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Blended Learning In Elementary Schools: An Interdependent Enterprise

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BLENDED LEARNING IN ELEMENTARY SCHOOLS: AN INTERDEPENDENT ENTERPRISE

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ABSTRACT

This qualitative case study, bounded by a scope of leadership, was one way to analyze how leaders encouraged teachers to leverage blended learning in the public elementary school. The theoretical framework lending to cognitivism included sociocultural cognition and contingency theory. With the central phenomenon and research question, "What leadership aspects encourage teachers to leverage blended learning in elementary schools?" the researcher sought to understand the power of leadership and teacher perceptions as change occurs in the public elementary school, integrating blended learning. Subquestion 1 was used to pursue information about teacher identified leadership support that teachers perceived to be helpful throughout the change process in the transformation to blended learning. In Subquestion 1, the researcher asked, "In what ways, if any, are blended-learning leadership supports helpful?" Subquestion 2 was used to inquire about reflection of self, as the teacher thought of what he or she had gained to engage later as an integral stakeholder. In Subquestion 2, the researcher asked, "How do helpful, blended-learning, supportive measures engage teachers to become integral stakeholders?" Eight teachers and two principals (from two elementary schools within the same school division) who were engaged in blended learning participated in the research. In Vivo and descriptive coding data from interviews and documents were analyzed. Continuous analysis of the original 148 codes became the three themes. The themes of leadership, change, and the stakeholder led to the findings of research. The potential of moving from traditional to blended learning is conceivable

with transformational leadership that is inspirational, influential, innovative, and supportive with continuous learning opportunities. Recommendations include actions for leaders to lead through the challenge, build a culture of learning, dedicate a plan for meaningful and authentic professional development, respect and honor teachers' time, model expectations, and understand that the teachers' decisions are influential.

Keywords: blended learning, innovation, transformational leadership, praxis.

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"Why should you continue going after your dreams?

Because seeing the look on the faces of the people

who said you couldn't . . . will be priceless."

~ Kegin Ngo

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CHAPTER 1

INTRODUCTION

Modern teaching and learning add complexities to historical, pedagogical frameworks, referring to the traditional or industrial education model (Turner, 2015). Today, children in the earliest years of their lives participate in innovative learning opportunities, using mere touch during their infancy as they engage interactive screen devices (Moftah, 2015). Somewhat exclusively, these same students are born into a "media-rich household" with immediate access to global information not instantly attainable by prior generations (Helsper & Eynon, 2010, p. 515; Moftah, 2015). Innovation, introduced to children by their caregivers as an interaction, learning experience, and source of entertainment, inspires the interconnected world of possibilities (Moftah, 2015; Turner, 2015).

From the introduction and encouragement of interacting with technology at such an early age, learning inquiry, engagement, application, and extension have shifted. This shift, from what was traditional of former generations is to one of encouraging potential from the interrelatedness of varying types of accessible media and its use for expansive desired outcomes (Guest Editorial, 2005; Moftah, 2015). The elementary education institution, acknowledging the increased need for diverse and student-centered learning versus the traditional institutional learning of the past, has accepted the presence of technology of the 21st-century, merging the "past and technology" (Helsper & Eynon, 2010, p. 518). However, early in the acceptance phase, teachers presented a learning gap regarding the understanding and refined scholarship of technology, therefore, they inhibited student academic outcomes because of the presence of continuous traditional instruction (Prensky, 2001). Preservice teachers continue to endure a slower progression of

innovative learning opportunities in higher education in contrast to the fervent inclusion of innovation in Kindergarten–Grade 12 (K–12) schools (Archambault & Kennedy, 2014/2018). Administrators, as elementary school leaders, simultaneously present challenges in this education shift, inciting the risk of increased turbulence through the demands of change, for "leadership is considered second only to classroom instruction as an influence on student learning" (Wolf, Bobst, Mangum, 2017, p. 6).

Horn and Staker (2015) stated that half of the high school dropouts drop out because they are bored, a risk of the dramatic decrease in engagement and the act of questioning, which peak is a young 4 years old (Wolf et al., 2017). Blended learning is a pioneering possibility of eliciting learner agency response to the needs of these innovative students in K–12 schools (Wolf et al., 2017). Blended learning includes four models—rotation, flex, a la carte, and enriched virtual—that provide voice and choice, and encourage student-centered learning engagements (Akgunduz & Akinoglu, 2016; Horn & Staker, 2015). Tucker et al. (2017) identified five areas of best practice—personalization, agency, authentic audience, connectivity, and creativity—which are "hallmarks" of blended learning without adding to what they identify as definition "confusion" (p. 6). Similar authors described the blended-learning processes as an "approach" or "learner-centered methodology" that "results in an amalgamation of digital content, tools, and best practices" for "personalized instruction" resulting in "mastery" (Sheninger & Murray, 2017, p. 57). Abstractly, blended learning in elementary schools is an experience of best practices and processes that include choice to elicit agency with the integration of identified models.

With attention to what schools are doing to merge blended learning into a redefined teaching and learning process within the schoolhouse, researchers are designing questions and case studies of blended-learning experiences and recording the efforts of change. Current

research attention is mostly on blended learning in higher education with emerging research in K–12 schools. However, very little of that research involves blended learning in the public elementary schools; therefore, intensive study is required to expose the nuances of that unique setting.

Statement of the Problem

A paucity of information exists regarding how leadership leverages blended learning, changing teaching and learning at the public elementary school level, and affecting the degree of turbulence and learner agency in the schoolhouse. Much research on blended learning is focused on participants in higher education, on the high school setting, or on charter and privatized K–12 schools with technology-focused business models. The minimal research on blended learning in a variety of elementary schools has principally been concentrated on specific content areas and matching technologies.

The complexities of blended learning in K–12 schools include the rapid change of innovation *and* a shift in the once standard pedagogical practices of educators. Frameworks as tools are evolving to remove barriers for school leaders and meet what Smith (2017) calls digital convergence. These tools, identifying the urgency of integrating innovation, include a procedural framework to follow. One challenge identified within tool frameworks is the redefining of educator roles with modern pedagogy and innovative technologies. In response, administrators and their district superintendent counterparts are integral to shaping the potential redefined role of the teacher (Horn, Gu, & Evans, 2015). Despite these evolving frameworks, little research has been conducted on leadership in public, elementary schools or on how the intricacies of those leaders interrelate with the adoption of varying contexts that are designed to remove barriers (e.g., procedural frameworks) for the very same leaders.

Globally, some K–12 schools have successfully launched blended-learning programs, while others attempt to learn from the successes and failures before their attempts or unveiling (Horn et al., 2015). Qualitative case study research of blended learning in the public elementary school environment and of the leaders who frame the shift from traditional to blended learning in the same environment delivers the opportunity for teachers to reflect on their perceptions of those leaders making decisions. These reflections are worthy of recognition by their leaders because administrators wish to use frameworks to shift teaching and learning in their school from traditional to blended learning. Leaders must build a "strong guiding coalition" as Kotter (2012) explained, requiring "the right composition, level of trust, and shared objectives" (p. 54). Therefore, leadership aspects, characteristics, and traits that influence decision making clarify the importance of having the desired leadership through this momentous shift; however, what teachers want is empirically unknown.

Purpose of the Study

The purpose of this research was to study leadership aspects, characteristics, and traits of administrators (the decision makers of influence) as teachers perceive them in the public elementary school environment while they are engaged in blended learning. This study encouraged teachers to find their voices as they reflected upon the leadership of their school administrator with budding effects of change (e.g., framework or policy development and role refinement). Much of the K–12 blended-learning research has been focused on the methods or technology that were used, the motivation of students, or student test scores and achievement (Drysdale, Graham, Spring, & Halverson, 2013). Instead, gaining teacher perspectives was one way to analyze how teachers felt encouraged to leverage blended learning in their classrooms, for innovation demands change with a modern response to teaching and learning.

Research Questions

This qualitative case study, designed in response to the minimal research found on blended learning in the public elementary school, combined the reflective perceptions of teacher participants of their administrator leaders. The central phenomenon and research question, "What leadership aspects encourage teachers to leverage blended learning in elementary schools?" was used to seek and understand the power of leadership and teacher perceptions as change occurs in the public elementary school while integrating blended learning. One subquestion was used to seek information on teacher-identified leadership supports that teachers perceived to be helpful throughout the change process in the transformation to blended learning. The researcher asked, "In what ways, if any, are blended-learning leadership supports helpful?" Another subquestion was used to inquire about reflection of self, as the teacher thinks of what he or she gained to later engage as an integral stakeholder, asking, "How do helpful, blended-learning, supportive measures engage teachers to become integral stakeholders?" This question was used to seek to find what supportive measures teachers consider helpful enough to push their engagement with genuine willingness and honest intentions or, as Kotter (2012) described, toward becoming part of the "guided coalition" (p. 54).

The goals of research were to observe and understand how teachers perceived the leadership impact of blended learning in the public elementary school. Specifically, this impact is determined by identifying the leadership aspects, characteristics, and traits of decisionmakers that encourage teachers to leverage blended learning in elementary schools. These perceptual findings could later be used as guiding factors for future leader actions. Gaining the teacher's reflective perspective of leadership aspects helps leaders intentionally guide or scaffold teacher supports, learning, and interaction. Leaders can use the findings to supplement the development

of practical classroom instruction, to design the policy of blended learning at the elementary level, and to plan forward while anticipating challenges and removing barriers.

Dynamic instruction, along with what Horn and Staker (2015) recognized as the three most significant desires of education leaders—personalization, access, and cost control—is noted to transform learning in the elementary school and to meet the needs of students with equity and accessibility. Gaining insight into teacher perception responds to the first desire of personalization. Access and cost respond to the education leaders second and third wishes of access and cost control. Therefore, blended-learning research at the public elementary level and the three most significant desires of educational leaders connect.

Conceptual Framework

Vygotsky (1980) believed that social interaction and the use of cultural tools through goal-directed activities activate the mind (see also Tenenberg & Knobelsdorf, 2014). Research and literature by prominent authors have shown the broad theme of student-centered or personalized blended learning and the mind. With a comprehensive analysis of cognitivism and emerging research of blended learning, the theoretical framework (partially rooted in Vygotsky's [1980] understanding of mind) engages goal-directed activities (see also Tenenberg & Knobelsdorf, 2014).

Theory of the mind is interdisciplinary with different naming conventions and concepts, many falling under the umbrella of sociocultural cognition theory (Tenenberg & Knobelsdorf, 2014). Cultural–historical activity theory (CHAT) is a practice-based approach that provides a framework for preparation and productivity analysis (Foot, 2014). Strengths of CHAT include the six-part activity system—subject, object, community, rules, a division of labor, means of production/tools—as proactive planning or outcome focused (Foot, 2014). Analyzing the

perceptions of key players in blended learning helps to identify the successes or failures in the plan or the supportive measures of the organization for the goal of blended-learning implementation and sustainment (Foot, 2014).

The variables of path–goal theory—leader behavior, contingency factors, and follower attitudes and behaviors—work synchronously, but with the first variable dependent on the other variables (Marion & Gonzales, 2014; Ronald, 2014). Path–goal theory helps leaders to guide others towards organizational goals (e.g., shifting to and incorporating blended learning) by removing barriers (Ronald, 2014). In doing so, teachers as followers become enabled because the administrator guides and mentors them to follow the path to meet the organizational goal, all while experiencing increased motivation and productivity (Ronald, 2014). The theoretical framework is a strength that complements complex new topics (e.g., blended learning) where frustration can become counterproductive to organizational goals, and where research findings have recorded teachers returning to traditional instruction (Bingham, 2016).

Blended learning, minimally studied in K–6 public schools, produces nominal empirical suggestions and recommendations because of the lack of general study. Removing barriers through field guides, frameworks, tools, or the recommendations from research, affects the topic of study; however, teacher reflective input is absent from some of the emerging research. Sociocultural cognition and contingency theory at large identifies goals and exemplify processes for personal or organizational productivity and growth (Foot, 2014; Ronald, 2014; Tenenberg & Knobelsdorf, 2014). Integrating the theoretical frameworks combines broad social and behavioral theory, which is a *mindful* approach.

Assumptions, Limitations, and Scope

Horn and Staker (2015) found that global growth and development, which political, social, and personal decision-making influence, inspires academic accessibility, educational equity, and the three most significant desires of education leaders—personalization, access, and cost control. This assumption is a compilation of synthesized learnings from the literature of blended learning, and the three-pillar design from inquiry findings within the review of the literature. These three pillars—plugged in pedagogy, the interconnected learner, and trust and transformation—are interrelated and influenced by leaders.

Plugged in pedagogy is a study of the shift from traditional to modern pedagogy, which has been influenced by digital technologies, innovation, and the support that is interwoven within the change process. It is assumed from the literature that leadership aspects found as supportive encourage teachers to leverage blended learning in elementary schools by engaging in purposeful measures (Wolf et al., 2017). These learning measures (e.g., intentionally designed professional development, access to professional learning networks (PLNs), and leader supported collaborative development time within the school day) appear to positively affect levels of turbulence during change (Smith, 2017; Wolf et al., 2017).

From the literature, another assumption is fashioned that blended learning is encouraging. Found in the literature, individualized academic opportunities and access, increased higher-order thinking skills, student control, learner agency, motivation, and engagement, and cross-curricula opportunities are all opportunities sought and achieved with blended learning (Greer, Rowland, & Smith, 2014; Horn & Staker, 2015; Kumpulainen, Mikkola, & Jaatinen, 2014; LaBanca, Oh, Lorenston, Sibuma, & Snelback, 2015; Wolf et al., 2017). This assumption is based on empirical evidence and case studies highlighting the realized possibilities within various school settings.

Studying blended learning and remaining focused on the interconnected learner, or a student-centered learning approach that crosses the curriculum with developed guiding models is innovative and responds to the individual needs of diverse learners.

The culture of the school and the development of a culture that embraces change are presumed to be responsibilities and rewards of school leadership (Agostini, 2013; Wolf et al., 2017). The literature exposes the importance of leadership to build a sense of trust because with trust comes transformation (Knight, 2011; Quinn, 2002). When teachers trust their leaders, they might feel encouraged to leverage blended learning in elementary schools because they might engage in transformation by partnering with the "strong guiding coalition" (Kotter, 2012, p. 54; see also Knight, 2011).

The qualitative case study intrinsically bound by a scope of leadership uses a cognitive theoretical framework of sociocultural cognition or CHAT and contingency theory. Interview artifact collection methods of the responses of elementary school teachers as participants qualitatively inquire of the "mental constructions of reality that are based on [people's] experiences and views" (Wang, Bruce, & Hughes, 2011, p. 300). These "mental constructions of reality"—feeling, behavior, and opinion interview questions—expose the potential of broad variability, a potential limitation (Wang et al., 2011).

Limitations include the complexities of the theoretical framework itself. Independently, the theories (CHAT and path–goal theory) exhibit weaknesses. These limitations (as the theories are combined) become minimized. Without remaining outcome-focused or proactive planning, that minimization becomes dissolved (Foot, 2014). Combining the narrow view of the study and specific questions for data collection, the scope of the qualitative case study of two public

elementary schools and four participants per school, limited overall findings for dramatic conclusions, despite the goal of contextually appreciating the results.

Rationale and Significance

Shifting customary practice (e.g., educating within the framework of a traditional industrial model in the elementary classroom while integrating blended learning) fails to respond to the rapid, groundbreaking, technological developments of the 21st century or the recognition of individual student need. Leading traditionally without inquiring about the decision-making impacts, instead of leading in transformational ways with the goal of building a coalition of stakeholders, fails to respond to developments in organizational processes, global economy, and industrialization, or the introduction and development of leadership and theories of the past half-century. Smith (2017) stated, "Research shows that simply digitalizing traditional instruction invariably leads to lower levels of cognitive rigor" (p. 24). With this knowledge, leaders might lead, but the teachers must become the trailblazers of this great transformation in the classroom. If teachers do not perceive leader aspects to leverage blended learning in elementary schools, acting as agents of support, helping them to redefine their role and to shift to blended learning, will they become members of the coalition? Will the shift to blended learning reach or exceed the goal-based potential?

Focused, personalized education that is designed from the resources and knowledge of the teaching staff is a significant factor for facilitation encouragement to the introduction and creation of a shared vision, integrating blended learning into the elementary classroom (Smith, 2017; Wolf et al., 2017). Although education as an organization is mainly institutional and is typically focused on the constant, clear, and orderly, it recognizes the need to change (Marion & Gonzales, 2014). The complexity of transformational change within organizations will naturally

create confusion that could affect development or initiation in many schools. Considering the lack of empirical research on this topic regarding the public elementary school, the increased research will help to mitigate the effects from this confusion and bring a voice to the teachers immersed in the reorientation of their role within the elementary school.

Definition of Terms

Access—Access means using innovative technologies to increase opportunities for learning beyond physical geographic complexities (Horn & Staker, 2015).

A la carte—In this type of learning, students attend a brick and mortar school, but access a learning course that is fully online. This model of blended learning is typical in high schools, where courses might not be available within the school, but the learning can be accessed online (Horn & Staker, 2015).

Aspect—Aspect is defined as "a particular status or phase in which something appears or may be regarded" or the "appearance to the eye or mind" (Merriam-Webster, n.d.). Aspects as defined, relates to the word "aspects" within the research question, whereas leadership aspects include the characteristics or traits of the leader.

Blended learning—This type of learning is characterized by varied student control with online and face-to-face learning, and an intentional, curriculum learning focus with dynamic instruction. Horn and Staker (2015) identified the main ways of delivering blended learning—rotation, flex, a la carte, and enriched virtual—but pointed out that those models could be individualized according to the teacher, learner, resources, or accessibility (Akgunduz & Akinoglu, 2016).

Blended learning in elementary schools—This type of learning is the abstract union of Horn and Staker's (2015) models, Tucker et al.'s (2017) hallmarks, and Sheninger and Murray's

(2017) approach to blended learning, resulting in best practices, learner agency, and student-centered opportunity.

Competency-based learning—This type of learning is the "possession, application, or creation of knowledge, as skill, or a disposition" of knowledge before a continuation of new learning concepts (Horn & Staker, 2015, p. 9).

Cost control or control costs—These types of costs are those that the school district manages to meet the needs of their stakeholders and to maintain the school budget responsibly (Horn & Staker, 2015).

Digital convergence—This convergence is the urgent call for change to help facilitate the inclusion of an innovation in schools, with the purpose of impacting learning and teaching (Smith, 2017).

Enriched virtual model—This model evolved out of a need for intervention or desire for a more blended atmosphere after student data, using a virtual model, began to look negative. Students access their learning virtually and complete their work on their time. Responding to the decrease in the success of a full virtual model, the enriched model includes opportunities for students to gather at a central physical location to obtain face-to-face instruction or intervention. This model is different from the rotation model that is used in brick and mortar schools, for these students do not attend a brick and mortar school, but instead are students of a virtual school (Akgunduz & Akinoglu, 2016; Horn & Staker, 2015).

Flex model—This model was built mainly for the middle and high school student who requires an additional opportunity to take a course, or the chance to take a course not available in the school or district. Students learn at a central location and receive delivered instruction through technology. They might be watching instruction, but then working in small cohorts or

work groups. This model, typically used in the elementary school, coincides with the developmental needs of the students in Grades K–6. Similarly, A La Carte blended learning is also a model for high school students. Students are autonomous, and access learning (whether mandatory or desired) online (Horn & Staker, 2015).

Framework—This is a scaffolding approach or a process that is used as a tool to decrease barriers to understanding, planning, or implementation (Wolf et al., 2017).

Game-based learning—This type of learning includes online artificial intelligence programs that personalize the learning needs of the student while providing the teacher with real-time data (Hong, Tsai, Ho, Hwang, & Wu, 2013).

Learner agency—Active learners, with full inclusion, exhibit learner agency as they become agents of their learning by setting goals for learning, investigating the purpose and understanding for learning, and securing ownership for the learning process and their knowledge (Wolf et al., 2017).

Personalization—This type of instruction is at a learning pace that is crafted to meet the individual needs of each learner (Wolf et al., 2017).

Rotation model—This model is similar to the academic workshop model commonly found in the elementary classroom. Typically, the teacher directs the rotation, but this is not always the case. In the rotation model, the use of technology is the focus of one of the rotations. Horn and Staker (2015) added that variations such as station rotation, lab rotation, the flipped classroom, and individual rotation fall under the rotation model. They also provide individualized learning opportunities: (a) being controlled by the teacher or (b) sharing control with the teacher with varying levels of student autonomy.

Student-centered learning—This type of learning is personalized learning or personalization and competency-based learning combined (Horn & Staker, 2015).

Turbulence—Turbulence is explained as having four levels—light, moderate, severe, and extreme—within the "turbulence gauge" found in turbulence theory (Shapiro & Gross, 2013, p. 9). Shapiro and Gross (2013) explained the gauge as the varying degrees of potential "volatile conditions" (p. 8) experienced or attained within site.

Workshop model—This model is a rotation, semistructured model that includes a small-group mini-lesson, independent learning and work, a warm-up or exit ticket assessment, and a peer–peer or peer–teacher share session. For instance, during a math workshop rotation in an elementary school classroom, one rotation might be a small group learning with a teacher, another might be independent work and mathematics games, and the third rotation might be accessing innovative or online game-based learning. In a workshop model, various rotations might co-occur after a whole group mini-lesson or might include an exit ticket to assess student need (Lempp, 2017).

Conclusion

With urgency, school administrators recognize that elementary curricula and learning require a new student-centered response. After all, the learner of today is not like the learner of the last decade, and the ever-increasing need for customized, on-demand learning is evident. The individual approach to learning encourages the continuation of inquiry long after the teacher has provided the formal education. Student will apply new knowledge in their learning space and find competency in that learning while decreasing the need for scaffolding to complete academic shortfalls (Boone, 2015; Horn & Staker, 2015).

