Journal of Online Learning Research (2017) **3**(2), 105-143

Supporting School Leaders in Blended Learning with Blended Learning

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This study provides a mixed-methods case-study design evaluation of the Leadership in Blended Learning (LBL) program. The LBL program uses blended approaches, including face-to-face and online, to prepare school leaders to implement blended learning initiatives in their schools. This evaluation found that the program designers effectively implemented all four models of blended learning as part of the program. The evaluation findings also suggest that the Leadership in Blended Learning program improved participants' capacity to effectively lead blended learning initiatives in their school, district, or organization. Participants reported that sessions were especially effective in deepening their

understanding of planning for and using technology to support professional learning; the role and responsibilities of leadership; definitions, models, and key planning components of blended learning; and traditional vs. new instructional models. Finally, the findings suggest that LBL was largely successful in helping educators apply their learning within their profession settings. Among those who completed the End-of-Program survey, roughly 9 out of 10 participants (88%) indicated that they had made changes in their school or professional practice. When asked if they had applied their learning to support changes the program was designed to address, the majority of participants (57% - 83%) again responded positively. The findings from this paper suggest that using a blended approach can help scale high quality professional development for principals.

SUPPORTING SCHOOL LEADERS IN BLENDED LEARNING WITH BLENDED LEARNING

As access to technology has increased, so too has its use in classrooms across the United States. The average number of computers per school increased from 72 in 1995 to 164 in 2008 (U.S Department of Education, 2010). And teachers are using it. In a survey of Advanced Placement and National Writing Project teachers, 76% reported that they use technology to share, collect, and grade assignments online (Purcell, Heaps, & Buchanan, 2013). While many students articulate that they enjoy learning on their personal devices, schools struggle to integrate technology to maximize its capacity in support of instructional goals.

Some have leveraged the expansion of technology in education to build online classes, online training programs, and even online schools. Much more common is for educators to use blended models that include face-to-face and online learning. Regardless of how technology is used, leaders emphasize its importance. More than 90% of school and district administrators say that technology is important for achieving their school or district's mission or goals for preparing students (Project Tomorrow, 2015).

While teachers indicate that they are receiving some training on how to use technology in their classrooms, the role of the principal in the transition to digital and blended learning is often ignored or under-utilized; and principals receive minimal professional development. A 2014 report showed that only 9% of federal allocations for educator training programs go to principals and studies show the professional development opportunities for principals are often one-time workshops that use largely ineffective methods for instruction (School Leaders Network, 2014; Prothero, 2015). This paper

articulates the need for principal training on implementing blended learning and uses the Leadership in Blended Learning (LBL) program as a case study for this type of professional learning. The LBL program provides a scalable, blended approach to principal professional development and evidence shows there is much potential for leveraging such approaches.

Research Purpose

This is an evaluation of the pilot of the Leadership in Blended Learning (LBL) program as implemented by the Friday Institute for Educational Innovation at North Carolina State University. The program uses a blended learning approach to prepare principals for implementation of blended learning in their schools. To date, this is the largest scale program of this type. Further, the use of blended learning models to model for and educate principals about blended learning is new and innovative.

The purpose of this research is to better understand the effectiveness of this blended professional development in two ways. First, the evaluation focuses on the degree to which the program leveraged a blended approach. Second, the evaluation seeks to better understand the impact of the LBL program on principals' knowledge, skills, and application to practice.

BACKGROUND

What is Blended Learning?

Researchers have defined blended learning as any instruction that combines classroom learning with online learning (Friesen, 2012; Tucker, 2013). Graham (2006) describes blended learning as models "that combine face-to-face instruction with computer mediated instruction" (p. 9). Horn and Staker (2011) articulate that "blended learning is any time a student learns at least in part at a supervised brick-and-mortar location away from home and at least in part through online delivery with some element of student control over time, place, path, and/or pace" (p. 3). This definition reflects the extensive work the Christensen Institute has done related to blended learning.

The Friday Institute developed and used the following definition of blended learning in the LBL program: "Blended learning is a personalized learning environment which incorporates digital tools and includes (1) some learning that is online or through digital media; (2) some elements of learner control over time, pace, path and/or place; and (3) an integrated learning experience connecting the different modalities."

Why Blend?

As described above, leaders across all fields have started using blended learning models for training, education, and team management. Not only are more people reporting they learn online, but researchers have found that blended learning improves pedagogy, increases flexibility, and is more cost effective.

Improve pedagogy

Many studies have found that use of blended learning approaches has increased the presence of active learning strategies, expanded the number of peer-to-peer activities, and the use of learner-centered strategies (Collis, 2003; Graham, 2006; Morgan, 2002; Smelser, 2002).

Increased access & flexibility

For classroom teachers, blended learning allows learners to engage in learning activities wherever and whenever it is convenient to them. It provides the learner with new ways for interacting with content and allows teachers to more flexibly personalize learning for all students. This same flexibility allows trainers to redefine adult learning, thus giving the trainers the ability to offer choices in terms of pace and learning modality while still convening the group of learners to engage in more social learning activities. As Bonk and Graham explain, "Many learners want the convenience offered by a distributed environment, and, at the same time, do not want to sacrifice the social interaction and human touch they are used to in a F2F classroom" (p.9).

Increased cost effectiveness

Blended learning models allow educators or organizations to provide online content to many learners around the world for a very low marginal cost. Further, by leveraging the online component as the backbone of the learning experience, organizations can provide fewer costly face-to-face learning sessions to more groups.

Institutes of Higher Education and private sector companies started adopting blended learning earlier than elementary and secondary schools primarily because of these reasons. While blended learning is being leveraged for students, it has not been widely adopted for teacher and administrator training. However, early evaluations of emerging programs show promise among small groups of educators, particularly those in STEM fields (Owston, Sinclair, & Wideman, 2008).

Models of Blended Learning

Educators can implement blended learning in many ways. The Christensen Institute has categorized the various implementations of blended learning into four models: rotation model, flex model, a la carte model, and enriched virtual model. While there are various cataloging schemes for types of blended learning, this one is frequently used and regarded in blended learning research. Further, this best matches the models used and explained in the LBL program. Figure 1 demonstrates the types of blended learning as explained by the Christensen Institute.

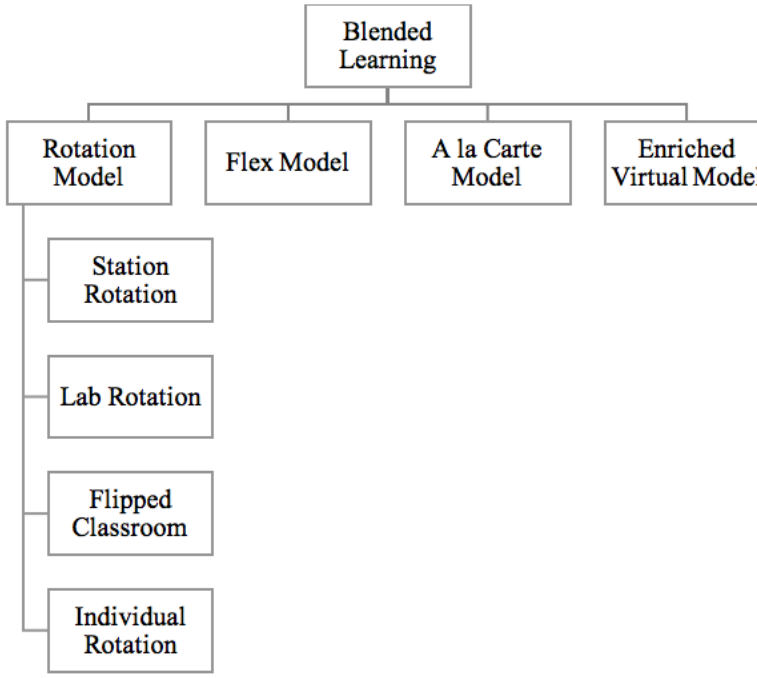

Figure 1. Blended Learning Models.

