooms and see how each subject is woven into a project. This will build teacher skills and reduce stress and anxiety. Additionally, find, create, and provide ongoing professional development for teachers who have been immersed in the work for several years and are seeking to further their development.

The next recommendation is to align action plans with vision. Develop building improvement plans that align with the district's vision for teaching and learning, rather than creating plans that operate in isolation, focus solely on short-term goals, or merely meet mandates. Instead, consider creating long-range action plans for buildings so teachers and administrators have time to become experts and to actually accomplish the goal before moving on to something else. Taking this action creates consistency and steadiness in the work.

Lastly, it is essential to build a culture of trust and risk-taking within schools. When teachers feel genuinely supported and trusted by their leaders and colleagues, they

become more willing to step outside their comfort zones and experiment with innovative teaching strategies. Empowering teachers to try new approaches fosters creativity and growth, both professionally and for their students. Encouragement from leadership not only validates these efforts but also creates an environment where failure is viewed as a valuable part of learning rather than something to fear.

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Plans for Submission

This proposed research article for *The Elementary School Journal* will be ready for submission once it has gone before the doctoral committee and passed the oral defense at the completion of the dissertation-in-practice.

SECTION SIX
SCHOLARLY PRACTITIONER REFLECTION

Scholarly Practitioner Reflection

A scholarly practitioner continually reflects to foster ongoing development and growth. Quality reflection requires time, discipline, and purpose to create meaning and clarity in learning (Merriam & Bierema, 2014; Mezirow, 1997). As I reflect on my leadership growth through the University of Missouri's Doctor of Education program, I recognize how I have evolved in my pursuit of becoming a more effective school leader.

This doctoral work and dissertation not only required me to draw upon the many facets of my educational journey but also served as a rigorous test of my perseverance, commitment, and fortitude. Throughout this process, there were numerous occasions when the demands of professional responsibilities and personal life challenged my ability to make consistent progress. Yet, each obstacle reinforced my commitment to completing this work. My dissertation strengthened my resilience as both an educational leader and a scholar.

Influence on Leadership in Practice

Leading others is rarely simple; it requires navigating multiple dimensions that change depending on the situation and the people involved. "Leadership is a highly sought-after and highly valued commodity" (Northouse, 2016, p. 1). Many leaders have been thoroughly analyzed in the hope that their actions, characteristics, and nuances can be replicated. Learning about different leadership styles and practices has broadened my perspective and inspired me to grow as a leader.

My doctoral work has profoundly shaped my approach to educational leadership, providing both theoretical frameworks and practical strategies for decision-making, vision setting, and interactions with staff. This work has enabled me to reflect on my

leadership practices and identify areas for growth that foster collaboration, innovation, and meaningful learning experiences within my learning community.

Outlining different frameworks for leadership allowed me to reflect on my leadership strengths and identify the type of leader I wanted to be. It encouraged me to think critically about the traits in leaders I admire and aspire to be. Engaging with these frameworks also forced me to reflect on my personal communication style, decision-making processes, and approaches to collaboration. Likewise, our learning about leadership and organizational analysis compelled me to view my organization through different lenses. Bolman and Deal (2010) taught us that organizations are complex and ambiguous; however, when we examine the same situation from various angles, we can accurately diagnose problems and take effective action. I had to use this throughout my dissertation. By reviewing my problem of practice through multiple lenses, I identified the supports and barriers to my issue and made recommendations for future practice.

Participating in the StrengthsFinder (Clifton, Anderson, & Schreiner, 2006) activity at the very beginning of our coursework helped me to recognize and leverage my natural strengths and talents. My strengths as an achiever, learner, maximizer, individualizer, and arranger were utilized throughout my doctoral coursework, dissertation, and professional work as tools to enhance my effectiveness as a leader. They helped by driving me to set high expectations for myself and others, continuously develop my knowledge, optimize the talents of those around me, recognize and respond to the unique needs of each team member, and strategically organize initiatives to support meaningful instructional and organizational growth (Clifton, Anderson, & Schreiner, 2006).

When I began this doctoral program, I was a kindergarten teacher. My first experience in the coursework was in a room full of preK-12 school administrators, higher education administrators, and professors. It was intimidating, and I did not always feel like I was in the right place. Even though I aspired of being a school leader at that time, I was not one. I was looking at the coursework through the lens of a teacher. My journey through doctoral coursework and the dissertation required me to view things from different perspectives at times. Considering ideas from multiple perspectives was incredibly valuable and has had beneficial implications ever since.

Additionally, I brought a different perspective to the work and the teams I worked with throughout the coursework. As a result, I was able to contribute unique insights and challenge my colleagues to think differently about familiar problems. Simultaneously, I became a more thoughtful and adaptive leader, able to recognize and value diverse perspectives within my team. As I began my dissertation journey, a career change led me to teaching in a school built on the foundation of reimagining education, which employed a pedagogy of project-based learning as its primary method for teaching and learning. The school had achieved great success since its opening just three years prior, and the district was encouraging its other elementary schools to adopt a similar approach to project-based learning. As other schools began professional development and implemented this style of learning, I would sit in on district teacher meetings and notice, from my conversations with other teacher colleagues, that they were struggling with the work. It was challenging for me to understand why other schools and teachers who received the same training I had were having such a difficult time putting that training into practice. There were many times when I wanted to judge others for not grasping the

bigger picture, but my dissertation work required me to listen, think critically, and examine the multiple realities that others face in this work.

This research allowed me to delve deeply into the barriers that prevented teachers from implementing project-based learning teaching methods. Moreover, it allowed me to gain a better understanding of what instructional leaders were doing and not doing to support or hinder the work. As a current assistant principal, this information has been and will continue to be incredibly useful as I support teachers in this meaningful work. This exercise of listening to principals and teachers can be transferable to my future work as I could use these same structures to identify patterns, needs, and opportunities for growth. Engaging in this type of reflective listening will inform my leadership practices and strengthen my ability to support teachers effectively.

Lastly, my dissertation provided a space for me to gain a deeper understanding of adult learning. As a leader of an elementary school building, it can be a daunting task to create a learning-rich environment that meets the needs of over 80 teachers and staff members with varying levels of experience and expertise. Examining my approach to leading adult learning required deep self-reflection and a willingness to be open and transparent with my staff. Through this understanding, I have worked hard to first be a better listener and second to help create a school culture of positive intent, trust, risk-taking, and collaborative conversation.

Influence as a Scholar

The dissertation coursework required me to integrate the knowledge and skills gained throughout my program to design and execute a comprehensive research project addressing my problem of practice. The dissertation process was grueling for me. It was

difficult for me to identify a problem of practice that I was both passionate about and that would have lasting implications, despite the pendulum swings that we often see in education. It was challenging to identify a topic that seemed worthy of research.

At the time I began my dissertation, I was a teacher and deeply immersed in project-based learning work. I was eight years into my teaching career, and project-based learning had reinvigorated my spirit for teaching. I was astonished by what my students could do, and I was having a blast! I was equally surprised by the lack of enthusiasm for the work from other teachers who were receiving the same training I was. My perplexity led me to land on this topic for my dissertation research.

When I began my dissertation, as a scholar, I had to examine why my topic warranted research. As an elementary teacher, observing the struggles from training and development to implementation into daily practice was perplexing. As an experienced teacher, I could make assumptions and judgments about the difficulties, but a thorough examination of past studies was necessary to determine what previous research had uncovered.

Examining past research on a topic can be daunting. The scope of education research is vast. One article leads to another article, which leads to another article, another idea, and another thought. As a learner (remember, it is one of my top strengths), I found myself quickly slipping into loosely related topics that were fascinating to me. I found the review of literature in reimagining education and project-based learning to be intriguing and on the edge of innovation. This was both fascinating and a challenge as I often found myself altering the scope of what I wanted to research. Fortunately, I had a great advising team that helped me stay focused. Following a review of the literature, I

identified research gaps that informed the formulation of my research question and methods for my dissertation, specifically examining the instructional leadership practices of school leaders in schools that focus on project-based learning.

Qualitative research methods were ultimately chosen to examine my problem of practice, as I sought to gain a deeper understanding of the perspectives and experiences of teachers and school leaders (Merriam & Tisdell, 2016). The previous qualitative research work I conducted during my doctoral studies was a valuable experience that helped guide me through this qualitative research. As a person who genuinely enjoys listening to the stories and experiences of others, choosing qualitative research for my dissertation was also enjoyable and fun. While quantitative research is incredibly useful, a qualitative approach also allowed me to delve deeper into the heart of the work.

Learning to be an expert interviewer was challenging, as I often found myself wanting to be an active participant in the conversation, creating dialogue, rather than just asking the questions. Seidman (2013) stated that interviews are a delicate balance. “Saying enough about myself to be alive and responsive but little enough to preserve the autonomy of the participant’s words and to keep the focus of attention on this or her experience rather than mine” (Seidman, 2013, p.98). It forced me to be a better active listener, and because I was listening more intently, I also got better at follow-up questions to gain more clarity. I conducted 11 interviews and four focus groups, involving a total of 28 participants. The range of discussions lasted between 22 and 49 minutes. I believe I was able to establish a strong rapport with the participants, creating an environment in which they felt comfortable sharing their honest opinions, thoughts, and experiences during the interviews and focus groups. Each person brought a unique perspective. They

were open and vulnerable, and I am grateful for the successes and struggles they shared with me.

Many view the dissertation as the culmination of a doctoral degree, while others consider it a starting point for continued research. Action research aims to examine a problem of practice and determine how to address it or enhance what is already working within the problem. Merriam and Tisdell (2016) note that action research is “always focused on the improvement of practice” (p. 50). One thing I have learned through this dissertation is that while I enjoy reading research for the learning perspective and participating in and conducting action research, I do not really enjoy the technical writing aspect of research. While I am deeply grateful for this opportunity and have gained significant insights into my own capabilities, I do not intend to pursue large-scale research in the future. While the technical writing of the research was not enjoyable for me, I did find myself throughout the process of interviews and focus groups thinking about how I can advocate for teachers as they delve into project-based learning, and how my understanding of the barriers and helpful supports can be used to support better the teachers I lead both now and in the future.

Conclusion

My doctoral coursework and dissertation have significantly shaped my leadership and scholarly growth. As a scholar and researcher, my doctoral coursework and dissertation have deepened my understanding of the research process, from identifying gaps in the literature to designing a comprehensive study, selecting qualitative methods, and analyzing data to draw meaningful conclusions. As a school leader, this work has helped me develop a more thoughtful, adaptive, and reflective approach to leading adults,

fostering collaboration, trust, and a culture of growth while supporting teachers in implementing new learning. As this process draws to a close, I recognize the value of the skills, knowledge, and experiences I have gained—not only in completing my dissertation but in guiding my ongoing leadership practice. The insights I gained will continue to shape how I lead, support, and inspire others.

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APPENDIX A: FOCUS GROUP - TEACHERS

Focus Group Question	Corresponding Research Question
Tell me a little bit about yourself.	
1. How would you describe the role of real-world PBL in your school right now? What does it look and feel like in classrooms?	RQ 1 RQ 4
2. What inspired you to try real-world PBL, and what keeps you motivated to continue using it (or causes hesitation)?	RQ 5
3. In what ways has your principal or leadership team supported you as you plan and facilitate real-world PBL?	RQ 1 RQ 2
4. What professional learning, coaching, or collaboration opportunities have helped you grow in your ability to implement real-world PBL?	RQ 4
5. Describe a moment when real-world PBL truly worked for students. What leadership factors helped make that success possible?	RQ 5
6. What barriers do you experience when trying to design or lead real-world learning experiences?	RQ 2

7. How does leadership help navigate the tension between accountability demands and creative, authentic PBL?	RQ 5
8. How has real-world PBL impacted your professional growth, excitement for teaching, or desire to remain in the profession?	RQ 4
9. When you think about sustainability, what does leadership need to protect, enhance, or fix for real-world PBL to continue thriving?	RQ 1
10. What advice would you give your school leaders if they want more teachers to feel successful and supported with real-world PBL?	RQ 3

Focus Group Responses

Question 1: How would you describe the role of real-world PBL in your school right now? What does it look and feel like in classrooms?

Megan: It drives most of our instruction in reading and writing especially.

Layla: It's definitely transformed from like the idea of projects into more like life applicable skills and like job skills, real world aspects, not necessarily just project.

Lucy: I feel like in the younger grades, maybe it's still a little bit more project because we're trying to teach the foundational skills for sure. Separate, but hopefully by second grade they're able to mesh together a little bit better.

Ava: I think as a school, we don't know. We don't participate. Like across the grades. I would say we try to do projects. We just need more support. Like, what is it? What is the intent of it? Like, it's not just fluff. What are you trying to learn? How do you work backwards when you're planning the standards? How can you fit them in? So, I'd say even though we've been taking this journey for a long time, we're still at the very beginning. I'd say in fifth grade, I can't even think of a project that we did last year. I would say when I was in fourth grade, we centered a lot of our projects around Project Lead the Way, only because that was easier for us to integrate science. But this year it's a whole different story. As a fifth-grade team, we're committing to doing two really big projects to try and integrate all the subjects. We just started one two weeks ago. That is a development of the land. And I'd say I personally have integrated more science than anything else. Like in the beginning, I gave them three basic erosion questions just to see the baseline of what they know about erosion. Before we started this whole journey, then, we are going to work with edge students and we're going to write a persuasive paper at the end. So, we're just starting out really doing it.

Lola: Having come from a school that was more project-based learning, more real-world learning, I would say that here it's in its infancy stages, and there are some that really buy in and believe it, and there are some that are very intimidated by it. And I think it would help if there were others who were able to share it, and that there was more celebrating it,

and that it was more invited from the top down. That there was a philosophy there around it. Ava spoke to the fact that fifth grade is doing two big projects. Ava needs to also say that Ava is doing all the work on that, and others are being invited in. Some of us embrace it, and there are some that don't embrace it at all and don't buy into it. So really, they're being invited into it, but she's really spearheading it and doing all of the work for it.

Haley: I mean, it is encouraged. It's definitely encouraged. And we use, like, the district resources that are available that have been created and especially in science. And then in that reading social studies area, I would say those are our main areas where we focus on it.

Amanda: I mean, I think it's something that is a goal of our building is to do at least one larger project that we do a real-world learning, and they want us to take it out, and share our learning with a real-world public audience. So outside of our school walls, but that's not to say that, like, we don't do other things, I guess, to try to make it real experiences for our kids, though, either.

Kayla: Yeah, I think it's kind of a combination of trying to make it as authentic as possible, but connecting it to our standards, which is always, I don't want to say challenging, but it's always that piece that we find ourselves just trying to go back to, like, okay, this is a situation. How can we tie what we need to teach into the real world?

Janet: I think that at Cedar Grove, that was probably a very big focus. I mean, I really think that at least in kindergarten, each quarter or so, we had a PBL that we were doing, and we tried to build a lot of our activities around that. But make it natural, like make it authentic in what we were doing in the classroom. I think at Meadowbrook, I definitely

see that here. We do a lot more Project Lead the Way, which I'm not super familiar with, but I'm kind of learning. And I do think that they use it, but I'm not sure that it's as a bigger part of their curriculum as it would, you know, as it would be for Cedar Grove. That is kind of the impression I'm getting. But I'm new here and still learning every day.

Mary: I think that we do a decent job of prioritizing real-world learning when it comes to science and social studies. I think we're really in progress on applying that to kind of like math and ELA as well. I think that we really see that more honestly when we are planning ourselves. So, I guess, for example our building goal is writing right now. And we are working on creating a unified consistent writing curriculum or like writing practice for instruction throughout our building so that our students are getting consistent and reliable instruction all through their time here. And so that's been the case, obviously, since Sunnydale doesn't have a set writing curriculum. We have been building our own, and we've worked in a lot of PD sessions with our instructional coach and our admin to do that. And I think that having the initiative, or like having to take the initiative to build our own curriculum and make our own units actually opens more opportunities for real-world learning because we're the ones doing it. And then it's a lot. I don't know if convenience is the right word, but when you're applying it in the classroom things are always easy, right? And things are always practical. And it depends on the group that you have that year. And, you know, there are some years where I'm like, absolutely, I'm going to go and do all these science experiments and hands-on things. And then there are other years where it's like, I would never do that with this group of kids. And so just like having kind of the, like, autonomy to create what is reasonable and practical for where we are and where our students are, and then take that and apply it to like, what's actually

happening in our building, what's actually happening in our community. I think that we're starting to see that more, especially in ELA, because of that building goal. Whereas when we're using kind of like a prescribed curriculum like PLTW, it seems like that takes a back seat more because it isn't being created by us, and it's not as tangible or applicable. And sometimes it's not what our kids need. So, I think that there's kind of like a, I don't know, a difference in the role right now of like, we have this prescribed curriculum through PLTW. But even without necessarily consciously trying, we're fitting it into ELA just because of what we're learning, what we're teaching, what opportunities we have through other things that are happening in our building. Like, I know fifth grade is partnering with our school garden to do one of our writing projects towards the end of the year. And so, then it becomes more tangible that way versus, I don't know, just like following something that's kind of been created for us.

Wanda: It's not been a huge emphasis. Not saying that it's not happening, and we're not trying to incorporate some of those things, but it's not been necessarily where like our building goals and things like that have not been directly tied to currently.

Finn: I feel like we've kind of cycled through that.

Samantha: PBL is less important now.

Ginny: I feel like when it comes to that type of learning, especially since our school, as you're probably aware, is Title One. So, I feel like anything to get these kids involved and connecting to what they're learning with what they can use after. I feel like any connection that these kids can make to what they're learning is very helpful for them. And so, I think right now, I know a lot of the teachers are connecting science, they're doing science inquiry to connect it. My team, we have a garden in our school. So, we

kind of translate our real world, learning through the garden and planting, and kind of how to take care of crops, grow them, and then we share it with our family. So, ours is a little different. But still teaching that work ethic through.

Question 2: What inspired you to try real-world PBL, and what keeps you motivated to continue using it (or causes hesitation)?

Megan: As a veteran teacher, I was excited to try something new just because I had done, you know, 13 years of regular instruction. And so, the idea of project-based instruction was exciting to try something new, to have kids immersed in their learning and making things, learning by doing, learning by trying. So, it was just a fun challenge that I was ready for.

Layla: For me, it was definitely the engagement piece. I was on a team of packet printers, and I was getting really frustrated with teaching science standards through a packet or a textbook. So, I was trying different things in my little trailer, and then I realized how engaged my kids were and at such a deeper level. And the rest is history.

Monica: The more hands-on approach was. Yeah, I've had so many years of experience. So, but just like five years of regular traditional teaching and then being able to be put into a school that I knew nothing about. It was literally just the only interview that I had. But it was super enticing, like to be able to go into a role that was super hands-on. I feel like it's more flexible, and I like all the movement. It's not the same exact thing every single day. And even though routines stay pretty much the same, it's just been really fun to be able to see what we can do with the standards. And it's not just your typical I can

statement on the board with sticky notes. It's just really, really fun. I just enjoy the fun part of it.

Lucy: I came from a workshop model where we had an hour of reading, an hour of writing, and an hour of math every day in kindergarten, and kids who are coming in with trauma and all of the things they were coming in with, that model was not successful. It was just hard as a teacher to keep on their case about trying to get them to read for an hour when they can't tell you the letters in their name. So, it was nice to come here and kind of have the freedom and not be tied to certain curriculums or certain time frames. At my past school we always talked about *Sid the Science Kid*. We wished we could be that teacher because she just has the freedom to let kids just guide their learning. I feel like this is as close as you can get to that. So, it's just nice to see the kids take ownership.

Ava: That's so easy for me, the kids. Like, if I'm bored, they're going to be bored, period. Especially teaching now needs to be different than it was before. I'm not a huge fan of sit and get. I understand there has to be direct instruction, I get that, but I also want the kids to be engaged and invested in their future. I don't feel like sitting and getting the information and then regurgitating it is a way for them to get ready for their future. So, to me, that's such an easy answer. It's the kids, straight up 100%. I want them to be excited about learning. I want them to go home and talk about it. I want them to be thrilled about the outcome of a project. So, to me, it's the kids. And like, I'm at the end of my career, and so I have absolutely nothing to lose, so why not try something different if it's going to make a difference? So that's an easy one for me.

Lola: I want to piggyback on what Ava said, like 1,000% the kids. But it's the way we process things in the real world. And I always have to have the rationale for things. I'm

the kind of person that wants to know why. So why are we doing this? And so, if we're asking the kids to do something, then why aren't we doing it the way they would really do it in the real world? I don't want to learn something in isolation, because that's not the way I'm going to do it. And I'm very inquisitive by nature, and the kids are incredibly inquisitive. So, let them find something that they're interested in. Let them pursue it that way. Let's then integrate those skills that they need to know. When they get to that point where they have to know it, then we're going to address those skills. Otherwise you lose them, especially now when you're competing with all of the social media and all of the technology and everything. Let's use it with them and make it a tool, truly a tool, rather than competing with it.

Haley: I like for them to have an end goal in mind, and with that end goal of like, either serving our community or something. What are they doing that is that is helpful not only with instruction, but also with just them being little good people?

Researcher: What are some things that cause hesitation?

Haley: I think the feeling is that projects have to be something big. And so, viewing it as like this overwhelming, lots of time and effort have to be put in context, when it probably doesn't necessarily have to be that way. But that's kind of sometimes how it feels.

Amanda: I think the grade level that we teach makes it, I don't know if I should say easier, but they are looking for those experiences outside Meadowbrook.

Kayla: Their interest. They usually have a higher interest when it connects to a real-world event.

Sylvia: I was going to say any opportunity to make those connections is helpful.

Researcher: What causes hesitation to do it?

Kathryn: I wouldn't say hesitation, but one of the challenging pieces is making it truly authentic with their interests and tying it to the standard. I guess that was always the struggle. So, it's not a hesitation, but it's something that we kind of have to go back to the drawing board each year to figure out how can we make this work best for this group of students and with this happening in the community?

Kayla: And sometimes resources can also play a part into that, like what we have available. You know, if we have enough available for a grade level or depending on what it is we need.