Innovation in technology has provided fervent growth and opportunity, while inciting demands of those who have access and those requesting it. This blended learning is transformational and challenging, it introduces chaos into the educational institution, and it directly responds to the three most significant desires of educational leaders today. Many researchers have identified the rewards of blended learning in higher education. These rewards include (a) accessibility; (b) decreased cost and idle time resulting in behavioral consequences; (c) increased knowledge, inspiration, drive, and graduation rates, and (d) a flexible nature for learning and academic acquisition (Akgunduz & Akinoglu, 2016; LaBanca et al., 2015). Frameworks that support blended learning are evolving and district level leadership can respond to those seeking change. School leaders can build on that support to influence teaching and learning at the classroom level.

Although administrators and teacher leaders in elementary education might not be ready to implement blended learning because of their lack of knowledge and experience, K–6 learners are due the opportunity nonetheless. Students today are already plugged-in, with others actively searching to find energy to begin the process of transformation (Prensky, 2001). Teachers are integral to the implementation process of blended learning, and educational development processes are needed to eliminate strict transference of traditional practices and support technology-based approaches. Teachers are the voice of this change.

Therefore, in this first chapter, the researcher has mapped the inquiry for the reader, narrowing the path as the problem and purpose leading to questions of leadership and blended learning. Interlocking social and behavioral theories were presented. In Chapter 2, the researcher provides an overlay, widening the view to imposing connections of current literature themes—21st century education, student-centered learning, and transforming instructional leadership—

and the Vygotskian-influenced conceptual framework. In Chapter 3, the researcher explains the research methodology. This methodology further expounds how research was analyzed while acknowledging any limitations, with detailed explanations and a presentation of results in Chapter 4. Chapter 5 is a brief overview of the study, summarizing the research process. Composed, the five chapters capture teacher perceptions of leadership aspects and how those aspects encourage them to leverage blended learning in elementary schools, helping to build upon what is already known to remove barriers, developing existing frameworks, or building new ones.

CHAPTER 2

LITERATURE REVIEW

Vanguard teams, school districts, teachers, and researchers inquire and deploy blended learning in K–12 schools. In 2010, Horn and Staker (2015) discovered that the stakeholders in the educational institution seek three things when they make decisions about teaching and learning, and those critical identifiers are all found in online learning. In the shift from traditional education to online and blended learning, these stakeholders encounter the complexity of change (Bingham, 2016; Boone, 2015; Horn et al., 2015). Stakeholders' single- or double-loop, reactive solutions become the precursors to the longevity of successful transformation (Smith, 2017).

As instructional leaders, principals embody the role of teacher motivator, supporter, and provider of resources, affecting teaching and learning that is student-centered (Quinn, 2002). In the change process or shift from traditional to modern pedagogy with innovative technologies, engagement overhauls fear (Wolf et al., 2017). Bodden-White (2015) found that school leaders are instrumental to the advancement of blended learning in schools, and that they directly influence teacher perception and the implementation of blended learning in the classroom. The objective of this researcher's study was to research the leadership aspects that encourage teachers to leverage blended learning in elementary schools. The literature, frameworks, and research—including approved dissertations, case studies and articles—illustrate the complexity of the educational institution in pedagogy, stakeholders in education, and their response to change.

A Thematic History and Overview

Teaching and learning, and the technological tools used to change the relationship between teaching and learning, influence the development of extended or modernized pedagogy

(Crompton, Olszewski, & Bielefeldt, 2016; García-Cabrero et al., 2018; Fletcher & Bullock, 2015). Substituting traditional education with technology or digital tools impedes innovation, causing a decline in academic rigor because the curricula and standards remain static (Smith, 2017). As blended learning changes over time, technological innovations, single- or double-loop solutions, and pedagogical, developmental approaches influence it when teachers' understandings and perceptions affect that change (Fletcher & Bullock, 2015; Gerbic, 2011; Smith, 2017).

This researcher's review showcases blended learning by integrating literature in two ways: (a) examining administrators' and teachers' understandings or perceptions and (b) studying blended learning in the educational institution. Innovation and technology change the interdependence between instruction and learning (Kumpulainen et al., 2014; Wolf et al., 2017). With significance, traditional pedagogy is examined against the needs of the 21st-century learner to organize for potential change (Boone, 2015; Richardson, 2010).

Leading through the chaos of innovation in a historically traditional environment requires reflection and review of the process, progress made by others, and possible misgivings that others might have had (Boone, 2015; Horn et al., 2015). Integrating the literature gives a broad view of the theme of blended learning in educational institutions, but it also encourages the reader to understand the connections. These connections between developed pedagogy, the modernized teacher, the student-centered learner, and the way that traditional transformative leadership can become transformational are influential factors in blended learning (Boone, 2015; Kumpulainen et al., 2014).

Purpose of Study

The literature that the researcher has assembled regarding blended learning in education exemplifies the rapid pace of the transformation of the research components of (a) blended learning, (b) teachers, and (c) change as a dynamic process. Peer-reviewed or scholarly literature is conditional when examining leadership aspects that affect student-centered blended learning in elementary schools. In the literature, the participants included subject matter experts, people in higher education, K–12 preservice and active teachers, school and district administrators—all of whom were in different public, private, and charter schools or organizations. Through the focus on the literature, the researcher strove to discover interest, reflection, warning, or nonbiased research on blended learning. Therefore, the purpose of this review, which is tied to the objective of studying blended learning, is to analyze the literature for additional research on this emerging topic.

The Review Framework

The framework of the literature review is the synthesis of the varied works into three interrelated topics. Topic 1, plugged in pedagogy, is the shift from traditional to modern pedagogy, which has been influenced by digital technologies, innovation, and the support for them that has been interwoven into the change process. Topic 2 is the interconnected learner, student-centered learning, the impact of blended learning across the curriculum, and the guiding models of blended learning. Topic 3 is the nuances of trust and transformation that are exposed through the researcher's synthesis of the literature. With these three pillars of study, the review framework illustrates the complexity of educational institutional mainstays (i.e., educational stakeholders and their responses to change).

Plugged in Pedagogy

Traditional theoretical and academic content are pedagogy and could be transformed into new models of instruction (Smith, 2016). Teachers use theory and academics to construct learning environments and resources. This transformation (a) amplifies pedagogy into an opportunity in which students begin to learn in individualized and personalized ways, and (b) expands technology to global access, affecting both learning authenticity and relevancy (Greer et al., 2014; Wolf et al., 2017). Horn and Staker (2015) called this student-centered learning, where personalized and competency-based learning merge, a response to the need for teaching and learning to be student-focused.

In comparison to traditional "one-size-fits-all" curriculum and instruction, blended learning encourages individualized pacing, intervention, academic rigor, and the essential component of student control (Greer et al., 2014). Wolf et al. (2017) believed that blended learning could empower, involving teachers and learners differently as they set goals and take possession of the learning process, which would ultimately strengthen their learning agency. Mathews (2017) found empowerment through autonomy helpful, with results showing the overall success of primary and secondary school blended learning. Learner agency and blended learning are instrumental developments in academic knowledge growth. Overall, content rigor decreases if technology replaces traditional education without an intentional shift in how that content is designed and delivered. This caution highlights the importance of the pedagogical shift with blended learning (Smith, 2017).

21st-century education. The phrase "21st-century education" was devised to reflect the departure from the traditional education of the 1900s. To describe the phrase more broadly, it means that this type of education lacks a dated or industrial quality and responds to a changed

pedagogy. Innovation, higher-level thinking, and problem-solving skills are included in this changed pedagogy (Horn & Staker, 2015; Kumpulainen et al., 2014). Innovation in education includes going beyond tools such as iPads, tablets, and laptops. It contains digital literacy and citizenship, learning management systems, vendor- and teacher-created interactive curricula, and the modernization of pedagogy and other hallmarks of traditional education (Bingham, 2016; Greer et al., 2014; Horn & Staker, 2015; Smith, 2016). Devices, programs, and processes encompass some of the tools that K–12 administrators and educators use to teach and communicate with their students in the modernized educational environment (Guest Editorial, 2005; LaBanca et al., 2015; Smith, 2016).

Although blended learning might still be in the development stage at many K–12 schools, it is continuously evolving with persistent redefinition (Hong et al., 2013; Thibaut, Curwood, Carvalho, & Simpson, 2015). Part of this redefinition is the educational stakeholders' acknowledgement of the inequities of accessibility because of funding, location, knowledge, acceptance, or leadership (Horn et al., 2015; Richardson, 2010). Rural or impoverished schools might not have Internet capabilities, funds for implementation, or staff to support goals. Special needs or English language learners (ELLs) might not be able to access vendor-sponsored curricula readily (Basham, Smith, & Satter, 2016; Greer et al., 2014; Schechter, Macaruso, Kazakoff, & Brooke, 2015). Teachers of the mid- to late-20th century might not have the knowledge, skills, or ability to design and teach with available technology, and school administrators might lack leadership training in technology (Agostini, 2013; Horn & Staker, 2015; Thibaut et al., 2015; Basham et al., 2016). Acknowledging these factors—(a) leadership and resistance, (b) large barriers as stakeholders fail in leadership, (c) understanding and

interpretation, (d) implementation, and (e) building learner agency—are instrumental in anticipating how to shape change (Gerbic, 2011; Smith, 2017, p. 23; Wolf et al., 2017).

Basham et al. (2016) researched a universal design for learning (UDL) scan tool that measures and authenticates the overall accessibility and changeability of online, vendor-provided, learning materials. Most tools are likely the direct source of instruction for students, many of whom have special needs. However, it is the role of the teacher to ensure that online education and "teacher actions supplement" the "experience" of the learner (Basham at al., 2016, p. 148). Teachers who understand the hallmarks of UDL—(a) the nuances of their students, (b) the importance of transparent decision making, and (c) the goal of individualized learning—employ stronger pedagogy and improve accessibility and equity for education (Basham et al., 2016; Greer et al., 2014). Like Basham et al. (2016), Greer et al. (2014) went further by responding to innovation and match theory with 21st-century learning models that are student-centered. They warned that personalized education might not give the accessibility and equity that students require. Thus, Greer et al. highlighted vendor programs, online modifications, and accessible accommodations, and provided universal misunderstandings for making best-practice decisions.

Physical space and head space. 21st-century education is inclusive of reflective best practices (LaBanca et al., 2015). They increase accessibility and equity, and involve higher-order thinking skills, innovation, student control, and learner agency (Greer et al., 2014; Horn & Staker, 2015; Kumpulainen et al., 2014; LaBanca et al., 2015; Wolf et al., 2017). 21st-century education occurs inside and outside of the classroom, where traditional pedagogy and curriculum development collide with the innovation of modern pedagogy and novel technologies (Guest Editorial, 2005; Smith, 2016; Thibaut et al., 2015). With traditional education that reflects an

industrial model, administrators and teachers likely learned differently than their students do today (Kumpulainen et al., 2014). Today, the physical environment on campus as preservice teachers or administrators—and in the classroom as teaching, learning, and leading agents—are different. These transformations separate the exposure and experiences between students of today and the administrators and teachers who make academic decisions (Bingham, 2016). Therefore, teacher perceptions of those leaders (as decision makers, bringing blended learning to K–12 schools) vary through the chaos of change, personal temperament, trust, and courage (Bingham, 2016; Kitchenham, 2005; Wolf et al., 2017).

Regardless of the characteristics of existing blended-learning models, administrators and teachers who have experienced blended learning have responded to those models (Bingham, 2016; Kuo, Belland, Schroder, & Walker, 2014). They affect curricula, classroom design, and instruction according to their partiality (Bingham, 2016; Horn & Staker, 2015; Thibaut et al., 2015). In varied research, K–12 teachers taught and learned in blended ways, evidenced in the recording of their experiences, perceptions, understandings, and attitudes. Kuo et al. (2014) found that no one blended model is best, but believed that success in any model would depend on student personality, overall accessibility, and the length and location of the learning. Earlier, Kitchenham (2005) found similar results and believed that the 21st-century skill of collaboration influences learning success; however, unlike Kuo et al. (2014), Kitchenham (2005) hoped that further researche would uncover the perfect blend.

Thibaut et al. (2015) researched the blended-learning, physical environment and recorded student success when the environment and lessons were personalized and in response to a need. Thibaut et al. found that students were successful when they were responsive to collaborative relationships. Mathews (2017) researched blended-learning successes and best practices. Finding

comparable results to Thibaut et al. (2015), Mathews (2017) included recommendations to provide for stakeholder flexibility that would directly affect the level of student-centered teaching and learning.

Gerbic (2011) studied the literature of blended learning at the university level, a first potential site of a blended teaching and learning opportunity for students in higher education included student teachers. Beliefs about blended learning acted as barriers, affecting the projected success of the modern pedagogy and the infusion of recent technologies, influencing student teacher perceptions of blended learning (Gerbic, 2011). Beliefs about blended learning were also byproducts of a successful strategic approach, and transformational experiences by the same preservice teachers (VanDerLinden, 2014). Similar to Gerbic (2011), Thies (2017) studied barriers that teachers perceived as they began their blended-learning journey in their elementary, middle, or high schools. The change from traditional teaching to teaching in a blended way exposed (a) the challenge of managing increased student control; (b) the doubt or lack of colleague support and understanding; (c) the dearth of knowledgeable, collaborative partners; and (d) the depleted time or resources (Thies, 2017). Despite these barriers, all of the participants in Thies' (2017) study "would never go back to the traditional method of teaching" (p. 209), proving that the benefits of blended learning outweighed the barriers for the study participants.

Recently, literature guides have emerged as framework tools with the hope of removing barriers for blended, student-centered, and personalized learning development (Horn & Staker, 2015; Smith, 2017; Wolf et al., 2017). These guides serve as instructional tools for educational leaders or early-adopters and implementers of blended learning, influencing perceptions of blended-learning, strategic approaches and organizational development (e.g., digital convergence; Horn & Staker, 2015; Smith, 2017; VanDerLinden, 2014; Wolf et al., 2017). Many

school districts have employed nonprofit organizations and for-profit businesses to assist in the navigation towards student-centered blended learning, which complements the frameworks in the literature.

In the literature, levels of interaction through blended learning affect overall educational satisfaction and outcomes with the potential of change, depending on comfort. For students who are more introverted, the blended-learning environment can increase anxiety and affect their temperament during the experience (Kuo et al., 2014). Blended learning can personalize education for students who require nontraditional learning environments and deeper student–teacher relationships, or student–student and student–teacher collaboration (Kuo et al., 2014). All the decisions (e.g., which blended-learning model to use, how the curriculum evolves, what determines the level of student control, and where the physical space should be in which students learn) are administrator and teacher decisions (Boone, 2015; Horn et al., 2015; Kitchenham, 2005). Their decisions are determined by available resources and an overall understanding, including their knowledge, skills, or abilities, and perceptions (Bingham, 2016; Guest Editorial, 2005; Ertmer, Ottenbreit-Leftwich, Sadik, Sendurur, & Sendurur, 2012; Smith, 2016).

Reactive support. The authors in the literature explained that educational leaders' and teachers' understanding, attitudes, and perceptions of blended learning shape the experience and determine the outcomes (Ertmer et al., 2012; Smith, 2017; Wolf et al., 2017). Although some authors in the literature provided favorable findings for stakeholders seeking positive transformation with blended learning, Bingham (2016) found negative results. Bingham described the experience of blended learning and the intensity of technology in K–12 schools as unbalanced, and a situation in which teachers feel as though they are "drowning" in new and unwelcomed work (Bingham, 2016). Bingham (2016) discovered that most teachers in the case

study accepted student management of technology as the initial distractor while teaching and learning through the innovation of merged modern pedagogy and technologies. Teachers favor the traditional model of learning in times of stress, but it is a model with less student control (Bingham, 2016). Therefore, transformational change from traditional education to what Lemke (2004) and Trilling and Fadel (2009) called the "twenty-first century learning requirements" does not occur (as cited in Kumpulainen et al., 2014, p. 53). Students fail to receive instruction with higher-order thinking, increased communication, collaboration, and problem solving, which are all job and college-ready skills that are needed for success (Boone, 2015; Smith, 2017).

In Bingham's (2016) case study, teachers reacted with frustration when faced with a perceived lack of support or other challenges, believing that blended learning would increase their workload and overall responsibility. Thus, the teachers returned to approaches that reflected their own learning experiences, or the known and comfortable traditional model (Bingham, 2016). After returning their students to traditional learning, Bingham (2016) found a decrease in teacher stress and student technology use. It is unknown why, before research was conducted, the teachers believed that blended learning would increase their workload; however, Bingham did find that teachers anticipated fluctuating roles and responsibilities when comparing job requirements in a traditional or blended environment. That finding informs the question regarding teacher perceptions of leadership aspects that encourage them to leverage blended learning in elementary schools.

Basham et al. (2016) supported blended learning by detailing the benefits of a UDL scan tool. The scan tool evaluates programs that mainly serve children who have special needs, ELLs, or students struggling to obtain equity or accessibility in education or services because of their location or school funding (Basham et al., 2016). According to Basham et al. (2016), the UDL

scan tool was used “to measure alignment on more than 1,000 pieces of content” (p. 153). Greer et al. (2014) supported administrators and teachers by listing and evaluating different interventions and resources to increase student success. This support could be used proactively for proper planning or reactively to change understandings and supports, which would open doors to additional blended resources for students to access in diverse ways of learning (Greer et al., 2014). Ertmer et al. (2012) studied award-winning teachers in K–12 schools, finding barriers such as technology and support, the “gatekeepers” (p. 433) to creating student-centered learning with technology in the 21st century.

Horn and Staker (2015) provided a comprehensive guidebook to building the capacity of administrators and teachers. Made with quick response codes, Horn and Staker organized the text to increase the understandings of blended learning in the reader and to shape attitudes and enthusiasm through video, access to websites, and short case studies. Administrator and teacher understanding of blended learning require an unbiased approach to research to avoid misconceptions in the effort to build school culture (Horn & Staker, 2015). The attitudes of staff when designing and implementing blended learning must be goal centered, which leads to what Schein (as cited in Horn & Staker, 2015) described as a step towards influencing “organizational culture” (p. 250), or when the purpose meets unrealized autonomy.

Wolf et al. (2017) merged modern technologies and personalized learning in a case study field guide that highlighted the challenges and the decision-making, processes-turned-transformational-results of resilient leaders. Wolf et al. (2017) included in the chapter, “Try it Tomorrow” suggestions for success and questions to ponder. Similar to Horn and Staker (2015) and Wolf et al. (2017), Smith (2017) removed barriers, creating a digital convergence framework. This framework contained seven stages and 110 actions for transformational success

integrating student-focused learning and digital technologies in the 21st-century learning environment (Smith, 2017). If permitted into the developing Modern Teacher National Network, district leadership could also access facilitative tools and stakeholder teaching of the digital convergence framework that Smith (2017) described (Tech and Learning, n.d.).

Administrators as instructional leaders adopt behaviors that influence the instructional practice of teachers (Quinn, 2002). According to Knight (2011), within the interrelated areas of reflection, action, and real-life, praxis occurs when "teachers should apply their learning to their real-life practice as they are learning" (p. 42). In K–12 studies of blended learning, Bodden-White (2015) and Mathews (2017) found that teachers feel supported by their administrators when they receive professional development and feedback or collaborative production time. Thies (2017) recommended that administrators arrange professional development that addresses "culturally relevant pedagogy" (p. 216).

The Interconnected Learner

Horn and Staker (2015) and Boone (2015) connect the merge of modern pedagogy and new technologies to student learning as the "tipping point" in education. Student-centered learning responds to the uniqueness of each learner and it is built through effective instruction that is competency-based, differentiated, individualized, and personalized (Horn & Staker, 2015). Blended learning is one way students can access student-centered education. The connected learner can access instruction autonomously on his or her time, in his or her space and with designed interest or according to his or her personalized capabilities (Kumpulainen et al., 2014). Blended learning responds to individual and customized student need, recognizes learning opportunities as differentiated, individualized, or personalized, and helps students to become autonomous in learning (Akgunduz & Akinoglu, 2016; Basham et al., 2016; Hong et al., 2013).

Student-centered learning. Student-centered learning includes competency-based instruction, and ensures student ability and application of a learned concept before new instruction is received, which avoids gaps in knowledge (Horn & Staker, 2015). Blended-learning models encourage competency-based education and addresses the complexities in learning of each student through individual or personalized opportunities, some of which have been tested for learner variability with the UDL scan tool (Basham et al., 2016; Horn & Staker, 2015). Through blended-learning, 21st-century learners are given autonomy and they receive instruction with control (a hallmark of blended learning), increased engagement and self-directed learning, and learner agency (Akgunduz & Akinoglu, 2016; Horn & Staker, 2015; Wolf et al., 2017). No longer is teacher-centered instruction the only approach; when students own learning, teachers become agents of learning and teaching as they facilitate (Smith, 2017; Wolf et al., 2017). As Wolf et al. (2017) stated, student-centered learning "ensure[s] that students can succeed" (p. 27).

Impact across the curriculum. The authors in the literature described the K–12 interconnected learner through blended learning with a focus on its benefits and challenges. They included data about cross-curricula student interest, attitude, self-direction, performance, and learning effectiveness. K–12 students as participants are diverse, and some of them require specialized instruction, and attend public, private, and charter schools. Similar to administrators' and teachers' understanding and perceptions, student understanding and perception of blended learning also affects the evaluative experience (Agosto, Copeland, & Zach, 2013; Akgunduz & Akinoglu, 2016; Bingham, 2016; Kuo et al., 2014).