Rotation model

In a rotation model, a teacher rotates students between an online and some form of face-to-face learning in some fixed way. Face-to-face instruction might be whole class, in a small-group, part of a group project, or on an individual basis. In general, learning takes place in the school building

(aside from homework). There are four types of rotation models typically discussed: station rotation, lab rotation, flipped classroom, and individual rotation. A classroom that uses station rotation will have a set number of stations where at least one is a face-to-face teacher station and at least one is an online station and students will rotate through all of them. The lab rotation model is one where students rotate from a classroom to a computer lab within the school. A flipped classroom is one in which students engage in learning off-site prior to attending class and the activities and practice take place in the classroom. In a flipped classroom, students are introduced to new content primarily at home or off-site, online. In an individual rotation model, the teacher sets up a variety of learning activities (at least one is a face-to-face instruction station and at least one is an online learning station) and students are given an individualized "playlist" that dictates to the student where to go. Ideally the playlists are built on student needs and learning preferences.

Flex model

In a flex model, student learning takes place primarily online. As such, students move through the online content according to their own needs and understanding. Students take the course while in school and teachers provide support as-needed to individuals or small-groups.

A la carte model

In an a la carte model, students take a course online that compliments what they are learning in their brick-and-mortar school. Students can take the course either at school or at home. The primary difference is that the teacher of record is the online teacher rather than the teacher in the brick-and-mortar school.

Enriched virtual model

In an enriched virtual model, students attend one or more required face-to-face meetings and then complete the remainder of the coursework online, at their own pace. The majority of learning takes place online with only a few supporting face-to-face experiences (Christensen Institute, 2016).

Many of these approaches must be implemented at the school level rather than the individual classroom level. Thus, leadership from a school administrator is an important factor in implementing blended learning programs.

The Need for Principal Training

Research consistently indicates the importance of school leadership in improving student learning and outcomes.

> There seems little doubt that both district and school leadership provides a critical bridge between most educational reform initiatives and their consequences for students. Of all the factors that contribute to what students learn at school, present evidence led us to the conclusion that leadership is second in strength only to classroom instruction. Furthermore, effective leadership has the greatest impact in those circumstances… in which it is most needed. (Leithwood, Seashore Louis, Anderson, & Wahlstrom, 2004, p. 12)

Recent studies emphasize the many struggles of recruiting and retaining highly effective principals. Rand Corporation, in the study of principals in the first year across several urban school districts, found that over 20 percent of principals left within the first two years. This is critical because many schools that lost the principal after a year experienced declines in student achievement in the subsequent year (Burkhauser, Gates, Hamilton, & Schuyler Ikemoto, 2012). While working conditions and teacher capacity varied by schools, the study also found that "… the most common challenge was gaining teacher buy-in for the direction and strategies that the principal wanted to implement to improve the school. This was particularly difficult for principals placed in schools with large numbers of veteran teachers and/or in schools where there was not an existing sense of urgency" (Burkhauser et al., 2017, p. 37).

While understanding the importance of leadership and even the challenges of leading a school, many states and districts struggle to identify and provide the support and professional learning opportunities that principals need to maximize their potential of success. The Fordham Foundation recently reviewed the hiring practices for principals and found that "… better hiring practices alone are only part of the solution. Districts must also reimagine the principal's role so that it is a job that talented leaders want and are equipped to execute successfully" (Fordham Foundation, 2014). The Rand Corporation (2012) study found that the role must include an emphasis on managing human capital as a critical component to improving student achievement. Additional research on the principal's role in instructional and educational programs found that "… time spent on teacher coaching, evaluation, and developing the school's educational program predict positive achievement gains" (Grissom, Loeb, & Master, 2013).

A recent report by the National Association of Secondary School Principals (NASSP) and the National Association of Elementary School Principals (NAESP) highlights the fact that pre-service and in-service training and support are essential for principals. Drawing upon several different research efforts, they recommend professional development for principals that

is job-embedded; involves coaching; includes a cohort-based approach; and ensures protected time for principal development (NASSP, NAESP, 2013). Unfortunately, many states, districts, and other organizations working to improve schools do not have the capacity to develop and implement effective professional learning opportunities for principals that meet these recommendations.

Traditionally, K-12 professional development has been comprised of a few days per year when educators are released from their teaching or administrative responsibilities to attend "sit and listen" workshops. While these sessions may increase awareness of changing expectations, they rarely lead to changes in educational practices or improvements in student achievement (Darling-Hammond & Richardson, 2009; Joyce & Showers, 2002). Though the need for large scale professional development is clear and the principles of effective programs well established, the resources available to meet this critical need are limited and have been declining in many states and districts. New approaches that embody the principles of effective professional development and are scalable, accessible, and flexible to meet the needs of different educators are required.

The need for training is particularly salient as principals begin leading digital learning initiatives in their schools. This is because the transition to digital and blended learning represents an evolution in the role of principals as well as a shift in the school's organization, teachers' roles, and resource planning. There is anecdotal evidence that suggests the importance of a school leadership planning team in navigating this transition that includes the principal, teacher leaders, instructional coaches, librarians, and others (Martin & Roberts, 2015; Stavem, 2015).

The Leadership in Blended Learning Program

The Leadership in Blended Learning Program was developed by the Friday Institute for Educational Innovation at NC State University in partnership with The Learning Accelerator and the North Carolina Principals & Assistant Principals' Association (NCPAPA). It builds on the idea that a) principals need access to high quality training and b) that this need is particularly pronounced in the transition to blended learning. Principals must make a variety of decisions to support such efforts in their schools related to device selection, changes in curriculum, budget, and professional development for teachers. They must have a clear, articulate vision guiding each of these decisions. However, too often principals are told to integrate devices or technology without training or time to plan. LBL seeks to address this gap, ultimately driving towards a shared vision and plan for implementation of blended learning at the school level.

At its core the LBL program is a capacity building program. The Friday Institute for Educational Innovation partners with school districts, regional education service centers, state education agencies, or other educational organizations. The partner organizations identify facilitators to attend an intensive training face-to-face at the Friday Institute, get access to the LBL curriculum, and receive ongoing support virtually in order to lead the face-to-face and online activities with their local principal groups.