Janet: I think it's seeing how excited the kids get about it. It's amazing. Like, even like in kindergarten. Like when you pose a question to them, they really come up with some pretty fabulous ideas that you would not expect from. It's a lot deeper thinking, I guess, than what you would imagine you would get from a kindergartner. I mean, how often do we ask them questions like that? You know? So, I think just seeing how excited they get about it and how deeply they get into it, and they want to learn more and go like above and beyond what we're even talking about in class. And you don't necessarily see that with every kid. It kind of depends on the PBL, like for some PBLs one kid is really interested in, you know, like force and Motion. We have some kids that are so into it, but then others they're really more interested in, like our spring PBL of, you know, helping the outdoor environment. So, I think it's just the enthusiasm.

Mary: I think just an opportunity in general. I think it's really fun when the kids lead the way, when they have ideas about what they want to do and what they want to learn, that makes it much more exciting for everyone. There's like passion involved in that, which is more motivating than anything else. I also think just like community events or school

events, we have a really great building culture here, and we have a lot of staff and students who want to take initiative and want to share their talents and passions with everyone. So that makes it really easy to be inspired or create opportunities. And I think that as a building, we're really good at celebrating everyone's individual talents and what they bring to the table. So, taking those and running with it is always fun. I like taking what they're interested in. So, like, I have a group of students right now who are doing a podcast, and so, like, taking things like that and realizing this is clearly an interest of theirs. So, let's run with it and figure out what we can do with it. And I think that creating individualized opportunities is always better than maybe trying to make everyone fit in the same box.

Wanda: I think it brings excitement or joy for the kids, and I think it brings a purpose. I also have a daughter who participated in PBL quite a bit and she really thrived in it. So, it was nice to see that from a parent perspective too. But I also have another daughter now who's doing that and doesn't thrive in it. So, it's interesting to see that perspective now as well.

Samantha: So yeah, and I would agree with what she said. I feel like it builds engagement. The kids are excited. My hesitation right now falls on behavior. Like it's just hard to manage it because yes, there is excitement sometimes. We don't only always apply that excitement in a way that's helpful to our learning. So, then that becomes, I feel like a hindrance to doing it more just because it's one more thing that you're trying to, you know, squash that behavior while you're trying to do this exciting thing that you've got going on. And I feel like by doing that, it loses some of the excitement for the others. \

Finn: Well, I think it also takes longer. And so, you end up getting less done because you're trying to deal with behaviors that maybe weren't as big. Like, they can't transition from one thing to the next very easily, and those transitions take time away. So, something has to give.

Finn: Yeah, and then sometimes I would say that they don't always translate what they're learning to what the standard or what we're teaching. Like we're learning and the kids will say we're making light bulbs today. I'm like no we're not. That's not the point. So, we lose sight of the learning goal and it becomes more about the project. Yes. So, I think that's hard to keep the learning goal at the forefront.

Ginny: So, it was kind of my teammate's idea. She always wanted to start the garden at our school, and I think most of it came from just how scarce food is with some of our kiddos. And so, if we can grow it and supply it, then it's obviously helpful. And so, it's just a different way to get fresher food for the kids. So, my teammate had the thought two years ago and then put it into place.

Question 3: In what ways has your principal or leadership team supported you as you plan and facilitate real-world PBL?

Lucy: I think she's constantly both. I would add Caroline in there too, just constantly giving us professional development on our own, like articles and something in the newsletter, always about new things we can try, but also trusting us in the decisions that we're making in our room and not hounding us on like, why aren't you here at this time? Like, they understand what we're doing and why we're doing it. So, they're able to give us the freedom to make those choices based on what our kids are saying, and not just like walking in and being like, I don't see this, because they're not in our room all day and

they don't know what the kids are saying and where they're guiding it, and so they trust us to make those decisions.

Megan: I agree with that. I also would say that they help make things happen. Yes. Like we don't get told no. We get support on yes. How can we make that happen? How can we use supplies? Or have you thought about this idea, or you know, yes, let's make it happen. So, I think just that support and encouraging new ideas. Like any type of idea, is always something that they're as excited about. Or like, I give Carly an idea and she's like, let me come up with as many things as I can. Yeah, to make it happen.

Monica: And they're always willing to let us try. They never say, I don't think that's going to work. Like they're always like, let's give it a go and see what happens. If we fail. We fail.

Layla: And the ability to be just trusted as educators. Like if the district teaches narrative writing in quarter one, but it fits better with a project that you're doing in quarter three. They just trust you that you're going to get to what you're supposed to teach, but you don't have to tell us and follow what everyone else is doing.

Ava: Before this year, I would say zero, and I wouldn't say it is the fault of the administration, I would say there just wasn't a buy-in, so I don't think they believed in it. I think since we've had new administrators come through, we're starting to shift more that way. But I would say before this year, it was like zero. I personally have been asked not to do things that way in the past, specifically, and I have also been in trouble in the past for doing things that way. So, I would say before this year, it was zero. This year there's been a ginormous shift. I feel like, in supporting the things that I've been trying to do for the last seven years. So, every week I track the engagement of students, like how are you

feeling about school? Those important things that are on Panorama. And I would say the things that kids are saying now are 100% different than what kids have said in the past. So, I think it shows validity to the way that you present the information and how you're positive. The way that you present the information and work with the information, you can still get the same outcome. But yet they're engaged more and wanting to learn, which is half the battle.

Lola: I would say I was very fortunate. My first introduction to PBL was in a setting where the admin was all in and knew me and trusted me and believed in me, and I got to just go with it and shine. And there was an incredible support system, and if I needed something, it was there, and she encouraged me to grow along those lines professionally as well. And I achieved, the kids achieved, the scores reflected it. They were engaged. I just felt validated, and I loved it. And the kids loved it. I switched to a different setting and was not understood. I think, we didn't share a similar vision and was told it just wasn't their thing. I think that I withdrew more, and I think it reflected more in the way I approached the classroom then, because I didn't engage as much, even with staff, I didn't. I felt more isolated because I didn't know how to pull back as much and do more traditional teaching. And I think my teaching suffered. I think the kids that I had suffered because of that. I feel I've been given more license this year, somewhat. But I think it's more performative right now. I don't think it's truly an embrace of this whole thing. I think it's more performative. I think a lot of that comes from just not understanding or the buy-in of what it really, truly is.

Ava: Agreed. Just not experiencing. Not being immersed in it. Not seeing it with the kids.

Haley: Yeah. I think from what we have done, I was kind of lucky in the sense that I was involved in the PBLs that were created for the social studies standards. Three years ago, maybe. A while back. Yeah. But as far as getting to implement those, they're always, you know, want to be involved in whatever way they can, whether it's just being, like, present to see student work or I know we've used different contacts that they have outside of school with having the goal in mind. So, they're good with that sense too. I think there just is a willingness to be present. I think one of the ones that we do at the beginning of the school year and it's not as big, but the principal gives us a problem within the school, and then we spend that time trying to fix the problem or like, support the problem. And so, their willingness to just come in and to check in and to kind of play along and but also like, just be involved in the process and not just, like beginning and end.

Sylvia: They're always really great about partnering with us. And I think within our district we have a real world learning director, who's really great, too, about finding opportunities. If she knows that we are wanting to do something, she's great about finding those opportunities for us. And then our administration is good about also helping to support those in making it happen. Whether it's bringing people into us or us going out to them, either way, they're supportive of that.

Kayla: Yeah. I think they're always supportive of listening to ideas and seeing how we can make it work.

Janet: I think just being supportive and trusting us as teachers to make the right decisions for our class and then to just help us facilitate, like if there are any materials that we might need, or if there are any field trips that we're interested in going on, or maybe

speakers that we want to invite into the school. Just having that support and knowing that has been great.

Mary: I think with writing, there's been a lot of support just because that is a building initiative. So, we've been given half days to plan and work on it, and that's for all curriculum. So, like anything that we need to work towards, we get like half-day planning days at least once a year. This year, I think we get them twice a year, which is really nice. Then we've also had a lot of Wednesday early releases where we have vertical meetings over our building goals, whether it was for math at one point. Now we're on to writing, and each grade level team will share what they're doing and how it's going and what they're seeing. That's been really helpful just to see like, how things align. Especially being in fifth grade, seeing what kindergarten looks like for writing. I mean, it's a completely different world, but you can also see what they're building to. So that's been really helpful. They're really hands-on with checking in about helping with it. Our instructional coach is great about taking things off of our plates and kind of hearing our ideas. And then maybe taking that idea, putting it on paper and then coming back and presenting it to us, and it just helps to alleviate some of the things that we have to do. I think I would like to see more support with more of the like, prescribed curriculum. So PLTW and social studies has been a little bit hard. Just with, I don't know, there was a couple years ago they spent time with like a curriculum team, but the units were never finished. So, we have like two social studies units that the districts put out that are very project-based or real-world-based, and then the rest is just kind of on us. I think that it's kind of tricky, especially when there are so many moving parts in these things to catch on. And so, I think our kids kind of get a lesser experience because we're trying to

navigate PLTW or we're trying to navigate finding curriculum or creating curriculum, and then that hinders how much we can do just due to timing and creation. And that makes it a little bit tricky. So, I would love to see more, I don't know, support or even just like training on how to properly use PLTW. I know that it works really well in other buildings. So maybe just learning from them or seeing what they do to figure out how to make it work best here. That would be really nice.

Wanda: So, I would say our instructional coach planned right alongside us and tried to help us find resources and things. I feel like that's not as present anymore just because of where we are in that cycle. If I had a wish, it would be to connect people within the community that our kids live in, because I think that's the easiest place for them to see those real-world examples. And it's not like on a global scale for our kids. Our kids don't have that global vision as much. So, I think that if we could be connected with people within our community who could bring their learning to life, that would be really helpful.

Ginny: Well, I guess if we're basing off of the garden project, my principal was very involved. He was also very excited to make a garden here at school because he loves plants. So, he was very helpful with that. I was kind of scared at first, like, okay, yeah, this is a great idea, but, like, can we do that? Do we have the space? Do we have the money? And so, he was very willing, and we met. Our ILC was also part of it, and he helps with that. So, we just got everyone on board, and then there was a crew and then there were plants. So, I guess just having that confirmation right at the beginning and then just going through with it.

Question 4: What professional learning, coaching, or collaboration opportunities have helped you grow in your ability to implement real-world PBL?

Megan: I think Caroline always keeps us on the forefront of things. Like, I know when I first came here, I went to the district PBL training, but I feel like Cedar Grove was already beyond that. So, it kind of felt like I went and was excited. And then when I came back, it was like, but we could push so much further. So, I do think that the role of Caroline and our principal in this building is very crucial, because we are always trying to be ahead of the game and see what's new, especially with innovation. So, they're constantly just looking and sending out ideas.

Layla: I think when we first started the idea of project-based learning everyone was trained by Buck Institute. Like, before school even started, it was like a week-long institute. And that helped us all get on the same page with common language.

Monica: A consistent pusher of ideas, like, let's go further, has been really helpful as far as professional development goes. It's really hard to develop people who are being innovative because a lot of development is for things that have already been done, and innovation is doing something that's never been done.

Layla: So as a professional development coach or leader, it's super hard. Because you can't find opportunities for us to attend where we're not the ones, then ending up teaching. Like even conferences, you could send people there, but then Sunnydale as a whole is the one teaching the sessions, and then you don't ever feel like you're being grown professionally.

Monica: We have team meetings constantly with Carly too because she's always going to Apple and things like that to work on innovation. So, we do have team meetings with her.

They're highly encouraged so that she can continue to take our ideas and push them. And it helps to do two-cent Tuesdays. Like I need to build on my Apple Distinguished Teacher. Like I need to build on all of the technology that is being brought out or simple apps that I don't know a lot about. I mean, that professional development has helped me so that I can go out and teach it, even though typically the second graders end up teaching it to me.

Megan: Also think it's not like overloading us with professional development that we see in the rest of the district, because it's allowing us time to be able to plan and research and implement things that aren't being done, rather than sitting and learning things that are being done or already have been done, and just trying, like giving us the time and space to learn and work on those days built into our schedule. Which has been really helpful. Those two extra days a year that hopefully continue to be there, because that time is so needed for the teachers who are going 20 extra days during the year and then doing things on a whole different level.

Ava: I'm going to say that I was hugely blessed to have the superintendent's son a couple of years in a row because she supported me so much. She would be like, where do you want to go? Okay, go. What do you want to do? Okay, go. I got to go to a couple of places. Then this last summer, I had the opportunity to go to several different opportunities to get more information about what I could do. What would it look like? I already am investing my own time and my own money to go back to one of them that I went to last year because it was so good for what I'm taking on this year. So, I would say that I have been super lucky. Her support, I think, honestly changed my principal's view too. Oh wait, maybe there is something to this. Anyway, I've had the opportunity to do so

much like last summer. I wasn't home at all. I just went PD after PD after PD after PD. So, I was very lucky.

Lola: I've expressed continued interest in more development and have not been afforded that opportunity. And I don't know if it's because I'm closer to the end of my career, and it feels like that's not a good investment of resources. But I have not had that opportunity recently. In the past I did, but that was the school that I was at.

Haley: Yeah. It was years ago that I got like the PBL training. And then we created a PBL at that point. I also was involved in writing those different units for first grade. And then just time with like my own personal team here and then you know, our ILC is always great. He's just a good resource of someone to talk to. So, I feel like there's been quite a bit of stuff. But Maple Ridge is not necessarily made PBL a priority because we've spent a lot of our other time on math and phonics lately,

Kathryn: I mean, it's been several years, but I know we had the PBL training. And I mean, I think that's kind of where it all started. But that's been pre-COVID at this point. But then from there, I mean, the district, of course, has still offered, at the different trainings where you can choose to do some real-world learning opportunities, like if you want to go in and learn more, like different things. So sometimes going into those and seeing what's still available.

Kayla: I think the PBL training kind of gave us the foundation. But as time has evolved and students have evolved, we've kind of had to tweak and edit how we approach project-base.

Researcher: Can you expand on that a little bit more?

Kayla: Just I know when we did the PBL training, Alicia would always talk about like, don't have the end project, like be the end project. It's not like a final presentation, but sometimes I feel like we've had to go back and make the final presentation to showcase the learning. To say, okay, this is how we're celebrating the project. So, I feel like we've had to make those tweaks along with how we show our learning. And just kind of how the projects work along, I guess that sometimes we do have to have a set schedule, and the kids just can't build the schedule as they go. We need to have a solid foundation. So, we kind of had to create that.

Janet: I mean, honestly, I learned a lot from my co-teacher. I learned a lot from her. She was fantastic. Our blended learning coach, Caroline, was also really, really good about that. I feel like with the library where I'm at right now, I did just go to the National conference in Saint Louis, and I was able to go to a lot of different sessions and, like, meet a lot of other librarians and just kind of see some of the things that they're doing in their library and thinking about, okay, how could I incorporate that into my own library? So that was pretty inspiring. I would see things that they would show us, and I'm like, oh, well, I have that in my library. I could do that in my library, you know? So, I think just anytime you have that opportunity to do anything like that, it gets you pumped up.

Samantha: We completed the PBL training with Alicia, and most of our work since then has been planning those units on our own. We likely had release time right after the training, but it's been a while since we've had any.

Ginny: I'm still basing this off of the garden, but I'm trying to think. I think there were just times where we just me as a team and we discussed it. It was kind of a different type

of professional development, but it was just kind of like a team meeting, team discussion, collaborative planning.

Question 5: Describe a moment when real-world PBL truly worked for students. What leadership factors helped make that success possible?

Lucy: I just feel like so often in kindergarten, it's like letters and sounds and reading and math facts. And there are a lot of kids that come in struggling with that. But then when we get to PBL, those kids are the ones that are shining. Like they can tell you an embryo and all the parts of a seed because of the learning that we're doing. And it just feels like with that, all the kids can find strengths throughout the day that really work for them, and they're learning. So, we kind of have a good balance of the two.

Monica: Me having a kindergarten last year. She comes home and she teaches me all about the bugs and being able to save the bees. And I'm learning things I didn't learn in kindergarten. Yeah, it's really cool what they learn. They can come home and talk about their learning.

Layla: I remember I had a student in fourth grade who was going through the evaluation process, and it was right before Covid hit, and it was when the Australian wildfires took out everything, and my co-teacher and I decided to do kangaroo pouches. So, I went to our leadership at the time and said, like, I need sewing machines and I need this, and I need that, and the high school sent it all over. And the kid that was going through the evaluation process, he was just completely over school, but he made the most amount of kangaroo pouches in the back by sewing. He saw so much potential in himself to make a difference. And that was like my game changer moment. Yeah. That was not on the lesson plans. It's the project life skills, and we're allowing kids the freedom to voice.

They're going to find something that they connect with or want to learn. Whereas just sitting and teaching, like if they're they struggle at math and you're just teaching math, they're not going to connect, they're going to shut down. But with the real-world projects, they always find something they can connect to.

Megan: So last year, our kids developed the recycling team, and it literally was me sitting in front of a blank screen with a computer and they just came up with everything. And it's so great. Those moments where they have the ownership they have, they're creating, they're making it from scratch. It wasn't me leading them saying, okay, we're going to do a recycling team. It was them being like, we can do that. We need bins. We need outfits. They developed it. And then it's so fun this year to see them as second graders when they see the current first graders going and doing that, being like, hey, we started that. We did that.

Lucy: But like, we even have morning helpers from fourth and fifth and they'll come back and they'll be like, I remember when we did this and that and everything that they talk about is PBL oriented. They never tell me, like I learned to read. I learned to do math facts. It's always like, remember when we learned about bugs or this.

Monica: So, we're going to the Nelson-Atkins Museum next week. And yeah, they always remember those things. Yes, or they'll walk in and they'll see us doing our Native American PBL and they're like, gosh, that's really cool, but we didn't get to do that. They always know what they did and didn't do.

Lucy: Whereas my old school, I don't think a single kid ever came back and was like, remember when we did this?

Lola: I can give you an example. I was going to say, a couple of years ago, we did a project. It was The Hunger Project, and we were truly united. Several of us got together and did it, and several of us really bought in. There was an opportunity, and we took the kids to six different places where they could buy food. We were talking about food insecurity. And we were in the grocery store, and you could hear them having conversations about what they could afford for these different families and saying, no, we have to buy the store brand, and did you use this coupon and all that? They were so engaged. They had an understanding about the decisions they were making. They were so concerned about these families and saying, people are making these decisions every day and carrying on these conversations at home. They got it. The conversations didn't end there. It went on throughout the year, and they would refer back to these families all the time, and that these were real-life decisions. I wish that we could take it again to that level. I wish that there was that buy-in from everyone and that we could take it to that level, because those kids talked about that project all year. And their parents talked about it all year.

Ava: I will say it is sad because I wasn't here for that project, but we didn't do that project last year, and we're not doing that project this year. So that's where we just have to have that mind shift of, look how successful this was. Even if it's uncomfortable or something different than what you've done before, how can we recreate that learning that happened then. Yeah, I think it's just the connection piece again. Like it took some planning and things within our building to connect with people within our community and making that visible for our students. But also, just like their support, again, throughout we do a spirit week, and their participation in that is helpful. Them letting us come in and like helping

our kids with announcements and then just kind of supporting the fact that our kids are going through the building and like collecting money each day. So just having a little bit of support with that is big, because it is a big project, and having multiple hands in it is always helpful for sure.

Researcher: When you think about that project and the success of it, do you feel like there were any supports from the leadership that helped make that project more successful?

Lola: I think just the opportunity to try it made a huge difference, and the permission to get the buses, go do what you need to do it.

Ava: Absolutely. And I will say, even though we're not done with the land project, that kind of support that she's just talking about is what's happening. Like whenever I had mentioned that the high school program wanted to get involved, it was, how can we get you over there? And then I proposed a couple more times to go back, and it was, of course, how can we make this happen? So, I will say that the support means all the difference because otherwise I wouldn't have. We wouldn't have. So last week we went to the land, and they were in small groups and they had high school mentors, and they came and helped me introduce the careers. I could not have done all of that by myself at all. The fact that I got the go-ahead from administration, otherwise, it wouldn't have happened either. So, I agree in that part.

Haley: Yeah. So, we tie a real-world learning project in with our hero unit every year. It's become my baby. So, when I first started first grade I was on a team of, like, veterans. They're all gone now, and so I have kind of, like, shifted it and morphed the ideas from them. We do like a fundraiser at the end. So, like, our driving question is, how can we be heroes in our community? And so just getting the kids to, like, pull characteristics from

heroes of, like, giving and helpful and things like that. We raised over \$2,000 last year for a homeless shelter. It was like their choice. So, they recognized a problem in our community. We shared ideas, voted on what we wanted to be helpful, and then worked with our social worker to raise money for them. The year before that, we did the animal shelter. So, they recognized issue from taking what they've learned from the content and then, worked to make a difference. It's awesome.

Sylvia: I think I'll go back to maybe pre-COVID again. Just when we had the robotics, I felt like that really got students interested in that path of robotics that maybe they hadn't been interested in before.

Kayla: I'd agree. Like exposure to something.

Janet: I loved our spring PBL that we did. We always did the how can we help our outdoor environment at Cedar Grove. We learned about different creatures, and then each groups of kids would choose what animal they were really interested in and they would become experts on it. Then they would determine how they could help bring that animal to Cedar Grove ecosystem. But first they had to figure out, of course, why they needed it. Why would we want it at Cedar Grove? How could we bring it to Cedar Grove? So, they would brainstorm, and they would build, and then after they did all of that, they would put on a program, and they would educate their families. I think just hearing them be able to articulate to their families why this creature is important to the earth, why we need this creature here at Cedar Grove, that was cool, because you were like, okay, we really learned something and we had fun doing it. People looking on the outside might have just thought we were kind of playing and, you know, we were. We were building homes for

ants and we were also figuring out what they needed. That was always my favorite one, I think.

Mary: This was in Springfield too, but I had a unit when I was teaching fourth grade where we were looking at rocks, rock cycle, types of rocks, all of those things. And my kids had a real interest in learning more. We wrote letters to national parks and they asked questions about different things for our upcoming unit, what they wanted to know about rocks or fossils, or anything along those lines. The parks wrote back which was really cool. They sent like maps and posters and pamphlets and like all kinds of things. So, we had like a research corner of just all the stuff that we compiled from the parks. And I think that became a really tangible experience for them and helped us to apply it. So like Arches National Park, I think it is like a perfect example when we're looking at erosion and we're looking at the different layers and the types of rocks. Being able to give them real life visuals, I think, made it so much more valuable for them.