Game-based blended learning was used to research fifth- and sixth-grade, student moral reasoning (Hong et al., 2016). Hong et al. (2016) studied students who were faced with situations

that required right from wrong decision making. Although interest in the game waned with continued play, overall student hypothetical–deductive thinking increased (Hong et al., 2016). The game helped students to strengthen their moral compass, reflect on the impact of error, and revisit the scenario to readjust morally (Hong et al., 2016). Similar to Hong et al. (2016), Akgunduz and Akinoglu (2016) found that student interest increased with blended learning. They researched seventh-grade students using blended learning and social media to learn science content with autonomy (Akgunduz & Akinoglu, 2016). Akgunduz and Akinoglu (2016) found that the overall attitude and interest in science and learning increased with blended learning, with no significant changes observed in social media. Blended learning increased the self-directedness of seventh-grade learning; however, unlike Hong et al. (2016), Akgunduz and Akinoglu (2016) did not find a rise in targeted ability or knowledge. In both cases, blended learning through games and social media augmented interest (Akgunduz & Akinoglu, 2016; Hong et al., 2016).

Similar to Hong et al. (2016) and to Akgunduz and Akinoglu (2016), Brown (2013) transformed learning for the 21st-century learner. Brown brought blended learning to a second-grade classroom, using technology to change a unit on graphic novels during the literacy block. Students read and investigated graphic novels on paper, but then designed and wrote their graphic novel using Microsoft Photo Story (Brown, 2013). The students also documented their progress in writing on a classroom blog, connecting the lesson, process, and a shared reflection (Brown, 2013). Brown (2013) recognized that the blended experience increased the collaborative nature in the classroom, where communication freely flowed, and students *scaffolded* instruction for each other, for they were autonomous and in control. Student understanding and interest in learning improved, as did student productivity and learning of graphic novels, and this experience increased the complexity of student-centered learning (Brown, 2013).

Schechter et al. (2015) researched first and second-grade students who received literacy instruction through blended learning. Through support from the vendor, the online component provided dynamic in-person instruction, and the performance of the students who learned in a blended way outscored the students who learned in a traditional way (Schechter et al., 2015). The significance of this study was that the participants were students who attended an urban school, were mostly Hispanics and ELLs, received free and reduced-price lunches, and exemplified academic growth (Schechter et al., 2015). Beyond the data that Schechter et al. (2015) collected that validated the success of the vendor-provided program, teachers documented that the blended experience did not affect their sense of time. In other words, the vendor program used in the research was prepackaged; therefore, teachers sent their students to a device for individualized learning (Schechter et al., 2015). The teachers' responsibility was to provide dynamic, face-to-face instruction, a traditional side of education if one views the individual parts of the blended experience (Schechter et al., 2015).

These specific examples of literature demonstrate the significance of the understanding and perception of blended learning for all parties—administrators, teachers, and students. The social and emotional sides of learning (e.g., collaboration and communication) continue to occur with blended learning and are amplified in various situations (e.g., infusing social media and class blogs; Akgunduz & Akinoglu, 2016; Agosto et al., 2013; Kuo et al., 2014). Hong et al. (2016), who investigated morality (i.e., the ability to make right or wrong decisions), and Hong et al. (2013), who used game learning with Kindergarteners to evaluate the emotional intelligence of participants, both demonstrated the diversity in curricula and the individualized nature of learning. Agosto et al. (2013) and Kumpulainen et al. (2014), who studied blended learning and the benefits to the 21st-century students, highlight the increased collaboration,

communication, student control and self-direction, and the extension of learning and teaching opportunities.

Guiding models. In their guide, Horn and Staker (2015) assisted administrators and teachers with the transformation toward using blended learning in education. They gave detailed instructions and suggestions for blended-learning implementation. Horn and Staker highlighted site success through case studies and provided a personalized, blended opportunity to build capacity in the understanding of blended learning through quick response codes and increasing reader or student control while affecting attitude. They confirm the need for an active organization and a transformational leader to change education at the district level (Horn & Staker, 2015). Other authors in the literature highlight specific school-based leaders, whole school districts, or individual teachers who have transformed learning through modern pedagogy and digital technologies (Guest Editorial, 2005; Boone, 2015; Richardson, 2010; Smith, 2016; Smith, 2017; Wolf et al. 2017). The objectives and suggestions of these authors for urgently leading through change, introducing blended learning, and designing framework guidelines to remove barriers align.

Throughout the literature, recurrent words and phrases are used to describe blended learning. Blended-learning models increase student control. This control affects communication, collaboration, interest, and motivation, and develops learner agency (Akgunduz & Akinoglu, 2016; Brown, 2013; Greer et al., 2014; Horn & Staker, 2015; Kumpulainen et al., 2014; Smith, 2016; Wolf et al., 2017). Pictures show students at the K–6 level wholly engaged in collaborative learning, in nontraditional learning spaces with nontraditional learning tools (Guest Editorial, 2005; Brown, 2013; Smith, 2016). Districts share the online tools they use for blended learning;

some are designed by vendors, some are basic tools for academic development, and some deliver the interaction (Horn & Staker, 2015; Smith, 2016; Guest Editorial, 2005; Wolf et al., 2017).

LaBanca et al. conducted research on blended learning, responding to the lack of blended-learning research in K–12 schools. LaBanca et al. (2015) recognized the growing popularity of blended learning in education, historically at the higher education level with a recent interest in K–12 schools. Citing other research, they implied that blended learning in higher education has been found useful and they questioned whether it would be as useful in K–12 schools (LaBanca et al., 2015). Studying students in an urban high school, LaBanca et al. (2015), sought to examine the social–emotional side of blended learning. LaBanca et al. wanted to learn the understanding and perceptions of blended learning, but to learn it by examining "the affective and cognitive impact of blended instruction on students in grades 9–12" (p. 3). In all, LaBanca et al. discovered what Schechter et al. (2015) had found—that student achievement increases with blended learning, which includes student-centered instruction and student control. Diverse student populations demonstrated the most dramatic growth, and many students were more positive about their learning experience (LaBanca et al., 2015).

Horn et al. (2015) sought to find common barriers and logical solutions to blended learning in school districts. Thus, Horn et al. invited superintendents from California who led their school districts through blended-learning implementation to share and discuss reflective lessons by answering two direct questions. Their answers served as the guiding models of reflection for solutions (Horn et al., 2015). Horn et al. (2015) first asked, "What are the barriers, real or perceived, to implementing blended learning in your district?" (p. 18). As Horn et al. uncovered, the understanding and perceptions towards blended learning in K–12 schools identified some of the barriers.

In the discussion, the superintendents found that the barriers emerged when responding to the newness of the process (i.e., credentials, funding, and vetting; Horn et al., 2015). To push past these barriers, the superintendents collaboratively communicated how they solved their problems, thus they answered the second question that Horn et al. (2015) had asked: "Have you found solutions to or ways around these barriers?" (p. 18). This question led to discussion, allowing the superintendents to learn from each other, all for continuous improvement. Horn et al. (2015) also collectively shared tips for blended-learning implementation, more than half of which had "understanding" (p. 22) as an undertone and one third was related to "attitude" (p. 22). The authors of the guiding models, the book, the research, and the other literature defended the efforts, the barriers, and the struggles to transform traditional learning into student-centered learning. Not one of the authors suggested that the transformation was natural; instead, they provided lessons learned to lift the perception and understanding of the reader (Horn et al., 2015).

Broadly focused on student-centered learning and digital technologies, frameworks guide educational leaders through the complexities of change, as they shift their districts and schools to a 21st-century teaching and learning environment. Wolf et al. (2017) and Smith (2017) described the urgency of why and how district and school leaders must and can make this shift, while they called attention to the impact of school leaders. Leadership—from the very top of the traditional educational institutional hierarchy to the most local level—is paramount to the success of change and student academic growth (Smith, 2017; Wolf et al., 2017). These leaders focused models as frameworks to highlight the importance of balancing stakeholder perception, for the classroom teacher, decision-making process is the end-state determiner of change goals at the lowest institutional hierarchical level (Smith, 2017; Wolf et al., 2017).

Trust and Transformation

Wolf et al. (2017) described a culture of the acceptance of failure, strengthened trust, and amplified communication. The culture of a school, as Wolf et al. (2017) illustrated it, is "grounded in the roots of the school" (p. 70). According to Wolf et al. (2017), although school climate changes, it is the culture that will determine "the success of a transition to personalized and digital learning" (p. 70). Agostini (2013) studied the role of leadership in blended-learning schools, finding a "strong school culture as a key component of developing a successful blended learning school" (p. 82). Smith (2017) argued similarly and used reflective inquiry to lead those in leadership positions from a single-loop to double-loop solutions. Altered by trust is the resistance to change (Smith, 2017). That trust, which is developed over time when leaders lead with the "why," helps stakeholders understand the intricacies of change as they envision the "what, where, and when" of change (Smith, 2017).

Quinn (2002) advised principals (as instructional leaders) through a change to build relationships by shaping the environment and by including "trust and patience" (p. 462). In a culture of trust, risk taking is encouraged and celebrated, and continuous learning and praxis include collaborative development and a partnership approach (Knight, 2011; Quinn, 2002). This partnership approach, including the essential components—equality, choice, voice, reflection, dialogue, praxis, and reciprocity—as Knight (2011) defined them, elicit a greater stakeholder engagement than that of the expert approach. Leadership is integral to the successful shift towards 21st-century education, and this change is paramount to decreasing the return from student-centered to teacher-centered teaching when teachers lack understanding or perceive that blended-learning support is not structured to meet their needs (Bingham, 2016; Smith, 2017; Wolf et al., 2017).

Rather than an adoptable program or an idea to implement in isolation, Horn and Staker (2015) described blended learning as integrated learning online and in school. It is a movement where modern pedagogy and digital technologies respond to the organizational wants of administrators, the instructional desires of teachers, and the learning requirements of students, but they accomplish it through a "problem to solve or [the] goal to achieve" (Horn & Staker, 2015, p. 98). Policymakers should design acceptable frameworks for espoused interest that create a seamless organizational culture (Boone, 2015). A transparent organizational culture, in turn, permits autonomy and blended learning becomes an interdependent enterprise, institutional goal (Boone, 2015; Horn & Staker, 2015; Richardson, 2010). This transformation affects student-centered education because traditional school calendars can become year-round, including specific tracks that permit intensive intervention, equitable access to additional coursework, or the potential to graduate early (Mathews, 2017).

Conceptual Framework

Blended learning is a mixture of teacher directed and student choice learning opportunities. Students access online tools and collaborate or communicate to meet the learning objectives and academic goals with some control of location, time, path, or pace (Horn & Staker, 2015). Designing research of blended learning from the sociocultural cognition theory gives a focus on the mind. According to the reflective interviews of K–6 teachers, adding CHAT and path–goal theory to the theoretical framework of studying leadership aspects that encourage teachers to leverage blended learning in public elementary schools provides the opportunity for constructing purposeful recommendations to school leadership (Marion & Gonzales, 2014). Whether one studies teacher perceptions or administrative supports, continued learning provides the "what is" of cognitivism.

According to Wolf et al. (2017), although the goals of the organization might differ, "leadership is considered second only to classroom instruction as an influence on student learning" (p. 6). Blended learning redefines the role of the teacher, and how teachers perceive it influences the success of student learning (Wolf et al., 2017). The perception of administrative support through the shift from a traditional or teacher-directed model to a blended model or teacher directed-student choice model influences student learning. The process of shifting teaching and learning in the elementary school requires leadership from the school administrator that is complementary to teacher–follower needs and desires, for that leadership shapes the perceptions of teachers as they endure the process of change, which affects student learning.

The weaknesses of the independent theories (i.e., the CHAT and path–goal theories) are minimized as they overlap with the strengths of the other theory. For example, one criticism of path–goal theory is the complexity of leadership demands and the ability to follow the model. Combining path–goal theory with sociocultural cognition or CHAT mitigates the concern through outcome-focused, proactive planning (Foot, 2014). Together, the theories lean toward actual achievement of goals, the motivation behind that achievement, and the social collaboration or communication needed for successful practice.

Conclusion

Schools around the globe are responding to innovation and blending instruction using different models and resources as vanguard teams (Guest Editorial, 2005; Smith, 2016; Horn & Staker, 2015). Through the literature, the major themes of blended-learning, 21st-century education, student-centered learning, and transforming instructional leadership, continued to rise in the search for the primary objective of studying encouraging leadership aspects that leverage blended learning in elementary schools. Within these three major themes, Mathews (2017) and

Thies (2017), who both conducted research on K–12 blended learning, found that professional development and adequate time were teachers' two key desires when experiencing the transformational shift.

Twenty-first-century education includes critical skills that encourage students to problem solve, work collaboratively, communicate with a more profound purpose, and use metacognition skills with intensity (Kumpulainen et al., 2014). This theme and the intricacies of blended learning enhance student participation in several ways (Horn & Staker, 2015). Students learn through blended learning with self-direction and enhanced student choice, strengthening their learner agency (Horn & Staker, 2015; Wolf et al., 2017). They communicate with peers through blogs, chats, or online classrooms (Agosto et al., 2013). Akgunduz and Akinoglu (2016) showed that (a) 21st-century students enjoy learning through blended learning, (b) their communication efforts increase, and (c) they are more self-directed in their learning. Teachers, who are coaching the process, affect student success (Kitchenham, 2005). According to Agostini (2013), if teachers perceive administrators to be supportive of blended learning, creating a "strong school culture" (p. 82), those perceptions influence teachers to use instructional technologies in a blended way (see also Bodden-White, 2015). If teachers understand the nuances of blended learning and harness the skills required to succeed as a 21st-century learner, their perceptions towards blended learning are more favorable, directly affecting the learning outcomes of their students (Kuo et al., 2014; Thibaut et al., 2015). When the curriculum is merely digitalized, academic rigor declines. This decline increases the importance of digital convergence with dynamic leadership through the shift as the leaders listen to and respond to the teacher and student needs (Smith, 2017).

Student-centered learning is another theme found in the study of the literature of blended learning. Moving from a traditional "one-size-fits-all" model to an individualized (i.e.,

personalized) model with digital convergence encourages administrators and teachers to develop dynamic instruction that merges theory and pedagogy (Horn & Staker, 2015; Smith, 2017). Sources and support to assist leaders and teachers with blended-learning deployment in the district and classroom include frameworks, vendor-based materials, programs, and sole source items. (Basham et al., 2016; Horn & Staker, 2015; Greer et al., 2014; Schechter et al., 2015; Smith, 2016). All of these sources help to build a product for blended-learning instruction or interaction. In research, teachers fell back to a more traditional model when they were stressed, not feeling supported, or lacked time or materials (Bingham, 2016). These teacher reactions, misunderstandings of blended learning, or other-than-favorable perceptions towards blended learning negatively affect student learning and exposure to 21st-century learning opportunities (Bingham, 2016; Smith, 2017). From research, Thies (2017) believed that "there is some merit to allowing blended learning to grow organically among teachers in the school building" (p. 218), while administrators support teachers by incorporating professional development and opportunities for teacher collaboration and policy interpretation according to the teachers' needs.

The last theme found in the literature exposed the need for transforming leadership throughout the process of development, implementation, and follow through (Horn & Staker, 2015). An undertone throughout the literature was the frustration of the lack of technology, funding, resources, or knowledge to transfer traditional pedagogy to innovative modern pedagogy and digital technologies. Many teachers relied on content solutions (e.g., teaching traditionally) versus continuing the struggle of blended learning in the classroom (Bingham, 2016). Suggestions in the literature guide the district leader, administrator, or teacher through the process of organizing for change, defining a budget, and learning to teach in a blended way (Boone, 2015; Horn et al., 2015; Horn & Staker, 2015). The guiding models or frameworks give

evidence to the possibility of success, with leading questions, tips, material lists, and visuals (Boone, 2015; Horn et al., 2015; Horn & Staker, 2015; Smith, 2016; Smith, 2017, Wolf et al., 2017).

Leadership affects the success of student-centered blended learning in schools (Boone, 2015; Smith, 2017). If a leader (a) transforms processes and is transformational through the chaos of change, (b) educates for understanding, (c) supports in diverse ways, (d) celebrates success, and (e) is an understanding listener, positive perceptions of blended learning develop (Boone, 2015). Teachers believe leaders are the most significant inspiration for blended learning, and those perceptions are vital indicators if teachers will use innovative technologies and teach in a blended way (Bodden-White, 2015). As the administrator supports teachers to build capacity, teachers begin to affect students through blended learning by increasing student control and teaching in dynamic ways (Boone, 2015; Horn & Staker, 2015; Wolf et al., 2017). Thus, education becomes student-centered, increasing student engagement, drive, interest, motivation, skill, and learner agency (Boone, 2015; Horn & Staker, 2015; Wolf et al., 2017).

Although comprehensive, the literature about blended learning in K–12 schools is incomplete, and few studies have been conducted in public, K–6 schools. Researchers must continue to study stakeholder understanding and perceptions of blended learning in K–12 schools, separating elementary, middle and high schools in the study. Modern pedagogy and digital technologies vary within the three age groups of students in the diverse types of schools, as does the level of student choice according to the student's developmental ability, academic topic or area of study, and learning through technical knowledge, skill, and ability. These differences include limited access because of the Children's Online Privacy Protection Rule (2013) and divergent developmental capabilities as diverse learners. Blended learning is

changing with continuous innovation, and time has not elapsed to gain a deep understanding of the long-term effects of 21st-century education (Bingham, 2016). The lack of comprehensive exploration of the leadership aspects that encourage teachers to leverage blended learning in elementary schools is troubling as decisionmakers continue to affect the end state or student learning in the classroom.

CHAPTER 3

METHODOLOGY

This qualitative case study, intrinsically bound by a scope of leadership in the public, elementary school, blended-learning environment, is described as a "teaching [device]" (Creswell & Poth, 2018; Merriam, 2009, p. 45). The central phenomenon and research question, "What leadership aspects encourage teachers to leverage blended learning in elementary schools?" was influenced by case study research found in the literature. The research design was framed by the problem of practice, research questions, and purpose statement. The theoretical framework addressing cognitivism includes sociocultural cognition and contingency theory. This social framework identifies similar artifact collection methods such as the interview to create "mental constructions of reality [that] are based on people's experiences and views" (Wang et al., 2011, p. 300).

Setting

The researcher sought public elementary school teacher perceptions in a blended-learning environment, purposefully exposing a setting not widely researched. This study adds to the need for knowledge regarding how school leaders' decision making transforms the blended-learning environment in a variety of public elementary schools. Therefore, the two public elementary schools that were selected differ in size and student demographics. The findings will add to the minimal inquiry about blended learning and the leadership of teachers and positional leaders in public elementary schools with active blended-learning models.

"Town Public Schools (TPS)" (a pseudonym) is a large, public school division in the eastern United States. About 30% of the students register as low-income students, and just more

than half of the students register as other than White in the school membership demographics. This study of leadership aspects that encourage teachers to leverage blended learning in an elementary school occurred in two public elementary schools in the same school division. The public elementary schools are diverse settings with a similar focus.

TPS was selected as the setting for research because of a combination of factors. TPS' Apple Lane Elementary School (pseudonym) and Eagle Ridge Elementary School (pseudonym) participate in a district-aligned and district-supported, one-device-per-student (or 1:1 device) initiative. The school program gives promise regarding student access to engaging and motivating learning opportunities. The planning, technology, and district-level support varies between the schools, but the research focus was identical: blended learning in the public elementary school.

Blended learning in public elementary schools engages students with modern pedagogy and innovative technologies. Similar to the differences in technology and district supports in the two schools, the student populations also differ. Therefore, interviewing teachers via a qualitative, multi-site, case study allowed the researcher to gain perspectives of the school leaders in different yet similar environments. Case study interview findings broaden the understanding of which leadership aspects encourage teachers to leverage blended learning in diverse public elementary schools.

Although the researcher is an educator and technology specialist, reflexivity was in place to limit the probable challenges of what Coghlan and Brannick (2014) called *preunderstanding*. Precautions to minimize subjectivity and bias included the transparency of the site and volunteer participant relationship to the researcher, of which there was none. The division had a refined application process to control the research impact on the school division. These processes

included sponsorship and accountability to the researcher, encouraging trust. The perceptions that the participants declared were analyzed, not interpreted, which eliminated the risk of the halo effect.

Participants

Apple Lane and Eagle Ridge are K–6 public elementary schools that have a range of 600–800 students. Apple Lane student membership demographics show a diverse student population with a majority that is Asian or White, and a minority that is Black, Hispanic or Latino, and Other. The student population at Eagle Ridge differs from that of Apple Lane, with almost half of the students being Hispanic or Latino, one quarter being Asian, and the remaining percentage being White, Black, and Other, respectively. Apple Lane is not a Title I school, but Eagle Ridge qualifies for Title I funding because well over one-half of the students qualifying for free or reduced-price meals. TPS technology participation, the student-to-computer ratio at both public elementary schools, is 1:1. Relating to the TPS technology supports and structures in place for implementation and a continued impact from the accessibility of the 1:1 transformation, the leadership actions at Apple Lane and Eagle Ridge Elementary Schools that leverage blended learning were evident in the findings from the research interview process. These findings reflected participant perceptions of the influence of leadership on TPS technology supports and structures.

Licensed K–6 teachers with at least 2 years of retention at either of the two elementary schools were invited to participate in the reflective interview process (see Appendix A for "Email to Potential Participants"). The total number of participants in the study was eight randomly selected teachers, four from each elementary school. The participants were general education teachers who taught in Grades 1, 2, 4, 5, and 6, and who had a range of 4–24 years of

experience. The goals of the researcher were to understand how research participants perceive the impact of their principal leaders. Participants identified leadership aspects, characteristics, and traits of decisionmakers that encouraged them to leverage blended learning in their public elementary school.