Goals for Principals

As participants engage in strategically designed, job-embedded activities in the Leadership Blended Learning program, they build their capacity as school leaders to:

- Develop a shared vision for the attributes of a next generation school.
- Develop and implement a plan for transforming the teaching and learning system by instituting structures for the highest quality personalized, competency-based instruction for every learner's needs.
- Create a collaborative school culture of academic excellence that fosters teacher and student intrinsic motivation, responsibility for learning, and leadership.
- Lead an engaging, application and problem-based learning environment that supports creativity, critical thinking, and problem solving.
- Develop teachers' capacity for making optimum use of technologies, digital resources, and data systems to create personalized, competency-based, flexible learning environments where all students succeed in meeting rigorous academic standards.
- Build community support for new approaches to teaching and learning and fully access external expertise and resources in the private sector.
- Use proven approaches for leading and managing the necessary changes specific to this work.

Program Curriculum and Format

The LBL curriculum is implemented with a cohort of principals over the course of a school year. The curriculum resources contain detailed guidance for the facilitators, who lead the program, as described below. The curriculum includes recommendations for adding specific local and state context into the content. While the program is designed primarily for principals, the superintendent, central office support team, and school leadership team of each principal could participate in portions of the program to further strengthen local support for the success of the school initiatives. The online platform supports interaction across cohorts to encourage collaboration and learning from one another despite geographic differences.

The curriculum has five sessions that follow a blended learning format. For each session principals complete online pre-work, engage in a one-day, face-to-face session, and then participate in online follow-up with job-embedded activities. Over the course of the five sessions, principals build a *Road Map* (a supportive tool for action planning) for blended learning. Each session is designed to take roughly 4-6 weeks, though organizations schedule according to local needs. The sessions are organized by the following five topics:

- **Session 1: What is blended learning and what does it mean in my school?** This session provides an overview to blended learning, explores various blended learning models, and addresses the role of the school principal in leading the transition to blended learning. Participants discuss their goals for blended learning and identify the opportunities and leadership challenges they face in transitioning to blended learning.
- **Session 2: How do I create a culture which supports blended learning?** This session explores the important culture shifts for all stakeholders involved in a blended learning transition, with a focus on understanding what's different about student-centered teaching and learning in a blended environment, and exploring how the experiences of the students, teachers, administrators and other members of the school community will shift and be evaluated. The session focuses on the role of the school leader to foster a thoughtful, inclusive, collaborative change process with a growth mindset that recognizes the complexity of a blended learning transition.
- **Session 3: How does teaching and learning change with blended learning?** Blended learning facilitates important shifts in teaching and learning as schools move to a more student-centered, personalized approach. This session provides school leaders with an understanding of key changes in curriculum and instruction in a blended environment such as: new opportunities for personalization and for addressing learning differences; powerful applications of project-based learning and game based learning with technology; options for and affordances of digital curriculum and connected learning; and important new options for the use of student learning time.
- **Session 4: How do I support teachers in a blended learning environment?** This session provides school leaders with an overview of the characteristics and qualities of an effective blended learning educator along with key thought frameworks, professional development models and evaluation options available to support teacher success in implementation. This session focuses on blended learning professional development planning dimensions — who, how and what — that school leaders should consider as they prepare their staff to make dynamic, pervasive and sustained changes in the nature of their teaching and learning.

- **Session 5: How do I address the nuts and bolts of implementing and sustaining blended learning in my school?** Blended learning requires systematic changes in schools, as discussed in each of the prior sessions. This session will focus on the nuts and bolts of shifting to a blended model including issues of devices, infrastructure, use of space, communication with stakeholders, and sustaining programs. Participants will complete and share their blended learning plans with each other and prepare to implement their plans in their schools.

The topics of these sessions were informed by the North Carolina Distinguished Leaders in Practice – Digital Learning (DLP-DL) program facilitated by the Friday Institute and NCPAPA. The LBL program and curriculum builds off of the initial success of DLP-DL and seeks to add consistency, structure, and scalability to the program.

The Leadership in Blended Learning Pilot

The LBL program initially launched with six pilot organizations that were selected through a rigorous application process. The pilot sites were distributed geographically across the United States, but they were comprised of organizations that demonstrated either a minimal level of readiness or an infrastructure to support this new program. Some were already several years into their blended learning initiative, while others had not yet started. The pilots included 37 facilitators and 270 participants. The specific breakdown is in Table 1.

Table 1
LBL Program Enrollment by Pilot Organization

Organization Name	Location	# of Participants
Fulton County Schools	Atlanta, GA	19
Greeley-Evans School District 6	Greeley, CO	49
LEAP Innovations	Chicago, IL	35
Mentor Public Schools	Mentor, OH	19
Ohio Blended Learning Network - Central	Columbus, OH	38
Ohio Blended Learning Network - Southwest	Cincinnati, OH	30
Rhode Island Association of School Principals	Statewide, RI	39
Oakland Unified School District & Rogers Family Foundation	Oakland, CA	41

RESEARCH METHODS, QUESTIONS, AND THEORY

This report compiles preliminary findings from the Leadership in Blended Learning pilot. The questions guiding this study are:

1. How does the LBL program integrate blended learning approaches?
2. Does the LBL program effectively change principals' knowledge and skill?
3. What impact on practice does the LBL program demonstrate?

We use two data sources to address these questions. To address question one we examine the curriculum itself in order to identify which models of blended learning are used in the program. Second, we use end of unit and end of course surveys completed by participants to better understand the effectiveness of the program and impact on principal practice. This survey was completed by principals either face-to-face at the end of the day-long training session or as part of the online follow-up for each session.

Survey Instrument

The survey was developed by an evaluation team that was separate from the program development team. It is a self-report survey with both Likert scale and open ended questions completed by participants following each session and the completion of the program. While this particular survey was not validated, it was based on two previously validated surveys. The first was developed and validated for another grant at the Friday Institute and the second was developed by the Learning Accelerator. Contributing to the validity of the survey is the design process for the survey. Questions were designed around program session goals. For example, one goal in session two is that participants "will gain a deeper understanding of what school culture is." The corresponding survey question is "how effective was Session 2 in deepening your understanding of… the elements of a supportive school culture?" In the analysis we use means from the quantitative questions and coded qualitative responses to understand findings. The survey questions are available in Appendix A and Appendix B.

Data Analysis

This evaluation uses a mixed-methods embedded case-study evaluation design (Creswell & Clark, 2010; Yauch & Steudel, 2003). In this approach, qualitative data is used to better understand the quantitative survey findings, allowing researchers to have a better understanding of the relationships studied. This study design can "increase the interpretability, meaningfulness and validity of the constructs and inquiry results by both capitalizing on inherent method strengths and counteracting inherent biases in methods or other sources" (David & Sutton, 2011, p.296).

Evaluators collected and analyzed qualitative and quantitative data for this study. Members of the team largely used means and subgroup analyses for the quantitative survey approaches. The team reviewed observation notes and interview transcripts independently. Researchers applied codes representing the "conceptual labels" of each paragraph or data cluster (Corbin & Strauss, 1990) and developed codes identifying patterns within the data. In line with the consensual qualitative research model, the team discussed and compared the relationships among codes, the conditions that gave rise to certain concepts, and combined similar codes/concepts into broader patterns or themes (Hill, Knox, Thompson, Williams, Hess & Ladany, 2005). Team members continued this process, returning to the data and applying codes and conceptual labels to certain phenomena, either using existing codes or creating new codes. Finally, the evaluators met throughout the academic year to share findings, which resulted in the development of higher level categories or themes that draw together several related codes or concepts (Corbin & Strauss, 1990; Creswell, 2007; Patton, 2002). This process followed the standards of qualitative evaluation (Patton, 2002; Schwandt, 2008). This type of cooperative relationship also created an overall better understanding of the data and can lead to more valid conclusions(Creswell, 2007).