Samantha: I can't think of one kid specifically, but I do know many years ago when we did project-based learning, when we did all the fundraising and we gave the goods to Hope House. Then the students actually did the shopping. I just remember we had the Hope House representatives come and accept the items. So, I mean, I do know there was a lot of engagement, and I feel like a lot of conversation and discussion even following that unit.

Ginny: Yeah. So, a lot of my students come from challenging homes. One kid specifically, he would like, he would love to go outside and work with his dad in the yard, and now his dad isn't in the picture anymore. So, when he went to the garden, that was something that made him connect. He would be like, "I know how to do this. I did

this with my dad.” So, incorporating like that connection without realizing we made that connection. Then obviously providing the food is very helpful. My other teammate does a lot with the garden. They go into jobs where they would earn money.

Question 6: What barriers do you experience when trying to design or lead real-world learning experiences?

Lucy: Well, obviously the number of kids, because it takes a lot of materials and time and it's so hard with the amount of kids that we have. So, having fewer number. Then I think that opens it up to do more child-based projects rather than whole group projects, because it's very hard to manage 50 individual projects. But if we had fewer numbers, we could really open up the possibilities of finding kid interest, desires, and passions. Whereas right now, it's just management.

Megan: Yeah, management for sure. And sometimes the barrier could be space and sometimes the passion. The difference between the kids I had last year to the kids I have this year - just like coming up with the new ideas like recycling. It's sometimes hard. It's restarting every year. And that time piece is so hard, because you are restarting every year. So, you might have the same idea but it's driven by your class.

Monica: We do Battle of the Brains every other year. So that kind of like plays into the start of our year. I mean, this is only my second time, but it takes a lot of prep and just things to do. Sometimes you have to kind of sway the driving question a little bit more. This class, I've had to do that a little bit more than I had to a couple years ago.

Layla: Yeah. I think also parents have to be aware of how the learning is going to be different. Obviously, they understand that coming here. But if they don't understand what it is they're always like, but they're not doing reading, they're not doing writing. Where's

the homework and things like that. We have to really prep them for that during the first couple of years here at Cedar Grove. It's going to look different. It's not separate. You're going to have it all in projects. The day looks different. The learning at home looks different.

Lucy: Time to plan, time to get things prepped. Maybe you aren't starting a project knowing where it's going to go. So just time within the project to be like, okay, this is the direction we're going. Because we do have the foundational skills still. Like that's the hard part. We still have to be able to fit in how to do our letters and sounds.

Ava: I'm going to say a mind shift of people, specifically on our team. But like in our building, it has to be a building-wide mind shift because I don't know anyone else that does project-based learning at this point in this building. I don't think that means that they aren't engaging the kids. I just think that they're not using projects to engage the kids, because I think building-wide kids like coming to school at Willow Creek. I would say our biggest barrier is for our team. So, we have a team of seven. They're like three that go, okay, let's try this. And the other ones have resistance so much that it is hard. A mindset of, I can't take time away from my class to do part of this project, but it's hard to do it all inside of here. So, I would say mind shift and our current team, not that they won't get there, they just don't understand yet.

Lola: I would say buy-in. I think that's the best thing is just getting buy in. That's all I'm going to say.

Ava: Yeah. And don't you think, though, Lola, it has to come from the top. It almost has to be like. And I don't know, you could speak to this too, but it almost has to be. This is what we're doing? Yes. Now make it work. Because if not, people will always resist the

change because it's uncomfortable or just not what you know. Yes, I get the autonomy of our district, but I also know that there has to be a point where leadership goes, okay, this is what we're doing. So, do this. Just try it, and then not lose track what we are doing and then all of a sudden, here it is April, and we didn't do that. Like accountability to checking in. Are you doing it? What are you doing? How can I help? Where can I send you? Who can you see in our building? Our building is full of so many amazing teachers and we never ever tap into each other ever.

Lola: There's a competitive nature that is encouraged too. I think, and that's part of the problem.

Ava: I would agree. Yes. Which is sad because there's so much talent. I agree, and knowledge that would make it so strong, with so many resources.

Haley: Time. Yeah. Just literally time. Time to plan it. Time to put in the effort it takes to create something, but also just feeling that you have so many standards to hit and trying to just prioritize what needs to be done. Do I have time for this? So, time.

Amanda: I mean, I think there's always the barrier of time in the creation of a PBL. It takes time to plan it and organize all the details that go with it. Because if it's truly authentic, it's not something that you repeat year after year after year. So, it takes a lot of time and preparation to kind of build it. But it's hard to build as you're going.

Researcher: With the barrier of time, how do your leaders help support that?

Amanda: Each grade level has a day that we can use for planning throughout the school year whenever we want. So, we can either do two half days throughout the year, or we could take a full day, depending on what we need. That way we can use that as planning time, however we need to.

Kayla: I do think one of the challenges that come with that is for Conscious Discipline. Right? And correct me if I'm wrong, like we could either choose to have a professional development day where we work or we could choose to send two members to CD. So, I declined the Conscious Discipline training for that reason, and they found the funds somewhere else. So, I was still able to do Conscious Discipline, and we have the plan day. I just didn't take the plan day because I missed. But I think other grade levels chose to send what, two team members to another district supported event which lost their time to help plan. So just kind of balancing, like you kind of have to pick and choose what current innovative trends are going on.

Janet: I do think sometimes, even just like earlier today in the library, feeling a little frustrated. Maybe that's not the right word, but like, I have one little boy in particular who really needs someone one-on-one with him, and he doesn't have that. So today I sat down next to him and I helped him get started on one thing, but then I had to move on to help other friends. And so then by the time I got back to him it was time to go. He was like, I didn't get finished. So, I think sometimes that's tricky for kids who aren't quite capable or who have more difficulty doing things on their own or getting started. I worry about them getting left behind sometimes.

Mary: I think time is always a barrier to really make a truly viable and reliable curriculum and to build it, especially something that has so many components and may be involving the community or involving other people to create a real-world experience. It can be really tricky with, you know, like a 50 minute plan every day. We're just a little limited on when and how we can get things planned and collaborate with people and make it happen. I think that there's also like a resource component there, if whether that's

resources being people of like partnering with community members. Some people say no to things and or you just can't get with them. I don't think as a district, we struggle to obtain like physical resources. I think that there's always been plenty of budget to accommodate that. So not necessarily that part, but for sure, like just having the time or the people needed is hard. I also think sometimes we just get thrown into the deep end, and I think that having experience really plays into that. As someone who's still, like, pretty new to the profession, PBL predates when I entered teaching. I think people assume that new teachers just know because we are you know, the generation that grew up with technology and we're supposed to be like, digitally literate and innovative and honestly, like, we don't. There's a lot of assumption that new teachers just know these things because it was either covered in college or we've grown up doing it, but in reality, I would love guidance. I would love to see what other people do. I would love to get other ideas, because I think that creating real-world learning opportunities also requires you to think outside the box a lot. When you're kind of like just getting the hang of teaching and you're following what your teammates are doing or what your building is doing, there's not a lot of room to think outside the box. And it can just be a little bit overwhelming or tricky at times. So, I think that that's definitely a big component as well

Wanda: It's time. And then I would say they sometimes are more expensive. Money can be a deterrent if you have to like buy different supplies that aren't provided. But I would say more so time.

Finn: Yeah, I would say time.

Samantha: It does take a lot of planning. Yes, and I think the hard part too for is to make it personalized to each group of kid. I can't plan in the summer for it. Like I don't know

what these kids are going to want or be interested in or. No two groups are the same. So, because we always have these great plans in the summer, like it's going to be better than last year and then the kids will come in like this is not working. So, I don't know until you meet the kids. I don't know that you can really plan a whole lot of that style of learning.

Ginny: I'm thinking about behavior specifically. So, the school year started off really rough with some of these little kindergarteners. So, I know with them specifically it was the barrier of their behaviors. Just trying to figure out how to help each individual student based off their needs and then teaching it to it.

Question 7: How does leadership help navigate the tension between accountability demands and creative, authentic PBL?

Megan: Right now, we have set aside a certain days we're going to all meet and work on PLCs or on RSPs. We're all going to so that it keeps us on track. Because like when I'm in my room planning and getting things ready, like those things kind of push to the side. I know they need to be done even though I'm doing the work in the classroom. But like the typing out, the paperwork, the documentation, she allots times for that and is like, everybody's coming and doing this. She makes us sit down and do it. Which is great because it is easy to push that stuff aside. But then when we're finished, it's like, okay, go to your room and go keep prepping. So, I think she makes sure she puts time aside for that.

Layla: Yeah. I'm the professional development coordinator. When we sit and plan out the month ahead, it is two meetings on, two offs, and she tries to navigate those off early releases with team meetings during specials times so that it's still meeting.

Monica: Yeah. Intimate like grade level meetings, because mine looks different than your guys' or whatever. So yeah, and just being helpful in any way that she can.

Lucy: She also is constantly like if you paras with an open time in your schedule, send me the time so that you can help with RSPs. She's trying to offer them to the classrooms. So, like when our para is not needed, then they could go help another kid with an RSP.

Ava: I would say that our administration defaults to the test scores side. We are very successful, and I think that's what we hang our hat on. They're trying to sort it out.

Lola: Yeah. Me too. I don't know what the answer is, but I think that we definitely hang our hat on those test scores. I think that carries way more weight, actually, because I'm responsible for all the science. It's like, we got this program. We want you to do it with the kids. It has to be done this many times a week, but they can only do it in the class. But yet every lesson has to be hands on. We don't want to ever see them at their desk. But you also are responsible for all the test scores in the district. So, I'm getting a lot of different messages and it makes it really hard because yes, I want them to do project-based learning. And I get it that we've got this new software, but they also have to be hands-on every lesson. That's a lot. That's a lot for 160 kids, essentially. And so, they've got pressure on them and I understand that. But that puts a lot of pressure on me when I'm the sole person doing that too. So, they want me to be successful in this and they'll get me the resources I need. But then there's also they've got that onus on them that we've had the best scores and we've got to keep them the best. So, I've got a built in workday with one of the learning coaches. So that should help a little.

Haley: Our admin and just being a Title One building does so much of the clerical side of things, which is so helpful. So, like when it comes to the RSPs and all that, they really

handle it for the most part. Like we are obviously implementing some of the instructional things, but they do as much of that as they can from like paperwork, communication with parents, and that side of things. So that's really appreciated. Then just helping us prioritize too. So, like, you know, our goals have really been to focus on phonics, and last year before that was math. So, like we are given a focus and something to really strive for. But also, it's not everything all at once.

Kayla: I mean, I feel like they trust us a lot to get it all done. Does that make sense? Like Find a way to make it work.

Amanda: With our time management. Right. Exactly.

Sylvia: I feel like they secure or they want us to secure time. Like, that's when we come up with the schedules of each year. They secure time for us to make sure we have those RSPs done or that protected time for RSPs, but then tying it back to the standards - to me is always the hard part.

Kathryn: With the resources given and being an open education resource district, more time is spent outside of school hours trying to find materials that's interesting to the kids and hits all of our topics and standards, and accomplishes what we want in regards to our project. So, there's a lot of balancing pieces and a lot of time spent to make sure that the learning is authentic and real and engaging and ties to the standard. It's a big balancing act.

Amanda: Yeah. But it's also kind of the fun part for to me. As a teacher, it's that way where we're not just like, okay, this is what we did last year. It's like making it exciting and like putting our own spin on it each year. Adjusting it to what's currently going on in current events too, you know. Like what's going on around us to be able to play into that.

So, we had a team member who did a project around the KC Current Stadium. They brought in engineers, like environmental engineers to talk about how the stadium would affect the river and how the river would affect the stadium. So, I mean, being able to make those connections and help the kids see, like, oh, this does happen and this is a profession and someone needs to do this.

Janet: They were just supportive. I think her philosophy was always like, what you're doing in the classroom is really, like, the most important thing and not putting a lot of stress on it. Obviously, test scores are important. Obviously, all of those things are important. We have to have those things for kids to be successful, but not making them like the top, you know, the thing to strive for. I see that here as well. I really feel like you get a lot of support. You get a lot of positive feedback from the administrators here. They're here to help you with anything you need. They try to take as much off your plate as they can. Our principal is really good about every day, sending out a here's what needs to be done today and remember next week this is happening. So, I think just that organizational piece too is helpful and just the reminders.

Mary: I think our leadership does a really great job in this area. They really act as a funnel, and they'll say that they really try to kind of block out what they think is not helpful to us or would put too much on our plates, and they take a lot off of our plates in that area where they'll spend their time making spreadsheets for RSPs and having things ready so that all we have to do is sit down and have a meeting about what kiddos are flagged for that, and then discuss what interventions we're going to do, and so on, rather than like making us pull those resources and figure out who needs intervention or what that's going to look like. So, I think that they're really good at balancing that. And just

like accommodating or modifying things to still meet the needs of whatever the district or the state might be putting out, but also protect their staff while meeting that need, which I'm really grateful for. So, a lot of that they take off of our plates just in various ways.

Samantha: Well, I will say that having a resource in some of our areas that we teach has been super helpful because I can't I mean, there's a reason people make math resources and Ela resources because they have the time to create it, and I can it. Just because I'm given a resource doesn't mean it's going to work great. I think it takes great teachers to implement anything. And so, I don't know, I think that having some resources is helpful, but we are also given some leeway in how we use the resource and making it our own.

Wanda: I mean, we don't have to turn in lesson plans or anything. I mean, I feel like they give us a lot of grace in how we teach, and I do feel like this year it has gotten very specific in I mean, we do have a lot more paperwork we have to fill out. We've got agendas and different goals that we're tracking and different subject areas. But I do feel like I'm not constrained by using my own creativity. I guess when it comes to actually conducting a lesson.

Finn: And I feel like our principals are really good at partnering with us, especially student behavior, but also like academic needs. Obviously as a Title One school, we have support in that way that other schools don't have. I think that helps us manage RSPs better. It's still a challenge because there's only so far one or two people even can help. We have a higher need probably. But I do think that we use our resources as efficiently as possible - our human resources and our actual physical resources.

Ginny: I guess just going back from the beginning of the school year these kids came in really, really rough and I just felt defeated and defeated. But having that support of the

admin to come in and just really help me feel supported and like give me pointers and feedback without me feeling like I was doing something wrong was really helpful. And then it also didn't make me feel drained. This is my first year doing kindergarten, and there's a very rough, rough group of kids here. So, at first, I was like, why did I do this? Why did I do this? But then having their support has been really helpful with maintaining, I guess, my emotions and mood every day. I'm able to teach appropriately because I have their help, I guess.

Question 8: How has real-world PBL impacted your professional growth, excitement for teaching, or desire to remain in the profession?

Lucy: I will not go to another school. If I leave, I'm quitting because I could not go back to a you have to teach this curriculum page by page. Even going to district meetings, it's very hard to set in because it's like if you could just see the possibilities that happen when you let go and give a little bit more freedom. So, like, I will not leave this building unless if I'm leaving education.

Layla: At ten years, I was definitely hitting the burnout. And then I came here, and I feel like I'm drained, but like, I'm drained because it was a lively day.

Monica: We had two different design challenges today. We're working on our showcase stuff next week. It was just a really busy but fun day. I mean, the kids never come in hating school. They're always running down the hallway, which is great because even when you're in a bad mood, it's like, okay, well, they think it's the best place ever.

Layla: Yeah. Even though I'm exhausted or whatever. Because before I feel like I would just be bored. I would get so bored. It's the hardest part of my current job in special education, because I miss PBL so much. I miss teaching projects because I went the

opposite where I am legally mandated to teach XYZ. And it's like, here's the curriculum you're going to teach out of. I so badly want to teach projects, but personally I feel like I was called to do this job, so I want to do that. But then I miss teaching in the classroom. The innovation that comes with it. It even challenges us to be innovative and creative. My job is not creative. It is very...you have to do this.

Megan: No, I think that it is the thing to be creative, because I think for having taught for 20 years, for years and years and years, I did the same thing. And I followed this curriculum and I was on this lesson and then this lesson, and then I come here and you actually get to do what you went to college for, which is create lessons, you know, from scratch, building them up. So just getting to be creative is what keeps you interested.

Monica: Yeah. And staying. And not having your curriculum book in your hand. Like your wonders. Yeah. Every day. And it's like if they're struggling for a day, you can figure out what they need in that moment. And it's not like, I know you don't want to sit here, but if they walk in and see my I can statement is wrong. I get written up. So, it's just nice, like as educators, to be trusted and know to do what's best for the kids.

Lucy: I feel like it's teaching really good life skills with students too, because it's teaching them flexibility. If the routine is off or like if you need to flip something or change something or whatever it is. Time management. That's a life skill that you need to know. Like you need to know that sometimes things don't go your way. Sometimes you can put it down and take a break from it, other times you can't. And that's what we do in our classroom. Like, no, we got to push through. This has to be done or let's take a break for the day.

Layla: I know a lot of teachers at middle and high school levels, and they always they always can tell the kids from Cedar Grove because they have those skills of problem solving, communicating with one another, and collaborating because they have to. Yeah, even like teachers that teach our kids in summer for summer school, they're always like, well, those are the Cedar Grove kids because they can manipulate the iPad and problem-solve

Monica: But I think it was you that had told me too, like a few years ago, that 50 is hard because you're stuck with those people or like the same class, having the same exact class for six years. If they can't get along, they're learning those problem solving skills because they have to learn them. They're stuck with each other. Like, you don't get to just have your parents bail you out and get you a different teacher. That is an option. What are you going to do to solve this problem? Because you're stuck together, and that's a good life skill.

Layla: That parent book study. That was the one thing that the parents all said. We love this place because, yeah, we hear about the same kickball recess issue year after year. But also, it's well, how are you going to fix it? You're stuck with them for the next five years. Let's figure it out. They don't have to be your best friend, but you do have to figure it out. And also, there's 50 in the class. So, if you can't get along with this one and we can't figure it out, there's another kid. But like, also patience. All of that. Like in a job you're not going to like everybody. You're not going to get to go first every time. Like we really are teaching those aspects of life through projects. Like you might be done with your project, but you might have to wait a little bit because, yeah, that's life.

Kathryn: Because there is an exhaustion with it. Yeah.

Amanda: Yeah. But I do think that, like, the passion that the kids have for it and the enjoyment that they have in it, I mean, it's still makes it fun and enjoyable and seeing them thrive in it. I mean, it continues to keep us going.

Kayla: Yeah. So that stereotypical teacher answer, like the kid's excitement motivates us to.

Sylvia: I think like when we're working on BizTown or School of Economics or the Burns and Mac. Those are my favorite times. And so, I look forward to those. I know the kids look forward to them, but I also look forward to the projects and their excitement, the creative chaos. It's somewhat organized, but I love the creative chaos.

Janet: I just I do think that PBL is a really great way for kids to learn. If we could, you know, if everything could be PBL, I feel like kids really would learn so much. I don't want to say it's better, but I think they would have a deeper understanding of what they're learning. I love how excited they get about these big projects. I feel like those are the things that they're going to remember, like down the road, you know, when they when they leave elementary school, they're going to look back and they're going to be like, oh, I remember in kindergarten when we helped out the gingerbread man's fairy tale friend, you know, things like that. Yeah, that was fun, but we were really we were learning about force and motion, you know. It was like play time. They didn't realize they were really learning, you know, because they're having so much fun while they're doing it. So, I think those are the things that are going to stick with them the most. So yeah, I think it is great and not always feasible for everything, but as much as you can incorporate that real-world learning into your classroom or into your curriculum, I think that's best for the kids.

Mary: I think I'm far more excited to teach when I've had a hand in what I'm teaching and when it's applicable and exciting for them, it's exciting for me. And that really rubs off too. Like, if I'm excited to teach and they're excited to learn, and I think that that makes it just fun. And then in that case, when it's fun, it's unforgettable and they are growing. And so, having a hand in it, I think is really valuable. I think growth wise having a hand in it is always a challenge, which means growth. So just like being empowered or challenged to plan and create these opportunities is always an area for growth. I think trial and error is always an area for growth. Project-based learning can be messy and chaotic. And so, kind of learning how to make it work in a classroom. And you know, this didn't work this year, but we'll try it different next year. That kind of thing is always a factor. But I do think it's much more exciting and much more of a growth opportunity for myself and the students when I'm the one or our teams are the ones having the hand in the planning and the execution of all of it.

Wanda: I see the huge benefit there just because I think it is prepping our kids for the most part. I see my own seventh grader, how she transitioned from a very strong PBL school to a traditional school. She has many of the skills that she uses to apply things that other kids probably didn't have experience in. She's just more creative in how she shows her learning. Whereas some kids are just like, where's the worksheet? How long do you want me to spend on it? When I'm done, can I get on my iPad or, they are just sitting there waiting for you to give them the information or the answers. Whereas when you're doing project-based learning, there's more motivation to investigate or solve the problem. You know, whatever the need may be.

Ginny: I'm not excited, but it's really hard for me with the behaviors my students have. So, we try our best to be incorporated in the garden, but it's really hard to maintain like their goals and the teaching aspect of it, while still trying to incorporate going out to the garden and doing all that stuff. So that was really a challenge for me. So, behaviors kind of came in the way, and we couldn't always do what the other classes were doing. Yesterday my kindergarteners were packaging fruit for everyone. So, they were actually very excited, and that was one of the first times that we were able to help with the garden. They had to count and kind of incorporate math into it. The excitement for me was just there because I'm like, wait, they can do this. Also, I'm also not really a gardener. So, I'm also learning along the way. I've seen a lot of different projects around the school, and it seems like the kids put a lot effort into it. So, there's probably that connection piece somewhere.

Question 9: When you think about sustainability, what does leadership need to protect, enhance, or fix for real-world PBL to continue thriving?

Layla: I feel like places that are visited that are anywhere close to Cedar Grove have very small class sizes to allow them to have individualized learning and things like that.

Obviously, time needs to be protected. Teachers have to have time.