The research design of the case study as a teaching device allowed the participants' perceptions to be used as guiding factors for future leader reflections and actions. Used to remove barriers, leaders can apply the case study to guide or scaffold teacher learning and interaction intentionally, to support the development of practical classroom instruction, or to design the policy of blended learning at the elementary level. Providing the findings of this researcher's study this study's recommendations will be one of the outcomes, and may elicit teachers' engagement and their participation in future research.

Data

Findings from case studies become teaching devices for decision makers, inviting topic dialogue. Varied data, including interviews, observations, artifacts, and documents, are collected for case studies (Creswell & Poth, 2018; Merriam, 2009). To best explore the leader's impact of blended learning on teacher stakeholders in the public elementary school, this instrumental case study was bounded by leadership parameters that were identified (Creswell & Poth, 2018). The subject of curiosity includes the perceptions of teachers as they reflect upon the helpful and supportive words and actions of their leaders, and on the identification of their membership in the "guiding coalition" (Kotter, 2012, p. 54).

The central phenomenon and research question, "What leadership aspects encourage teachers to leverage blended learning in elementary schools?" was pursued to understand the power of leadership and teacher perceptions as change occurs in the public elementary school

while integrating blended learning. The subquestions allowed the researcher to gain information about specific supportive measures that the leaders made available, and that the teachers perceived to be helpful throughout the change process and transformation to blended learning. These subquestions, were organically integrated into the interview discussion, as the researcher asked Subquestion 1, "In what ways, if any, are blended-learning leadership supports helpful?" and Subquestion 2, "How do helpful, blended-learning, supportive measures engage teachers to become integral stakeholders?" These three questions, steeped in cognitivism, were used to explore the leadership, supportive measures that the leaders use to remove barriers, and the way that followers became members of the "guiding coalition" (Kotter, 2012, p. 54).

Interviews

Brinkmann and Kvale (as cited in Creswell & Poth, 2018) described an interview as "knowledge [that] is constructed in the interaction between the interviewer and the interviewee" (p. 163). The goals for the interviews for the qualitative research included documentation of the participants' perceptions, as they interpreted their own unique experience, which led the researcher to understand their "point of view" (Creswell & Poth, 2018, p. 163). Despite the variety of potential types of qualitative research interviews, the one-on-one interview in person or by using video-streamed technology best fit the focus and goals of this research. The interview protocol included the three research questions, the answers to which were recorded on two digital recording devices. The one-on-one interview directly correlated with the research question as the researcher sought to discover the individual teacher perceptions regarding how the leadership aspects encouraged them to leverage blended learning in their elementary schools.

Informed consent from the participant interviewees included a research statement describing the research, the projected length of participation in the research, any risks to the

participants, and the measures that the researcher would take to ensure the privacy and confidentiality of their details to protect their rights as a research volunteer. The researcher secured these informed consent documents, along with the interview protocols and recordings. The researcher elicited participation through a TPS-supported invitation of teachers who had 2 years of retention at the public elementary school research sites. The location where the interviews would take place (on site or using audio technology), were decided in a collaborative effort by the mutual decision of the interviewer and interviewee. Using a digital recording device (and a similar backup device), the researcher completed the interviews and contracted for their transcription.

Document Review

Official documents (e.g., the prior and current year school plan, school technology plan, district technology plan, any prior and current professional learning, professional development, or PLN resources) that involved blended learning were requested for review. The information received extended the researcher's understanding of school leadership aspects that encouraged the teachers to leverage blended learning in the public elementary schools. Although extracting leadership characteristics and traits was not possible by merely reading the documents, the material that was received did validate or extend descriptions of the participants' perceptions, which were offered first as raw data. After analysis, these findings became guiding factors for future leader actions.

A request for data (i.e., the specific official documents listed) occurred after TPS approved the research. Document receipt and review was dependent on the TPS principals' disclosures at Apple Lane and Eagle Ridge Elementary Schools; however, the researcher was able to obtain some through open-source information during the same timeline. Prior to

beginning the study, the researcher anticipated that the "artifacts [would] provide contextual information and insights into material culture" (Bloomberg & Volpe, 2012, p. 252).

Analysis

The case study, which is comprised of feeling, behavior, and opinion interview questions asked of four participants per elementary school, is interrelated with cognitivism because, according to Tenenberg and Knobelsdorf (2014), those "mental representations and general reasoning processes" (p. 2) produce data (see also Merriam, 2009). School plans and plans for professional development or PLNs served as data documents that complemented the interview data for additional research discovery. Together, the interviews and documents that served as research data were collected, and the researcher has stored them securely.

The thematic patterns found in the data led to the research findings (Bloomberg & Volpe, 2012, p. 175). As Bloomberg and Volpe (2012) recommended, fluid qualitative data summary tables assisted the researcher to find the "emergent patterns" (p. 176) as categories and themes were generated after coding during the "first round of analysis" (p. 176) an inductive process (see also Merriam, 2009). Once the first coding was complete, focused coding occurred to organize further the interview data (Bloomberg & Volpe, 2012). As Bloomberg and Volpe (2012) suggested, "Discrepancies and negative instances in the patterns" (p. 176) were searched for to "determine how useful the findings are in illuminating the research questions being explored and how central they are to the story that is unfolding about the phenomenon under study" (p. 176). As the process continued, becoming increasingly deductive, nothing new presented itself in the quest to identify additional categories; therefore, as Merriam (2009) noted, a "sense of saturation" (p. 184) helped to finalize the naming of categories that were "congruent with the orientation of the study" (p. 184). A frequency distribution table visually represented the

findings, using descriptive statistics for the categories found from the deductive process of coding the interviews (Agresti & Finlay, 2014; Salkind, 2014).

Categories deductively found within the data analysis maintained a focus on the phenomenon of blended learning. The document data acted as additional indications to the leadership aspects that encourage blended learning in elementary schools, which were supplementary to the teacher perceptions as shared in the interviews. Data were combined and, loosely adopting the components of the cognitive ladder of inference with the rungs of data, reasoning, conclusions—or, as Coghlan and Brannick (2014) called it, "learning-in-action" (p. 32)—the findings controlled the risk of indistinctness.

Participant Rights

Merriam (2009) identified multiple considerations for the researcher with the expectation of a continuous ethical research practice. Consideration 1 is that the researcher "must consider the effects of the context on the data" (Merriam, 2009, p. 162). Considerations 1 and 2 require the researcher to consider "the effects of software functionalities on the data-gathering process, and the effects the medium trends to have on ethical practice" (Merriam, 2009, p. 162). With participants, not subjects in research, rights expand dramatically, as the term "participants" "serves as a litmus test concerning ethics" (Merriam, 2009, p. 162). To engage directly in the expectations of ethical principals in research, the researcher is course verified through the Collaborative Institutional Training Initiative (2018) program in human research and as a social and behavioral research investigator.

Adults, as the only research participants, helped to manage all of the potential risks of ethical issues involving children. The research participants were treated autonomously because their volunteerism was only to the degree they chose and they could end their participation upon

their request without consequence. Informed consent, including statements explaining the study, reasons for the study, the procedures, the length of potential participant engagement, the potential risks and benefits, and the security of research materials provided the participants with the basic elements of the informed consent process (see Appendix B for the Qualitative Informed Consent).

In research, confidentiality is agreed to within the informed consent process, and research participants are protected through safeguards (e.g., using pseudonyms and removing any extraneous, individually identifiable characteristics). Privacy is a participant protection regarding the participant's right to control his or her interview responses and personal feelings. Additionally, the participants have presumed privacy because the research occurred in a private setting that the participant selected. For increased participant confidentiality and the assurance of privacy, the interview data from all of the participants were combined and were represented as collective perceptions in K–6 schools with blended learning.

Although teachers as the interviewees were the participants in the research, TPS required two safeguards (a) pseudonym use and (b) the extraction of any extraneous, individually identifying characteristics of the division, school name, leader, and participant. Therefore, school administrators received informed consent because it was their leadership aspects that encouraged blended learning in public K–6 elementary schools, which was the focus of this research.

The researcher anticipated that potential unintended outcomes of participation in the study might occur with the lack of researcher control in the discussion of interview content among school division members, school site employees, or the participants themselves. The application for the research process at TPS might have exposed school sites before anticipated approval, resulting in the unveiling of the school leader to those with access to the application.

Therefore, the researcher requested that the research office of the school division protect the information provided on the application for research throughout dissertation publication and subsequent review of the study. In addition, school leaders and participants were requested within their informed consent form to treat research participation as confidential and to avoid sharing their participation with others.

Potential Limitations

A limitation of the case study was the narrowed view that covered only two public elementary schools and four participants per school. A benefit and limitation, that will be dependent on the subjective view of future readers, will be the intimate perceptions of the teachers as participants might cause broad interpretations.

In addition to these limitations, the researcher is employed as a technology specialist, after formerly serving as a general and special education pre-K–12 teacher. In the researcher's work as a teacher, innovation to enhance engagement and learning autonomy occurred in the classroom. Embedding station rotation into the blended classroom, the researcher could continuously teach small groups of students while they accessed online skills programs, used software and browsers for project-based learning, or engaged in student-designed activities. The school technology specialist verbally supported the researcher's actions as a grade-level teacher, but the decision was the result of a personal shift in learning how students learn best, and how the researcher could manage the many different students in the classroom while seeking to provide student-centered learning experiences.

This experience fueled the researcher's interest in researching blended learning, which could be a limitation because of potential bias. Selecting the elementary schools and leaders in this way was a step towards ethical, data decision making and research collection, decreasing

professional bias. Prior to this study, the researcher had no personal knowledge of nor had any existing relationships with the schools, school leaders, and school participants who eventually participated in the study. Selecting the elementary schools and leaders in this way was a step towards ethical, data decision making and research collection. Despite the limitations, the case study contributes to the minimal but emerging research of blended learning in the public elementary school, is a benefit to those exploring the topic, and adds to the literature on the topic.

Conclusion

The qualitative case study is intrinsically bound by a scope of leadership that involves data from interviews and other documents, and meets research goals to become a device for further learning. The data obtained from the participants of the two schools guided the analysis for which the researcher used descriptive statistics and frequency distribution tables (Agresti & Finlay, 2014; Salkind, 2014). Adopting the components of the cognitive ladder of inference, as Coghlan and Brannick's (2014) "learning-in-action" (p. 32), assisted the researcher to analyze the message in the interviews, begin to reason with the data and findings from the document review, and to form conclusions from findings.

CHAPTER 4

RESULTS

Innovation is dynamic with the potential to influence a shift in the traditional role of the teacher, while increasing learner agency. Blended learning is one response to increase student engagement, forcing the merge of modern pedagogy and innovative technologies for student-centered learning (Wolf et al., 2017). As decisionmakers, principal leaders are agents of this change, and leadership aspects might not "account for the goals, struggles, and day-to-day priorities of the professional educators charged with faithful implementation" (Arnett, Moesta, & Horn, 2018, p. 4). This liability in leadership might affect school *stakeholdership*, risking the leaders' ability to build a "strong guiding coalition," leading to other-than-desired, blended-learning implementation or sustainment (Kotter, 2012, p. 54).

The qualitative case study—intrinsically bound by a scope of leadership, and designed from the cognitive theoretical framework of sociocultural cognition or cultural historical activity theory (CHAT) and contingency theory—clutches the voice of the teacher. This voice (perceptions of leadership garnered from interviews) merges to invite principal leadership to plan proactively when introducing complex new topics such as blended learning. The central phenomenon and research question ("What leadership aspects encourage teachers to leverage blended learning in elementary schools?"), united with two research subquestions ("In what ways, if any, are blended-learning, leadership supports helpful?" and "How do helpful, blended-learning, supportive measures engage teachers to become integral stakeholders?"), engaged the teacher in reflecting beyond the leader throughout the transformational change process, which included self as an agent within the change process.

The school division approval, the volunteer participant informed consent process, the document retrieval, and the participant data confirmation took approximately 3 months. Between August and November 2018, eight volunteer teacher participants (four each from Apple Lane and Eagle Ridge Elementary Schools) were interviewed after TPS' approval. The principal leaders also provided the researcher with a school plan and professional development and PLN documents. The interviews and documents were uploaded or inserted into the ATLAS.ti coding software, allowing the solo coder to analyze the research, for "coding in most qualitative studies is a solitary act" (Saldaña, 2016, p. 36). Once the coding process concluded, the participants (volunteer teachers and principal leaders) confirmed the data. Figure 1 illustrates the 3-month TPS research application to the analysis process.

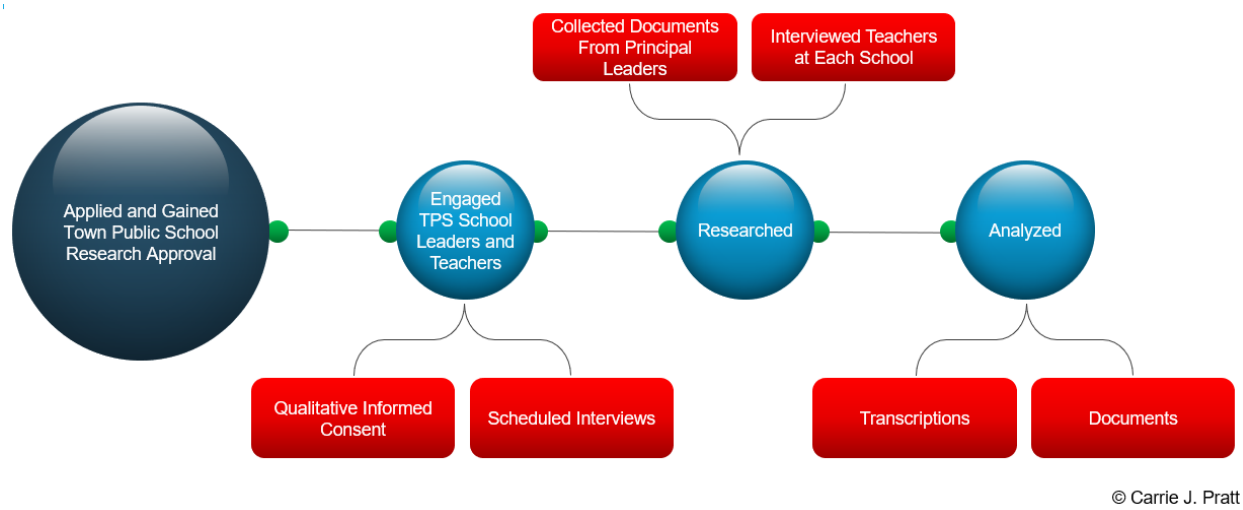

Figure 1. Research process to engage school sites and participants in the analysis process.

In this chapter, the researcher details the analysis process of the coding methods that were used within the ATLAS.ti coding software. Additionally, the minutiae of the development of the analysis show the progression of the research by which the researcher embraced the voice of the teacher. According to Saldaña (2016), this progression—coding, sorting, synthesizing, and

theorizing—"state[s] what and how and preferably why" (p. 278) leadership aspects encourage teachers to leverage blended learning in elementary schools.

Analysis Method

The interview process for each school spanned a specific period that the TPS' research authority determined. In the controlled allowance, licensed schoolteachers with at least 2 years of retention and blended-learning experience at Apple Lane and Eagle Ridge Elementary Schools voluntarily agreed to be interviewed (see Appendix C for the Qualitative Research Interview Protocol). Upon completion of each interview, the participant received the initial participant payment. The audio interview data file was sent electronically to Rev, a confidential service for digital transcription. After Rev's transcription, the researcher uploaded the file to ATLAS.ti, and the coding process of each interview promptly began.

Analysis: Coding

Interview topics and topics from the provided documents, two school plans, and five professional development and PLN documents, combined with In Vivo codes totaled the initial 148 codes. Strauss (1987, as cited in Saldaña, 2016) advised that new researchers should In Vivo code, (translated as "in that which is alive"; p. 105). According to Strauss (1987, as cited in Saldaña, 2016), In Vivo codes are directly extracted from the transcript as "word[s] or short phrase[s]" (p. 105) to bring the voice of the participant to the analysis process. Throughout the first coding cycle of the eight transcripts, In Vivo coding occurred in combination with descriptive coding. Descriptive coding allowed the topics to emerge. The topic identification mirrors topic popularity in social media, which is commonly defined by the hashtag symbol (Saldaña, 2016).

Coding summaries provided to each participant highlighted only codes from their interview or the documents that they provided. All eight teachers and the two principals concurred that the code summary was representative of their words or the documents that they provided. After the data confirmation from each participant, the researcher issued final payment.

Three memos (one for each research question) were established in ATLAS.ti and each research question and corresponding interview question was linked. This process encouraged further analysis that was related to the 10 interview questions that were aligned to the research question (RQ), Subquestion 1 (SQ1), and Subquestion 2 (SQ2). Of the 10 interview questions, two were labeled as RQ; four were labeled as SQ1 and the remaining four were labeled as SQ2. The codes were lumped, reducing the initial 148 codes to 128, and then were sorted, leaving 26 of the 128 codes aligned with RQ, 41 aligned with SQ1, and 81 aligned with SQ2. Figure 2 illustrates the research questions and the way that those questions were represented within the Qualitative Research Interview Protocol.

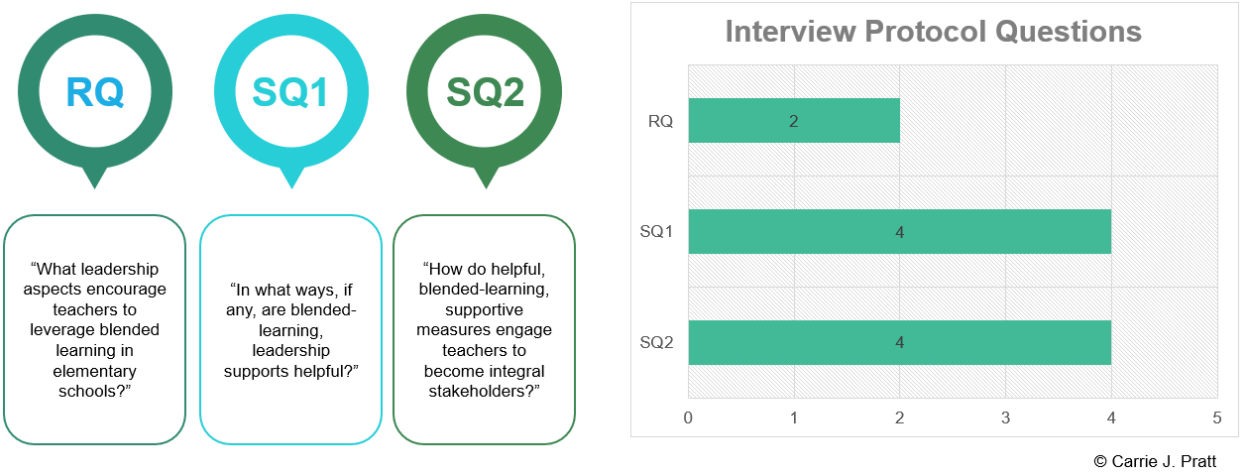

Figure 2. Infographic is specifying the question distribution of the research question (RQ), Subquestion 1 (SQ1), and Subquestion 2 (SQ2) within the 10-question Qualitative Research Interview Protocol.

“Learning-in-Action” and “Learn by Doing”

An extraction of interview quotations, the code list, memo code overviews, and the RQ, SQ1, and SQ2 overview codes from the individual interviews occurred to build qualitative data summary tables. Throughout the research analysis process, the researcher moved up and down the rungs of the cognitive ladder of inference (Coghlan & Brannick, 2014), while deploying Creswell’s (2013, as cited in Leedy & Ormrod, 2016) data analysis spiral. Coghlan and Brannick (2014) explained that the cognitive ladder of inference—which is used to “plot[s] how meanings and assumptions are attributed to selected observable data and experiences, and conclusions and beliefs are adopted on which actions are based” (p. 32)—leads to a conclusion.

Although they are cyclical versus linear, Creswell and Poth’s (2018) “analytic circles” (p. 185) lead to an outcome. Similarly, Coghlan and Brannick (2014, as cited in Creswell & Poth, 2018) described the cognitive ladder of inference as “learning-in-action” (p. 185) and Dey (1993, as cited in Creswell & Poth, 2018) described how qualitative researchers “learn by doing” (p. 185). Both learning-in-action and learning by doing complement the challenges that Dey’s (1995, as cited in Creswell & Poth, 2018) “three I’s—insight, intuition, and impression” (p. 185)—pose as the qualitative researcher analyzes data. Figure 3 illustrates the similarities of the cognitive ladder of inference and Creswell and Poth’s data analysis spiral.