FINDINGS

The findings are organized by the three research questions below.

How does LBL integrate blended learning approaches?

As described previously, there are four models of blended learning according to the Christensen Institute: Flex Model, Rotation Model, A la Carte, and Enriched Virtual Model. The LBL program is structured as an enriched virtual model that uses some rotation, flex, and flipped models to support learning in various activities.

The LBL program is structured as an enriched virtual model; participants are required to come together face-to-face once per session and are given online coursework to be completed virtually before and after the face-to-face session.

Each session of LBL has a flipped component that starts each face-to-face session, called "Making Our Thinking Visible." The Making Our Thinking Visible portion asks participants to recall the independent online activities and use them in a face-to-face guided activity. Specifically, in session one facilitators use the following activity:

> Based on the pre-work, participants will individually describe: 1) What is one thing you've learned? 2) What is one thing you were surprised about? and 3) What is one question you have? Participants will then read the group's responses and note the two that resonate the most with them in each of the three categories. As a group, discuss the top two responses in each of the three categories in order to 1) get your participants thinking about blended learning and 2) develop a common understanding of blended learning and questions to pursue through the program" (LBL facilitator guide, session 1).

Participants have to have completed the online component prior to attending in order to engage in this activity. Further, the results from this activity inform future activities and help the facilitator personalize the learning experience based on what participants want to know more about and to build a shared understanding after independent, online learning.

In session 3 of the LBL program, the program developers use a station rotation model to support participant understanding of how blended learning changes teaching and learning. In this case, the principals rotate among five stations within the learning space. As the facilitator guide describes:

> Participants will have a chance to rotate through several stations to experience various types of digital content and tools. Participant will complete the Experiencing Digital Content and Tools Protocol & Checklist as they move along the stations. Finally, participants create a digital poster that highlights their "take-aways" they want to share (e.g. email, post on school website, etc.) with staff back home. This activity will use a rotational model to expose the principals to a range of digital content and tools. These will include: *Open Education Resources (OER), Teacher and Student Content Materials & Resources; Licensed or Subscription Content; Digital Learning & Assessment Tools* (LBL Session 3 Facilitator Guide).

The five stations have online instructional activities set up by the facilitator who circulates for support as needed. This particular activity goes further with its use of a "digital poster" to share take-away lessons, which further encapsulates the commitment to modeling blended learning for principals. Participants share their posters in the face-to-face environment, get peer feedback, and then share their links to the digital posters in the online forum so that they might be referenced in the future. Rotation models appear a number of times in the LBL program including sessions 3, 4, and 5.

Session 5 includes a flex model. In session five, one of the facilitator options for implementation is to allow principals to engage in the "nuts and bolts" areas that are of most interest to them (a type of individual rotation model). Principals engage in online learning around the area they've identified as being most relevant to their needs and the facilitator provides guidance and input as needed. The online activities are the core of the learning for the principals and the facilitators provides support on a flexible, as-needed basis. However, the added layer of self-selected "stations" (online) where principals can select one or more areas to learn about makes this a unique implementation of the individual rotation and flex model.

To compliment the blended program, participating organizations and principals were also encouraged to enroll in the Digital Learning Transition Massive Open Online Course for Educators (MOOC-Ed). While the MOOC-Ed was tangential and not required, it provided participants with an A la Carte Model to further their blended learning. A la Carte Models are models that have an online learning experience that supplements or compliments the learning happening in the brick-and-mortar learning environment. A self-directed MOOC-Ed with parallel, supporting content meets these criteria.

The LBL program effectively leverages three of the four models, directly, as described by the Christensen Institute. Additionally, the availability of the Digital Learning Transition MOOC-Ed provides participants with an A la Carte option, although the degree to which participants participate in this option is unclear. The program is structured as an Enriched Virtual Model, and the activities draw on various Rotation and Flex models. Thus, LBL incorporates blended learning models to enrich principals' understanding of what blended learning is and to provide them with the necessary knowledge, skills, and dispositions to be able to best support the transition to blended learning in their schools.

How effective is the LBL program?

The evaluation findings suggest that, as a whole, the Leadership in Blended Learning program improved participants' capacity to effectively lead blended learning initiatives in their school, district, or organization. Participants reported that sessions were especially effective in deepening their understanding of planning for and using technology to support professional learning; the role and responsibilities of leadership; definitions, models, and key planning components of blended learning; and traditional vs. new instructional models. The vast majority of those surveyed also reported a variety of ways in which they applied their learning and range from simply developing and understanding of communicating findings to implementing school level changes that directly impacted teachers and students.

While data was scarce on the impact of these reported changes in the school or professional practice, participants reported they were successful in creating interest in and value of digital learning among their teachers, with many developing a shared language around blended.

In addition, participants commented on how their awareness led to clarified vision for their schools and for the possibilities of 21st century learning for their students, enhanced their capacity to communicate and justify blended approaches to stakeholders, and better understand how to move forward with the implementation process post LBL.

Session Effectiveness

At the end of each session, participants were asked how effective the session was in deepening their understanding of 4-7 topics addressed. As a whole, the participants responded very positively across all sessions, with the percent of participants who felt sessions were "effective" or "very effective" ranging between 76% and 86% (Figure 2, following page). Specifically, participant responses indicate that sessions were especially effective in deepening their understanding of the following topics: definitions, models, and key planning components of blended learning (Session 1); the role and responsibilities of leadership (Session 2); and traditional vs. new instructional models (Session 3); and planning for and using technology to support professional learning (Session 4).

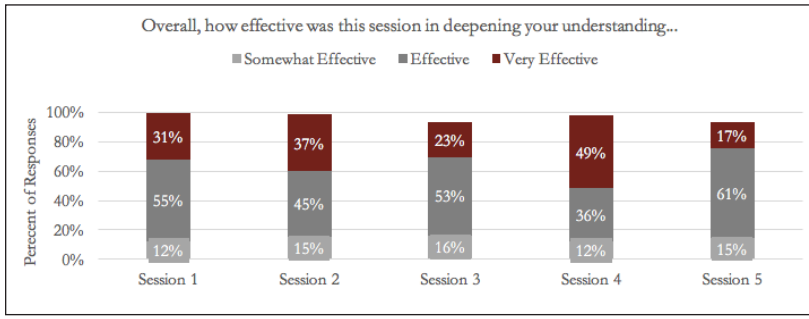

Figure 2. Effectiveness in Deepening Participant Understanding.

Leadership Capacity

The core topics addressed in each session were designed to provide participants with the knowledge, skills, and resources to lead blended learning in their school or district. On End-of-Program surveys participants were asked the extent to which they agreed that their participation in LBL has improved their capacity on a range of necessary skills for leading this change.