Lucy: But like the district having to be on board that we might not do the exact same thing. But as long as we're showing that the kids are learning what they're supposed to be learning and we're doing what the state mandates, then it has to be protected that we might not look the same and might not have to do all the same things. Yeah, the balance between creativity and state expectations. Yes. I think too, as far as project elements go, like the authentic audience, kids have to be doing it for a purpose. Yes. And student

voice. They have to be able to have some kind of voice and choice in the project in order for it to be authentic. But that authentic piece is huge.

Ava: I was just going to say professional development. Get into a school that does this. Go see them. But there's also like pockets in here. So, I know there's a third grade teacher who's really working hard on something. There are a few first grade teachers that are working really hard on something like have them talk to us, have us go out and see things like, we don't know it unless we see it. What is it? I don't know how many percentages I'm making up this number, but like 85% of people have to see it before they're ever going to buy into it. I don't know what the number is, but it's really high. So, a huge number of people have to see it before they will ever try it. Well, we haven't even seen it, right? So, send teams to go see a school. I mean there's money out there. I know there is. Send teams to go see a school, and not just two people that you know are invested, because those aren't the people that you have to worry about. Send the people who aren't quite sure. I think changing administration has changed the mindset of some principals, which I think is great. It's very slowly happening, but it's obviously happening because look around us.

Lola: But I think that like accountability, like, what's the word I'm thinking of. Consistency. You said in the beginning we were going to do a project, but you never came back to the project. So now we didn't do the project. So, then your words mean nothing like, how can we make this happen? I don't know, I am not an administrator, so I can't imagine the job that it is. Nor would I want to.

Haley: Just thinking towards science a little bit more, I feel like sometimes it's a little more forced to have an ending project, and I don't know if it's because I didn't have a

hand in creating those, or if I don't feel like they necessarily align importance wise as much as we're spending time on it. But I feel like that's a responsibility I have. And so, I do them. So that's like a little bit of a turn off when I don't feel passionate about, like the ending project, because I just feel like I'm doing it because that's what needs to be done. Maybe social studies is just easier for me. But I get excited because I can feel like I make much more of a community connection, real-life connection.

Amanda: I mean, I think just continuing to be supportive of it. Then realizing that it does take the time and the energy and the supplies and the resources and all the stuff that it does take to continue on. Like with the robotics, while we saw that with the kids and how incredible it was, the reason we had to quit was because of the resources of it. It needed to be replaced. It's too expensive. And the district, we couldn't fund it, you know. So, I mean, then that piece of is hard.

Kayla: Yeah. But then trying to recreate some of those things, those same experiences is really hard.

Kathryn: I just think that they are supportive, you know, they understand. And I mean they understand where we've been and know where we would love to be going still. So that support of trying to help us get there.

Researcher: When you say support, what are the actual things that they do to support?

Sylvia: So, for instance, with robotics, when we were trying to find the pieces, David was reaching out to other schools trying to get pieces for us. He was reaching out with our tech person, seeing if we can get other parts that would still work with these other parts, working with different funding, seeing if we could get some different things. And I mean, we were shut down in various ways because only so many people can donate funds for

the educational resources. That communication piece of how can we help find these resources for you? And if we can't find it then how can we purchase it for you? But I also say giving us the gift of time, too. They're really good about like, those Wednesday afternoons, like, this is your real world learning time. So, sit down with your team and work.

Kathryn: And, and another thing that's just kind of like another way to support us. We would go to School of Economics and the start time and end time is very set. And you know, with Sunnydale, our buses have to be back by a certain time. And that cuts off us being there like nearly 45 minutes. Yeah, like an hour. And I mean, I would talk to him. I'm like, this is ridiculous that we are paying this much per student to go. And Sunnydale is big on this profile that we have of giving students these experiences. And we're cutting it short an hour. Tell me how this matches because it does not match. And so instead, like he's hearing me and instead we're paying for a charter bus to come back at the full time and give our kids those experiences. So that's another way of supporting, like hearing us like we're.

Amanda: It's not just I'm hearing you, I'm sorry for this, but hearing it and then taking action on it. And I know that's not always possible, but like thinking about ways that we can do things. That is a big thing.

Janet: I do feel like one of the hardest things is the numbers. Like the class sizes. I would feel sometimes like we just had such big classes that it was hard to do quite all of the things that we wanted to do. I'm noticing that even here, like at Meadowbrook. Being able to support for those kiddos who need that extra. That's probably the biggest thing. I

don't know if that's possible, but I do feel like that's what I notice the most, or what I feel like is the most difficult.

Mary: I think it's really tricky because with prescribed curriculum it is built out for you, but I think it can really hinder what we do. But at the same time planning everything by hand is also kind of an overwhelming or impossible task. So, I think that there's like a balance to it of maybe having like an outline or a structure to follow while also having the creative freedom to enhance it ourselves or switch it up ourselves to where it's actually applicable to our students and what we're doing. We've looked a lot at integrating our units together. You know, if we're doing this in social studies or science, then we're also applying it to what we're doing in writing and kind of combining those. So, like, for example, we're on westward expansion unit right now. And so, we're also applying that in writing by doing historical fiction and making that about westward expansion, like an Oregon Trail sort of situation. So, I think like being able to combine and adjust is nice, but having some sort of like structure or foundation even to build off of is really needed as well.

Wanda: Well, I think it probably protected time in our school day. It almost has to be scheduled.

Question 10: What advice would you give your school leaders if they want more teachers to feel successful and supported with real-world PBL?

Lucy: I think that they have to show that PBL is not adding to your plate, because that's what it feels like when you're supposed to be teaching this curriculum. Like, I feel like when I go to district meetings, all the teachers are like, well, we have to teach this page by page. And I don't think that that's true, but I feel like that's what they're stuck on. So, if

they could just see that these things are resources to support the learning, but then just like encouraging teachers to try it and if you fail, do something else. It's okay to fail, it's not going to be perfect. So, I think just encouraging teachers that it's like, just try the things that you want in your classroom. Like what kind of teacher do you want to be? Try it and see how it goes.

Monica: Which has been super beneficial this year with Caroline because she has been meeting with us because I had a veteran teacher, and then now I have somebody who's new to the district, like it's been super beneficial. After our project based learning unit, we sit down and we talk about what worked, what didn't, and then we go back to it next year and consider maybe what we could change, or we kind of look at what's happening with the world and consider what different pieces we could add to it. It's been really cool to, again, not having to do the same exact thing every single time, which is hard for a teacher.

Layla: PD support needs to look different. It doesn't necessarily need to be about all the things that the district is doing, but thinking about how can we spend some of the staff time to move forward. Like our Two Cent Tuesdays were never about reading, writing, or specific curriculum. It was more how can we incorporate something into PBLs? How could you play with it, giving them time to do some of the things you want them to teach so that they feel comfortable with it? When it's just, here's this, go do it. Then they don't feel comfortable and they're not going to do it well.

Megan: And I think supporting teachers, understanding that it doesn't have to look the same. Everybody's at a different comfort level. I think about even in our own building, some of us when a new initiative comes, some jump in feet first, and some of us try just

little things at a time. Get your feet wet. Not pushing everybody to look exactly the same.

Lucy: When we first opened Cedar Grove, it was everyone head first. I cried daily. We would meet at Chick-Fil-A on Saturday mornings, and my co-teacher and I would try to get ahead for the week. Then Wednesday nights we would meet again and stay till like 6:00 pm. It was miserable, but it was like a whole system push shift, right? So, you had to do it. But I feel like now that it's there, it feels like I'm planning less. Like I don't feel like I'm at home looking through curriculum, like it's just all about the kids. Creative thoughts, I can just jot them down and be like, hey, it's more about let's get the materials ready for the kids to do this. When people would come in here they would say, we can't do this. I agree. This is not feasible to do what we did system-wide. But it was because we had to with the building, right? Like the new building, the new school, the new everything. My advice would be take one thing, see if you can change one thing. One project, one unit. More student voice and choice. Like take one piece and change your audience. Change your driving question. Add in some writing to your math or you know, like take science and writing and put it together. Just do small things until you're comfortable and you feel good about it. Like it doesn't have to be a whole system wide diving in the deep end.

Megan: I love how Jessa individualized our PD, and we have a hub for PD. It was like, if this is what you want to focus on, dive into that and work on it. And what you are trying might be something totally different from someone else. It was all about our choice because it's what we're comfortable with, which is what PBL is all about. So, she made sure that PD and our teachers are reflecting that as well.

Lola: I think a lot of teachers need words of affirmation 100%, and I don't think we hear that enough. I think we as a team, we always start our team meetings on the negative. How about we flip that and start talking about things that were good or that worked? Or what's to be celebrated, before we dive in to what can we fix? So, I think one thing would be just affirming those small pockets of people.

Ava: Yes. Highlight and showcase. I'm just saying don't just put a blurb in your newsletter. Like, actually take the time to showcase those people. What are they doing? Get people into their classrooms. I feel like we're starting to move that way. But I'm just saying, in general, what could administrators do? Those would be some things that I would say, because I know in Sunnydale, in general, there are certain buildings that say, if you need words of affirmation, then you're in the wrong career. No, every single person needs words of affirmation.

Lola: Absolutely. I would say those things.

Haley: Yeah, I think it's just time again, you know, but just allowing us time, like, we've talked about just having those different focuses each year and maybe making that a priority making sure that the work that is out there is available. Like, I don't even know how many people use those social studies units. Only two of the four that were created are online. The other two are not. So, I think just intentionality of like, if the work's put in to make sure what is out there is available. So yeah, but also time to create things if that is what's needed as well. I also think that I would want them to build a rapport in which, there was a comfort created to where open, honest conversations were able to be had. So that way you could get a full understanding and an honest understanding of what supports would actually be helpful. Because sometimes we're polite and we nod our heads and

smile. But then maybe it wasn't the most productive thing. Just to, I guess, make everyone's time productive.

Amanda: Be the teacher's advocate. Be the spokesperson. Listen to them. Give them the gift of time. But figure out what you think they need, and make that happen.

Kayla: Think creative problem solving. Like find creative ways of how can we make things work. As much as possible, I think we're always willing to listen and figure out. We know it might not be exactly the way we were thinking, but compromising, like, what can we do? What pieces can we make work?

Sylvia: Yeah, I think also like communicating with district admin and also people in the community helps too for building admin to do that on our behalf. Our real-world learning director is a gift. She is because when they see that we're what we're wanting to do, I think that gives more credit too, knowing that it's a district focus as well.

Amanda: Yeah, we wouldn't be able to do what we do with our kids if the whole school didn't do something, if that makes sense. Like we can't just jump in at fifth grade. I think each grade, by everybody doing something along the way, helps us be able to do what we do. You know, like, we can't take our kids out to present and do the things we do. If they didn't have experiences in K-4.

Kayla: Yeah, they start having people come in, and it's like a slow progression. So that way we can take our leaders out to the community and speak to professionals. It took, you know, kindergarten and first and second grade to do their pieces, to have either people come in, whether that's students, A+ students, parents or other just professionals. That's a big deal. So that way by fifth grade, we can take them out to the professional setting.

Sylvia: I don't know if you're interviewing kindergarten, but I'm going to give them their flowers right now. Like they even take them out to Heritage to present their coding projects. And like that's a big deal for kindergartners to go present. So, they are really setting the foundation for that.

Kayla: Yeah. So, by the time they get to us, they're just they're used to talking to people like at least at some point they've talked to people outside of their grades. So, it also practices that communication skill as well, and how to present to a public audience.

Janet: I think just maybe being okay with it not happening all at once, you know, like maybe this year you're going to try these things and see how that goes. And then maybe next year we can implement a few more things at least, you know, because otherwise it's really overwhelming, I struggle with that because I'm like, there's a lot of things like I want like right now. I'm very disappointed that the makerspace is not like up and running and functioning every day. But I'm like, I'm doing everything I can. I just have to do a little bit at a time. Another librarian keeps telling me, five year plan, have a five year plan. So, I've kind of tried to keep that in the back of my mind. So, I think as long as administrators understand it may not happen right away, you know, it might be something that you have to work toward.

Mary: Just to consider carefully how they plan to introduce and implement PBL and real-world learning goals in a way that does not overwhelm their staff. I think that these learning styles can feel incredibly overwhelming or unreachable at times to teachers because they are often presented as these huge projects that involve so many people or resources, which can be the case. But just as often, real world learning can be incorporated into learning in smaller ways while being just as effective if not more so.

Wanda: So, I would say, like, having a dedicated block of time. But obviously when you do that, that takes away from something else and being able to get kids the skills they need without losing that time is really hard. I don't know, but I think the permission to take the time, I guess, would be helpful.

Samantha: I think to take the time to plan, like there's not time to do it right now. We're struggling with time to work on, you know, sitting down and looking at how can we mesh together these things to make this unit.

Finn: Also, with PBL, you tend to want to put everything into it. And maybe it's not everything. Like maybe you can do two things or three things integrated and that makes a little bit more manageable for us. So maybe that permission that it doesn't have to be the perfect unit, like the world's greatest.

Ginny: The first thing that came to mind was just like, hear them out, listen to what they're presenting, and just see if it could work. Because that's kind of all it was with this garden, and now we have it. I didn't even think it was possible. So, I guess just listen, hear them out, see if it's realistic.

**APPENDIX B: INTERVIEW- PRINCIPAL/ASSISTANT PRINCIPAL
QUESTIONS**

Focus Group Question	Corresponding Research Question
Tell me a little bit about yourself.	
1. How would you describe the current culture of real-world project-based learning in your school, and what leadership actions have helped shape that culture?	RQ 1 RQ 4
2. What motivated your school to pursue real-world PBL, and how did you communicate this vision to teachers, students, and families?	RQ 5
3. What specific leadership practices or strategies have you found most effective in supporting teachers as they design and implement real-world learning experiences?	RQ 1 RQ 3 RQ 4
4. Tell me about a time you had to remove barriers or advocate for structures that made real-world PBL more possible for teachers. What did you do, and what was the outcome?	RQ 2 RQ 5
5. How do you provide professional development and coaching that builds teacher confidence and capacity for real-world PBL over time?	RQ 4

6. In what ways do you carve out time, collaboration opportunities, or access to external partners to support real-world learning?	RQ 3
7. How do you balance the goals of real-world PBL with district expectations, standards, and accountability measures?	RQ 5
8. What changes have you seen in teacher motivation, professional growth, or retention connected to real-world PBL efforts?	RQ 5
9. How do you know whether real-world PBL is having a meaningful impact on student learning, engagement, and future-ready skills? What evidence do you look for?	RQ 1 RQ 3
10. If you were giving advice to another school leader just beginning this work, what would you say is essential for cultivating real-world PBL in a sustainable way?	RQ 3

Administrator Interview Responses

Question 1: How would you describe the current culture of real-world project-based learning in your school, and what leadership actions have helped shape that culture?

Carly: Yeah. I mean, I think there is a lot of, for lack of a better word, like interest right now. Like, I think teachers see the value? See the impact. I think that they there's the buy

in. So, I think that that's all there. I think being an elementary school kind of presents that unique challenge of also like, but they do need to learn how to read and they need to learn some basic math and like making sure that we're just just being really balanced, if that makes sense, with the with the initiatives.

David: I feel we have a very healthy culture. When I think of real world learning, I go back to our superintendent. I lean on his words when I think of our role as an elementary school in real world learning. Like if we at the elementary level can simply expose and let our kids explore within different layers of real-world learning. I feel like we are laying a pretty solid foundation for the experience in middle school, and the immersion in high school.

Jessa: I would say it's just embedded. It's very natural here. It's not one more thing. It's truly what we do here. I feel like for newer staff, maybe that's a larger learning curve, but overall that is the culture here -with families, students and staff. So, it's not something extra or new.

Thomas: I mean, if you're if you're thinking or the question is intended on, is it viewed as a positive, is it viewed as something that's worthy? Is it viewed as something that you know, they're striving for? I would say yes to all of those things. I think, you know, all of our teachers see value in real- world projects. I think the challenge becomes just how do you embed real world learning? So, it's not the thing. It's actually just part of the learning experience. And then also it's done at an appropriate level for whatever age that we've done. So, I don't think it's viewed as negative or viewed as not worthy or people resist doing it. In fact, I think almost to the contrary, that I think people have been doing real world like activities for a long time in the elementary world. They just haven't named

it that, or they haven't necessarily even intentionally made that decision. Other than that, would be a good activity for kids, right. I guess just personally, I get where it gets harder and harder and harder for me to see the connection is when we are at DLT and we're learning or discussing learning ecosystems, and we get into these hubs of learning. That's when I just have such a hard time seeing that funneled into an elementary world and what that would look like especially when you look at it in the extremes of the definitions that our superintendent provides for us. It's not the definitions anyways, that he's provided is not a continuum necessarily. It's the way the definitions are very long term over a long period of time. Great. I think there's definitely a continuum of that. But to me that's more for high schoolers, you know, we would be striving for high schoolers to be doing.

Brady: I think we have different opinions about it, just kind of based on personalities or teams. I think that we all recognize that it is important and that can be really helpful for students. But I think the hurdle is the planning time and just resources and you know. As you know, as a teacher, there's a lot on your plate. So, I think that is kind of our next step. We know that project-based learning is great for all kids, and we want to introduce them to that. But how are we going to make that manageable for teachers and make it meaningful for kids?

Debbie: I think we have a fair amount of teachers that see and understand the importance and are unsure of how to make it something that feels seamless and not something separate from everyday learning.

Charlotte: I think people, in my opinion, people don't disagree with it. They think it's what's best for kids. It's finding the time to do it and do it well. When you have no curriculum, you're really planning your day to day lessons, and that takes a ton of time.

So, it doesn't leave a lot of time to plan those real world or PBL experiences like we intend to. Unless you are the type of teacher that puts in lots of hours outside of contract hours right now, with Sunnydale's current reality of lack of resources, lack of curriculum - it just doesn't lend itself to being done in a typical contract day. We have the buy in. It's just now finding time for teachers to actually do it. So, giving them time. Then that's when you start spending your 1% money to give them time, but then you're not developing teachers with that 1% money. You're not sending them to PD because you're spending all your money giving them plan time. So, it's a double edged sword. We've got the buy-in.

Question 2: What motivated your school to pursue real-world PBL, and how did you communicate this vision to teachers, students, and families?

Carly: That's a great question. I mean, it's definitely part of a district initiative, right? We've heard. We've been through the PBL training. We have a director of Real World Learning. We're being asked more and more questions about how we're doing real-world learning at the elementary school level. So, I think that part of that is just trying to align ourselves with the district initiative. Like I said, I think we see the value, you know, we're trying to balance it also with trying to make sure we're doing really great reading instruction and really great math instruction. But I think it's once you feel the value, then you're more motivated to continue the work. I know the real-world learning directors have talked a lot about career readiness and how important that is to start at the beginning years. I know, at least for me personally, that's really resonated. Like, gosh, kids leave and they know they want to be either a teacher or some other career that they've seen on TV because that's all that they really know. We could do a better job of exposing them.

You know that has resonated with me and really motivated me personally lately, especially my own children. You know, my children will know how to be a teacher or a principal. So how do we let them know there are other career paths as well? I think that that's the biggest thing for David and I is that we're in this together. We try really hard to build a lot of safety. At Meadowbrook, we have dedicated time for them to plan their real-world learning experiences. There's a shared tab on our notes doc where they put even, like, clerical stuff that they need to make that happen. We try our best to help with that. We try really hard to support arranging the buses or connecting with those people or whatever it may be. Teachers know ahead of time the days for sure that we have sort of protected time for them to work on it. And then we ask them, what can we do to make this load easier?

David: I think the first thing I think about is naming and claiming the amazing work that teachers are doing. And by naming and claiming what they're doing, my assistant and I, we are then able to help connect the dots. to When it applies to learning and or partnership opportunities that come available through the community. So, I think naming and claiming the amazing work happening and promoting that with our team. The second I would say is just creating structures that make it not feel like it's another thing, like how do we stack what we do? How do we stack efficiency into what we do so that we can showcase our kids? And that's under that idea of exploring or exposing them to pathways or to experiences that allow them to be showcased. For example, if a class is doing a module on prosthetics. They're doing the work. So, naming and claiming it and then us being able to connect the dots that it is very much toward a medical field. Then can we take our learning outside of the building to then showcase our students learning to an

authentic audience of doctors, professionals, veterinarians. Right? So, tying the experiences that are happening to outside of our building.

Jessa: I think with Cedar Grove, the whole idea was looking at how we can do school differently, how we can prepare learners for the future that doesn't yet exist. How can we do a better job for students? How can we meet their needs better in a more authentic way, knowing that learners are diverse? And then with that, I think project based learning came alongside of that real world application that it's not just learning math to learn math. It's learning math because it can apply to how you garden, how you build, how you do all the things. And so that just was part of Cedar Grove being designed. I think it was a natural fit to help support that. For staff, specifically in the interview process, I will even send stuff ahead of time to potential candidates just to make sure they fully know. Because I do think besides project based learning, Cedar Grove has several special nuances. But in the interview, our questions are really specifically tailored around our vision, around project-based learning. Real world learning. Just to make sure that we are getting the right candidates in. I mean, even then, it's obviously just questions. But you know, I did have one person in an interview that said, thank you for these questions. I'm realizing I'm not a good fit. So even if that can help in the moment, I feel like that's the purpose. Then with families and students, that is something just since I've taken over obviously, Cedar Grove's reputation is our best marketing. A lot of families already know. They hear about it, and so we don't necessarily have to explain a ton to new families. But we have been really intentional about trying to do a better job of communicating things ahead of time. We launched a whole new day in the Life of Cedar Grove video that we sent to all of our new families. So, I think that's always a work in

progress. But we've tried to communicate our mission and vision more clearly and more intentionally.

Thomas: I think it's just like anything else that if you want it to be, it's just like anything that from an improvement side of things or leading anything. If you want to change something, you gotta clearly think through what do we really want to change? Let's be really clear with it. What do we want it to look like? How are we going to support people in this? How are we going to provide training? How are we going to provide the knowledge? The whole Knoster model, it really is a good model. When you think about something new that you want to take on, if you can hit all of those components and then you can keep it going and stay focused on it and not be a squirrel. It's like horse races. You know, some horses are easily distracted. Right? And so, they put blinders on those horses because they don't want the horse to get distracted from what's most important, which is straight ahead. Right? And so, we have many times thought of or seen many great ideas, but they can also be major distractors. Because you're like, oh, that's a good idea. Then all of a sudden, you're over here and it's like, no, wait, hold on. We're supposed to be here.