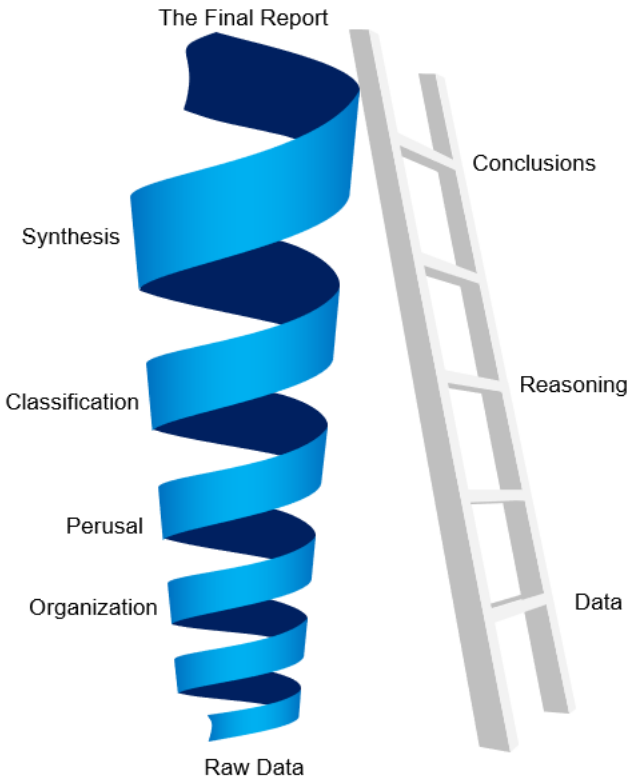

Figure 3. A comparison of (a) Creswell's data analysis spiral to (b) the cognitive ladder of inference. From (a) Practical research planning and design (11th ed.) by P. D. Leedy & J. E. Ormrod, 2016, Boston, MA: Pearson. Also from (b) Doing action research in your own organization (4th ed.), by D. Coghlan & T. Brannick, 2014, Thousand Oaks, CA: Sage.

A Trio of Leadership, Change and Challenges, and Teacher as Stakeholder

The iterative process of organizing data progressed as codes were sorted, synthesizing the data to form categories within the second cycle of coding. Organizing data, an arduous process, required the researcher to visually identify codes and categories while talking through the process for sense making as the codes were lumped and then pattern coded into 39 categories. Emerging themes found within the primary categories interrelated and those relationships were established, using the Atlas.ti network visualization feature.

Continuous analysis of the data from participant interviews and school documents transformed from 148 codes into 128 lumped codes, and then the 39 categories into just six

categories. The six categories were (a) leadership aspects, (b) leadership—action → tools, (c) leadership—action → support, (d) change—action → together, (e) teacher as stakeholder, and (f) challenges. According to Merriam (2009), this analysis process as "the construction of categories is highly inductive" (p. 183).

Saldaña (2016) wrote, "One of the most critical outcomes of qualitative data analysis is to interpret how the individual components of the study weave together" (p. 276). With accountability as the goal, the researcher separately analyzed the six categories. Figure 4 illustrates the analysis of the six categories as the researcher connected each category to the research methodology.

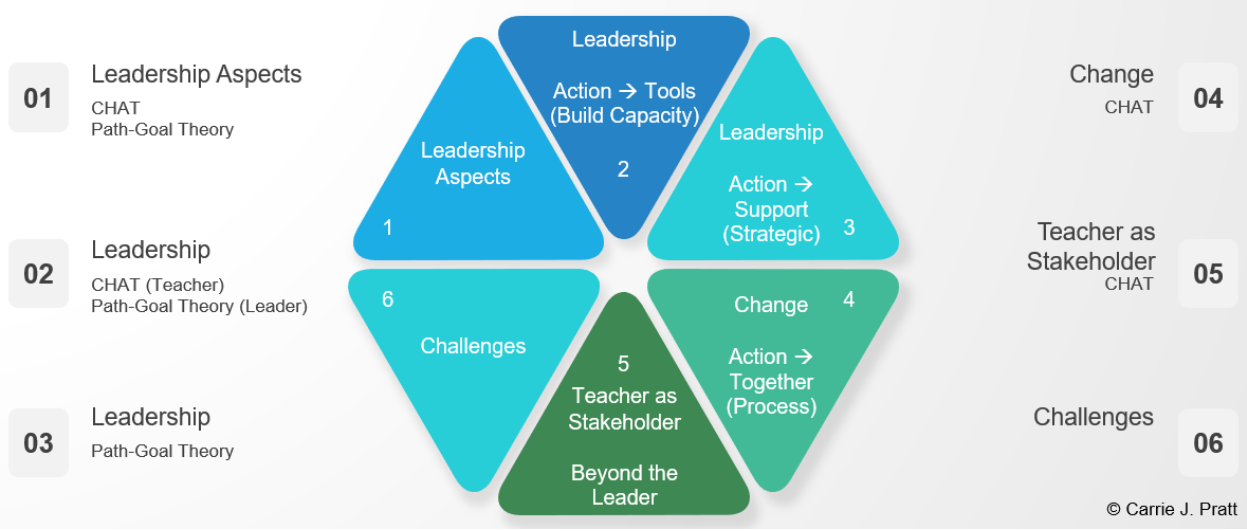

Figure 4. The six categories that were found from qualitative data research analysis of the research question (RQ), Subquestion 1 (SQ1), and Subquestion 2 (SQ2).

Leadership, Change, and the Stakeholder

After the analysis of the six categories, the researcher continued the analysis process, deploying the codeweaving technique (Saldaña, 2016, p. 276). Saldaña (2016) explained that codeweaving "may, at first, create a forced and seemingly artificial *assertation*, but use it as a heuristic to explore the possible and plausible interaction and interplay of your major codes"

(p. 276). Using the technique, the researcher found that the three leadership categories were interrelated.

The categories of leadership aspects and action, using tools to build capacity or leadership action with strategic support, became a research theme of leadership. Using the codeweaving technique, interplay was found between categories of challenges and change. The category of change, as action together within the process, posited effecting challenges throughout the change process, therefore becoming one theme: change.

Figure 5 illustrates the three broad themes—leadership, change, and stakeholder—reduced from six former categories, as illustrated in Figure 4. After further analysis and the code weaving process, the category teacher as stakeholder reduced to the theme of stakeholder, supported with the connection of the SQ2. Figure 5 illustrates the change from six categories to three themes with the inclusion of RQ, SQ1, and SQ2.

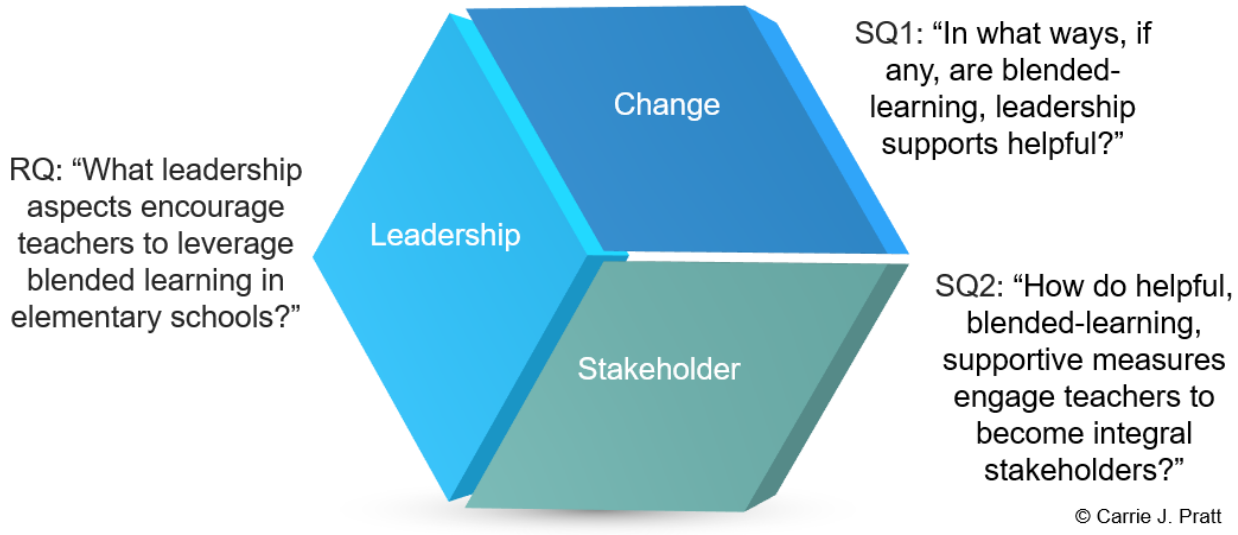

Figure 5. The three broad themes—leadership, change, and the stakeholder—from the research in connection with the research question (RQ), Subquestion 1 (SQ1), and Subquestion 2 (SQ2).

Trinity of Concepts

Continuing with the code-weaving process, the researcher included RQ, SQ1, and SQ2 reread interview transcripts, and reviewed memos and In Vivo codes in Atlas.ti. Through this iterative process, the researcher found what Soklaridis (2009, as cited in Saldaña, 2016) described as a trinity of concepts (p. 275). Similar to Soklaridis' (as cited in Saldaña, 2016) design, the trinity for this research also demonstrates "dimensions or *magnitude*" (p. 276). Figure 6 illustrates the macro-, meso-, and microthematic levels of the research.

Exploration of the trinity—the themes of decision-making leadership, change impact, and teachers as stakeholders—caused the researcher to wonder, along with Saldana (2016), "Which one of the three items, to you, is the apex or dominant item and why? [and] In what ways does this apex influence and affect or interrelate with the other" (p. 275) themes? These wonderings led the researcher to revisit intentionally the In Vivo codes, the voice of the teacher, finding what Saldaña (2016) called "comparable dimensions or magnitude" (p. 276) to the process of morphing data into themes. It was at this point in the research that the deductive process reached a point of total saturation for the researcher (Merriam, 2009).

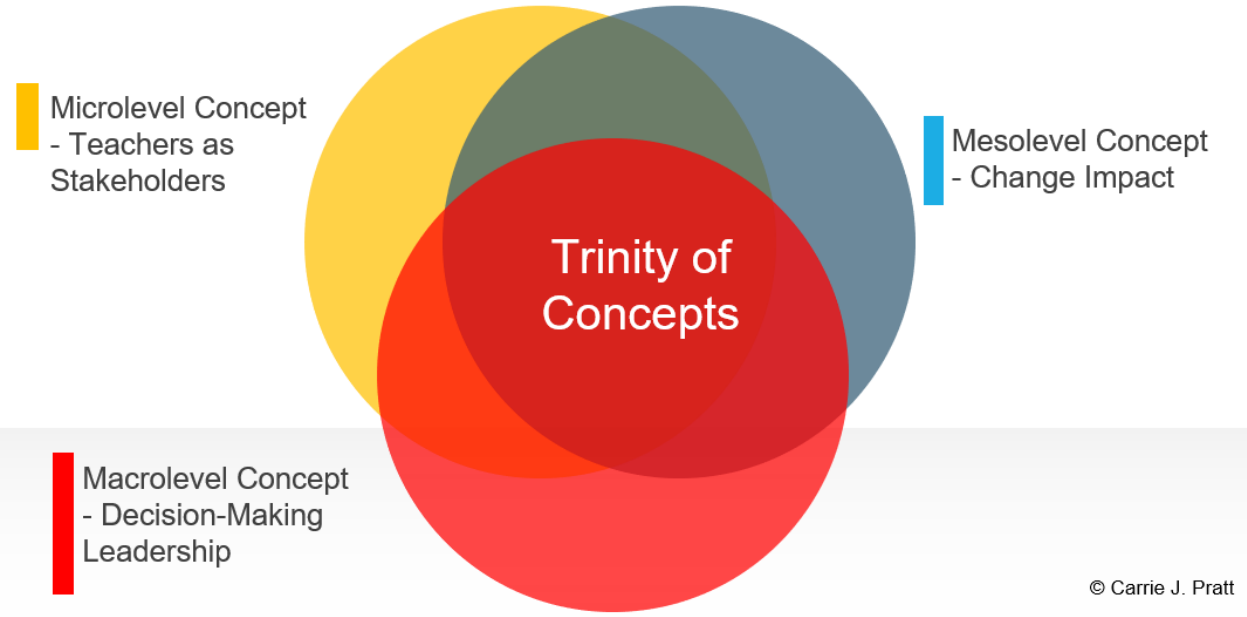

Figure 6. Soklaridis' design of a trinity of concepts in contrast with this researcher's trinity of the macro-, meso-, and microlevel concepts found within data analysis. From "The process of conducting qualitative grounded theory research for a doctoral thesis: Experiences and reflections," by S. Soklaridis, 2009, *The Qualitative Report, 14*(4), 719–734, as cited in *The coding manual for qualitative researchers* (3rd ed.), by J. Saldaña, 2016, Thousand Oaks, CA: Sage.

Presentation of Results

In this study, the teacher participants perceived that the public elementary school leaders demonstrated leadership aspects, characteristics, and traits. The supports and tools that the principal leader provided are categorized together as a theory from the three themes leadership, change, and stakeholdership. Tavory and Timmermans (2014) explained the evolution of "social science theory" (p. 66) in that "it predicts and controls action through an if-then/when-then/since-that's why logic" (p. 66). SQ1 and SQ2, provisions of the RQ, support some of that logic, turning the "what and how and preferably why something happens" (Saldaña, 2016, p. 278) into theory. According to Vygotsky (1980), the "mental constructions of reality" (p. 33), as perceptions captured in interviews, are what Wang et al. (2011) called just one "part of a dynamic system of behavior" (p. 300). Teacher perceptions are the crux of the theory; the voice

of the teacher is a teaching tool for decision-making, school leaders in a blended-learning public elementary school.

Of the 10-questions in the interview protocol, two questions related directly to the RQ, four related to SQ1, and the remaining four questions related to SQ2 (see Figure 2, specifying the question distribution of RQ, SQ1, and SQ2). With the interview questions, the researcher sought to find answers to the central phenomenon and research question, "What leadership aspects encourage teachers to leverage blended learning in elementary schools?" The research findings model teacher self-reflection as a practitioner, in a public, elementary, blended-learning environment. The voice of the teacher brings relevancy to the research because it is the perceptions of those teachers that lead to theoretical findings. Figure 7 illustrates the In Vivo codes; the teacher perceptual beliefs according to the three themes of the research—leadership, change, stakeholder—are organized by encouraging leadership aspects.

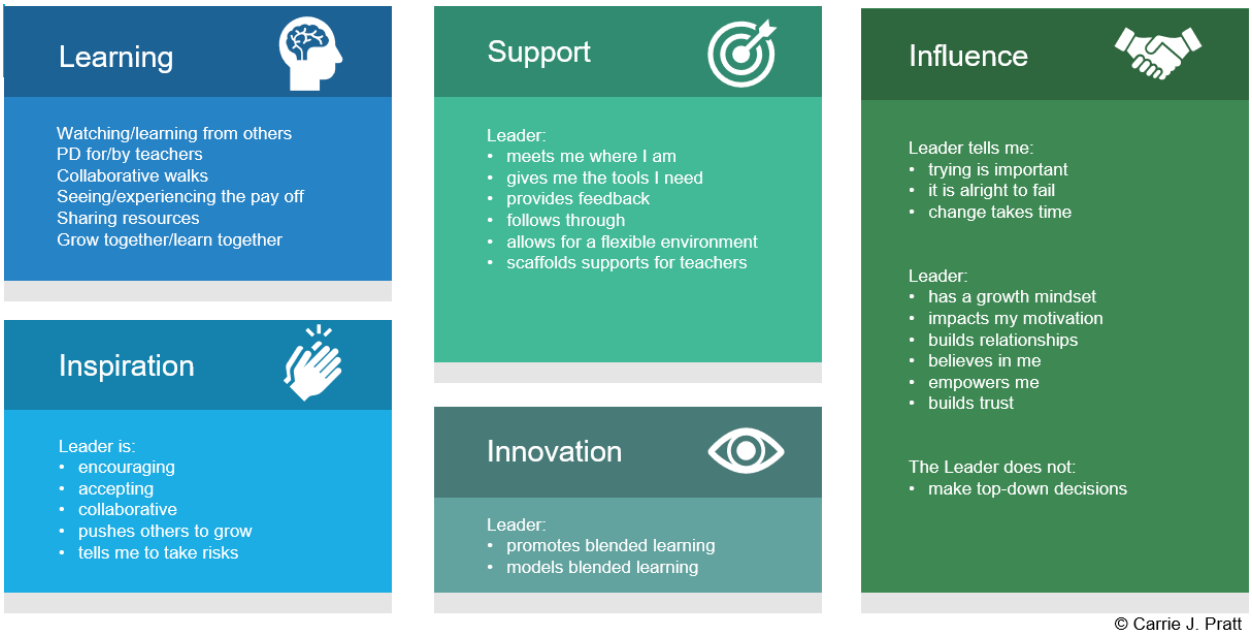

Figure 7. The perceptions of teachers and the way that those themes translate to encouraging leadership aspects that leverage blended learning in elementary schools.

Intellectual Stimulation

Blended learning—an interrelated enterprise of leadership, change, and stakeholdership in the public elementary school—is leveraged by the leadership characteristics of the school principal. Data, categorized and placed in themes, produced identical hierarchies of perceptual beliefs. Teachers were confident that the primary factor that helped them to leverage blended learning in their classrooms was the ability to watch and learn from others during collaborative walks and from professional development that was provided by teachers for teachers. Similarly, evidence from other studies identified professional development and time as teacher desires throughout the shift from a traditional teaching and learning environment to one of blended learning (Mathews, 2017; Thies, 2017). The teacher participants described learning opportunities that related to the In Vivo codes in Figure 7, which encourage leadership aspects that leverage blended learning.

> Even as a 6th grade teacher, [my principal] says, "We'll go to the middle school, go see whatever classes you want to see in a middle school or a high school and observe."

Elementary school, blended learning might differ in the middle school because the student-learning agency and technology capacity increase. When the principal encouraged and planned for a visitation to the middle school with sixth-grade teachers, the teachers felt supported. Together, the principal leader and sixth-grade teachers learned from others during a collaborative walk and returned to their school with knowledge to scaffold blended learning, preparing students for blended learning in the seventh grade. The teachers expanded on the opportunity to learn from others during collaborative walks, including professional development and knowledge sharing.

- We've been able to visit different classes, different teachers who are doing different things in their class, and our principal. . . . You know, we're going to different schools. We're seeing all sorts of different grade levels and how they use blended learning.
- I can try something, but [my principal] also encourages us to them. If you don't understand it, to go find somebody who does understand it and go see how they use it. It allows me to go learn more, and bring it back into the classroom and try it.
- I appreciate that our administrator is just always encouraging us to not only be there [professional development and breakout sessions], my principal encouraged leaders that [were] identified in [the] building to be presenters, too, at this to help continue to share what we know and grow together.

Teacher participants felt encouraged by their principal leaders when they were offered the flexibility to explore other classes and to engage in meaningful professional development. In response, the participants identified their responsibility of knowledge sharing with colleagues, as blended-learning leaders.

> A bunch of the principals together [and] put out a Google form [asking], "What are the things that you're interested in learning? Then we'll create a training around those things." It was all aspects of assessments, and blended learning, and using all the different tools.

Beyond school leadership, the teacher participant acknowledged the efforts of division principals as they worked collaboratively to develop blended learning in elementary, middle, and high schools. The school division's collective effort to listen to the learning needs and wants of teachers resulted in the deployment of a division-wide, blended-learning conference with a guest

speaker. The teachers perceived that the division was dedicated to them in building their capacity with blended-learning opportunities, according to the voice of the teacher. Similarly, the teachers described knowledge sharing and capacity building, according to their wants and needs, but with nontraditional outcomes.

> My principal has also provided coverage so that [. . .] let's say the kindergarten team is meeting, and they want to talk about how to do HyperDocs or Google Classroom, I would have someone go into my classroom and cover my class, and I would attend their [teacher] meeting, and I could share and walk them through that process. Kind of on the fly also, I have actually had my students go to these teacher meetings [. . .] and [the student presented how to use a tool for blended learning] to the teachers. So, just a lot of learning from each other, and seeing it in action.

If teachers perceived their colleagues as facilitators or coaches in a blended-learning classroom, and the students as blended learners, that experience became a model for what is possible, bridging the idea of blended learning to the action of blended learning. Although risk and failure increase during the change, the stress of not knowing what blended learning can look like decreases when leaders encourage collaborative walks or ensure that teachers have access to meaningful professional development. Also, watching and learning from others encourages a culture of collaboration and understanding, resulting in strengthened teacher networks and the sharing of ideas and materials.

In public education—historically a traditional learning environment—the principal is encouraging teachers to shift towards blended learning, a merge of modern pedagogy and innovative technologies. The In Vivo codes combined in Figure 7 as Learning and Innovation are similar to what Northouse (2016) called "Intellectual Stimulation" (p. 169) one of four

transformational leadership factors. According to Northouse (2016), this shift, with intellectual stimulation, rouses "followers to be creative and innovative" (p. 169) and "supports followers as they try new approaches and develop innovative ways of dealing with organizational issues" (p. 169). Teachers must leave their classroom to watch and learn from each other, an experience that they determined was most encouraging to help them leverage blended learning in their classrooms, and was one that, as Northouse (2016) stated, requires teachers to "think things out" (p. 169) and to "engage in careful problem solving" (p. 169) to meet their needs. Additionally, blended learning shifts the role of the teacher to that of a coach, and shifts access to learning of the student, or student-centered learning.

Inspirational Motivation

Inspirational motivation (the first of the four transformational leadership factors) inspires "through motivation to become committed to and a part of the shared vision in the organization" (Northouse, 2016, p. 169). Committing to the shared vision of blended learning in the elementary public school shifts the roles of teachers and responsibilities of students, and requires a "strong guiding coalition" (Kotter, 2012, p. 54). In this research, teachers perceived leadership aspects to be encouraging, accepting, and trusting. Those aspects inspire and motivate teachers to respond to change. The teacher participants described the key aspects that were related to the In Vivo codes in Figure 7, encouraging teachers to leverage blended learning.

> [My principal] built trust with the staff. Then when it was like, "Hey, guys, we're going to do all of 6th grade, all of 5th grade, all of 4th grade one to one." We were a lot more comfortable, and we were ready for it, because [my principal] had encouraged us to just to try, and to learn from each other.