Again, the majority participants responded positively. Across all items, 67% to 89% indicated that they "agree" or "strongly agree" that participation in LBL has improved their capacity as a leader on a wide range of indicators (Figure 3). For example, the large majority of participants reported that the program helped them develop a shared vision for blended learning (89%), develop and implement a plan for carrying out that vision (87%), and build community support (84%) for blended learning to help sustain their schools' transformation.

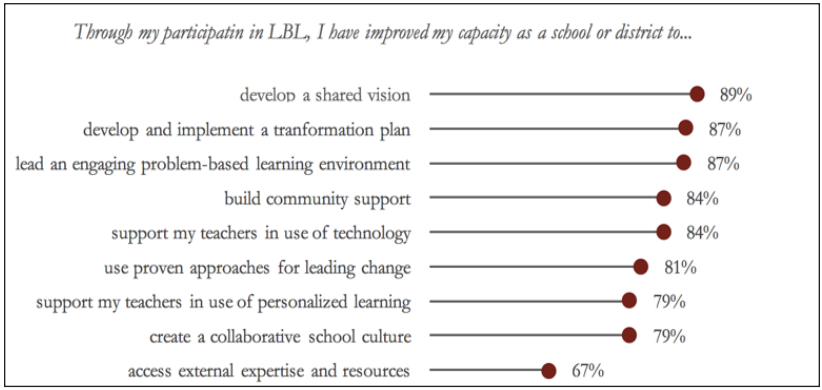

Figure 3. Capacity Building (% Agree/Strongly Agree).

Participants' responses also indicated one area in which they may have needed additional support. While the majority of participants responded positively (67%), roughly one-third of participants (33%) did not agree that the program had improved their capacity to access external expertise and resources from the private sector. These findings somewhat align with reports from Session 5 feedback in which participants were less positive when asked if they had deepened their understanding of the sustainability needs of their school, as well as strategies for communicating with stakeholders and growing and sustaining their implementation of blended learning (Session 5). However, one important caveat is that facilitators had flexibility in which parts of Session 5 they used and not all shared the communication resources.

Solidifying Vision & Goals

Though several participants in LBL began the course with assorted technology initiatives already in place at their schools, the full concept and complexities of blended learning appeared to be new knowledge for many. As a result, course participants reported greater understanding of the true meaning of blended, and commented on how their awareness led to

clarified vision – for their schools and for the possibilities of 21st century learning for their students. Principals' increased understanding and knowledge of blended learning provided a strong foundation for their vision and planning, and their grounding in LBL's larger concepts appeared to have solidified their dedication to implementing blended learning. The course also provided ample time for reflection and planning, and consequently, participants were able to clarify and refine their vision and develop well-defined goals for their schools and districts. This finding echoes the quantitative findings on shared vision mentioned above.

Communication & Justification

Due to their increased understanding of blended learning (along with its components and purposes), LBL participants were better equipped to share their vision and intentions with key stakeholders in their communities. Participants reported that their participation in LBL helped them to justify the blended approach to their schools and districts (who may be reluctant to embrace such change for a variety of reasons), and helped them create a shared language (between and among these stakeholders) for further communication and progress. In particular, the increased knowledge of and enhanced capacity to communicate about blended learning served as vital building blocks for dialogue – which can lead to greater understanding and buy-in from staff, students, and parents, substantial instructional shifts, and eventually impact school and/or district cultural overall – thus leading to deeper, more meaningful transformations toward 21st century learning.

Knowledge & Resources to Facilitate Change

In order to gauge participants' gains in terms of knowledge, skills, and resources, LBL participants were asked during interviews about new knowledge and understandings acquired as a result of participation in the course; additionally, many respondents to open-ended items related to course effectiveness on post-session surveys also commented on the knowledge, skills, and resources they acquired through LBL. The findings suggest that participants benefited a great deal from the course content and activities that characterized and illustrated the core notion and components of blended learning, along with the time and resources provided to help participants clarify their vision, goals, communication, justification, and action plans for implementing blended learning.

Further, through post-session surveys, many participants reported gaining greater understanding of blended learning and how to move forward with the implementation process. Their increased familiarity with new and different learning modalities and frameworks, as well as the necessary factors and activities for creating cultural shifts within buildings and districts,

contributed to the development of action plans to facilitate the change process. Further, participants in the LBL program emphasized the value of the tools and resources they acquired throughout the program in facilitating the shift to fully implementing blended learning – ranging from applications for accessing digital content to data-gathering tools such as the School Technology Needs Assessment (STNA). Participants purposefully used course resources themselves, and also reported sharing resources with staff; more information on how course resources impacted practice can be found in the following section (1B, Application to Practice).

What impact on practice does the LBL program demonstrate?

Beyond building participants' capacity for implementing changes in their school or district, Leadership in Blended Learning was designed to support their immediate application of the knowledge, skills, and resources acquired during the program to their professional practice. The findings suggest that LBL was largely successful in helping educators apply their learning within their professional settings. Among those who completed the End-of-Program survey, roughly 9 out of 10 participants (88%) indicated that they had made changes in their school or professional practice. When asked if they had applied their learning to support changes the program was designed to address (e.g. developing a shared vision and plan for implementation), the majority of participants (57% - 83%) again responded positively. Finally, on open-ended survey items and during interviews, participants were asked to describe what these changes looked like in their school district. Principals reported that they had applied their learning to share resources and model blended learning strategies, provide additional supports to assist teachers, and develop a systemic plan for implementing blended learning or refining existing implementations.

Changes in School or Practice

Participants were asked both during and shortly after their completion of the program if they had made any changes in their school or in their professional practice as a result of their participation in the program. Findings from the Session Feedback and End-of-Program surveys suggest that the majority of participants had an opportunity to apply the knowledge, skills, and/or resources acquired from their participation to make changes in their school or in their professional practice. Among the participants (n = 78) who responded to the item, "Have you made any changes in your school or professional practices as a result of participation in LBL?" on Session Feedback surveys, 67% indicated "Yes" (Figure 4, on following page). Shortly following completion of the program, participants were again asked if they made any changes. Among those who responded (n = 50), 88% indicated they had.

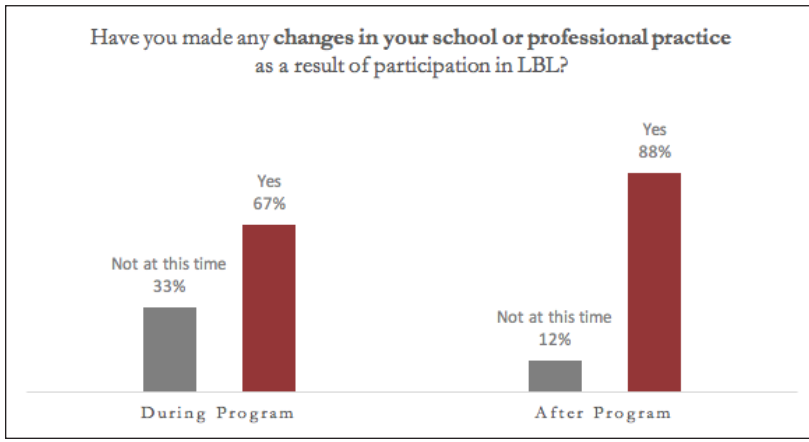

Figure 4. Participants Reporting Changes in School or Practice.