Brady: I think the motivating factor is honestly when we have had teachers engage in some of this work they see how much it means to the kids, they see their passion light up. And so honestly, you know, they hear our message and our support and our professional development about real world learning. But I think truly the motivating factor for them is when they start dipping their toes in and they see how excited students are. I think they also see how excited they get with the planning. You know, it's a different experience than, okay, let's learn about the letter A tomorrow. Let's learn about B the next day. I

think they start to get so involved in the project, and it makes them feel good, and it gets them excited about the possibilities. And so honestly, I think we encourage them along the path. But I truly think the motivating factor is what they see their students doing and how much they love it. I think it has been different throughout the years as we've kind of taken on this goal as a district. I think this year we're getting the messaging a lot better. I think before when we heard real-world learning and giving these examples, it had to be this big idea or giant project. Whereas now we're talking a lot more about relevance and how can we bring that into the classroom. As you know, our fifth grade team is doing a whole different structure, and they're using a lot with the career clusters. So, we've also started to bring in how can we bring in some relevance and tie that to careers and what that might look like in the future. And you know, spark a passion for something. So, I think that messaging is really just what can we do to make learning more hands on, more relevant engaging? We've also focused a lot this year on professional development with our leadership team about project-based learning and planning. So, we did that at the very beginning of the year. Some of the language that Caroline from Cedar Grove gave us we have really utilized when we're planning - using our hands, our heart and our minds. Considering how can we focus on all those three pieces within the unit? So that doesn't mean it necessarily has to be a three month giant unit and project. What could we do in our normal everyday lessons to incorporate those three things?

Charlotte: That's a great question. I'll always go back to my longevity. I think it helps that I've been here for so long. So, I feel like my staff knows at this point I'm not going to push something unless I truly believe that it's the best thing for kids. I think we've started very small like this year, we said one per semester. That's twice a year. We're asking you

to do this so it's not out of reach. Then we also said bring a unit you already do, and let's build it from there. So not let's create something new, but let's take what you already have done and beef it up a little bit.

Charlotte: So that's part of our BIP. So, one thing you know that the district said this year is you're going to have a real-world learning goal. So, we honestly could have just picked one grade level because our fifth grade is operating under those guidelines this year with the different structure we put in for them. But I knew that wouldn't push everybody forward and push everybody's thinking. Since we don't have an ELA curriculum, we could stay stagnant and just do what we're doing. However, we are under that mentality that we need to continue getting better, even with the resources we have. So as part of our BIP, we just decided, you know, we want to tell our story. So how could we tell our story and do it in a way that takes into account where every teacher is in this building? Because not every teacher has dived into PBL and real-world learning like others. So, we're like, if we just start with one a semester and everybody gets their feet wet. The thing is, you can't move forward if you don't have everybody on the same page. So, I didn't need half the building or half my teachers on the same page. I needed everybody on the same page. So, if I my expectation is that they do two a year, one in the first semester, one in the second semester, it moves us all forward together. Then next year we can add on to that. Not everybody would have had those experiences if I just started with one grade level this year. So, I really believe in if we're going to move, we have to move together, even if it's at a slow pace. And that's what we're doing right now. Then we're also trying to tell our story better through those experiences we're offering kids this year. That is one weakness

I feel like I have that I don't tell our story. We do a ton of stuff. We just don't tell our story very well. As you know, whatever gets monitored gets done.

Debbie: I think I would add we encourage taking risks, and I feel like we work really hard to create a culture and an environment where risk taking is celebrated and supported. We don't expect perfection. We are just happy that people are willing to try different things and push the envelope a little bit. We try and help get supplies for things that are needed for these kinds of experiences, help make those connections, help find time or classroom coverage for them to finalize details, or just to kind of bring it all together. So, I feel like as leaders, we are putting the importance on that and our actions are matching our words. So, we shared that information with our leadership team initially in our summer retreat before school started, to kind of help them make sure that we were all on the same page with the vision and the direction we were heading. It gave us an opportunity to fine tune anything that we needed to. We shared it with all staff at preservice so that everyone had an understanding of our expectations and goals for the year and then our leadership team, we're doing check ins with them periodically throughout the year to kind of check in on progress. We're having them be responsible for documenting the real-world learning activities for each semester, and they're putting that information into a shared book creator that we're using as a school, with that being the focus, so that we are being intentional about sharing that story and how we're growing from that. And it'll be good to look back on in the future. Here's where we started and here's where we're at now. And then we also partnered with the director of real-world learning. She has been working with our whole school. She did PD for two hours on real world learning. And so, they kind of are hearing that message continually from us and

from other people. Then she's worked with each of our teams in a team meeting so that they know that this is something that we are serious and passionate about, and it's going to keep happening. And it's not just a, you know, let's talk about at the beginning of the year and then we're not touching base about it ever again. So, it's consistent.

Question 3: What specific leadership practices or strategies have you found most effective in supporting teachers as they design and implement real-world learning experiences?

Carly: You know, I'm lucky in that, since I've been here, it's been the norm to have sort of a minimum expectation of sharing out their learning every year at every grade. And so that culture was built for me. It's a lot of asking teachers to reflect on those experiences, and then they hear themselves talking about how powerful it was, and that it was worth it, you know, to do this, those things, it might seem extra, if you will. You know, I think too, and I think this is a particular strength of David's, is there's a lot of safety when you plan things with him because you're going to have his unconditional support, if you will. So, I think our teams have learned over time that they can start small and grow even more. So, at the beginning, we definitely have teams that want them to share their learning, but we're going to bring in our EIP students to do that. So, we may not go anywhere, but they're still sharing their work, and we try to communicate that's really valuable. We try to encourage that. They tend to want to they feel good and confident and safe and they'll take the next step, if that makes sense. So, we try to encourage any step. Because any step into real-world learning is the right step.

David: It's not so much about top down as much as it is the mindset of let's do it together because it's good for kids. So, it is very much a this was amazing, how do we grow what

we just did. Right? So, I guess the answer is keep it about kids. The team, the teachers are already doing the work. So, let's celebrate that. But how do we showcase kids. Right? I think it's a willingness to do what it takes. If we as a team, if we as a school team believe in this kind of work, what can Carly and I do behind the scenes to just make it happen, right? Almost like we will do what it takes to set the team up for success, but behind the scenes. So maybe, maybe very servant leadership, right? Or shepherd leadership. It's like fanning the flame of the work being done, right? So internally we have our school wide data folder, which holds our learning and how we bring learning to life for our kids. It makes it visible to all teachers in the building. So, one of our components within our school wide data folder is a real-world learning tab hub. That just allows teachers to place ideas of what kids are learning, where they want to take it, and about when it happens? And then from that planning then Carly and I are able to take those logistics and do the groundwork to bring it to life. So, when I say structure, it's the structure of giving teachers a landing place to plan, but also the structure of giving teachers time to plan it. So, whether that is an early release PD afternoon, whether that is a giving them time to plan it, call experts in, but then letting Carly and I plan like the grunt work or the behind the scenes work to bring that experience to life

Researcher: So, what does that look like, the grunt work?

David: Yeah. So, once they have picked which module, which PBL, which thematic unit that they want to bring to life for the exposure of real-world learning. Once they plan where we want to take that experience, the behind the scenes work that Carly and I do begins. We work with the director of Real World Learning. We plan or email the schools or the partners that could or are available for a showcase. We order transportation, we get

on the phone. Sometimes it's working with some select group of students to create a flyer or create a poster. So, there's a lot of logistical, behind the scenes work that begins to happen so that all we need is a date and a time. That way it makes it seamless for the activity or the authentic audience.

Jessa: I think having a strong vision, I think that everything goes back to the vision and the intent. When you really clarify the why you're doing something, and I think that Cedar Grove being founded on that, I think that is how we always start our pre-service. That's what we always go back to when I feel like we're kind of drifting. I feel like the vision is what anchors us back to what we're doing in PBL, so deeply embedded into that vision. That's been helpful as kind of our bumpers of getting us back on track. I think that is really knowing your staff and creating that trust. We have, you know, veteran staff. We have brand new staff. And depending on where they're at, I think as a leader, it's crucial to know your staff and know them well. It's that balance of how much do you push, how much do you support, and where is that kind of, you know, happy medium because you can easily coddle too much for fear of making them uncomfortable. And equally, you can push too hard. And there's teachers that will always say yes, but then, you know, at home they're completely burned out and overwhelmed. And so, trying to read staff. So, I think that's the biggest thing is that relationship and connection with me to staff members and obviously with Caroline. That's huge too. We can see the difference. We have staff members that work really well, maybe with me or will come to me more with certain things and others that will go to Caroline more with things. So just being on the same page and knowing that our job ultimately is just to support the staff in that. So, whoever they feel comfortable with and then really trying to personalize it as much as we can, like

we do for students. I mean, we've launched a variety of things with cohorts having different groups and vertical teams. We have a professional development website where we have a variety of modalities, I guess media depending on what teachers need. You know, I'll get certain books and I'm like, hey, I'll just put it in their mailbox - if I know that they're a book person. You know, where some of my staff it might still sit in their mailbox. And not that I get it right every time, you know? But I think, again, in trying to figure that out. I sent a survey out to staff asking how do you learn best? I'm trying to match that as best as I can. Trying to give them lots of collaboration time to learn from each other. This year, we tried something different with really utilizing more in-house PD and subbing them out and covering so they can just spend time in other studios to watch from each other. Because, yes, there's such value in getting out of the building. But with Cedar Grove, there is nowhere else like us. And I think some of those structure pieces are the parts that make Cedar Grove really hard, and you lose sight of the learning and instruction because you're so stuck on the structure of it. So that was kind of a shift this year. We sent the new teacher and the co-teacher who is a veteran together this year. That seemed to be really beneficial, because sometimes there's just those little things that you notice that are hard to replicate if you don't see it. So, I think it's a constant work in progress, but something that we continue to try and tweak and refine. So, I'll be interested in what teachers say, but that's what we're trying

Thomas: I mean, I think it's like anything. It's just giving teachers time to be thoughtful with their planning and their preparation and supporting it. When we were first starting our garden for our special education students saying yes to that and then supporting it financially when I could. And then, you know of course, putting a spotlight on it.

Hopefully a healthy spotlight on it to where it does get some, you know, healthy recognition. So, it keeps them motivated to do this. Then also looking on and then brainstorming and ideating on ways to expand it and make it even a little bit bigger. So, I think anytime you can give teachers time, you can fund and support and provide resources. You know, I think that that obviously helps a lot. It's hard to say. You need to do x, y, z. If that initiative is real world learning and you don't then provide time for people to really ideate and create good plans around that, or then you don't put financial support there, or you don't put resources it's not going to happen. I mean, a lot of it's the model that our superintendent shared with us, but you know, if you look at that, those whatever, six items on that, if you're not hitting those items on that, they don't understand clearly what it is, that real world learning. Maybe that's probably the hardest aspect of real-world learning, because again, coming back to what we just talked about, there's just such a wide continuum of real world learning. Like we've got a few grade levels that have really still hung on to their PBL that were designed back when we were doing the gold standard. But the more focuses you have, then of course, it's harder to sustain all of that. Right? And I feel like that's one thing I have, maybe I've learned in my career is that you have to let go of things. And it comes from this book *The Four Disciplines of Execution* by Covey, where his improvement plan has worked in really for the business world. But he describes that every business has this whirlwind that these are just the things that you always do that are just part of your, your job. And then it's like, okay, what's one additional thing that you would like to focus on that then hopefully you can add as part of your whirlwind, if you can get it, you know, embedded into your work, well, then that becomes your whirlwind and then you're able to then focus on another little piece or

another thing later on, but you have to get it embedded. And then you have to create practices that continue to bring that back to surface. And so here, PBL is just something that we literally have just never talked about anymore. And I know there are some great PBLs still going on, like our first grade does a really, really good hero PBL. So, we've got some of those things going on, but by and large, I feel like it's not, not as embedded as maybe it was. And then you have math, math doesn't always just kind of embed into that. Sometimes you're forcing it, and that's not, you know, good for kids either.

Brady: Honestly, I think just being there as a support. One of the big things we did this year is giving them time during team meetings instead of saying, hey, here's your messaging, go off, do it on your own. We're trying to be a lot more practical about offering that time, and just the extra brain space to use us as a collaborator. So being able to sit down with them and plan out units with them, get feedback, be good listeners just to hear what they're struggling with and see how we could kind of come in and support or give other ideas. We've tried to do some of the community outreach part for them so that we can help connect them to people. So really, I think just listening, encouraging, being there to help with the planning and collaboration has been pretty impactful.

Debbie: I think sharing what other people have done. So, sharing real life examples, so they don't see it has something huge. Or they see how the standards are tied into a project like that. I think people truly need to see it and see a good example of it. Then they are like oh, I can do that, or that's not that big of a deal. Or, you know, just thinking differently about what lessons could look like.

Charlotte: Yeah, I think the time piece is huge, making sure that we have devoted time for this because it is a priority and it is a focus. We have to be intentional about providing

them the time and space to continue working on this and building on it. And then I think having our RWL director come over for team meetings was great because they got the PD. So, everyone heard the same message. But then we're meeting each team where they're at right now in this process and just saying, show us something that you've done before. How can we elevate it a little bit? What's one little tweak or two little tweaks we can make? What would you feel comfortable with? What ideas do you have? And so, we're really supporting them in that that path and that process and not just saying, here's where you are. We expect you to be here. Get there. I feel like we're really, truly walking it with them and providing the support to make it feel manageable.

Question 4: Tell me about a time you had to remove barriers or advocate for structures that made real-world PBL more possible for teachers. What did you do, and what was the outcome?

Carly: Yeah, I mean, barriers are always time and money. So, having to figure out how to make it work timing wise, timing with their schedules, timing with wherever it is that they're hoping to do. Money too. You know, we've definitely had to get creative with different times that they've been out of the building and how to fund that. We've had to get creative.

David: I think what comes to mind first is we can control what we can control, right? Working within the parameters of what's within our control to carry out. When I say the bigger picture of barriers is who can absorb? Oftentimes when I'm calling the director of partnerships. Right? The big question I'm asking is who can absorb 112 kids? So, if it's a medical project, where can I go or where can our kids go to be showcased that can absorb 112 kids? Is that 112 doctors? Probably not. That's probably not going to happen. So, we

have to think outside the box when it comes to like who's our audience? Right. That's a barrier sometimes I think. Transportation can be a barrier, and that is just what it is. But I think even though those barriers come at play, it's like, okay, but how can we think differently? Can we bring people here? Can we do an internal showcase? You know what I mean.? We have the mindset of “every kid can”. It's kind of like why we do field trips, right? Like you, you want it for every kid, not just the ones who might get this opportunity a lot, all the way down to those who may never get this opportunity. So, I think that is all the more reason why when we come into barriers, we just think differently or think innovatively outside the box so that we can make it happen.

Jess: I think I mean, just on an advocating side, again, because our structure looks different, our setup looks different. I worked with our PTA on just trying to restructure our budget to allow for more field experiences and getting out, because so much of what we do, we can talk about real-world learning and authentic audiences, but also getting out in the community or bringing more people in often costs money. We do a lot of grant writing here, and so kind of trying to revive that, and I really educated myself more on what grants. So just that and then we got PTA to add some more money, just advocating that that was a priority for our students and staff. So, to get that barrier out of the way, that we could have more money because they're super generous and do a lot of classroom grants, which is wonderful. But then there was less money in the budget for field experiences. So, in talking with leadership, just kind of shifting some of those funds that we're able to bring more speakers in, get more kids out to support that real-world learning. I feel like the instruction part of PBL is strong here, but we're trying to shift it more to compassionate innovation and just kind of elevating what we're doing. And to do

that for us, it felt like we needed more money to be able to get out and see and do things. So that's been helpful.

Thomas: I mean, to me, it's that that early release Wednesday and that structure. I do feel like we've had to kind of push against it a little bit. Anyways, at one time a couple of years ago, it was really close to becoming a very mandated approach, and that you better be meeting as an all staff in the library and providing some professional development and large group work. where to me that is like that could be a component if you are in the beginning stages of something. When we were doing writer's workshop, we met as K-5 teachers, but there was learning that needed to happen. But once that learning has happened, you know, you got to give time for teachers to implement. I maybe have felt like I've had to push against that a little bit in when they're looking at what's your Wednesday calendar look like? And, you know, I have a lot of it built in time where teacher teams are expected to be either work on writers' workshop, UFLI, or math. Those three things would be, you know, good, sustainable work that that we've done. It's not PBL learning necessarily to your question, but if I was to answer that question and that were to be something that we were trying to focus on, specifically real world learning or specifically PBL, I would create then time for that work to get done. I'm not going to be at every one of those meetings and that's okay. So, then what's my accountability system that I put in?

Brady: I feel like I've said this a lot, but I really feel like it's the time just coming from the classroom a couple years ago to be able to, you know, think big, and to be able to plan it out you know? When you get a plan time and everybody uses the restroom and all of that, and you come back and you have 30 minutes as a team of seven teachers to try and get on

the same page about something, that can be really difficult. So, I think just our intentionality about giving them time. During our two hour early release, we gave them an hour to start planning some of this out. During our team meetings. We've given time if they ever need more time. We are very good about covering classrooms or we've allocated some money for a half day plan just so they can get their ideas together. Our fifth grade structure, since, you know, that's so different, we made sure that we have specials teachers coming in the morning. They have specials right away in the day, so it allows them to plan from 8:30 a.m. to 10 a.m. So that gives them an hour and a half to really sit down and figure out how we can make this work. So honestly, I think that's the biggest barrier is just the time to plan it all and to get everything situated, in my opinion. So that's how we try and support them in that way. I think that community outreach part has been helpful to be able to connect them with people and resources. We're very lucky that our PTA partners with us on a lot on those things. So, if there is something that we're needing with funds or resources, they're really quick to provide that for us. So that is extremely helpful.

Charlotte: I'll just go back to time with that one. We're always removing the barrier of time and planning. A lot of our teachers just ask for extra planning time. So, we're always either finding someone to cover their classroom so they have extra plan time, finding them subs. So, I feel like that's the biggest barrier for me. And again, that's 1% money a lot of the time.

Debbie: Yeah. I think the other piece too, is giving teachers the permission to change their structure and their schedule. Like telling them it's okay if one day you're not teaching reading and math because you're doing a true full day immersion into a real

world learning project. Like, not only is that okay, we encourage it. I think that's a big shift that is hard for a lot of teachers to make, is kind of veering away from their traditional I do this from this block to this block and this, you know, from here to here. Every day is the same. And just being able to break out of that here and there or intertwine things, find the overlap kind of breaking those traditional structures and viewpoints is something that I think we're really working on doing as well.

Question 5: How do you provide professional development and coaching that builds teacher confidence and capacity for real-world PBL over time?

Carly: Yeah, that's maybe not quite as like systematic. I know we've talked especially during pre-service about like what I had mentioned with like, gosh, as a society, we maybe don't talk to kids early enough and often enough about what it is that their strengths and their career paths, how those two experiences might align. I know we learned that kids know that they can be a teacher and they know the careers that they see on TV, and they may not know much more than that. And so that has really resonated. We definitely did some work around that at pre-service. And just trying to see the value in exposing career paths for sure. We do also have a lot of examples of bringing in different speakers to share their experiences as it relates to whatever it is that we're learning. So, I can think of someone that knows a lot about the Lewis and Clark expedition zoomed and shared artifacts that they've collected. When they did The Science of Flight in third grade, we had a pilot that was here. When they do infection detection, there's lots of medical personnel that have come in to share how that pertains to their career. So, we're trying to connect what it is that our kids are learning and their standards with like someone that's really doing that job.

David: I feel in a district like ours, in some ways we are ahead of the curve when it comes to growing what we're already doing. I feel like the greatest PD and the greatest game changer that is in our building is because we see the impact that it's having on our kids. Like that's the greatest PD. When we see what this is doing for not only our culture or what we are building K-5, but when we see the impact that it's having on our kids and their ability to speak in front of an audience. I'm never one to turn down when teachers have that organic idea of what they want to try. You can't. You can't grow unless you don't try. So, I feel like there's always moments of ideas and creativity. Kind of bringing the idea that learning in our building is very organic. So, when one teacher tries something, if we name it and claim it. Like sometimes it's a matter of, hey, will you share that? And then we watch it just spread organically, right? I am always open to, you know, when we think of district resources like Project Lead the Way updates, PBL updates, I feel like those are helpful from a logistics standpoint, because that's where ideas come from as well.

Jessa: Yeah, I think again, not to be a broken record, but I think it's knowing your staff. We did some personal self-reflections. We did, like, a color wheel of. Here are all the things that we felt like to teach at Cedar Grove required because we know it's a lot. So, for new people coming in, it's often really overwhelming. A feeling of I have to be great at all of these things. A typical classroom teacher has that pressure. And then I feel like coming here has that extra layer of like, whoa! So, we start at the beginning of the year, just kind of reframing our professional development plans on that idea of 1% better. Where are you at now? What's an area you want to get better at? And what are you going to do to get there? So, there was lots of different choices based on what and who can

support you. So just doing check-ins on that. I think being aware that you're going to have the people that might stay stuck and then that looks different. But just like with students, you know, me and Carly chatting. Because as leaders, we often have blind spots of you know, we may know that there's more going on at home. I would like to think that I know all those things, but sometimes it's like, whoa, they're frozen, and it has nothing to do with school. So, I know, like, that's this isn't the time to push. So, I think, you know, just constantly trying to offer a variety of ways, but then also having those accountability measures.