The principal leader selected sixth grade as the first grade to have one laptop per student, and shared with fourth- and fifth-grade teachers that the process would occur in their classrooms in the following school years. This decision was made according to the shared vision of the principal leader and the teachers, for several teachers in one school were simultaneously enrolled in a blended-learning degree program; therefore, they were members of the guiding coalition.

> Our school has an open-door policy, that [my principal] encourages us to go into each other's classrooms.

The participant emphasized the collaborative culture in the school and its pairing with the principal leader's encouragement of teachers to leave their classroom and see their colleagues in action during the instructional day.

> I think a realistic mindset of how it's going to be, and also [my principal] fostering independence in us, and not necessarily being told top-down exactly what you have to do, how you have to do it, and when you have to do it.

This participant expressed how the trust from the principal leader included a sense of acceptance because the change might not be easy; therefore, the principal allowed the teachers to move flexibly through challenges, similar to the expression of another teacher participant.

> [My principal] just met everyone where they were at, depending on their comfort level, and just tried to scaffold support because we were all at very different levels of comfort with blended learning and technology integration.

When, as Kotter (2012) stated, "effective visions are open ended enough to allow for individual initiative and for changing conditions" (p. 79), teachers are inspired and motivated to shift from a traditional teaching and learning environment. Those key elements, as Kotter (2012)

noted are "the right composition, level of trust, and shared objective" (p. 54) of how the principal leaders inspired and motivated, and they are drawn from the perceptions of the teacher.

Idealized Influence

Kotter (2012) stated, "Often the most powerful way to communicate a new direction is through behavior" (p. 97). Northouse (2016) too noted that the "behavior component" (p. 167) of the leader is one of two idealized influencing components. If principal leaders act as models of the vision, Northouse (2016) stated, teachers will respond by "identif[ing] with the[se] leaders and want very much to emulate them" (p. 167). As Northouse (2016) described it, the behavior component is combined with the "attributional component" (p. 167) of idealized influence, or the "attributions of leaders made by followers based on perceptions they have of their leaders" (p. 167). Together, the trust that principal leaders and teachers share, combined with a vision, heightens trust, respect, and response within the educational organization (Northouse, 2016).

The teachers perceived their principal leader as demonstrating a *growth mindset*, stimulating risk taking, and supporting them through failure. These attributional and behavioral components of idealized influence (the third of the four transformational factors) encouraged the teachers to shift their teaching and learning practices within their classroom (Northouse, 2016). The participants described vital aspects related to the In Vivo codes in Figure 7, encouraging them to leverage blended learning.

- I believe that [my principal] has a growth mindset, believes that it's okay to try things, and if we fail, [my principal] gives us the security that if something isn't successful, if it is a failure, that it's okay, that we'll just regroup and try something different. [My principal] models that for our building and for the staff, and even just the things that [my principal] does.

- [My principal] looks at us as individuals to see what our strengths are, and [my principal] helps push us to grow. I think it makes us feel safe in our classroom to try things knowing that if it doesn't succeed, it's okay.

Teacher perceptions or "mental constructions of reality" increase the credibility of the leader and the vision (Vygotsky, 1980, p. 33). As Freire (1970, as cited in Vygotsky, 1980) explained it, those "mental constructions of reality" (p. 33) also help teachers' praxis. Freire (1970, as cited in Knight, 2011) stated, "It is reflection and action upon the world in order to transform it" (p. 43). When leadership is transformational, reflections pose the actions of the leader as centralized on "improving the performance of followers and developing followers to their fullest potential" (Northouse, 2016, p. 167; see also Avolio, 1999, and Bass & Avolio, 1990, as cited in Northouse, 2016). In concert with the other three transformational factors, idealized influence is only one factor in the building capacity of other factors, and the transformation of teaching and learning in the elementary school.

Individualized Consideration

Listening, coaching, and supporting, are individualized considerations that principals provide to teachers in responding to change-induced turbulence (Kotter, 2012). These individualized considerations (the fourth and last of the transformational factors) together become a unique service that leaders and managers can offer to followers in response classroom turbulence during positive change (Kotter, 2012; Northouse, 2016). The participants described critical aspects related to the In Vivo codes in Figure 7, encouraging teachers to leverage blended learning.

- Knowing that it was okay to take baby steps, [my principal] would always say, "Just try something. Then next year, try something else."

- It wasn't ever an expectation to be an expert in anything, so that also brought a lot of comfort, having other people come to the building who could give us tools, and knowing that when we had those tools, that it was okay to just take baby steps, dip your toe in the pond, you know?

This participant expressed how the expectations of principal leaders helped them to feel supported as an individual, responding to the unique challenges that he or she faced. Like teachers, one principal modeled actions and considered self, providing individualized consideration for others.

> I see that [my principal] is very open-minded and is always willing to be vulnerable too by saying, "This is something new for myself as well. But I'm going to work through it with you." I find that very encouraging.

Principal leaders, who respond to the complexities of change with individualized consideration, listen with the intention to provide the support necessary for each teacher. This individualized support as consideration, encourages teachers to "really learn a new approach, and then reconsider their teaching practices and reshape the new approach, if necessary until it can work in their classroom" (Knight, 2011, p. 43). Blended learning as a new approach to teaching and learning in the school is a relationship between the principal leader, the teacher, and the student, requiring new approaches and partnerships.

Since: That's Why

In these schools, it appeared as though the principal leaders adopted key transformational practices to gain, as Kotter (2012) called it, a "strong guiding coalition" (p. 54) and to affect positively the success of blended-learning evidence in the public elementary school. As Marion and Gonzales (2014) noted, when leadership aspects cause "structural adjustments" (p. 178) and

are “perceived as transformational” (p. 178) by teachers, those teachers are inspired from “the inside out” (p. 178). As Kotter (2012) observed, the transformational practices of leaders build a “strong guiding coalition” (p. 54) so that teachers become integral stakeholders in the shift from traditional learning to blended learning in the public elementary school. In association, the research themes—leadership, change, and stakeholdership—were used to theorize the potential of moving from traditional to blended learning (the what), which is conceivable with transformational leadership that is inspirational, influential, innovative, and supportive with continuous learning opportunities (the how).

Conclusion

Before the researcher began this exploration, the decision-making leadership aspects that influence teachers to shift their teaching practices from historically traditional to blended learning in the public elementary school were unknown to her. This problem invoked a study of blended-learning literature. The authors in the literature explained complex, educational, institutional mainstays such as stakeholdership in education and the response to change. The themes found in the literature—21st-century education, student-centered learning, and transforming instructional leadership—galvanized the attention of the researcher to discover further the encouraging leadership aspects that leverage blended learning in elementary schools.

The review framework, interrelated topics—plugged in pedagogy, interconnected learner, trust, and transformation—the pillars of this study, underscore how innovation alters the interdependence between instruction and learning (Kumpulainen et al., 2014; Wolf et al., 2017). Figure 8 illustrates the literature review framework evolved from the research of the literature with which the researcher synthesized the themes and complex, education institution mainstays.

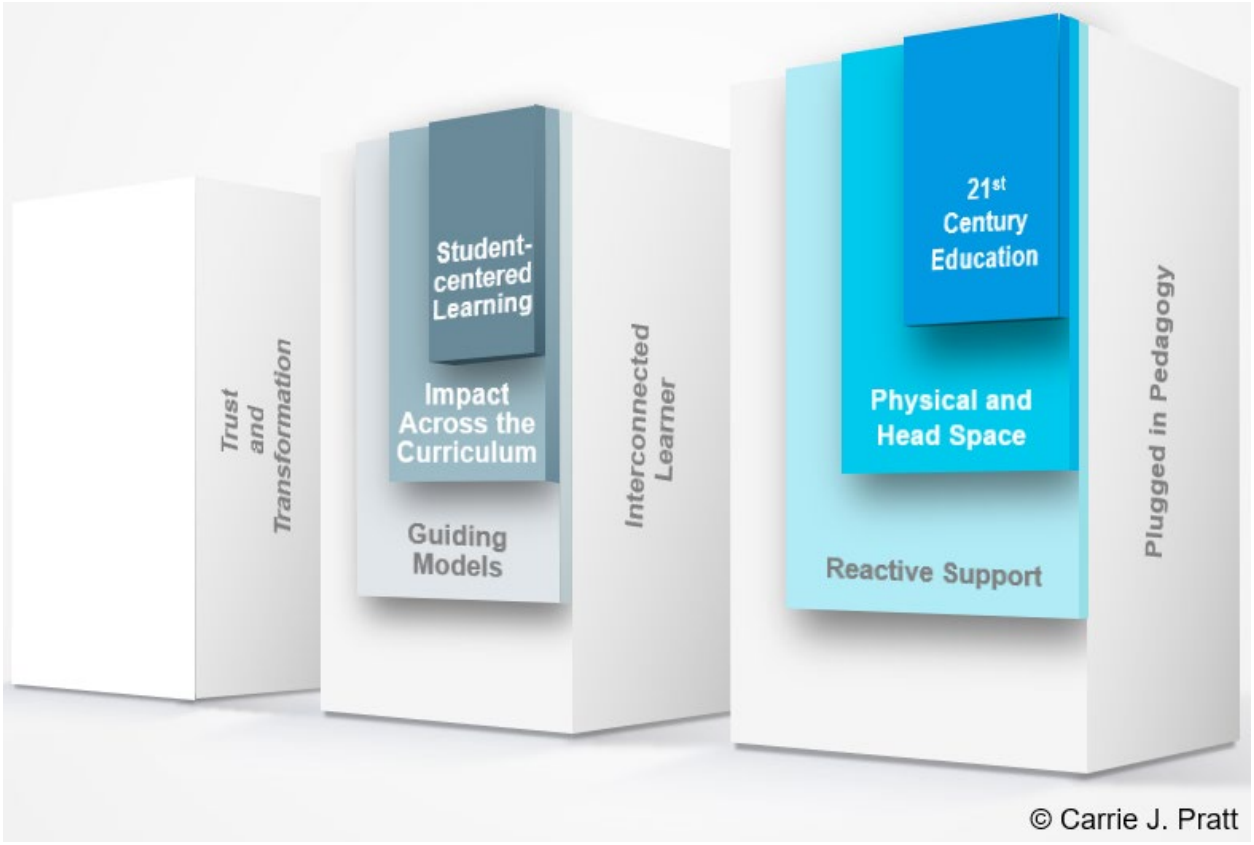

Figure 8. The three pillars of study are illustrated and framed from the findings in the literature as the themes that described 21st-century education, student-centered learning, and transforming instructional leadership, which are influenced by the complex, educational, institutional mainstays of stakeholdership in education and the response to change.

One research question and two subquestions were designed to identify leadership aspects that encourage blended learning in elementary schools. The researcher wanted information that would lead to supports that teachers find helpful. The researcher also pursued the voice of the teacher, as a potential participant of what Kotter (2012) called a "strong guiding coalition" (p. 54) of the shift from traditional to blended learning.

Together, CHAT, contingency theory, and path–goal theory led to cognitivism and Vygotsky's (1980) theories. The conceptual framework of the qualitative case study is intrinsically bound by a scope of leadership in the public, elementary school, blended-learning environment. The researcher invited the voice of the teachers who identified leadership, change,

and stakeholdership as perceived themes to the research question. Research theoretical findings affect the researcher to ideate that the potential of moving from traditional to blended learning is conceivable with transformational leadership that is inspirational, influential, innovative, and supportive with continuous learning opportunities. These findings answer the central phenomenon and research question, “What leadership aspects encourage teachers to leverage blended learning in elementary schools?” and bring voice to teachers in public elementary schools enduring a change from traditional learning to a blended-learning environment.

CHAPTER 5

CONCLUSION

The purpose of this research was to study leadership aspects, characteristics, and traits of administrators to find what encouraged teachers to leverage blended learning in their elementary classrooms. The primary focus of K–12 blended-learning research includes the analysis of methods, technology, tools, student motivation or achievement, and test scores (Drysdale et al., 2013). Therefore, the researcher focused the study on leadership and blended learning, and encouraged teachers to reflect upon the leadership of their school administrators, the decision makers in a strong position to influence curriculum reform.

Definitions of blended learning vary, causing what Tucker et al. (2017) considered "confusion" (p. 6). However, hallmarks of blended learning include personalization, agency, an authentic audience, connectivity, and creativity (Tucker et al., 2017). Regardless of the muddle, blended learning in elementary schools is an approach to education that results in best practices, learner agency, and student-centered opportunities, and that transforms teaching and learning as modern pedagogy and innovative technologies merge (Horn & Staker, 2015; Sheninger & Murray, 2017; Tucker et al., 2017). Shifting teaching and learning from traditional education to the hallmarks of blended learning provoked this researcher to investigate how leaders who are school decision makers influence the adoption and sustainment of the varying blended-learning models within the elementary school.

Horn and Staker (2015) found that leadership influences instruction and learning outcomes align with the three most significant desires of educational leaders. Personalization, access, and cost control are transformational to learning, equity, and accessibility in K–12

education (Horn & Staker, 2015). Wolf et al. (2017) stated, “Leadership is considered second only to classroom instruction as an influence on student learning” (p. 6). Therefore, this researcher found that it was important to study teacher perceptions of leadership aspects that would encourage them to leverage blended learning in elementary schools. The voice of the teacher was instrumental in the research findings because the decision-making leader directly influences the teachers, who are primarily responsible for classroom instruction, and are agents of change with the potential of becoming part of a “strong guiding coalition” (Kotter, 2012, p. 54).

The conceptual framework of the study lends itself to the theoretical framework of cognitivism, referring to the way that the mind “obtains, processes, and stores information (Clark, 2018, p. 176). CHAT is a practice-based approach with a six-part activity system (Foot, 2014). These parts —subject, object, community, rules, division of labor, and means of production and tools—serve as frameworks for preparation and productivity analysis (Foot, 2014). In addition to CHAT (which falls under the umbrella of sociocultural cognition theory), the path–goal theory (under contingency theory) helps the researcher take a social–behavioral approach (Tenenberg & Knobelsdorf, 2014). Path–goal theory includes variables. The first variable, leader behavior, is dependent on the latter variables, which are contingency factors and follower attitudes and behaviors (Marion & Gonzales, 2014; Ronald, 2014). Together, the framework complements the complexities of shifts in teaching and learning, for leaders might not adequately attend to the challenges that teachers face daily to implement the new initiatives or programs (Arnett et al., 2018).

This qualitative case study was intrinsically bound by a scope of leadership that occurred at Apple Lane and Eagle Ridge Elementary Schools of TPS. Four teachers at each school were

interviewed after confirming through the consent process that they had been engaged in blended learning for 2 or more years at their school site. In addition, two principal leaders provided school plans and professional learning schedules. The interview and document data were coded and categorized into themes—leadership, change, and stakeholder—and the critical perceptions of teachers were sorted and found to align with the four transformational leadership factors (Northouse, 2016). Sorted:

- Learning aligned with intellectual stimulation,
- Inspiration with inspirational motivation,
- Influence with idealized influence, and
- Support and innovation aligned with individualized consideration.

For that reason, the potential of moving from traditional to blended learning is conceivable with transformational leadership that is inspirational, influential, innovative, and supportive with continuous learning opportunities, and the theoretical ideation of the researcher from the findings of the research.

The purpose of this chapter is to present research findings as they align with the four transformational leadership factors (Northouse, 2016). Figures 9–11 and Figures 13–14 provide visuals for leaders as they plan for the shift from traditional education to blended learning in their schools. These figures are embedded in the interpretation of findings as a connection to the implications of research. Following the interpretation of findings, this chapter includes recommendations for action and further study, for blended learning has been minimally researched, especially in conjunction with leadership at the elementary school level.

Interpretation of Findings

Central Phenomenon and Research Question: What Leadership Aspects Encourage Teachers to Leverage Blended Learning in Elementary Schools?

The theoretical findings or the potential of moving from traditional to blended learning is conceivable with transformational leadership that is inspirational, influential, innovative, and supportive and that has continuous learning opportunities that have evolved from a trinity of concepts. The macrolevel concept of decision-making leadership, the mesolevel of concept change impact, and the microlevel concept of teachers as stakeholders represented the three themes leadership, change, and stakeholder. Figure 9 illustrates how the theory represented on the left, emerged from the deductive to inductive research analysis process, beginning with the 148 codes on the right.

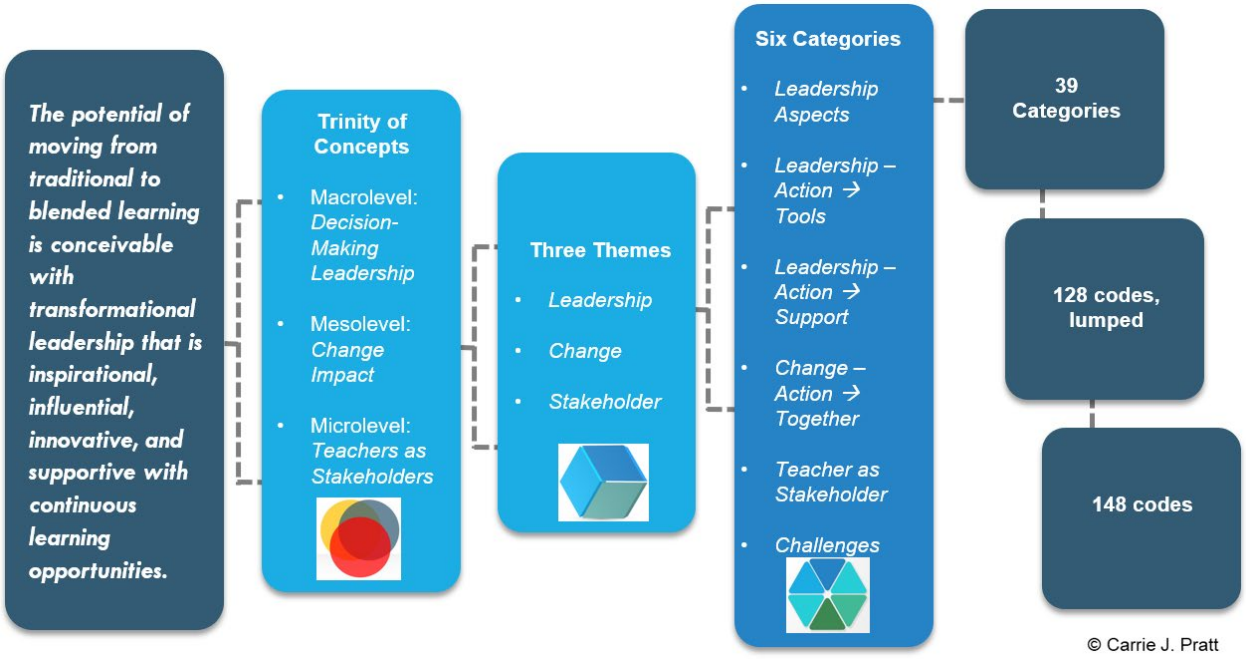

Figure 9. The deductive to inductive research analysis process and the evolution of the theoretical findings are illustrated with the deductive process represented on the right and the inductive or research findings presented in italics on the left.

Before the three themes, six categories evolved from 39 categories, all from the initial 148–128 lumped codes from the eight interviews and the school documents. Three of the six categories were distinct sorts of leadership aspects, tools, and support, found to be interrelated using Saldaña's (2016) codeweaving technique. The remaining three of the six categories were change, teacher as stakeholders and challenges. Further analysis merged the categories of change and challenges into one theme, as interplay between the two categories were found when codeweaving.

Throughout the deductive to inductive research analysis process, In Vivo codes represented the perceptual beliefs of the teachers, turning their voice into collections for leader contemplation. In coordination with Figure 7 found in Chapter 4, these collections illustrated as Figures 10–11 and 13–14 serve as a teaching device for principal leaders as they plan to lead a school engaged in blended learning. Figure 7 is an illustration organizing the key perceptions of teachers—learning, inspiration, influence, support, and innovation—which were grouped to bring voice to the research. These groupings naturally aligned with the four transformational leadership factors—intellectual stimulation, inspirational motivation, idealized influence, and individualized consideration—and they are presented as conclusions (Northouse, 2016).

Intellectual stimulation: Learning. Acree (2017) described the seven goals for principals found within the Leadership in Blended Learning program, a "capacity building program" (p. 111) for leaders in education. According to Acree (2017), the fourth goal, "Lead an engaging, application[-] and problem-based learning environment that supports creativity, critical thinking, and problem-solving" (p. 111) is a goal that directly connects to learner agency, and not merely to the student, but also to the teacher. In this research, teachers perceive watching and learning from others to be the most desired learning opportunity in the elementary school

engaged in blended learning. Professional development for and by teachers of blended learning, stimulates those teachers intellectually as they learn side-by-side with other teachers who undergo similar experiences in their elementary classrooms. The stakeholders in teaching and learning desire opportunities that will allow them to grow together, to learn together, to share resources, and to see and experience the payoff. The teachers preferred learning opportunities, combined with collaborative walks, and the opportunity to visit the classrooms of teachers in the school or school community, increasing the potential for praxis. According to Knight (2011), praxis, "the act of applying new ideas to our own lives" (p. 43), encourages teachers to reflect and act within their authentic teaching and learning environment.

Knight (2011) explained, "Praxis is enabled when teachers have a chance to explore, prod, stretch, and re-create whatever it is they are studying" (p. 43). Praxis aligns with what Northouse (2016) described as intellectual stimulation, the third factor of transformational leadership. Northouse (2016) stated, "Intellectual stimulation . . . includes leadership that stimulates followers to be creative and innovative and to challenge their own beliefs and values as well as those of the leader and the organization" (p. 169). Watching and learning from others, professional development for teachers by teachers, and collaborative walks require discourse, critical thinking, and problem solving. Teachers perceive leaders who plan for and provide opportunities for intellectual stimulation or learning opportunities (as illustrated in Figure 10) as encouraging them to leverage blended learning in their elementary school classroom.