Applied Knowledge & Skills

On End-of-Program surveys participants were also asked the extent to which they agreed that they had applied the knowledge, skills, and resources acquired through their participation in LBL as they related to the stated goals of the program. The majority participants responded positively. Across all items, 67% to 89% indicated that they "agree" or "strongly agree" that participation in LBL has improved their capacity as a leader on a wide range of indicators (Figure 5, on following page). For example, the large majority of participants reported that the program helped them develop a shared vision for blended learning (83%), develop and implement a plan for carrying out that vision (81%), and build community support (79%) for blended learning to help sustain their schools' transformation.

To better understand the ways in which they were applying what they had gained from the program, participants were also asked on open-ended survey responses and during interviews to describe the changes they had made in their school or in their professional practice. The findings suggest that how participants applied their learning fell along a wide continuum, ranging from less formal applications like sharing program materials or modeling technology use for staff, to more formal supports such as providing professional development (PD) opportunities or implementing school level changes that directly impact teachers and students.

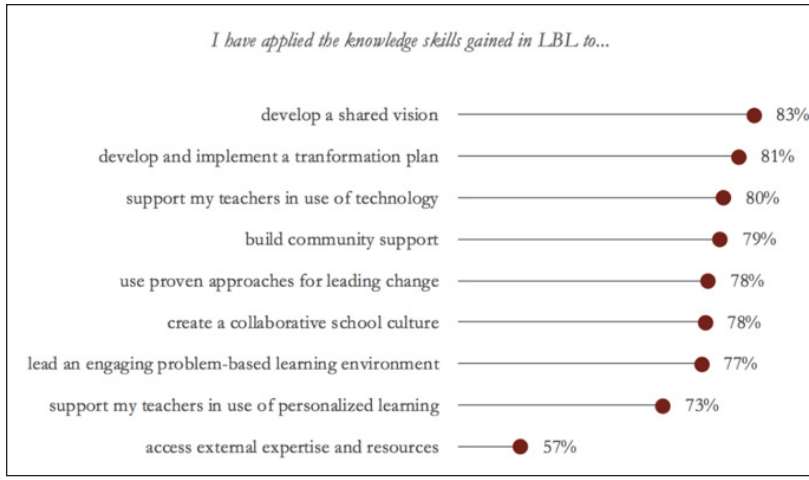

Figure 5. Applied Knowledge & Skills (% Agree/Strongly Agree).

Sharing Resources & Modeling Strategies

When asked to describe the ways in which they were applying their learning, participants frequently responded that they were sharing resources introduced in the program with staff and school stakeholders, both through informal conversations as well as during staff and parent meetings. Participants also reported exploring and using additional technology resources as a result of participation in the program, and were making efforts to model technology use and blended learning strategies during staff meetings and professional development sessions. Principals noted, for example, that they were using technology to collaborate with teachers and students, sharing best practices and professional articles though tools such as Twitter, and modeling the use of technology to "enhance meetings" and "show staff and parents that I am learning & embracing these changes myself." Finally, several participants noted "flipping" their staff meetings and using strategies such as station rotations model to conduct professional development sessions so teachers could "experience" blended learning for themselves.

Providing Training and Supports

Beyond simply sharing resources and modeling technology use, principals noted seeking out and providing more formal supports for their staff. The most common approach to supporting teachers was through providing professional development opportunities specifically related to blended learning. While some of these opportunities were proposed for the

following school year and had yet to be implemented, many participants reported that they already provided opportunities for their staff while still participating in the program. Some additionally noted that their PD addressed BL topics such as school culture, Universal Design for Learning, technology integration, and "flipped learning" strategies. In addition to staff training, some participants reported additional supports such as seeking funding for blended learning and purchasing additional technology, providing instructional coaches to assist teachers, and creating school level blended learning teams.

Planning, Piloting, and Improving Implementation.

Finally, participants noted that as a result of participation in LBL, they have either begun to develop a plan for blended learning in their school or district, begun small pilots in their school, or have used what they learned to revisit their current approaches. In terms of planning, participants reported that the sessions help them collaboratively refine their vision and goals for blended learning, and to develop a plan for rolling out a blended learning initiative. They noted that tools like the Roadmap and STNA help them identify specific areas of need and "anticipate issues that might arise and respond to them appropriately." Several participants also noted they had begun small pilots within their school, while those who were already in the process of implementation reported that the program has helped them revisit current practices and collect data that will help them better leverage BL to support teaching and learning. One principal, for example, described developing a classroom observation tool based on the SAMR model presented in the course, while several others noted their experience has facilitated conversations with staff about ways to improve their current approaches.

Table 2

Reported Impact of LBL on Professional Practice and Implemented Changes

Themes	Illustrative Quotes
Sharing Resources & Modeling Strategies	• "I continue to try new ways to integrate applications of technology into my work, conversations, presentations, and daily practice with our school community and all of its stakeholders."
	• "I am online much more (Twitter) with colleagues sharing best practices and articles on BL. I have more staff engaged in the innovative work and feel they truly see me as a learner as well in this new practice."
	• "I am using more media and technology in faculty meetings, parent assemblies, and student assemblies."
	• "I try to model each item I have been learning about and then give them time to try it out with their students."
	• "I held my first 'flipped staff meeting' and held a PD day using a station rotation model."

Table 2, *Continued*

Providing BL Supports	• "We have and will continue using our STNA data to plan staff development." • "[We are] designing professional development and incorporating more UDL and student-centered activities." • "We have provided PD to our teachers and have increased the amount of technology in our classrooms." • "[I am] providing innovative instructional coaches working with groups as well as individual teachers." • "We have formed teams of teachers and other staff members who have are taking risks and using new and innovative teaching strategies around blended learning to help their students become more independent learners."
Planning or Refining BL Implementation	• "The training was useful in planning for our BL initiatives, it helped me and my staff anticipate issues that might arise and respond to them appropriately!" • "We watched a video with faculty regarding we want learning to look like in our classrooms and how is it different from previous years and why." • "We have embedded the SAMR model into teacher walkthrough forms. This will help us keep the conversation of how to use technology for more than just substitution…" • "It helped us start thinking about a way to begin the organization of this process. We have been conducting certain elements of BL in various classrooms with different degrees of personalization… but planning helped us become more concrete about our plan and vision. Also going over data from the survey helped us look at certain things we may need to address to make sure all staff are on the same page in particular with our school vision and its use of technology to assist in personalizing learning."

Impact on Teaching and Learning

As discussed above, due to course participants' gains in knowledge and their increased ability to communicate about (and justify) blended learning, qualitative data revealed that participants were successful in creating interest in and value of digital learning among their teachers, with many developing a shared language around blended. And again, because participants placed such great value on the tools and resources they received/were exposed to, this led to the sharing of numerous resources with staff. All of these changes in practice are noteworthy, but more than that, it appears that other leadership choices – establishing feedback loops, creating space and time for collaboration, and focusing on students' needs – are allowing educators to better understand what is being asked of them and are assisting them in moving forward with the purposeful integration of technology and blended strategies in their classrooms, ultimately facilitating larger shifts in teaching and learning.