Debbie: Our real-world learning director has been very helpful. They needed to hear it from somebody besides their administrators. We have been saying it for years. They needed someone from the outside to truly come in and just say it in a very similar way, but it wasn't us. And she is so good, too, about doing her research and coming with ideas of who they could partner with or resources that they could utilize. I do feel like we're at a point in the district where when we went through that PBL training years ago, that would be so helpful for our teachers right now. I feel like we're missing so many components of what it truly means. Like, they think if they have an authentic audience, that's PBL. No, that's not PBL. Or they think if they have a guest speaker, that's PBL. No, that's not PBL. So, I feel like that training that we had so many years ago that I don't feel like everybody but Cedar Grove was ready for. I feel like it was thrown at the district. Cedar Grove was ready for it because that was an expectation. I feel like at this point, now that it is being written into our BIPs. It's becoming more of an expectation for the district, and now I feel like our teachers are ready for it. So, I wish we could do that again. Like intense PD, I feel like that is lacking in our district where we do everything at

a surface level, but if we really want it done, we need to go in deep. So, I wish we could bring some sort of even a two day training of what that could look like.

Charlotte: That's why our teachers are lacking the confidence in it right now, because they don't have the knowledge and the understanding. I think if you went to any school and you asked a handful of teachers about what PBL is, you would get a different answer. Even though, you know, I feel like we are consistent in our conversations and things. There's just so much information out there. Everyone has different experiences and ideas and there isn't one consistent message from the district. And so, I do think that is a huge setback as far as teachers feeling confident in doing this on their own because they don't have all the information and they don't necessarily understand the vision from the district related to this specifically. And there's not enough time to give them that information. Right? With everything on our plates, as leaders, you have to pick and choose what you get. I mean, there's so much that you could offer to teachers to help elevate their instruction in the classroom, but you have to pick and choose. So that is such a huge topic in my mind. That is something that needs to be a multiple day experience, not building administrator PD.

Question 6: In what ways do you carve out time, collaboration opportunities, or access to external partners to support real-world learning?

Carly: Yeah, I mean, for sure, a minimum for us is we have three early release Wednesdays dedicated to their team planning and what's next for them for the real world learning experience. So, I think teachers know that they're being given the time. It's not just one more thing on their plate. They get more and more efficient as they try different things and they're like, oh yeah, that worked last year. Let's keep it or we're ready to try

something different with this. And so, we're really fortunate in that our teams have stayed pretty solid, pretty consistent. So that really has helped them to kind of you know, they know what they feel like is impactful, and they know what they want to change up because they've done it together before, if that makes sense.

David: Time, and because RWL is a building goal and a building focus, that automatically grants permission for us to give time to for teachers to plan. We have three PD sessions built merely just around the planning part of it so that they can intentionally craft and ideate and plan what moment they want to bring to life. Usually most of our authentic audience showcases happen in the spring. We have one that will happen in November. I think we have two that happen in the winter, and then the other three are more in March, April, May. So, there's time. I do think at Meadowbrook, most of our teams meet every day. That is where they are kind of planning intentionality around what's up next. So, I think just last week we had showcase. We had experts in the building, kicking off a unit or mid unit to kind of, you know, promote what they have been talking about. Anytime that happens, it's amazing.

Jessa: Yeah. So, with our Wednesday meetings, we have two-cent Tuesdays. You know, there might be Wednesdays during plan time, depending on what it is and who might be the best person. Again, being a small team here with just me and Carly. You know, depending on who that right person is, you know, we just try to balance giving as much time as possible because again, with this staff, for the most part, we can have very little PD time. But they need a lot of work time because PBL requires so much. And so, trying to honor that. Just sitting and listening to someone talk is not the most helpful, but equally, you know, trying to have those check- ins with everybody sharing something

they're doing with real-world learning that was successful. What would you tweak if you did it this time next year? What do you want to remember to tweak? One thing that has kind of shifted from before I got here to now is just having more intentional conversations as soon as a project-based learning unit or opportunity is over, like having those reflective conversations right then and there. Because you often forget a year later. So, trying to capture that and make notes, even as simple as it is, has been really helpful in elevating it and pushing it forward. But a lot of it is just those reflective conversations and then time.

Question 7: How do you balance the goals of real-world PBL with district expectations, standards, and accountability measures?

Carly: Yeah. That's interesting. Like I said, for us, it's just been a norm. Like we've stuck with PLTW modules. Of course, we've learned and grown and grown as far as how we execute all of those, but we've really stuck with it. That heavily connects to PBL and real-world learning. It is just an expectation that a minimum and usually this is a minimum, not a maximum, is grade levels are going to share their learning in some way outside of their classroom. So, they know that that's coming and they plan accordingly. I think for us, we we're thinking really creatively about the portfolio. You know, this year the goal, there's some goals and hopes around building portfolios. So, we've worked with our leadership team, actually, we're just starting with one person on our leadership team. They're talking to the other teachers about how it worked and what they learned about it. We're also really trying to involve our specialist teams so that it's not just all falling on our classroom teachers. As far as how are we showcasing the different things that we're learning in a portfolio versus a grade card?

David: I think this team celebrates growth from start to finish. We always say wherever their starting point is, let's celebrate their growth. We also always say celebrating growth is the means toward proficiency, right? So, whether that's standards driven or whether that is real-world learning driven. I'm going to use the words we've heard our superintendent say. It comes with a lot of autonomy-bounded autonomy. I will say other than providing the structure to bring learning to life like, this team is a high functioning team that just needs support, right? So, accountability and celebrating growth. Let's bring one authentic audience to life a year, and let's continue to hone in on those who need academic support. So, there's our story map, and then our ability as leaders to support the teachers to bring that to life in whatever way they wish or see best fit, because they know that group of students so well.

Jessa: I think this is something we've had lots of conversations about because previously there weren't as many district expectations. I think with Cedar Grove being newer, the state, all of the things like reading success plans, dyslexia training, MTSS processes - there are so many things now that are either federal or state required that we are not exempt from. Then trying to still meet all of those really rigid structures with a school that is designed to be very innovative and different. I mean, it's definitely been a balancing act. The teachers have felt it, the staff have felt it. So, trying to figure out how we can stay true to our vision and who we are, but still meet the requirements. Just really looking at what is required, what is a non-negotiable and considering what can we do to make it meaningful and manageable. Obviously, I'm a little biased, but this staff is really brilliant, and so just trying to help them name it, oftentimes it's like they do it so naturally. It's like you're doing it without even realizing it. So just slow down. How

would you describe what you're doing? You know, and so just kind of taking time to pause. I mean, I think just giving them time to pause. You know it's always pushing, pushing, pushing. But I feel like the last couple of years, it's like, okay, we have permission to just breathe for a minute. Like, you had a shift in leadership. We have some whole new expectations. Half of the staff is new. Like, we just need a minute. Do right by kids. Do right by yourself. I need you guys to take care of yourself so you're best for kids. You know, we will build back up to all the things or whatever the case may be, but there's a level of readiness. And there's also just the reality of it's okay to breathe for a minute. And I feel that really comes from me as far as giving them permission when you can see the team are about to crack. Like giving them permission to pause. What can I help with? Where are you? Like, what is that thing? I think so much of it comes back to the leader knowing your teachers and knowing who can handle it and who is at their breaking point, and who needs support and who just needs time, because they're all so different. I have some teachers that I'm like, that is probably going to be the thing that makes her lose it. And then you're like, oh, okay, that wasn't a big deal to you. And then the one that you maybe underestimate that you're like, oh, she's got this. And you're like, okay, wait, I totally got that wrong. That was the straw that in fact just broke your back. So, it's half art, half roulette.

Thomas: I mean, yeah, sometimes those are in conflict with one another, right? Like you'll be at a principals meeting and district leaders will say, "Just try it. If you fail, big deal." But then in August you'll get your MAP results, and that seems to be pretty important, too. So, you know, they don't necessarily always go hand in hand. I understand the thought behind PBL that if you can do it in a really rich experience, that learning is so

deep that it's more likely to be deep learning and transfer and stick. But I'm an adult and you are too. And there's lots of things that I've been really deep with. And then I haven't done it for 2 or 3 years. And gosh, I need a refresher.

Brady: I think that's one of the hardest parts as a leader is just figuring out how to balance that and then teaching your teachers how to balance everything. So honestly, I think we're lucky in the regard that our teachers are learners. Like, they want to do so well in so many aspects of their career. Like they push themselves so hard. So, I think where we kind of come in is helping them look at their plate and helping them balance, Like, okay, you have RSPs going on, you're trying to learn more about Eureka math, and implement this. Then you also want to plan this unit. So, I think just having that sounding board of okay, well what can we do here to help with RSPs so that we have the time to also implement this unit. So honestly, I think it's the listening aspect and helping them kind of plan strategically for all of those different things is how we can best support them. There are some things you can kind of take off the plate, we can say let's focus our energy here. You seem to really have your math rotations down, you know? So, there's a lot of those conversations that happen too, if that makes sense.

Charlotte: I think it lends itself well to combining all of that together. I think our job is just to help teachers see the connection so that it doesn't look like one more thing, but that it really is the avenue in which to connect everything and make it stronger and feel more seamless and less like one more thing. But it is the thing that connects it all together. I think that's where we're struggling the most right now.

Question 8: What changes have you seen in teacher motivation, professional growth, or retention connected to real-world PBL efforts?

Carly: First and foremost, you see them enjoying teaching and learning. You know, I think at the times where one of our grade levels really goes all in on like a mini society and building their stores and learning about economics. You get to see the kids be creative and just ways that you could never have predicted. I noticed the adults seeing that not only are they learning, but they are having a lot of fun with it too. So, I think that is motivating to keep looking for ways that we can also be teaching our standards, teaching things that they have to know, but also like doing it in a way that is meaningful and lets kids kind of not have a ceiling and just take it as far as they can take it. I don't know if that makes sense, but there's no ceiling on a lot of these projects, and that's really neat to see. I think the teachers start to see that and find a lot of value.

David: I think motivation speaking to that earlier like the motivation was seen as just like that synergy that has happened. That collective teacher efficacy to say what I'm doing is working and here's the impact I'm seeing it have on kids, and it goes back to "every kid can." Professional growth. I feel like what I've mentioned here, like Carly and I, we can plant seeds, and that's part of naming it as we see it and then circling back by and saying, hey, have we thought about this or could this be a next good step? Right? Like we have very little, very little turnover. I think there's safety in structure. I think it's the teacher collective efficacy, efficacy mixed with the synergy that has happened because we're thinking different about making learning authentic.

Jessa: I think Cedar Grove aside, I mean, either way, because it, you know, started to really bubble up more even when I was at Willow Creek. There is so much. And I know we talk about the proverbial plate and we try to show how it's all connected, but teachers are pretty perfectionistic by nature and they want to do everything well. It does feel like if

you if you don't do well, your kid doesn't get support. If you don't document well in Panorama, your kid's not going to get a referral. There are so many things and we try to often downplay it like it's just one quick thing, but I think they take it to heart. Then you put project-based learning in, and it I think until you fully grasp what it is and why it's so beneficial and how it makes learning relevant and real, it feels like that one extra shiny thing that is easy to not do or to check the box. And when I see even, you know, not here because I feel like it's different. But at Willow Creek, you know, trying to support that when teachers just want to check the box that told me they didn't understand the vision and the purpose. Because I feel like once you fully grasp what it is like, that's the thing you're not willing to compromise anymore. And so, to me, that shows where they're at more. Those are the people who fully believe it. Like they'll rearrange everything else because that's just how they teach, and they know that's what matters. To get the learning to stick versus, oh, I have to bring in an audience and have them read to a grandparent, like check. Like, no, that's not what the purpose is. But again, I think it comes back to leadership and knowing that or recognizing that and where you have to support, I don't know.

Thomas: Yeah, I think they're excited. Right? They're excited. They're engaged. They're motivated. And I think what one of the things that you see or makes that happen is it's their idea. It's their ownership, their decision making. They've invested their thought and their collaborative spirit throughout that project. That's what I think brings that excitement to it. It's they have the ownership versus just a manual that you give and say teach this. So, I think that's what makes it probably the most exciting and rewarding is then they see this project come to fruition. And their accountability is their own self

versus me having accountability on them because they're the ones that have owned it. I mean, it's, you know, it's deep learning.

Brady: So, we had a teacher and she was really just kind of struggling instructionally. She was just kind of losing that passion for teaching and not really knowing what direction to go. She went back to using PBL in the classroom regularly, and she is very different from two years ago. I mean, you can just see she was, you know, lit up. Her kids were talking about the project non-stop. They were on fire and deep in the researching and learning. So, I just think overall, she has found her purpose again. And it's showing in what you see in the classroom and what her students are doing as well.

Debbie: Excitement of kids. In my opinion, that's the number one motivator. Even one of our pretty traditional second grade teachers, what she's doing is so deep. But the excitement she sees out of kids and the behaviors have decreased because they're so engaged in what they're learning. So, student engagement, student excitement, I think that motivates all adults. So, I would say that would be the number one thing to motivate teachers. The excitement of the teachers is the first thing that comes to my mind. Our third grade team specifically is the first one that pops in my mind. I feel like they really took this challenge on and their first big experience was having students work to reimagine our playground to make it accessible for all. And so, they partnered with Variety KC, and we're talking about, you know, what does it mean to have a playground that truly is accessible for all? And who are we serving? What is our community serving? What things do we have currently that are great? What things do we need to change? And so, the students took such ownership of that. And I think the teachers were having so much fun with it because the kids were loving it. They saw all the benefits and all the

perks, and they were having fun. And that's the thing that they commented on the most is it kind of brought that like love for teaching back to their lives. They found that spark again. So, they have been super passionate about continuing that work, and even asked for time last year to rewrite their ELA units because they wanted to make them more real world learning based and tie things in because they saw the power in it.

Charlotte: I think to a lot of teachers, when they start seeing how the skills that they're working on with students can transfer in these different ways, and they're seeing the relevance and the importance that the kids are recognizing and how their ideas keep spiraling and building, and then they start coming up with things that teachers are like, oh my gosh, I never would have even thought that they were capable of understanding that or taking it to that level. So, I think that's really motivating for teachers as well.

Question 9: How do you know whether real-world PBL is having a meaningful impact on student learning, engagement, and future-ready skills? What evidence do you look for?

Carly: I mean, this is a teeny tiny little example, but we have tours that come through pretty regularly and often we'll just ask teachers, is there someone that could speak to a project that they've done? And oftentimes for us, it could be months ago, and it is amazing how much the kids will recall and remember and be like, like it was yesterday for them. But we know it wasn't. It was months ago. And so, to me, like if you ask them about a math worksheet that they did months ago, they're probably not going to recall it in such a way. So, I think that that's a teeny tiny example of when you ask a seven year old about something that they learned months ago and they can remember it with such vivid details, that's a really good sign. I also think, when we get down to our fifth-grade,

they go to like a BizTown type of economics unit. Just listening to those kiddos be able to talk about their strengths and how it can relate to the job that they're hoping for. It's actually my very favorite day of the year -those interview days. Then I feel like on that day you get to hear from them how they're reflecting on what they think those experiences apply to them, if that makes sense.

David: So, in my nine years at Meadowbrook we've had the gift to do probably 50 or more tours of people coming to Meadowbrook to see the learning that is happening here. Often those tours are led by kids. I may kick off the tour, but it's the kids who lead the work. So, I will host about 7 to 8 fifth graders and kind of explain why we have guests that come to our school. I want them to show off their school, but when we are going over things that guests might see or guests might ask, we start to kind of talk about what their learning has looked like in their time here. Things that they remember are how strong relationships are in this building. Like they love their teachers. They see it. They feel it every day. Then the second is a lot of the experiences that they have been a part of from kindergarten through fifth grade. They are able to recall and name them, and that is how I know the impact is there. If our job is at the elementary level, is to expose or allow them to explore. We have certainly done that. As we look to even where DESE's career paths are taking us, as I hear kids name off those core memories or those peak moments they've had in schools, I can take their experiences here, and I can mirror them with DESE's career paths, I can name which career path they have experienced.

Jessa: I think you can just see it and feel it when kids are pumped about it and talking about it and talking about it at quarter and wanting to come by and chat with me about it, or parents know about it because the kids are so deeply invested, they're telling everyone

who will listen. It's not just an isolated event, it's something that they really, really care about. Now three years of watching the kids build up to it, you know, the second graders now are the kindergartners and I know who are the ladybug kids, who had the worms, who had the bees because they are so deeply connected still that it really shows that when it's done well and intentionally that learning stays with kids. It's not just checking it. With project based learning, it's like I taught it and now that is like their way of life. These fifth graders that we have now, I mean, it's really pushing the fifth grade team out of their comfort zone because they have had such rich learning experiences. And that is our newer team. I know it's really overwhelming, but this crew requires it, they are demanding their next experience because they want that. I don't think people expect that to be such a powerful consequence and a positive way of like, these kids are forcing the adults to change because of the experiences that they've had and what they want. And like our competency work when they're doing it in third and fourth grade, ready or not, they want it for fifth grade. Like they don't want to go backwards. We had a student share that on a tour. He's like, well, I got to do that last year, but my teachers haven't let us do that yet. And I was like, oh, from the mouths of babes, like, that's legit. Then it did force a conversation like, well, can you help us with that? Absolutely. You know, and that doesn't mean it in a disrespectful way. It was just sincere. Like they're just waiting because that's been their experience. And so yes, there's a huge difference of when they're invested in it and they're highly engaged.

Thomas: I don't know. I think there's some things that you're just they're hard to, they're hard to probably quantify. It's hard to quantify emotions and feelings and some of those soft skills that kids develop through project-based learning. You know, a lot with our

garden, it's really actually tied not to the academic side of things. It's tied to social, emotional and social skills. So that's where our speech pathologist is involved in it from a language standpoint. So, I mean, you can maybe quantify it in some way with improved behavior, improved social. But, you know, it's like we don't live in vacuums here. You know, there's always other contributing factors. I think your culture can be a bit of an indicator of things are going well. You know, kind of what we talked about if things are, if teachers are engaged and motivated and positive. That's probably a good indicator of the work that you're focused on. And so, if you're focused on PBL, that's probably telling you you've got some good things going on.

Brady: I really think it's when the students can speak to it and talk about, you know, the why behind it, you know, instead of coming in and asking are you doing this? Well, we have to learn math. You know, they can speak to the importance of it. We've shared it before, but one of my favorite examples is when our third grade classes helped redo our playground, they went out and we had some students in wheelchairs and you know, other accommodations that were not being met on the playground. And so, when they started learning about all of that and researching and reading, they weren't just saying, well, we're learning about comprehension. They could speak to you about, well, we have kids in our school who can't use our playground right now. So, it's important to us that we go out and we find a new way to do it. And that's why we're writing this paper to take to the principal and to give her our reasons why with evidence. So, I think it's when they can tell you why it's important and why it has an impact on them.

Debbie: I think kids talk about what they're doing in the classroom. If they're talking about what they're doing in the classroom, it's impactful. It's making an impact on them.

They're thinking about it outside of those lessons. They're going home talking about it. So yeah, if they talk about what they're doing in class to me that's impactful.

Charlotte: I think too in the assessment piece. We see those skills transfer into other areas. And they're able to generalize that into whatever assessment it is that they're taking that way of thinking, that way that they're connecting the dots. The critical piece, you know, there's all of those things that I think has an impact and that we can see in other areas as well.

Question 10: If you were giving advice to another school leader just beginning this work, what would you say is essential for cultivating real-world PBL in a sustainable way?

Carly: Yeah, I would say it's okay to start small, like accept all ideas. Start small, but then start asking those reflective questions. Keep the focus on the kids, too. What impact did you see this have on kids? How did it impact your kids that learn really easily? But how did it impact your kids that maybe have to work really hard to learn? And I think when teachers start reflecting on the impact it has for kids there's your buy in and then you've just got to kind of knock out those barriers so that they can keep it going.

David: I would say name it, claim it, connect dots. And imagine “what if?” Those would be my words to a new leader. Often, when we are interviewing teachers in the spring, or any candidate for our building. One of the questions that always resonates with me is if we walked into your room, what would we see? What blows me away about that question? If I were asked that as a new teacher, I would say it would take me a minute. But what I've grown to understand about that question is sky's the limit. Like what? What is the ideal classroom? Right. Flip that into our role as leaders. Like, if you have a school of 560 kids, or you have a school of 212, right? What would the ideal school look like?

Would it be a school for adults or would it be a school for kids? I would hope the latter of the two. Right. You'd want a school for kids. That good reflection for leaders. What does the ideal school like? What do you want it to feel like? What do you want teachers to say about your school? What do you want kids walking away saying? So, I think it goes back to those core concepts. Then I think as a leader, like when you name and claim what teachers are doing, I think that builds efficacy and it allows you to promote what they're doing, but yet showcase kids in the process.

Jessa: I think really making sure the vision is there and that it's shared and that you give space to have the pushback. I think sometimes we want to just be like teachers, you know, we want to present it and have everyone get it and be okay. But I think there's so much value in going slow. And what are the misconceptions? What are your fears? What are your worries? What are your hang-ups and actually giving time for that, even if maybe that's an entire year where you're just spending talking about what's hard, what's in the way. And I think sometimes we, for the sake of trying to check it off or get to it, we skip that part of we have to have the adults be okay with it and fully grasp it before we expect them to do it. And you know, a three day training from Buck Institute is really powerful. But just like with conscious discipline, a seven day training may not be enough to completely shift someone's thinking. They may have to go to it three times. And so, I think just giving the time and space to be okay with the ones who are resistant. Letting the ones who are ready go with it. But it's also something you kind of have to see. And I think the more you can see it and see it done well, and there's a lot of artificial PBL. I think everyone's in a different learning spot. But sometimes it's like what we're showcasing is PBL or real world learning. You're like, okay, I see it differently, but not in

a negative way. Like I think about my daughter in middle school one time, like she's like, oh, we're doing PBL. And it was the box being checked, you know. It's a shift in philosophy. I think we want it to be like a curriculum and a box and a resource. I know when the district tried to have everyone share their PBLs on documents, you know, from the teachers at Cedar Grove and the people who were fully vested they thought I can share it with you, but it's not going to make sense. That's why when all of my new staff came in and they were handed detailed PBL plans that had been curated over several years, they didn't make sense to the new teachers, because they weren't theirs. And so, I think that's the other tricky part for it to truly be authentic. There's really not a blueprint and a script to give to someone else, which then feels like more work. And then, you know, you have your kids that were in second grade and they went to Benton House and they were so excited. Well, they move up to third graders and they're no longer excited about doing that. So now it forces those third grade teachers who may have had this beautifully wrapped thing last year. Well, now you have a new group of kids and that's not their thing. I'm still hung up on the thing from last year. So how do you truly adapt to the learners you have? Which then again, feels like it's harder because you can't have a mindset of this is our third grade experience, this is our fourth grade. If we're truly doing it how it was intended, it's probably going to look different every year based on the kids you have and what they're passionate about. So that's the other part that's really hard. That feels really heavy or really overwhelming.