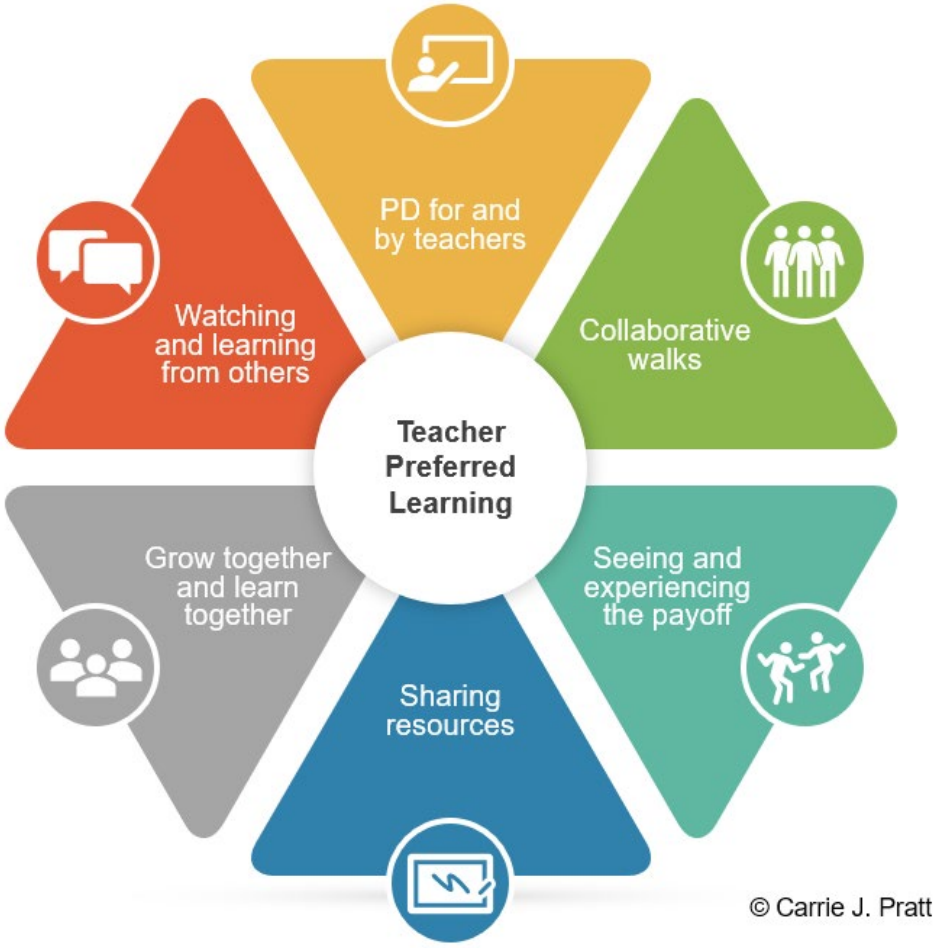

Figure 10. The most-preferred learning experiences that teachers want are illustrated and listed; they were extracted from perceived leadership aspects in the blended-learning, teaching and learning environment.

The voice of the teacher included perceptions of participants in the case study who considered themselves intrinsically responsive to the rapid changes in education. The teacher stakeholders reflected on their motivation and the way that they identified as a stakeholder in blended learning. In the research, some participants shared their immediate realization of the disruption that modern pedagogy and innovative technologies were causing. They also recognized their impact on students as learners in a traditional learning environment. Others identified how blended learning aligns with their interests. The teacher participants described

how these understandings pushed their intrinsic desires to shift prematurely to the later external influence or the leadership aspects of their school principals.

- I was one of the first people to ever have Internet, and I saw how having Internet … made a big difference in what I could do.
- I think the first thing is you, yourself. Me, myself. I'm interested in it. It's fun for me, it's important for me.
- I think when I started teaching I was just naturally into technology and so I feel like it was a way to connect with the students.

These participants expressed how intrinsic interest and motivation, early access to technology, and the understanding of how technology affects the teacher–student connection were influential for their own engagement. The participants also realized how technology awareness and capability is important for students.

- I know[ing] that it's important in their [student] lives and their future.
- They're [students are] going to have to do a lot more going forward with computers, and if they don't have the skills already innately in them, they're going to struggle more and more.
- I'm not so afraid of it [technology], and by adopting it for the kids and showing them how to use it safely, how to use it to do their best job, they'll be better off.

Fullan (2001) explained that an "internal commitment derives from energies internal to human beings that are activated because getting a job done is intrinsically rewarding" (p. 8). Knight (2011) further stated, "When the thinking is taken out of teaching, teachers resist" (p. 25). The teachers voiced their perceptions and identified how they prefer to learn, and these preferences might be integral to the intensity that blended learning is leveraged in the classroom.

Knight (2011) stated, “Goals that others choose for us seldom motivate us to change” (p. 25). One participant shared that the staff was engaged in a book talk; however, the book was selected for the teachers and that it lacked alignment (as part of an instructional role) with an elementary, blended-learning focus and the way that the teachers felt. The group later abandoned this book, and the impact included frustrations of valuable time wasted and the leader’s overall lack of follow-through. A transformational leader supports continuous learning opportunities with a keen awareness that the learning opportunities, when teacher preferred, affect stakeholdership and overall motivation and learning capacities.

To encourage praxis, Knight (2011) suggested that principals should plan for “meaningful and relevant” (p. 53) professional development as well as encouraging teachers to “have the freedom to make real decisions about the way they teach” (p. 53). Decision-making leaders influence intellectual stimulation and overall teacher learning. Supporting teacher preferred continuous learning opportunities is only one key leadership aspect to help stakeholders move from a traditional to blended-learning environment, combined with aspects that are inspirational, influential, and innovative.

Inspirational motivation: Inspiration. Leadership aspects influence the decisions that a leader makes, especially during change or throughout the adoption of a new initiative. Northouse (2016) described inspirational motivation as one aspect of a transformational leader, and that description aligns with the perceptions of teachers in this research study. The teachers described their leaders as encouraging, accepting, and collaborative, and they told the researcher that their leader actively pushes others to grow and encourages risk taking. Figure 11 illustrates the five most common inspirational leadership aspects that teachers perceive help them leverage blended learning in the elementary school.

Figure 11. The top inspirational teacher perceptions of leaders that help teachers to leverage blended learning in their teaching and learning environment.

The International Association for K–12 Online Learning (iNACOL) Blended Learning Teacher Competency Framework identifies competencies for blended-learning stakeholders as illustrated in Figure 12 (Powell, Rabbitt, & Kennedy, 2014). In the competency framework, the second ring, between "mindsets" and "skills" is "qualities" (Powell et al., 2014, p. 8). These "qualities" are broken into a "what" and "how" (p. 8). According to Powell et al. (2014), aligned with the perceptions of an inspiring leader, the competency framework describes the "what" as "personal characteristics and patterns of behavior that help an educator make the transition to new ways of teaching and learning" (p. 8) and the "how" as "coached, encouraged, and reinforced" (p. 8).

Figure 12. iNACOL's framework for blended learning competencies. From *iNACOL Blended Learning Teacher Competency Framework*, by A. Powell, B., Rabbitt, & K. Kennedy, 2014, Vienna, VA: iNACOL. Reprinted with permission.

The teacher participants described critical aspects of how their inspiring leader encouraged their shift from traditional to blended learning. These sentiments align with the

qualities section of iNACOL's Blended Learning Teacher Competency Framework (Powell et al., 2014).

- We're not going to be judged or evaluated based on that [the beginning process of phasing in blended learning], and we're going to give the kids opportunities to try new things.
- I would say that [my principal] doesn't expect you to do everything at once. [My principal] just expects you to just start somewhere and just try something.
- [My principal] encourages risk taking, and you don't have to feel like if you fail or something doesn't go as planned, that there's going to be any repercussions. You're just applauded for attempting it.
- Our admin very much wants us to try things, and they're not pushing us to do more than we can do.

In this research case study, teachers perceived their leaders to be encouraging, accepting and collaborative, while also encouraging stakeholders to take risks. Correspondingly, teachers reflected and believed that their principals pushed others to grow, one component to build capacity in the teacher. Goleman (1998, as cited in Fullan, 2001) identified this as "social competence" (p. 72), whereas "motivation" (p. 72) is one subdivision described as "emotional tendencies that guide or facilitate reaching goals" (p. 72). Inspiring teachers is just one key leadership dimension that helps stakeholders to move from a traditional to a blended-learning environment. Such leadership, combined with behaviors that are influential, innovative, and supportive with continuous learning opportunities, agree with the four factors of transformational leaders that Northouse (2016) defined. Together, the leadership aspects help stakeholders move from a traditional to a blended-learning environment.

Idealized influence: Influence. Principal leaders (and the institution of education) face moral and ethical complexities because of the vast social and behavioral implications that every decision commands in the intensely human-centric field. The change brought by new initiatives such as blended learning alters the known and comfortable process structure of traditional learning, and this change might cause turbulence or bring chaos. Wheatley (2006) explained a behavior shaping force as "the combination of simply expressed expectations of purpose, intent, and values, and the freedom for responsible individuals to make sense of these in their own way" (p. 129). All stakeholders in the elementary school community—district and school leaders, instructional teachers, technology support, curriculum and learning design and delivery, students, and families—are responsible for the results of moving from a traditional learning environment to one that is blended. However, in change, the influential leader might shape the turbulence or chaos, becoming the behavior shaping force.

Although many people initially believe that a charismatic leader is a transformational leader, the charisma is found in the actions of the influential leader who has idealized influence. Burns (1978) considered the "concept of charisma" (p. 243) as a crux of confusion among those studying leadership, and offered an alternate term: "heroic leaders" (p. 244). Burns (1978) stated that heroic leaders "usually arise in societies undergoing profound crisis" (p. 244) and "heroic leadership provides the symbolic solution of internal and external conflict" (p. 244). Regardless of the term—charismatic or heroic— Northouse (2016) stated that the influential leaders (or with idealized influence) "have very high standards of moral and ethical conduct and can be counted on to do the right thing" (p. 167).

Leaders with idealized influence "act as strong role models for [their] followers" (Northouse, 2016, p. 167). According to Northouse (2016), trust throughout the organization is

high because followers "want very much to emulate" (p. 167) their leader in an environment where trust and respect run deep. In the research, teachers voiced their perceptions regarding the leadership aspects that encourage them to leverage blended learning in their elementary schools. Figure 13 illustrates the voice of the teacher as the participants reflected on their perceptions of what the influential leader communicates and demonstrates when leading in a school with blended learning.

Figure 13. The teacher perceptions of the influential leader, with those perceptions considered encouraging by teachers to leverage blended learning in the classroom.

Throughout each of the eight interviews, not one teacher used the word *charisma*. Instead, the participants shared how their leaders made them feel and how their leaders communicated expectations by building relationships within the school, conveying leadership charisma to be found in the actions of their influential leader with idealized influence. The teachers believed that their principal leaders demonstrated a growth mindset, and their example was one to follow. In Powell et al.'s (2014) Figure 12, "Mindset," (p. 8) the outer ring of the iNACOL Framework for Blended Teaching Competencies highlights the "what" and "how," like

the middle ring, titled "Qualities" (p. 8). According to Powell et al. (2014), the "what," "core values or beliefs that guide thinking, behaviors and actions that align with goals of educational change and mission" (p. 8) and the "how" is "understood, adopted, and committed to" (p. 8) mirror the perceptions of teachers in the research study.

The leaders influenced the teachers by telling them that trying was important and that it was all right to fail. The teachers understood that change takes time and, with that message, the teachers still felt motivated, empowered, and trusted. One participant explained how the principal affected their feeling of security through failure.

> I believe that our administrator has a growth mindset, and [my principal] believes that it's okay to try things, and if we fail, [my principal] gives us the security that if something isn't successful, if it is a failure, that it's okay, that we'll just regroup and try something different.

The influential principal leaders in the research might be considered a "potent force" (Wheatley, 2006, p. 129). Wheatley (2006) explained, "Fractal order originates when a simple formula is fed back on itself in a complex network" (p. 129). Although initially abstract, this idea of fractal order translates into the prevailing culture and value base of the organization. The teachers communicated the elements that made the core of their school culture, elements that connected them to a sense of stakeholdership in the move from traditional to blended learning in the elementary school. The influential leader guides stakeholders in the shift from a traditional to a blended-learning environment when combined with aspects that are inspirational and innovative, and that support teacher preferred continuous learning opportunities.

Individualized consideration: Support and innovation. Principal leaders who value the voice of the teacher demonstrate respect and trust. This symbiotic relationship can be most

valued during change, turbulence, or chaos. Fullan (2001) reiterated, "Effective leaders work on their own and others' emotional development" (p. 74) because "there is no greater skill needed for sustainable improvement" (p. 74). In the research, the teachers perceived that their principal leaders were supportive and innovative. This individualized consideration—the last of the four factors of transformational leadership—shows leaders as dynamic listeners, "coaches and advisors while trying to assist followers in becoming fully actualized" (Northouse, 2016, p. 169). As illustrated in Figure 14, the teachers were specific about the leadership aspect components that they found encouraged them to leverage blended learning in their elementary school.

The inner core of iNACOL's Framework for Blended Teaching Competencies is titled "skills" (Powell et al., 2014, p. 8). According to Powell et al. (2014), this core includes "adaptive skills" (p. 8) and "technical skills" (p. 8), with equal importance as illustrated in Figure 12. The supportive and innovative leader aspects (illustrated in Figure 14) align with how Powell et al.'s (2014) "adaptive skills" (p. 8) are "developed through modeling, coaching and reflective practice" (p. 8) within the Framework for Blended Teaching Competencies. The aspects of a supportive and innovative leader also align with how Powell et al.'s (2014) "technical skills" (p. 8) within iNACOL's Framework for Blended Teaching Competencies are "acquired and mastered through instruction, training, and practice" (p. 8). Every individual in the elementary school is complex and unique; therefore, it is important that the supportive and innovative leader respond to every challenge with individualized consideration because "the voice of the principal carries more weight than anyone else's in a school" (Knight, 2011, p. 50).

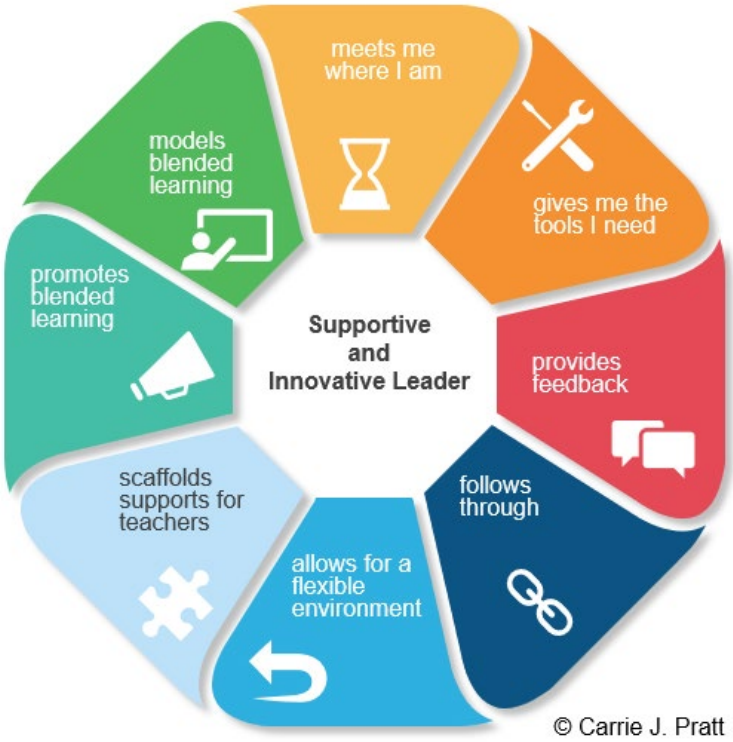

Figure 14. The primary teacher perceptions of the supportive and innovative leader of elementary schools engaged in blended learning.

Many of the teacher participants expressed how the voice of the principal affected their response to change. The teachers described how their principal was supportive and innovative, providing individualized consideration to the teachers.

- [My principal's] acceptance and recognition that we're all in different places on the comfort level of technology made it easy to change.
- You're just applauded for attempting it [blended learning], and really just promoting, furthering our professional development first within our school, and then . . . outside of the state with different opportunities has been helpful.
- I think a realistic mindset of how it's going to be, and also [my principal] fostering independence in us, and not necessarily being told top-down exactly what you have to do, how you have to do it, and when you have to do it.

- [My principal] just met everyone where they were at depending on their comfort level, and just tried to scaffold his support across that because we were all at very different levels of comfort with blended learning and technology integration.

Individualized consideration "is representative of leaders who provide a supportive climate in which they listen carefully to the individual needs of followers" (Northouse, 2016, p. 169). The teachers interviewed expressed how they felt supported as their principal leaders listened. The supportive and innovative leader, combined with aspects that are influential, inspirational, innovative, and supportive with continuous learning opportunities, agree with the four factors of transformational leaders that Northouse (2016) defined. Together, these leadership aspects and interrelated factors of transformational leaders help stakeholders move from a traditional to blended-learning environment.

Limitations and Discrepancies

The researcher interviewed eight teachers who were engaged in blended learning at two public elementary schools within the same school division. The number of teachers interviewed, and the number of school and division sites posed limitations. Engaging more teachers at each school, or more schools at the one division might result in an expanded analysis with more data that could influence the overall research findings. Additionally, researching across school divisions or districts might perhaps expand the outcomes of this research because the data might include greater diversity. These limitations serve as reminders of the limited locality scope of the case study, but they do not suggest that the research findings lack representations of teachers in public elementary schools beyond those interviewed for this study.

Bias is a limitation because the researcher was the sole investigator in this study. Additionally, the study was designed from the researcher's interests and experiences in blended

learning, leadership, and public elementary school teaching and learning. Merriam (2009) wrote, "[the] case study has proven particularly useful for studying educational innovations, evaluating programs, and informing policy" (p. 51). This research was created to find the voice of the teacher; the perceptions that teachers had of their decision-making principal leaders. The importance of teacher voice as a research finding might be useful as innovations, programs, and policies are designed and become active. Although the researcher was "left to rely on his or her own instincts and abilities throughout most of this research effort" (Merriam, 2009, p. 52) as a sole investigator, the use of Atlas.ti for organization, the laborious deductive to inductive coding process, and the participant data confirmation process helped to maintain an unbiased and ethical approach to the process. In honor of research integrity, prior the study, the researcher was course-verified through the Collaborative Institutional Training Initiative (2018) in human research, and as a social and behavioral research investigator.

It is possible that discrepancies exist in the qualitative research, where the researcher coded the voice of the teacher according to the interpretive understanding of what the research participant stated throughout the interview process. Additionally, research communications, content, and questions found within the Email to Potential Participants, Qualitative Informed Consent, or Qualitative Research Interview Protocol might have influenced the teachers' or school principals' communications and participation. Throughout the consent and interview process, the researcher encouraged the participants to address any confusion by asking questions. The researcher also provided explanations when the participants voiced a misunderstanding during the consent process or the interview, or as the participants confirmed the data.

Implications

There are various implications of leadership and blended learning, an interdependent enterprise, found from this research case study that was bound by leadership. The themes of the research—leadership, change, and stakeholders—led to the theoretical ideation of the researcher. The opportunity to move from traditional to blended learning is conceivable with transformational leadership that is inspirational, influential, innovative, and supportive with continuous learning opportunities. Therefore, the voice of the teacher will be significant if (or when) blended learning occurs in the elementary school setting.

The teachers believed that watching and learning from others was the most powerful learning opportunity. The findings imply that elementary school teachers desire opportunities to witness blended learning in the elementary classroom with students, and that they share resources with colleagues as they grow and learn together. The teachers are likely to begin replicating components of what they see of blended learning in their teaching. Collaborative walks in blended-learning classrooms are how many teachers prefer to watch and learn from others. Wheatley (2006) wrote, "Self-organizing evokes creativity and results, creating strong, adaptive systems" (p. 170) and "surprising new strengths and capacities emerge" (p. 170). Encouraging teachers to experience blended learning as an observer in an elementary classroom alters the teaching and learning environment for the teacher, activating praxis. This altered state—going from teacher to student or observer, creator or innovator to collaborator—encourages questioning, "which is a way of life for innovators" (Dyer, Gregersen, & Christensen, 2011, p. 68).

Teachers also prefer to learn from professional development that is specifically targeted for teachers according to their interests or learning needs. They desire professional development

that is presented by teachers who are engaged in blended learning in a like setting. That is, elementary teachers prefer professional development from teachers who are blending teaching and learning in their classroom at the elementary school level. This fact increases a sense of authenticity and relatability; both are considered essential to teachers. These results imply that teachers recognize the broad and varied social, behavioral, and academic scale of K–6 students, and that they want professional learning that applies to the grade and age level that they teach, and they want it to be provided by teachers in the field.

Teachers desire professional development that addresses the innovative technologies that are approved or accessible within the school division or school. Although teachers appreciate learning about innovative technologies, if they do not have access to those technologies, they do not find the professional development as meaningful. This thinking also aligns with text selection for adult book studies and discussion of blended learning. Teachers want to be an integral part of the book selection to verify the relevance against their own needs and wants for professional reading and learning. Therefore, strategic decisions that affect teacher time include meaningful selections of professional development and other learning opportunities that are constructed from teacher wants and desires, for teachers' interests in blended learning or their commitment to the process are what motivate them.