Listening, Learning, & Feedback

When asked about impacts on practice, many LBL participants mentioned trying to hear their teachers' and students' needs more clearly, learning from those interactions, and making changes based on information they heard. In order to continue the chain of positive communication, maintain vision, and move the transformation to blended learning at the school-level forward, principals appear to be listening more intently, interacting more purposefully, and giving timely, useful feedback to teachers; likewise, teachers are being better listeners of their students' needs and also providing students with more feedback.

Building-Level Collaboration for Innovation

Principals are leading the charge towards innovation with their knowledge and behavior, but beyond sharing resources and modeling blended learning at the leadership level, course participants appear to be providing time and space for their teachers to collaborate and learn from each other as well. Many reported sharing a variety of tangible and useful resources with their staff (which they had already observed being implemented), but perhaps more importantly, staff are beginning to explore and share more with each other. Several participants also reported providing opportunities for their teachers to visit their colleagues' classrooms in order to share ideas and gain greater insight into what different aspects of blended learning really look like – for example, teachers observed how others were seamlessly embedding technology, appropriately using digital content, and dynamically setting up the physical aspects of their classroom to facilitate blended learning.

Changing the Landscape for Students.

Another area participants reported positive changes in practice is in the impact on student life. Beyond simply increasing the amount of technology in classrooms and implementing a variety of digital resources (which many participants mentioned), course participants described ways in which they were making changes with their staff to move toward better serving students through blended approaches – instructional and mindset shifts that lead to greater student personalization and increased student agency and voice.

There are also several key barriers for course participants in terms of impacting teaching and learning in their schools and districts – teachers' limited time (easily the biggest issue), competing priorities, and in some cases a lack of readily available technology.

Table 3
Reported Impact of LBL on Teaching and Learning

Themes	Illustrative Quotes
Listening, Learning, & Feedback	• "As I provide feedback to teachers, my questions focus on moving toward student ownership and personalizing learning." • "We, as a school, have started discussions and implementation of using digital content and are providing students with immediate feedback." • "I will have PD sessions for teachers to revisit importance which will include showing some of the videos from today. I will ask all teachers to include BL strategies in the lesson plans that they submit weekly; I will make weekly observations and give feedback." • "I have been trying to have more conversations with the teachers in my building who have been part of the implementation of BL to get a fuller understanding of what is working and what they need support with." • "We have a regular feedback cycle with teachers, but we want to expand to include feedback from other stakeholders as well!" • "Sparked conversations around design thinking, around growth stagnation, programmatic feedback, student needs and how we plan to address them using blended learning."
Building-Level Collaboration for Innovation	• "I'm sending my middle school early pioneers to [a teacher's] third grade classroom because of design. I said, 'You want to see a different set up of design, you need to go see his room,' because it's not your typical elementary classroom, it doesn't look like it. We need to get out of this thinking of rows and as a matter of fact, I think we need to get rid of all the desks in the district and put tables and chairs and maybe it's bar stools and counters, I mean, whatever – you just need to go look." • "We have time embedded in our schedule to visit model classrooms and learn from one another." • "I am actively meeting and discussing how our model classroom is implementing BL and working with peers to assist them in making this shift." • "I try to model each item I have been learning about and then give them time to try it out with their students." • "We have formed teams of teachers and other staff members who have are taking risks and using new and innovative teaching strategies around blended learning to help their students become more independent learners." • "We are providing teachers more work time. It's definitely more tech rich, not blended, but it's appreciated as they can implement and practice their new learning immediately and get some of the work done and not walk away to do it later." • "I'm part of our NGLE cohort, the Next Generation Learning, so I'd gotten to do observations last year, and then we have been provided additional technology this year to start implementing some of that. So I feel like the technology, as far as providing those devices and things, even at the early levels, I feel like that has improved, even just since I've been here for the two years. Like they're out in classrooms, we're expected to being using technology, there's a lot of professional development coming out about how to look at the data and things which is really important… And so I'm seeing a bigger push from that aspect too, from what's being offered professionally as far as developing that way. And then, teachers getting the opportunity to share those things… they're doing more of like where we're teaching each other and running small groups and things like that, which is really beneficial. I've had the opportunity to run one [PD] and to share my knowledge about things, but then I've also had the opportunity to go and see what other teachers are doing, because I feel like that's how we're learning best from each other and like how this is actually working in the classroom versus watching some tutorial online or reading it from an article or something – we're actually seeing another first grade teacher in the district. And she's like, 'this is working really well for my students,' and going through how she's actually implementing these things and that is really helpful."

Table 3, *Continued*

Changing the Landscape for Students	• "We're adjusting the schedule, adding and subtracting staff members during blended learning time, and we've created menus for learning to provide more student agency." • "We are looking at adding students to our PLCs." • "We are currently working with teachers to dynamically group students." • "[We are implementing] rotational models in grades first through fifth but we are still at a very early stage. We have set class and individual student goals that are supported by our BL vision." • "Teachers are gradually adjusting their teaching to accommodate the needs of the learner and make lessons more student-centered." • "This is my 19th year of teaching and this year is the best I've ever taught. I always worked hard but I work so much smarter now. It's so exciting because I know all kids are learning. In the past I was always successful, I always moved my lower kids, but now we're moving all of the kids… I have two groups in each of my classes that are solving quadratic equations thanks to blended learning – because if I didn't have that opportunity, it would just be a whole-class instruction. Blended learning takes all that away."

CONCLUSION AND IMPLICATIONS

The LBL program demonstrates that there is much potential for the use of blended learning programs for professional development. Specifically, the results indicate that the LBL program is an effective blended learning model of professional development. Further, the use of multiple blended learning models provides professional development leaders with scalable approaches to highly effective professional development. The initial pilot of the program indicates that principals find the program effective in building their understanding of blended learning and that this increased understanding is translating into actionable changes to educator practice. Indeed, some principals articulate making substantial changes to their practice including integration of new frameworks for teaching and learning, shifts in scheduling to allow for more flexible learning, and changes in their approach to professional development. Further research should be done to better understand the limitations and potential for such models of professional development.

These findings are based upon one case with a few selected pilot organizations. Further research is needed as this and other programs grow to better understand its impact. However, early evidence supports that modeling blended learning is an effective way to provide training for principals. The flexibility and efficiency are invaluable to busy principals, and experiencing blended learning first-hand provides the participating principals with experience and an enriched understanding of what is necessary in the transition to blended learning.

References

Bonk, C. J. & Graham, C. R. (Eds.). (in press). *Handbook of blended learning: global perspectives, local designs.* San Francisco, CA: Pfeiffer Publishing.

Burkhauser, S., Gates, S. M., Hamilton, L.S., & Schuyler Ikemoto, G. (2012). *First-Year Principals in Urban School Districts: How Actions and Working Conditions Relate to Outcomes*. Rand Corporation.

Christensen Institute (2016). *What is Blended Learning*? Retrieved from https://www.christenseninstitute.org/blended-learning/

Collis, B. (2003). Course redesign for blended learning: Modern optics for technical professionals. *International Journal of Continuing Engineering Education and Lifelong Learning, 13*(1/2), 22-38.