Thomas: A clear vision that's understood by those that are participating in the work. Being really clear with that. Having a deep understanding of that. Creating a schedule that then prioritizes that. And, you know, I think sometimes our jobs to be flyswatters that

we kind of have to swat things away at times too, because if you don't, everybody's priorities start to come to you. And then before you know it, you're like, I was trying to be focused. And we've just now added so many things to our plate that are potential things to interfere with what we really wanted to accomplish this year. In that book, the *Four Disciplines of Execution*, they say there's always more good ideas than time to do it. Ever since I read that book, I was like, oh my gosh, like, teachers will come to me all the time with a great idea. And it's just like, it's a great idea. We just, you know, this is our idea right now though, right? You know, I mean maybe we'll get to that. But so, I think being really focused, really clear, creating a schedule that prioritizes that focus you know, thinking of resources and funds to support that, creating some kind of cycle for accountability to make sure that that work is happening. Then to kind of create that and then repeat, repeat and repeat and repeat and repeat. If you can do that, just over and over and over, there is a likelihood that stuff will be pretty embedded. Then your accountability can get wider and wider.

Brady: I think you really need to start with the why? So, showcasing, you know, some examples and how it's meaningful. And I think to make it sustainable really having that support at first. I think just coming from the teacher's perspective a few years back, you know, hearing the words, okay, we're going to do real-world learning. It's like, okay, what does that mean? So there needs to be a lot of professional development examples. I think anytime you can get teachers into classrooms to kind of see some of this work, it opens their eyes to what the possibilities are. And then really making it manageable in a way where you can find time for them to work on some of this, where they can pick your brain and they don't feel like they're doing it alone. Like they have support to be able to

try some things. I think some of the biggest messaging we've had to do with our staff, too, since they push themselves so hard, they want everything to work just super well, right? Well, with some of this work, there's going to be things that flounder. Like there's going to be things that we look back and go, okay, we could do that differently next time. And that's okay. That's not a failure. So just giving them that reassurance that we're all trying this together. This is something new for us, and that's okay. We're here to support you. I think helps them feel like it's more manageable.

Charlotte: I would say the buy-in from the teachers. You can't force this on them. If you force it, it'll be a one and done. So, you have to have that buy-in of why this is best for kids. I think we definitely know that it is important work and it is the right work. I feel concerned because I think it's something that if we're not intentional, it will fall to the wayside because there are so many other things that will overpower it. It very easily can get pushed to the back burner. So, I feel like it's critical for us as a district and as leaders beyond just our district, to find ways to continue making this manageable and a priority, and providing the PD that teachers need to feel more confident in it, and then celebrating the small tweaks that are happening and not just putting the focus on the big, elaborate projects. I think that's where we lose a lot of people.

Debbie: You have to show them how to integrate, because a lot of our teachers will say, I need to teach reading and math. So, you need to show them how to integrate that into their PBL. So, my hope is in a few years I won't have to say I want to see one a semester. It's just automatically done. You know, they're doing it constantly. Not because they have to, but because they want to. Because, you know, the kids are excited about learning and coming to school. We should want kids to be here. They should be excited about their

learning. Well, that happens when we put them in situations where they get to collaborate and learn things in depth and, you know, be problem solvers, be the solution. You know, give them a voice outside of their small little world.

APPENDIX C: INTERVIEW - INSTRUCTIONAL COACH QUESTIONS

Focus Group Question	Corresponding Research Question
Tell me a little bit about yourself.	
1. How would you describe your school’s current level of real-world project-based learning implementation, and what role do you play in supporting that work?	RQ 1 RQ 4
2. When teachers begin planning real-world PBL, what types of coaching, modeling, or co-planning do you provide? Second beat: Which supports are most requested by teachers?	RQ 4
3. What schoolwide leadership actions have made it easier for teachers to try ambitious, real-world projects? Flip side: What actions (or absence of actions) make it harder?	RQ 1 RQ 3
4. How do you help teachers build confidence with deeper learning strategies like student inquiry, community partnerships, or authentic assessment?	RQ 4
5. What barriers do teachers encounter most frequently when implementing real-world PBL, and how do you help them navigate those challenges?	RQ 2

<p>6. How do you collaborate with school leaders to align real-world learning with standards, pacing expectations, and accountability systems?</p>	<p>RQ 1 RQ 3 RQ 4</p>
<p>7. What shifts have you noticed in teacher motivation, flexibility, or professional growth as they engage in PBL? Follow-up: Any specific success stories?</p>	
<p>8. How do you know when real-world PBL is “working” for students? What indicators or evidence guide your reflections?</p>	<p>RQ 5</p>
<p>9. What structures, schedules, or resources are most essential for teachers to sustain real-world PBL over time?</p>	<p>RQ 3</p>
<p>10. If you could recommend one leadership move that would dramatically increase teacher success with real-world PBL, what would it be and why?</p>	<p>RQ 3</p>

Instructional Coach Interview Responses

Question 1: How would you describe your school’s current level of real-world project-based learning implementation, and what role do you play in supporting that work?

JoAnn: They do real world learning regularly. Each grade level usually has at least one a quarter that is related and connected to authentic audiences, and. Each grade level doesn't always do the same one every year. Like sometimes they change. They're either partnership projects or projects that connect to their real-world learning, but they do

them, I would say, regularly. It depends on the grade level. For example, in fifth grade, I was involved in the planning process and partnering to integrate the standards connected to the learning project. They have partnered with Burns and Mac for several years, and they do something different every single year. So, last year, they were kind of at a standstill, like they were wondering, 'What do we do? We've kind of exhausted all of our options.' So, we talked about, you know, the standard. Then they have an outdoor learning space that has a pond that's very stagnant. So how could we connect the outdoor learning classroom with their real-world learning project and connect it to Burns and Mac as their partners? It was just about connecting ideas and getting people connected to make it successful.

Caroline: We've evolved. I think for the most part, we have stayed somewhat close to the original vision of personalized learning goals, etc., and the real-world learning, project-based learning, etc., most of that. The component that we've deepened is the sort of the idea of play, and in creative stuff. It's not just once a week. Teachers have sort of seen the power of the tinkering and the playing. That's typically very tied to the project-based learning experiences. So, it's not just random.

Research: Can you give me an example?

Caroline: So, an example might be like first-grade has really implemented dramatic play, and their dramatic play is directly tied to their PBL. So, if they're learning about community helpers, usually jobs, or careers. They might set up the weather meteorologist center and play. So, there's an element of exploration that we didn't have at the beginning. We've definitely gotten better. We've kind of moved towards future-focused skills because I think with the rise of AI and machine learning, we've got to. It's different than

just the content. It's like, okay, if we want kids to be able to produce a visual story of some sort, they need to practice those skills in any sort of learning domain, like any. So, there's a little bit more of that intentional play. So, I mean, we call them project skills. I have big vertical alignment, and I've been doing some deeper work on okay, if kindergarteners can do this, what can second and third graders do, and all the way up. We've also woven in the character skills. For example, what does it mean to practice perseverance when you are navigating a hard, complex project or practicing those creative skills? We utilize creativity, and that creative thinking is a part of it. So, we're still immersed in that way, but it's become a little more flexible than it used to be. For example, we don't necessarily see the importance of a big entry event or driving question. It's become a little more fluid, and that's because the world has changed. So, I would we are still a very immersed school because when I go to other schools, I realize we are immersed, you know.

Don: I would say I would describe it as not what were trained in 12 years ago when it came from Buck. What I do think is really good here is that some of those elements are done really well and are really put into everything. So, for example, I would say that authenticity piece is a very important thing here. Whether something is like a full-blown project or not, we are always making sure that authenticity and that relevance is kind of at the forefront of what we do.

Anna: I would say like, if I'm going to say high, medium or low, I'd say medium to high. I feel like they have a very strong knowledge of real-world learning and project-based learning, and understanding the components that would justify something fitting into that category. I do know that at times it is difficult to weave in to making things real-world.

So, then we lean more on the relevance of it and help our students understand why they need to understand something. So, the purpose is what we focus a lot on. It's not real project-based learning over here, and then we do the teaching and the learning. We really try to infuse both of them together. I know that this year, we've worked a lot on clarity and really getting back to the standards, making sure our standards are woven throughout. That's where the true learning is happening.

Question 2: When teachers begin planning real-world PBL, what types of coaching, modeling, or co-planning do you provide? Which supports are most requested by teachers?

JoAnn: I would say again, it's different per grade level, but usually it is a thought partner in their planning process to help with alignment of the standards or connecting them to our community. I can think about the special education team. They are working on a real-world learning project with their garden. I reach out to others, provide the teachers with support to go see what other real-world learning looks like so that they can almost emulate it in a way. We've done some of that with the garden, like where we go visit other schools and how they're doing it, and then we come back and think about how we can make it our own. I would say that's how I'm involved in the planning. I would also say with modeling, I'm more of a co-teacher. Whenever I do it, I do it with them as a partner. So, it's not necessarily a model of here's how you do it. It's a we're in it together. A lot of times it's the planning. I would say that's a majority of the time this year, I have done co-teaching in three classrooms. I prefer the co-teaching, but I obviously meet whatever teachers want. I think they have spent years doing PLCs. So, they know the standards and they know what's expected. So, there's not much time spent on the what,

but there's always time spent on the how. Their conversations center a lot more around kids, and like, what do kids know? What are we seeing kids do? And then it's the responding. So, I think the 'how' is where they spend a lot of their time. Where I can always help is that response to okay, what's working? What's not working? If it's not working, why not? And like, what can we try?

Caroline: It really depends. It's very customized to what the teachers want and need. I can talk about what Cedar Grove looks like and then what I would do outside of Cedar Grove, because a lot of Cedar Grove teachers know what they're getting. They walk in knowing that this is what they're going to do. So, if anything, it always starts with a relationship. I have to build some sort of relationship. And it takes a minute to figure out what that looks like when new teachers come in. So, it might be everything from research. They have an idea. I'll go research some things for them. It could be like, we don't know what to do. We need an idea. It's truly like what you would do when you had personalized learning for kids. Because I have some teachers who just want to throw an idea by me or want to throw some things and like, brainstorm. And then there are some who are literally like, I don't know where to start. Something I've learned in my process is that for the 12, 13, 14 years I've been here is everyone is on their own growth plan. So, I always think as soon as I can figure out where they are, I begin to go. That's how I'm going to coach you. Whatever you need to be successful and move forward in support of our vision is where I'll figure that out. One of the shortcomings I have is I'll say yes to everything because I want to help. Then sometimes I'm like, you asked me the same thing for five years straight now. So maybe we need to grow here. So, I'm learning, you know? When they feel safe, I also try to dangle things in front of them. So, my job is also to

push a little bit. I don't always push everybody, and I have to be really strategic about timing. I really try to only step in with those ideas when it's like, imploding. I would rather let them start with a seed of an idea and then push, because I find that that's much greater buy-in. So, I practice that gradual release with them too. I really describe myself as being in front, next to, and behind when I work with teacher, because I have to be pushing them. I have to be walking with them, and I have to be throwing things out in front, like, come on, let's keep going. Also, everything comes back to the vision. If it's not within that realm, then I'm like, why are we doing it? I see a lot of new teachers when trying PBL, until they wrap their heads around where they need to go, they'll pull in, they'll do things a little bit more traditional. So, I have to help with that. Learning should not be separated out into 45 minutes, 45 minutes, you know. So, we just have to kind of work through that, if that makes sense.

Don: With our coaching model being as an opt-in approach, I don't just show up at everything unannounced or anything like that, but I do feel like we have established the norm here to where I think it's it is kind of just expected that teams will work with me. It's not like an extra thing for me to be a part of something. I am ingrained in the work that is happening here. So, it is just kind of the norm. I would say a big part of when I meet with teachers is discussing that authenticity or that relevancy piece. A huge part of how we've done that here has been through kind of really relaunching what we do with writing, and that's kind of been our avenue through that. So, in that sense, I've had a really big role in that piece of it. I do a lot of analyzing student evidence and co-planning from that evidence. It can be collected by them in the classroom, and then we analyze it together during their plan time. Or it's me co-teaching with them and collecting that

evidence in real time. Yeah, very, very little to the modeling piece. That is something that kind of gets into my coaching beliefs. Like straight modeling, I don't feel is super effective as a coach. However, there could be little pieces of lessons that could be modeled, which could be really effective. So, I don't do as much of that, but it's more of the co-teaching and the co-planning pieces. That in my opinion, is what affects the instruction that's taking place. It's the co-planning. Like that's definitely what they want. That's where they tend to ask for me the most.

Anna: A lot of the questions that I'll get asked or the supports I'll get asked to help with are like community connection. I quickly ask, 'What is the intended learning?' Like, what is it we want kids to learn. I feel like we're doing a much better job at that everywhere across the district. Not just at that one building. So really, I think now it is we're starting to swing more towards these are the standards we're getting ready to address, or this is the concept, how can we spin this to where it is more real-world learning or project-based learning?

Question 3: What schoolwide leadership actions have made it easier for teachers to try ambitious, real-world projects? What actions (or absence of actions) make it harder?

JoAnn: So, the principal and the assistant principal, I think that they are very, very supportive, like they have been part of the conversations that have led teachers to the point that they are now. I mean, it didn't just happen, right? It was them coming to team meetings. They sit down. They talk about the authentic learning, the real-world learning. Then, once each grade level identifies their ideas and thoughts, then the administration actually works to make that happen. So, if there's anything that the team needs, they're helping. I would say like they clear the way. Right? So, they're going to help make sure it

comes to fruition. So, in a way, they are almost partnering with the teachers as much or more than I am.

Caroline: I'm going to probably be harder on myself than I need to be, but I do know that I've been told that it helps when I'm in the trenches with them. So, one way I lead is with my servant heart. Let's figure it out. My challenge is I'm always split in too many places. So, I feel like sometimes I didn't do anything really great. When I have been able to be there and really develop it with them, I see a lot of the fruit that comes from that because they're not alone. That's my role as an instructional leader. I learned that from the previous principal, like really learning to lead with my servant heart. I tend to lead creatively here. I don't necessarily lead in managing the building by any means, but if I'm not leading with the vision and leading with all these things and instruction and pushing like it's just not going to happen, because there's so many other things. So, I've always felt like I'm the one who's going to push and grow them. I think what doesn't work is top-down anything. You have to do this. You have to do that. That never works. I mean, people will comply and jump through the hoop, but there's no ownership. I go back to autonomy, belonging, and competence, which is something I've been really exploring the last three years. Just like with kids, if teachers have autonomy to, you know, be in that space, just like kids, if they feel like they're part of a team and that they're celebrated for their strengths. If they feel like they're working within their zone of proximal development when it comes to PBL, meaning they're not doing too much or too little. I have to push or pull back. I have learned a lot, but I also know that I walk a fine line of wanting to push a little bit. So, I have to kind of find that space. I think that what doesn't work is when there's not a lot of flexibility. We don't really finish one thing before we've

moved on to the next thing, which is very overwhelming, and no one feels like they are ever accomplishing anything. So that is another piece of the puzzle that doesn't really support teachers when they're trying to do hard things or try something ambitious. I think the other thing that also makes a huge difference is culture. Your climate and culture of your building. If it feels like more people are praised than others, it impacts everybody. Because if everybody's working really hard and the seeing and the hearing about it is not happening, it can have an impact. I would say the leadership styles is one more thing that has been a challenge. The favoritism is a challenge. You can't make everybody happy. When you try to make everybody happy, that doesn't work. So those leadership qualities are key. If no one's communicating, that can be difficult. If it's let's just not say anything and it'll go away, that's hard. So, communication is huge, but it's a balance. Too much communication versus not enough. I think I've experienced both. And you know I've seen what works and doesn't work. You also have to have the space and time and opportunity to be creative and innovative. When you have a lot of structures in place, there's not a lot of time for that. So, I've been under two different leaders, one with a lot time and space to play and one where it gets tighter and tighter. Then you don't really have that time and space to play in your mind. So, I've definitely experienced both of those. So, structures and systems that are so tight, and most schools have very tight systems. When you begin to narrow that, the end is coming in terms of not being able to have the freedom because any real-world work, any project-based learning, you can't understand it. You live it and do it. I mean, you can have the knowledge. The second thing is that it always takes more time than you think. It doesn't matter how much you try it always takes more time.

Don: I would say the leadership here has been very open to I think making the teachers feel comfortable in taking those leaps. I think it really comes down to like the teachers know that the leadership trusts them in everything that they're doing. That frees them up to take some of these leaps and do different things, providing opportunities for their kids. I think it comes from probably that the most important part is just that high level of trust that leadership has shown them that they have in them, that they believe in them, which I think frees up some of like that worry or, or concern that if something doesn't go well that it's okay. So, I'd say that's been a big part of it.

Anna: I mean, I feel like the leadership has the expectation that this is a highly effective way for students to learn, and it brings relevance. I feel like you can hear that from the administration. They provide time. They provide support in the planning of these real-world learning experiences. A few years ago, they started setting expectations, like one project a semester, and then it turned into one a quarter. So, just setting the high expectations and the belief to just give it a go. It doesn't have to be perfect. We just want you to try these things.

Researcher: On the flip side of that, what do you feel like are actions that make it harder to do the work?

Anna: Time. That's not an action, but it's the planning time, right? Like, not everybody sees things that way. It is kind of undoing more traditional ways of thinking about teaching and learning. So, you also have to take that into consideration. It's not as easy as just saying, okay, you have a half day to plan a real-world learning experience. Well, one, you have to know how to do that. And two, you have to have that mindset to see beyond these walls in the building. So, some of it is just that mindset. Being concerned with the

way we assess kids doesn't align with the way we understand how children learn. So convincing people that it's okay, they still will learn it. It may just be checked differently.

Question 4: How do you help teachers build confidence with deeper learning strategies like student inquiry, community partnerships, or authentic assessment?

JoAnn: I really think that confidence comes from them experiencing it and having success in that experience. So, like when they have the attitude and the mindset of giving something a try. They're not afraid to try it, which I think allows them to naturally build confidence in a very, very authentic capacity. I don't think it's something that I see teachers struggle with because they have a very open mind. They have a growth mindset. Like they're very willing to try new things.

Caroline: So, I go back to a little bit of the Apple philosophy of, 'Yes, and?' and 'What if?' because first of all, all of us know there is no one way. So, when leaders of any sort say this is the way you do it, then I'm like, well, I can show you three other ways it could happen. So, where I try to build confidence or where I see even our leader, the two leaders I've worked for, is really trying to have people figure it out the way they need so that they can do it now. Accountability is huge. So, when systems work well, it's because of the accountability. And that's another thing, it's always coupled here's your accountability, but what do you need to help you get there? How can we set you up for success? So that that's something that I think would help build confidence. I also think that I usually know in the back of my mind when I hear teachers say an idea and I know it's not going to work. I mean, it's not going to work the way that they think it's going to work. I usually don't put a stop to it. What I'll do is I'll often say, what if you try this, you know, add this to it or whatever? That way it's not a crash and burn, but because being

confident to me is also being in the mistake space. Like, it's okay to take that risk, but what you don't want is them to do is fall so deeply that they're like, well, forget that I'm never doing that again. If I see that it's really going down a different pathway, I'll never say no, but I'll always respond with, well, what if? Because I think if I said no, that's not going to work, then the person's confidence is out the door. So, I think that's one way to build confidence with teachers.

Don: I would say that's probably through the co-planning process. I have always had that belief in coaching. Coaching is obviously a form of professional learning for a teacher. It doesn't have to be a session where the whole staff is coming to learn about something. Even in our one-on-one conversations or one-on-three with the team, so much of that is professional learning for them. As things come up throughout units or throughout projects, I think things naturally present themselves too. I have to consider where can I then embed some different chunks of learning for them that's going to help them move forward. I've kind of been relating a lot of this to our writing pieces with the relevance factor. When we kind of relaunched this, starting a few years ago, like that was all whole group PD on Wednesday afternoons, like a very long progression of like chunks of learning that we wanted for them. That was planned by me and the administrator administrators. And so, it kind of has come from both angles.

Anna: It sounds really silly, but just the simplicity of things. I try to model that, and I try to model positivity. If things seem difficult for a teacher, I'll just either say, hey, you know what? Let me plan a couple of things, and you take a look, and then we can start planning together. I may take that spin if that is helpful to a teacher. Or I'll ask the administration if I can take a half day with that teacher just to give us that time that I

know they're yearning for. Then we plan things together, and then also offering my support in the classroom of, you know, we can do this together. We can fail together. We can celebrate together. We can do awesome together. If you want me to teach and you watch and see how your kids are responding, like anything's on the table. And just knowing they have me to do things with.

Question 5: What barriers do teachers encounter most frequently when implementing real-world PBL, and how do you help them navigate those challenges?

JoAnn: I would say time and the cost of ideas. So, time being the time they need to plan it, the time they need in the classroom to make it come to life. Because sometimes when it's a project, it consumes other times of the day, whether it's reading, math, science, or social studies. I think time can be a barrier, but I also think the cost is a huge barrier. I know they have PTA that's very supportive, and like I said, the admin is super supportive, so they help contribute to those ideas.

Caroline: Time is always a barrier. How do we how do we do this? How do we make it work? I don't necessarily know how to solve the time issue. Time is the greatest commodity. However, prioritizing in the planning process what you want to do versus what you need to do is, is something that comes up in conversations. So other barriers are a lack of understanding. They just can't see it. They don't know what it looks like. They have no idea where to start. That's a barrier because it looks like a mountain to climb. It looks so hard that sometimes it's hard to get them going. However, I find that, like, you know, a lot of it's just one step in front of the other. Another barrier that I feel like happens is going back to climate and culture. If someone's getting all the praise in the building, someone else doesn't want to try anything because they're like, it doesn't matter

what I do. No one even knows I'm doing it. Sadly, that's part of the story. So, it's just an interesting dynamic in terms of the barriers that can hinder people. It can often be control. Another barrier that can be challenging is the expectation that they must do it a certain way. Part of that is not having the ability to be able to, like, meld ideas together like they see it as separate entities. This is even outside this building when I'm helping in other schools. I hear things like I only have 30 minutes for PBL, but I have social studies here, I have science here, I have this here and this. I guess it's all lack of understanding because they don't really get it, even after multiple trainings, it's still that way. I think for every barrier I think we've got to figure out how to work around this. It may not be what we want, but we need to figure out something because it's what's best for kids.