Sheninger and Murray (2017) wrote, "One of the greatest challenges for today's school leaders is the ability to create an environment that cultivates each person's intrinsic motivation" (p. 32). This challenge might be met with transformational leaders who are inspirational, and their actions and words might influence the motivation and behaviors of teachers. When school leaders are inspirational and influential, the culture of the school develops. When describing inspirational motivation, Northouse (2016) wrote, "Team spirit is enhanced by this type of

leadership" (p. 169), one of four factors of transformational leadership. Adding idealized influence, Northouse (2016) described the factor as the "emotional component of leadership" (p. 167).

It is likely that school culture might adapt and respond to the transformational leader's behaviors beyond anticipated goals. Therefore, it is implied that school leaders' decisions might directly influence how teachers perceive and respond to blended learning at the elementary school level. Teacher response might affect the rate or depth at which blended learning is present in the elementary classroom and whether schoolwide, blended-learning goals are attained or exceeded.

When school leaders are innovative and supportive, they "act as coaches and advisors while trying to assist followers in becoming fully actualized" (Northouse, 2016, p. 169). The findings imply that, when school leaders promote and model blended learning, teachers are encouraged to try blended learning in their classroom. Therefore, teachers are willing to take risks or to become uncomfortable as they innovate if they experience their leader doing the same. Teachers also believe that leaders who are willing to meet them where they are in the process of shifting from traditional to blended learning are leaders to try for and follow. Trust that the teacher will continue to grow, and that the leader will demonstrate patience, is possible when the leader also provides scaffolded support and feedback. As a result, a reciprocal partnership with trust and honesty increases momentum towards goals as perceived risks decrease.

The decisions that leaders make include their leadership aspects, influence reactions, and responses from teacher stakeholders. In the adoption or integration of blended learning, Arnett et al. (2018) reiterated, "Teachers are at the heart of all school improvement initiatives" (p. 23).

These shared implications might prove useful to diverse decision makers as a teaching tool to enhance the potential momentum of blended-learning goals.

Recommendations for Action

The six recommendations for action from this qualitative case study, which was intrinsically bound by a scope of leadership, are invitations to stakeholders. Decision makers about implementation of blended learning in the elementary school are invited to respond to the recommendations for actionable praxis, sharpening steps and the forward momentum of merging innovative technologies and modern pedagogy.

Lead Through the Challenge

Instead of turning blended learning into a managed school initiative, stakeholders should consider leading their district, school, or classroom by taking risks and "challenging the status quo" with "questioning, observing, networking, and experimenting" (Dyer et al., 2011, p. 25). Doing this with transparency and by modeling will help stakeholders recognize where others are innovators and how they affect the culture because everyone identifies his or her level of comfort on a spectrum of the blended-learning continuum. Leaders can embrace the potential of instruction moving from traditional to blended learning when they use transformational approaches that are inspirational, influential, innovative, and supportive with continuous learning opportunities. (Figures 10–11 and 13–14 provide specific details regarding what the aspects of transformational leadership look, feel, and sound like to teachers.)

Building a Culture of Learning

Leaders should consider creating adult learning opportunities for authentic observation of blended learning in elementary classrooms. Elementary school teachers desire opportunities to witness blended learning in the elementary classroom with students and share resources with

colleagues as they grow and learn together. Leaders might be more thoughtful of building a culture of learning with and from each other, through collaborative walks and the sharing of resources. Leaders should consider their message, while modeling, encouraging, and celebrating risk taking and failure. Relationships and trust are sovereign in the development of a growth mindset culture, especially when encountering something innovative.

Meaningful and Authentic Professional Development

Leaders wanting to build capacity of blended learning should carefully plan for and provide professional development that directly relates to the learners' everyday experience. Teachers recognize the broad and varied social, behavioral, and academic scale of K–6 students and they want professional learning that applies to the grade and age level that they teach, and they want it to be provided by teachers in the field. It is essential that professional development be for teachers by teachers. Professional development should be cyclical and provide teachers what they need to build capacity throughout the school year. When leaders provide these opportunities, they encourage a timely transfer of blended-learning development to classroom implementation.

Respect and Honor Time

Leaders might want to be more mindful and conscientious with teachers' time. Strategic decisions that affect teacher time include meaningful selections of professional development and other learning opportunities constructed from teacher wants and desires. Leaders should consider building relationships and asking teachers what they need and want. Listening to what teachers say, combined with observations of the elementary blended-learning landscape, helps leaders to plan professional development or book talks. Leaders might be more thoughtful to include

teachers as partners in the planning process. When leaders do this, they develop the culture and affect the momentum of blended learning in the school.

Decisions Are Influential

Leaders should consider that everyone has experience and opinions. School leaders, as decision makers, might directly influence how teachers perceive and respond to blended learning at the elementary school level. Leaders might be more mindful that it is essential to inspire and support stakeholders. Culture development and a culture of embraced change are responsibilities and rewards of school leaders (Agostini, 2013; Wolf et al., 2017).

Model Expectations

Leaders should consider structuring meetings to include blending adult learning in the elementary school. When leaders promote and model blended learning, teachers are encouraged to try blended learning in their classroom. When teachers can learn or meet in blended ways, they begin to recognize the way that they prefer to gain or process information. Teachers also realize that their learning time, place, path, or pace varies similarly to their students. Authentic experiences show teachers that their leader is also a risk taker, inspiring them to find their courage.

The six recommendations of actions represent the voice of the teacher, characteristic of the intense need for teachers to become central to the decision-making planning and processes of blended learning at the elementary school level. Leadership aspects are fundamental to school culture, and the potential of moving from traditional to blended learning is conceivable with transformational leadership that is inspirational, influential, innovative, and supportive with continuous learning opportunities. Although the qualitative case study research bound by a scope of leadership occurred in two public elementary schools within one school division with two

principals and eight teachers, the findings detail the leadership aspects that encourage teachers to leverage blended learning in their elementary school. Some teachers believed that they were intrinsically motivated to bring blended learning to their classroom, but all of them believed that their leader was influential.

These implications and recommendations are a teaching tool for decision-making leaders. As shared in Chapter 2, a transparent culture permits autonomy, and blended learning becomes an interdependent enterprise institutional goal (Boone, 2015; Horn & Staker, 2015; Richardson, 2010). Covey (1989) stated, “Interdependence is a choice only independent people can make” (p. 186). When leaders take the time to consider the research implications and follow the recommendations for action, they can assess the temperament of their school culture while working with stakeholders to find “public victory” (p. 203) of blended learning in the elementary school.

Recommendations for Further Study

Blended-learning research that is bound by a scope of leadership at the elementary school level is minimal, especially in public education. This limitation, combined with the limitations of this research, inspires the recommendation that researchers continue to study blended learning and leadership aspects at public elementary schools. Public elementary education is unique because, although the school mission, vision, and plan might identify a school initiative such as blended learning, public education was not founded or built on a blended-learning framework. This complexity increases the obligation for leaders to respond to stakeholders in public elementary schools, while they lead transformational educational outcomes such as blended learning.

Specifically, the researcher recommends that other researchers study a variety of public schools in many regions with diverse populations. The unique needs of the students might transcend the exceptional desires of the teachers. The voice of a teacher might be different in a rural or urban area or might allude to the exceptionality in teaching students of different economic, racial, or learning needs. Exploring and investigating the leadership aspects, which encourage teachers to leverage blended learning in a variety of schools, supports the personal and student-centered learning needs of every public elementary school student. These findings might help to develop leaders in schools, division or district leaders as they learn to understand the impact of initiatives, and the policymakers outside of the district without the understanding of what occurs every day after the morning bell rings in a public school.

Beyond studying blended learning in elementary schools, it is also recommended that educational programs in higher education be examined. It is recommended that researchers investigate higher education learning opportunities for preservice teachers as well as those in teacher leadership programs. If preservice teachers receive the possibility of learning in a blended way, and designing blended-learning experiences for practicum, they might transfer that ability to their teaching when they have become professionals with the potential of influencing others. Additionally, if aspiring principals learn to model blended learning in adult learning and collaborative opportunities, approach blended learning with transformational leadership, and study culture and change development, their leadership aspects, influence, and impact might be stronger when they have become school leaders.

This researcher also recommends that school districts or divisions replicate this research with schools whose teachers are engaged in blended learning. Doing this will highlight the way that leaders within the district or division encourage their teachers to leverage blended learning

in their schools. As a result, the district might align transformational leaders with leaders who require mentorship so that it can leverage district, blended-learning practices.

Conclusion

Blended learning in elementary schools is an experience of best practices and processes that are inclusive of choice to elicit agency with the integration of the four, blended-learning models—rotation, flex, a la carte, and enriched virtual (Akgunduz & Akinoglu, 2016; Horn & Staker, 2015; Tucker et al., 2017). As innovative technologies and modern pedagogy merge, leadership, teaching, and learning roles shift. These shifts add to the complexity of diverse student learning needs and commitments of stakeholders.

Notably, the top desires of education leaders include personalization, access, and cost control (Horn & Staker, 2015). These desires of education leaders might transform learning environments by increasing learning access, creating equitable learning opportunities. Policy, district, or school leaders might wish to rush and bring blended learning to the public elementary school level as an initiative, with plans and procedures; however, there is evidence that the potential of moving from traditional to blended learning is conceivable with transformational leadership that is inspirational, influential, innovative, and supportive with continuous learning opportunities.

From data analysis, the researcher found leadership, change, and stakeholdership to be central themes. These themes positioned the researcher to conceive the theoretical finding above. The theoretical finding corresponds with the four transformational leadership factors that Northouse (2016) identified, and the researcher has listed on the left with the themes on the right based on perceptions of teachers found within the research.

- Intellectual stimulation—Learning

- Inspirational motivation—Inspiration
- Idealized influence – Influence
- Individualized consideration—Support and innovation

Wolf et al. (2017) stated, "Leadership is considered second only to classroom instruction as an influence on student learning" (p. 6). Arnett et al. (2018) wrote, "Teachers are at the heart of all school improvement initiatives" (p. 23). Together, it is inferred that leadership is influential, and that influence (transformational or otherwise) might dictate the pace of whether and how teachers leverage blended learning in their classrooms, regardless of organizational goals.

This researcher believes that the reader determines the importance of this research. Wheatley (2006) described the journey for transformation best, stating, "Organizations with integrity have truly learned that there is no choice but to walk their talk. Their values are truthful representations of how they want to conduct themselves, and everyone feels deeply accountable to them" (p. 129). By following the implications and considering the recommendations with honest intentions, the reader might shift his or her leadership practices to respond to the voice of the teacher versus the urgency of his or her leader-determined initiatives. As Fullan (2001) phrased it, "Pacesetters must learn the difference between competing in a change marathon and developing the capacity and commitment to solve complex problems" (p. 37). If the reader replicates or expands the scope of the research, teachers will continue to be heard.

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APPENDIX A

EMAIL TO POTENTIAL PARTICIPANTS

Dear (insert name),

My name is Carrie Pratt, and I am a doctoral student at the University of New England, studying Educational Leadership with a focus on transformative leadership. My doctoral study of leadership in the elementary school engaged in blended learning, studies the leadership aspects, characteristics, and traits of principal leaders. Principal leaders act as decision-makers or directly influence the decisions that teachers make in how they leverage blended learning in the elementary school.

Therefore, I will be conducting interviews of teachers who have 2 or more years of retention at the school site, involved in blended learning, for my data collection to capture teacher perceptions of principal leadership aspects, characteristics, and traits. Also, I will collect documents from the principal leader. The documents, prior and current year School Plan, School Technology Plan, District Technology Plan, any prior and current professional learning, professional development (PD), or professional learning network (PLN) resources involving blended learning are voluntarily provided by the principal leader, with all personal or identifiable information redacted by the principal (if he desires) from the documents.

You are selected as a potential participant in my research, and I would like to invite you to interview voluntarily, a process that should take no more than one hour. To maintain your privacy and confidentiality as a participant, you will receive an informed consent agreement. Please note that your participation may be withdrawn at any time, and the information you provide will be held in confidence and securely maintained.

If you would like to participate in the study, please email your interest to [redacted] or call [redacted] and provide your name and the best contact phone number. After I receive your interest in potential participation, I will connect with you to review the informed consent form. I appreciate your consideration to participate in my study and further research on blended learning.

Carrie Pratt

Doctoral Candidate

University of New England

APPENDIX B

QUALITATIVE INFORMED CONSENT

Project Title: Blended Learning in Elementary Schools: An Interdependent Enterprise

Principal Investigator: Carrie J. Pratt

Introduction

- Please read this form. You may also request that the form is read to you. The purpose of this form is to give you information about this research study, and if you choose to participate, document your choice.
- You are encouraged to ask any questions that you may have about this study, now, during or after the project is complete. You can take as much time as you need to decide whether or not you want to participate. Your participation is voluntary.

Background and Purpose

Why is this research study being done?

Carrie Pratt, an Educational Leadership doctoral candidate at the University of New England, is conducting qualitative case study research of leadership aspects, characteristics, and traits in the public elementary school, as perceived by teachers, that they find helpful to leverage blended learning in their classroom. I appreciate your volunteerism to participate in my research, for the information may help other leaders learn of or understand how decisions and supportive measures directly affects blended learning in the classroom.

Who will be in this study?

You are being asked to participate in this study because you are a teacher with at least two years of retention in the site selected blended learning public elementary school setting *or*

you are the principal leader who makes decisions and leads a group of teachers in a public elementary blended learning environment.

Procedures and Length

What will I be asked to do?

After reading this informed consent and agree to participate in this research voluntarily, the following procedure will occur:

- You will be asked to sign the Qualitative Informed Consent form, signifying your volunteerism to participate in this research.
- Data:
- If a teacher participant, you will be asked to identify a date and time for the interview. The interview will take approximately one hour and can occur in a private location agreed to by the interviewee or interviewer, on the phone, or online. This interview will be recorded for transcription.
- If a principal leader participant, you will be asked to provide, and redact if you desire, documents if the researcher is unable to retrieve them through online opensource portals. Documents to be used as data are the School Plan, School Technology Plan, District Technology Plan, any prior and current professional learning, professional development (PD), or professional learning network (PLN) resources involving blended learning. The researcher will directly request the items not obtained through online open-source portals.
- After the study, you will be emailed by the researcher. The researcher will ask you to respond via email to confirm the interview data collected and provide the best email address to receive the payment gift card.

Risks

What are the possible risks of taking part in this study?

How will my privacy be protected?

- Teacher Participants: Throughout the interview, you may encounter a question that makes you uncomfortable. You are free to decline to answer any question or withdraw your voluntary participation in the study at any time. As a teacher participant to be interviewed, your rights to research privacy and confidentiality are protected, and safeguards such as pseudonym use and the extraction of any extraneous, individually identifying characteristics will occur.
- Principal Participants: If you are a school-based principal providing school or district document data, your rights to research privacy and confidentiality are also protected. If you desire, pseudonym use and the extraction of any extraneous, individually identifying characteristics of yourself, the school, and the district will occur upon selection at the end of this informed consent. You may change your consent or denial at any time throughout the process of research data collection and before confirmation.

Security

How will my data be kept confidential?

Communications, recorded interviews, and school and district documents will be converted to electronic files, with any hard or paper copies destroyed with a crosscut shredder. Ink signed consent forms will be secured in a password protected safe, and all electric files will be secured on a password-protected device.

Benefits

What are the possible benefits of taking part in this study?

The information you provide may help policymakers, district leaders, and school-based administrators learn how their leadership aspects, traits, and characteristics directly influence how you leverage blended learning in your teaching and learning environment. Leaders, learning from teacher perceptions, can change how leadership decisions are made in the public elementary school to support teachers in an innovative learning environment.

Payments

What will it cost me?

Participating in this research will not cost you anything.

Rights

What are my rights as a research participant?

- Your participation is voluntary. Your decision to participate will have no impact on your current or future relations with the University of New England.
- Your decision to participate will not affect your relationship with the researcher or your employer.
- You may skip or refuse to answer any question for any reason.
- If you choose not to participate, there is no penalty to you and you will not lose any benefits that you are otherwise entitled to receive.
- You are free to withdraw from this research study at any time, for any reason.
- If you choose to withdraw from the research, there will be no penalty to you, and you will not lose any benefits that you are otherwise entitled to receive.

- You will be informed of any significant findings developed during the course of the research that my affect your willingness to participate in the research.
- If you sustain an injury while participating in this study, your participation may be ended.

Options

What other options do I have?

You may choose not to participate.

Questions

Whom may I contact with questions?

- If you have questions about your voluntary participation in the study or believe you may have suffered a research-related injury, please contact Carrie Pratt at [redacted] or via phone at [redacted].
- If you do not wish to contact the primary investigator, please contact Dr. William Boozang, the lead research advisor at the University of New England, at [redacted].
- If you have any questions or concerns about your rights as a research subject, you may call Olgun Guvench, M.D. Ph.D., the chair of the UNE Institutional Review Board at [redacted] or [redacted].

Consent

Will I receive a copy of this consent form?

You will be provided with a copy of this signed informed consent. Your participation in this research is voluntary and may be withdrawn at any time. To withdraw, please email Carrie Pratt at [redacted] with the Subject Line: WITHDRAW FROM RESEARCH

PARTICIPATION before responding to the confirmation email. This research study has been approved by the University of New England Institutional Review Board on July 24, 2018, IRB# 18.07.15-014, Status: Exempt, 45 CFR 46.101(b)(2), with an approved addendum on October 17, 2018 and has been approved by the (insert school district) on (insert date).

Participant's Statement: *I understand the above description of this research and the risks and benefits associated with my participation as a research participant. I agree to take part in the research and do so voluntarily.*

_____	_____
Signature of research study participant Legally authorized representative	Date (Month, Day, Year)
_____	_____
Printed first and last name of research study participant	Role (Teacher or Principal)

Teacher Participants Only: *I give my informed consent for the interview to be audio taped (if interviewing online) in this study:*

_____	_____
Signature of research study teacher participant	Date (Month, Day, Year)

Teacher Participants Only: *I give my informed consent for direct quotes from the interview to be used in the research study and I understand that no personally identifiable information or characteristics will be used in the research study report*:

_____	_____
Signature of research study teacher participant	Date (Month, Day, Year)

Principal Leader Participants Only: *I give my informed consent for the collection of the listed documents (School Plan, School Technology Plan, District Technology Plan, any prior and current professional learning, professional development [PD], or professional learning network [PLN] resources) involving blended learning by the researcher as I provide them or are available through open-source portals.*

_____ _____
Signature of research principal leader study participant Date (Month, Day, Year)

Principal Leader Participants Only: Initial one selection, and sign and date below.

_____ ***I do*** *require a pseudonym for myself, school site, and the name of my school district in the research study report, furthermore, I consent to this study.*

_____ _____
Signature of research principal leader study participant Date (Month, Day, Year)

Researcher's Statement: ***The participant named above had sufficient time to consider the information, had an opportunity to ask questions, and voluntarily agreed to be in this study*****.**

_____ _____
Carrie J. Pratt, Signature of Researcher Date

APPENDIX C

QUALITATIVE INTERVIEW RESEARCH PROTOCOL

Verbatim Interview Instructions

Hello. Thank you so much for taking the time with sharing your perceptions with me today. You are a teacher with at least 2 years of retention at the public elementary school site engaged in blended learning, and you have signed the informed consent. Today, I will be recording the interview for transcription. Please know that this interview process will take less than one hour, and you have the right to withdraw participation or refuse to answer any question that I ask. Do you understand? Do you have any questions about the interview process, about your rights as a participant, or about the research focus before we begin?

Interview Specific Definitions

The word *aspects* within the interview question(s) refer to the leadership aspects or characteristics and traits of the leader. More specifically, when describing leadership aspects, please think of the "appearance to the eye or mind" ("Aspect," n.d.). The phrase *blended learning* describes varied student control where there is online and face-to-face learning, with an intentional curriculum learning focus with dynamic instruction. Horn and Staker (2015) identify the main ways of delivering blended learning; rotation, flex, a la carte, and enriched virtual, but reminds us that those models can still be individualized based on the teacher, learner, resources, or accessibility (Akgunduz & Akinoglu, 2016).

Central Phenomenon and Research Question

RQ: What leadership aspects encourage teachers to leverage blended learning in elementary schools?

Research Subquestions

SQ1: In what ways, if any, are blended-learning supports helpful?

SQ2: How do helpful, blended-learning, supportive measures engage teachers to become integral stakeholders?

Interview Questions

- As you think about the leader aspects your principal projects, what characteristics or traits do you perceive as encouraging? (RQ)
- You explained the encouraging aspects of your principal leader. Please elaborate, and share how those leader aspects are helpful during change, specifically thinking about the change you encountered from a traditional to a blended-learning environment? (RQ)
- Throughout the shift from traditional to blended learning, what type of supports have you received by your principal leader as the decision maker in the school? (SQ2)
- How are the blended-learning, leadership supports helpful to you as a teacher? (SQ1)
- Can you name and describe additional helpful supports that have been previously mentioned or entertained and then abandoned by your principal (SQ1)?
- Do you know why those helpful supports were not implemented or were abandoned? (SQ1)
- Can you name and describe additional helpful supports that can help you leverage blended learning in your classroom, beyond what you are currently experiencing? (SQ2)
- In what ways do you use the blended-learning, leadership supports in your classroom? (SQ1)

- What has happened to consider you as an integral stakeholder of blended learning in the elementary school classroom? (SQ2)
- Can you describe the blended-learning culture at your public elementary school? (SQ2)

Verbatim Interview Closure

Thank you for taking the time to share your perceptions. After I analyze the data, I will email you. This email will contain the interview data and will ask you to respond via email, confirm the interview data collected, and provide the best email address to receive the payment gift card. I look forward to how your perceptions of leadership aspects may forward research on blended learning.