Don: I think the answer that you'll most likely get from everybody is the answer I'm going to give you, which is just the time to do it. You know how much time it takes to plan something at the level that you want to plan it. And I know that you probably, over time, got more efficient with that, but it still takes a lot of time. And I'll even go as far to say that the Wednesdays have been great because that's given teachers more time. This is a building that really utilizes that time extremely well and efficiently. Even within our building structure, with our own PD budget, each team is given chunks of time to work on stuff as well. So, like that's something that the administrators here know and have heard and are doing to the best of their ability to free up more time as well. But I would still say that's what is still needed even more.

Anna: The fear of taking time to do something like that when I know I need to teach. They don't always see that it is teaching and it is learning. They think sometimes it is a separate thing. That is. And again, it goes back to mindset. I think the planning piece, the

time that it takes is a huge barrier. I hate saying that because we all say, you know, we just need more time, and then we get more time, and then we say we need more time.

However, it is like the time piece of just planning a solid opportunity for kids.

Question 6: How do you collaborate with school leaders to align real-world learning with standards, pacing expectations, and accountability systems?

JoAnn: So, the admin actually is very systematic about it. So, they have a running document of what they've done for every year, and it builds. So, once they've done it, it's something that they can either continue to do or build upon. So, they have that running record of what they've done. But I think admin is so systematic about it that you can almost see a progression of their real-world units developing. Does that make sense? Like they might have started small and each year they're getting a little bit bigger and a little bit more. Well, comprehensive but also comprehensive in how they're connected to community, like their community involvement started with maybe like one connection to that community where now it's like they have guest speakers. They have a business that they partner with. They go out and go into the community. It's really developed into something much bigger, and I think it's because it has become so systematic that it's sustainable and that it's a progression. Does that make sense? I think it also started small and then it's developed into what it is.

Caroline: So, what often happens is PBL gets slowly smaller, smaller, smaller. Because at the end of the day most teachers are rule followers. There's a lot of disconnect between it. It saddens me that I think kids are different now. I think culture is different. I think our world is different - everything in the last five years. So, there is a lack of empathy and compassion from leaders that were leaders before and aren't really on the ground. I think

that anyone who has not been in the classroom, or at least rubbed shoulders closely since the pandemic, does not understand. That includes state leadership, district leadership, typically because they, you know, once you reach a certain salary level, you're like, I'm sticking around for a while. I navigate and watch what my leader has to know and the stuff that she says we are required to do, and we don't have time. And I'm like, most of it's like the biggest waste of time. When you've got traditional leaders, and they haven't lived in it. If you don't have a shared experience of innovation, you have no idea what it is. I think that's a lot of what it comes down to. Right now, in our district leadership, there's one person I believe who has lived in innovation, like an innovative learning environment. Everyone else may have rubbed shoulders a little or been around or peeked. They haven't lived it. And when you live it, it's a whole different story, as you would know. So, I think that's part of the challenge. I think what happens is something gives a little because you can't keep adding without pulling away. Creatively, there are ways to think differently. And I think that's where innovation comes. And I would say that there's a lot of that. That's how our current leader will lead. How can we creatively do this? How can we do that? The other one, the other leader, more like did the work for us. A lot of times what had to be done was done behind the scenes. Where the other one doesn't necessarily do that, but she'll approach it of, well, this is what we have to do. So, we're going to make it work for us. If we're supposed to do this, then how do we leverage it to do what's best for kids? So, I would say that collaboration just comes from how you look at something half full, half empty. So, there's a lot of that. And I think our current leadership does a pretty good job of trying to see it that way, trying to help us see how we have to navigate the limitations that we have, if that makes sense.

Don: Yeah, we meet every Friday from one to two, and sometimes it goes beyond that timeline. We have a very consistent meeting that we value because we know how important that is in our relationship and what that could mean for the building and ultimately for students, because that's what we're here for. So, we really value that and we get a lot done during those times. It always focuses on me sharing some of the coaching work, but then it also turns to what it is that they're seeing and things that they're noticing in relationship to our building goals. So then from there then we can come together and talk about both of those things and how we can we utilize each other to capitalize on the things that we're seeing and the things that we're doing. So, there's even a lot of planning conversations for professional learning together. The three of us in those meetings, it's really uncovering needs and finding ways to attack those.

Anna: The leaders that I work with don't see it as a barrier. I think that they can see how standards should be aligned to the project, and the project should be aligned to the standards. So, I feel like they're in tune with that.

Question 7: What shifts have you noticed in teacher motivation, flexibility, or professional growth as they engage in PBL? Any specific success stories?

JoAnn: I think the shifts in professional growth take you from a kind of more traditional mindset of kids are sitting and learning, and it moves away from that into kids are building, kids are creating, kids are talking, and kids are owning the projects that they're doing versus teachers owning that. So, I think the biggest shift is in their professional development of what teaching is like, what their idea of teaching is like.

Caroline: So, what's interesting to me is when you come here, you have to kind of buy into the vision. Where it gets a little tricky when we've moved away from certain things

that feel more traditional like worksheets. I struggle with that because we are an outlier in how we do things. It takes a little more effort upfront, as you would know. You kind of buy in, and you grow, and you're in this space of constantly being creative. So, I learned very quickly that the best way is to always just celebrate, to encourage, and then again build that relationship enough so that at some point when they need something they'll reach out. One particular teacher who was here from the beginning. I said yes to anything she wanted, even if it was the stupidest thing. Then over time, that opened up opportunities to share ideas and opinions. So just kind of going back to that relationship and trust. It's always about trying to find some sort of connection.

Don: I have actually had a very recent conversation with one of the teachers who over-scaffolds a lot. We're trying to help shift her thinking when it comes to that. And so, she has not been resistant or hesitant to like to accept some of these things, but I think that in the moment, it's been hard for her to kind of continue with that. And we had a recent conversation that she has seen that now that she has been allowed to put some of her stuff aside, and some of the things that she feels like she has been valuing for most of her career, when it comes to this content area. And allowing some of those shifts to happen. She's now seeing some of those successes. And that's been really exciting to see that. And for her to be like, it's still hard for me, but I see why I'm doing that now. Like, to me, I think that's been really good and that's come through many conversations, many co-planning sessions, even breaking it down to like, well, let's talk like, really breaking down the standards and what it really means. And if, if, if you agree with this success criteria, then what does that really mean? Like, as far as aligning that to instruction.

There's been a lot of really good conversations, and I think a lot of good learning has come from that for her, like personally, and then for her kids as well.

Anna: I think whenever they are immersed in it, like they plan something and they're finally in the unit with the students, and they see the engagement that the students are having and how they can speak to the learning. It's a very motivating. I mean, I have goosebumps right now. I think it's very motivating. It affirms that this is the way and then they're like, okay, how do I do this? Like, how do I plan for another one? So, I feel like it's contagious once they can get into it. That's the hardest part. But with the administration setting those high expectations that it's just it is the way we do it, it's almost becoming just the culture here.

Question 8: How do you know when real-world PBL is “working” for students? What indicators or evidence guide your reflections?

JoAnn: When they can talk about it connected to the standards. When they're trying to explain why they're working on their outdoor classroom that's connected to the ecosystem and the habitats, and they're able to explain that as long as the water is stagnant and not healthy, that the ecosystem is not going to thrive, so that they're working on ways to build a better ecosystem so that the water can provide that necessary component of the habitat so that other insects and animals can actually engage in their own habitats. So, like when kids talk about it, it's not just that we're learning about the outdoor classroom or we're building the outdoor classroom. It's that they actually understand and explain the why behind it.

Caroline: So, it depends on how you look at what success is and what is learning. If you look at what is true, deep meaningful learning, it's active engagement. It's authentic. It's a

collaboration. So, all of that is PBL. So, if you look past the one narrow view of a grade, I think you're able to see growth in a variety of ways. For example, you mentioned confidence earlier. High levels of engagement when there's autonomy and choice. Confidence comes from I did it, I can do it. Kids are going to learn no matter what. We've asked them to jump through a pinhole of assessment, but when we open it up and we let them process and think. When we understand thinking processes versus content, then we see where their growth is and we see what that looks like, like when kids come up with when they're able to synthesize something and then go, oh, I have an idea. They're practicing like true problem-solving. However, that is not the case, as we're not set up as an educational system to capture that very well. I do think PBL is all about reflection. I think kids need to reflect, and they need to be able to say what they're doing. That's a big piece of the puzzle. And being able to prompt that and scaffold that. And then, again, conversations like, you're my student and you're working on a project, you have a check-in with me. How do I know these kids in the news crew have learned anything? Because this is just one big PBL. I'm not really assessing them for their writing skills, but I am. I can see when they write their scripts what they're missing. Quick conversation. Hey, by the way, why don't we try different starts of the sentence? I just did that today. Kate had the same thing and I was like, what if we switch this around just to give it a little more variety? Yeah, that's a great idea. But she owned it and it was her thing and all I did was notice and question. So, I think that's how PBL runs. I think if we try to control it, then it's not PBL- not the way that I know PBL to be.

Don: I think my initial thought is when you see the joy on their faces of what it is that they're actually doing and learning in the moment, I guess I can refer to that as

engagement, but I feel like it's different than engagement. Like, I don't want to use that word and just be like a lot of administrators like, oh, I'm looking for engagement in the classroom. Like, I think that just becomes such a watered-down term. But true, authentic engagement into learning is what I see and notice in kids. A lot of times it's different when they're in the middle of a PBL versus something else, because they are truly connected not just to the learning, which is what we want, obviously, but they're also connected to the cause of it, you know, like the outcome of what it's going to be. They are so focused on that, and they are going to stick with that learning when other times they might not because they know what that end result is going to be. I think a lot of times that drives their engagement, and it drives their willingness and desire to persevere and to think critically and all those other skills that we want. I don't think those would be present if it wasn't kind of in the form of a PBL, because it's something that's greater than them. I think that even at a young age, they sense that, and that kind of drives them as well. You can see that in them. That's what I love looking for and seeing that in their faces.

Anna: I think it's anytime you're talking with kids and you ask them what they're learning and they talk about the learning and they're not talking about the project. That's what we're learning through when they're speaking that way, then I think you're nailing it. And I think to go on your traditional assessments, because we still assess traditionally and it, it shows. But I think the best is when you're talking with kids and they can talk about what they're learning and learning to do and connect it to the outside world.

Question 9: What structures, schedules, or resources are most essential for teachers to sustain real-world PBL over time?

JoAnn: Well, I think their schedules allow for their plan times so that they can collaborate every single day. So, I think because they just have it built in as their routine that they're meeting, that they naturally see it as the time to plan. Because we often say, like, teachers don't have time, teachers don't have time. But I think that they just see it as this is our time, and it's what they do. There's not a lot of other things that happen during that time. Like I try to meet with a teacher about something that's not related to something their team is working on. It's difficult because their teams are so embedded in the work that they're doing. So, like when we say time is a problem, they actually schedule their time differently than other buildings do. Then, their Wednesdays, also that early release time is very structured around their teams. I would say it's also very structured around real-world learning. So that's what the whole Wednesday afternoon early release was last week. Each team was in their teams, and they were working on their real-world learning projects. They plug in like what they're currently working on and doing, and then admin helps meet with those teams and follow up to make sure that it can come to life. So, when I think about schedules, I think it's just committing the time that they have and making it a focus.

Caroline: Okay. So, schedules, I'll start with schedules, because that's easy. We are slaves to our schedules, special schedule, all of that. I think one of the things that I've watched current leadership do is constantly try to figure out how to maximize time and look at things flexibly. So, I think that flexible structure of time and flexible structure of when you do things, because that's not a lot and there's no way to do PBL when you have to be minute by minute of your day. So that one, and I also think that for structures, it's got to be scaffolded for kids that there are check-in points, the structure that I'm the project

manager and I am managing, I am making sure you are on track. So, I think that is a key component that teachers forget. It's not just go to the project. It's truly like scaffolding. I think if it's designed in a way that sparks their interest and they know they have to learn first, and then they apply what they learn, I think that's the way. It's not just going to magically come, and it's okay to pause. I mean, I've never done a project without reading and learning content first. So, there's that. Resources - I think resources can look a lot of different ways. I think resources are everything from seeing it in action. I think it really helps teachers to see what it looks like, not just talk to someone, but to actually like, hover and look and see what it really looks like. I also think some resources in terms of connections. You can hand someone a PBL on force and motion. I feel like that's never going to really do much. So, what helps with resources are community connections, like being able to build bridges to community. I think resources like experts, that could help tease that out. I think as much planning docs or some sort of simple thing that works for you is a really good piece. That's probably more structures, like when you could see, like, day one. This is where we are. Here's what we need. Like some sort of, like, the simplest space to be able to track what you're doing. At least a general track is really good.

Authentic materials are always great. So those are, those are like technical or physical resources I think trainings are important. When I think of PBL trainings. I mean, sometimes it's good, sometimes it's, you know, whatever. I also think learning how to embed technology in a very fluid way. So, it's not an add on. It doesn't always have to be your product. So, I think like there's a little bit of that in there, like teaching them how to use technology to become more efficient with whatever they're doing.

Don: Time. Time needs to be given to them. I'll call that a resource. Right? And then I think flexibility in their schedule as well. Like if something's just super choppy and it's also liked a no, you've got to stay to this, stick to this every day. Like I think that's really hard. Because when you are in a PBL versus not like that, it's very, you know, it's very different in there. So, I think some flexibility in scheduling. And then I will say another one is it might be more of a cultural thing, but like, I think for that to be successful, teachers need to know the administrators have their back and that they believe in what they're doing. Whether that's just supporting them or by saying, "Hey, we're here for you. We love what you're doing. Even if it doesn't go well. We know that what you're doing is the right thing, and it's okay if this one doesn't go well." That kind of support, but also even the support of I'm going to find a way to get you that extra time you need, or I'm going to find a way to help brainstorm this idea to connect to something outside of this classroom for you. Like any sort of support from the admin, I think that just means so much to teachers as well, knowing that they're there for them.

Anna: I think its flexibility, being flexible with your schedule and being okay with that, and allowing teachers to have time to plan together to come up with these and to revise them. Right? Like they're not perfect. If you need a new community connection of some sort just allowing for that time. Unfortunately, that's the hardest part.

Question 10: If you could recommend one leadership move that would dramatically increase teacher success with real-world PBL, what would it be and why?

JoAnn: Something that I see Meadowbrook do is share the work. It is very much a team. Admin is very involved in their teaming and their projects. Admin is planning with them. It's very, I almost want to say guided, but it's not guided, because teachers are very much

driving it. Admin is partnering with them to make sure that they're not struggling, to make sure that they have what they need, whether it's time or money. So, teachers are definitely not alone in trying to find resources. I would say admin very much has a hand in it, like they're very involved to. I also think it's just that partnership. I mean, that's what it comes down to. It's the partnership of admin coaching them as much if not more than I do. So, I think it's the collaboration piece. I don't know how to say. It not just saying like I expect this go do it. It's hey, we're going to do this. How are we going to do it? It's a very much we mentality and they're part of the team.

Caroline: I would go back to the ABCs. Autonomy, belonging and confidence. Probably autonomy as kind of the one that would probably be the strongest. If teachers want to come and have a handbook how to do it, then that's a that's a different kind of school. But someone who walks in has to have the autonomy to design and create and get what they need. And then that builds confidence. And I think that ultimately is like builds capacity, you know. Yeah, I would probably say that would be one.

Don: I'm going to try to summarize my last answer in this and it's going to be encouragement with empathy. I'm always going to be there to encourage which is really support. But I'm also going to do it with empathy. I'm going to be in the trenches with you as I do that. I'm going to show you that I'm valuing what you're doing. So, I would say encouragement with empathy.

Anna: Oh, in the work. I feel like when a leader, whether it be a coach or whether it be a building principal, if you're in the work and they see that you're invested and you're willing to take risks with them and fail and not know, then I think that's the quickest way. But if you're like, we want you to have a PBL per quarter. Good luck. Go get it. Like it's

gonna be hard. But if you're willing to have the mindset of we can do hard things and I can do hard things with you. I think it's the best way to be in it.

APPENDIX D: CONSENT FORM

Research Consent Form

IRB #: 2130670

Project Title: INSTRUCTIONAL LEADERSHIP IN PROJECT-BASED LEARNING:
CULTIVATING SUPPORTIVE CULTURES, OVERCOMING BARRIERS, AND
MEASURING SUCCESS

Principal Investigator: Megan Thompson

Identification of Researcher: My name is Megan Thompson, and I am a doctoral student in the Educational Leadership and Policy Analysis program at the University of Missouri – Columbia.

Purpose of the Study: The purpose of this qualitative study is to explore how instructional leadership influences the implementation and effectiveness of project-based learning (PBL) as a teaching methodology.

Request for Participation: You are invited to participate in this study because of your role as a principal, assistant principal, instructional coach, or teacher at a Sunnydale Public Schools elementary school. Participation is entirely voluntary, and you may choose to withdraw at any time without any consequences. You can also choose to stop at any time without penalty. If you do not wish to answer a question, you may simply skip it. You may withdraw your data at the end of the study.

Description of Research Method (Interview/Focus Group): If you agree to participate, you will be asked to take part in a semi-structured interview or focus group lasting approximately 30 minutes. You will be asked to share your experiences, insights, and strategies related to instructional leadership and/or project-based learning. Interviews and focus groups will be audio-recorded for accuracy, and notes may also be taken.

Privacy: Your privacy is of the utmost importance. All information collected will be kept confidential. Your name and any identifying information will be removed or de-identified in the reporting of results.

Employee Statement: An employee's decision about research participation will not affect (favorably or unfavorably) performance evaluations, career advancement, or other employment-related decisions made by peers or supervisors.

Questions: If you have questions about this study, you can contact the University of Missouri researcher at 660-707-3187 or megan.thompson@lps53.org. If you have questions about your rights as a research participant, please contact the University of Missouri Institutional Review Board (IRB) at 573-882-3181 or muresearchirb@missouri.edu. The IRB is a group of people who review research studies to make sure the rights and welfare of participants are protected.

You can ask the researcher to provide you with a copy of this consent for your records, or you can save a copy of this consent if it has already been provided to you. We appreciate your consideration to participate in this study.

APPENDIX E: PERMISSION TO CONDUCT RESEARCH

Email Title: Request to Conduct Research at Sunnydale Public Schools

Dear Mr. Hill,

I am requesting permission to conduct research at Sunnydale Public Schools as part of my study, *Instructional Leadership in Project-Based Learning: Cultivating Supportive Cultures, Overcoming Barriers, and Measuring Success*. This study is qualitative in nature, examining the perspectives of elementary teachers and school leaders at Sunnydale Public Schools. I would need to be on-site from October 2025 to November 2025. I have attached my application to conduct research in your school district, my IRB protocol approval letter, and the participant consent form for your reference. Please let me know if you approve this request.

If you require any further information or have questions or concerns, please do not hesitate to let me know. Thank you for considering this request.

Sincerely,

Megan Thompson

Doctoral Candidate

University of Missouri-Columbia

Attachments (3): Research Application, Participant Consent Form, Measurement Instrument, IRB Approval Letter

APPENDIX F: RECRUITMENT EMAIL

Email Title: Research Interview Request

Dear [Participant Name]:

Hello, my name is Megan Thompson. I am a doctoral student from the University of Missouri EdD program. I am conducting a study about leadership practices regarding project-based learning and would like to invite you to an interview with me regarding your experiences with project-based learning. Participation is completely voluntary, and participant identities will be confidential. If you would be willing to help me, I would love to set up a time to meet and talk. Please let me know when a convenient time would be.

Sincerely,

Megan Thompson (Doctoral Candidate)

University of Missouri – Columbia

APPENDIX G: PHONE SCRIPT

Good morning. This is Megan Thompson from Oakridge Elementary. How are you doing today?

I'm calling because I'm working on my dissertation through the University of Missouri–Columbia, and I would love your help if you're open to it. My research is looking at how instructional leadership supports project-based learning with real-world components in schools.

The study has been approved by the Sunnydale Public Schools Office of Assessment and Research, and I'm interviewing teachers, instructional coaches, assistant principals, and principals to learn more about their experiences with PBL. The interview will take about 30 minutes, and we can meet in person or on Zoom—whatever works best for you. I'm super flexible on time. We can meet before or after school, during the school day if you have availability, evenings, or even weekends. I can make it work around your schedule. Everything you share will be confidential. Your name and school won't be used in the research. I'll replace them with pseudonyms so nothing is identifiable.

Would you be interested in participating?

If so, what days or times are usually best for you?

Thank you so much for considering it. I know your time is valuable, and I really appreciate your support.

Thanks again, and have a great rest of your day!

VITA

Megan Thompson was born in Chillicothe, Missouri where she spent her entire childhood. Her childhood and adolescent experiences in public school, Girl Scouts, church youth group, the CHS Lady Golf Team, and CHS band were hallmarks of her early years, fostering both a love for people and a genuine love of learning. These formative experiences also instilled in her a deep respect for the teachers and coaches who shaped her along the way – and ultimately led her to pursue a career in education. Megan graduated from Chillicothe High School in 2005.

After high school, Megan attended the University of Central Missouri where she double majored in elementary education and early childhood development. After graduating in the spring of 2009, Megan began her 17-year career in education. Her 14 years of teaching in rural, urban, and suburban elementary schools in northern Missouri brought a depth of experience and perspective that shaped her approach to teaching, learning, and educational leadership. Megan has spent the last 3 years as an elementary assistant principal.

Additionally, in 2012, Megan received a Master's of Science in Education in Elementary School Administration from the University of Central Missouri. A doctor of Education in Educational Leadership and Policy Analysis is expected from the University of Missouri in December of 2025.