Corbin, J., & Strauss, A. (1990). Grounded theory research: Procedures, canons, and evaluative criteria. *Qualitative Sociology, 13*, 3-21.

Creswell, J. W. (2007). *Qualitative inquiry and research design: Choosing among five traditions, 2nd Edition*. Thousand Oaks, CA: Sage.

Creswell, J., & Clark, V. (2007). *Designing and conducting mixed methods research.* Thousand Oaks, CA: SAGE Publications.

Darling-Hammond, L & Richardson, N. (2009). Teacher Learning: What Matters? *Educational Leadership,* Vol. 5, No. 66, pp. 46 – 53.

David, M., & Sutton, C. (2011). *Social research: An introduction* (2nd ed.). London: SAGE.

Friesen, N. (2012). *Report: Defining blended learning.* Retrieved from http://learningspaces.org/papers/Defining_Blended_Learning_NF.pdf

Graham, C. R. (2006). Blended learning systems: Definitions, current trends, and future directions. In Bonk & Graham, *The handbook of blended learning: Global perspectives, local designs* (pp.3-21). San Francisco: Jossey Bass/ Pfeiffer.

Grissom, J. A., Loeb, S., & Master, B. (2013). Effective instructional time use for school leaders: Longitudinal evidence from observations of principals. *Educational Researcher, 42*(8), 433-444.

Hartman, J. L., Dziuban, C., & Moskal, P. (1999, August 16-18). *Faculty satisfaction in ALNs: A dependent or independent variable?* Paper presented at the Sloan Summer ALN Workshops: Learning Effectiveness and Faculty Satisfaction, Urbana, IL

Hill, C. E., Knox, S., Thompson, B. J., Williams, E. N., Hess, S. A., & Ladany, N. (2005). *Consensual qualitative research: An update.* Education faculty research and publications, Marquette University.

Horn, M. & Staker, H. (2011). *The rise of K-12 blended learning.* Innosight Institute, Inc. Retrieved from http://epublications.marquette.edu/cgi/viewcontent.cgi?article=1017&context=edu_fac

Joyce, B. & Showers, B. (2002). *Designing Training and Peer Coaching: Our needs for learning.* VA, USA, ASCD.

Leithwood, K., Louis, K. S., Anderson, S. & Wahlstrom, K. (2004). *Review of research: How leadership influences student learning.* New York: Wallace Foundation, Center for Applied Research and Educational Improvement, & Ontario Institute for Studies in Education.

Martin, A., & Roberts, K. (2015). *Digital Natives Digital Literacy.* Retrieved from: http://www.ala.org/aasl/sites/ala.org.aasl/files/content/aaslissues/MartinRoberts_JF15.pdf

Morgan, K. R. (2002). *Blended learning: A strategic action plan for a new campus.* Seminole, FL: University of Central Florida.

NASSP & NAESP. (2013). *Leadership matters: What the research says about the importance of principal leadership.* Alexandria, VA.

Owston, R. D., Sinclair, M., & Wideman, H. (2008). Blended learning for professional development: An evaluation of a program for middle school mathematics and science teachers. *Teachers College Record, 110*(5), 1033-1064.

Patton, M. Q. (2002). *Qualitative research and evaluation methods*, 3rd Edition. Thousand Oaks, CA: Sage.

Project Tomorrow (2015). *Digital learning 24/7: Understanding technology-enhanced learning in the lives of today's students.* Retrieved from: http://www.tomorrow.org/speakup/SU14DigitalLearning24-7_StudentReport.html

Prothero, A. (2015). For principals, continuous learning critical to career success. *Education Week.* Retrieved from http://www.edweek.org/ew/articles/2015/01/21/for-principals-continuous-learning-critical-to-career.html

Purcell, K., Heaps, A., Buchanan, J., & Friedrich, L. (2013). How teachers are using technology at home and in their classrooms. *Pew Research Center.* Retrieved from http://www.pewinternet.org/2013/02/28/how-teachers-are-using-technology-at-home-and-in-their-classrooms/

School Leaders Network (2014). The high cost of principal turnover. School Leaders Network. Retrieved from https://connectleadsucceed.org/churn_the_high_cost_of_principal_turnover

Schwandt, T. (2008). Educating for intelligent belief in evaluation. *American Journal of Evaluation, 29*(2), 139-150.

Smelser, L. M. (2002, March 20-23, 2002). *Making connections in our classrooms: Online and off.* Paper presented at the Annual Meeting of the Conference on College Composition and Communication, Chicago, IL.

Stavem, J. (2015, July 16). *How School Administrators' Roles Change in the Digital Age.* Digital Promise. Retrieved from http://digitalpromise.org/2015/07/16/how-school-administrators-roles-change-in-the-digital-age/

Tucker, C. (2013). The basics of blended instruction. *Education Leadership, 70*(6), 57-60.

U.S. Department of Education (2010). Institute of Education Sciences, National Center for Education Statistics. *Digest of Education Statistics*. Retrieved from https://nces.ed.gov/programs/digest/d10/tables/dt10_108.asp

Yauch, C., & Steudel, H. (2003). Complementary use of qualitative and quantitative cultural assessment methods. *Organizational Research Methods, 6*(4), 465-481.

APPENDIX A

END OF UNIT SURVEY

LBL Session Feedback (Principals)

Answer If session Is Empty

Q1 Please indicate the session you most recently completed.

- Session 1 | Defining Blended Learning (1)
- Session 2 | Creating a Culture for Blended Learning (2)
- Session 3 | Shifting Teaching and Learning (3)
- Session 4 | Supporting Teachers through Professional Learning (4)
- Session 5 | Implementing and Sustaining Blended Learning (5)

Q2 Overall, how effective was this session in supporting your transition to blended learning?

- Very Effective (6)
- Effective (5)
- Somewhat Effective (4)
- Somewhat Ineffective (3)
- Ineffective (2)
- Very Ineffective (1)

Q3 Please explain your selection.

Answer if session Is Equal to 1 or please indicate the session you most recently completed. Session 1 | Defining Blended Learning Is Selected

Q4 How effective was Session 1 in deepening your understanding of the following blended learning components:

	Very Ineffective (1)	Ineffective (2)	Somewhat Ineffective (3)	Somewhat Effective (4)	Effective (5)	Very Effective (6)	N/A (7)
Definitions and Models (1)	❍	❍	❍	❍	❍	❍	❍
Leadership Competencies (2)	❍	❍	❍	❍	❍	❍	❍
Planning Components (i.e. vision, goals, and stakeholders) (3)	❍	❍	❍	❍	❍	❍	❍
Communicating my Vision (5)	❍	❍	❍	❍	❍	❍	❍
Technology Needs in my School (4)	❍	❍	❍	❍	❍	❍	❍

Answer If session Is Equal to 2 Or Please indicate the session you most recently completed. Session 2 | Creating a Culture for Blended Learning Is Selected

Q5 How effective was Session 2 in deepening your understanding of the following blended learning components:

	Very Ineffective (1)	Ineffective (2)	Somewhat Ineffective (3)	Somewhat Effective (4)	Effective (5)	Very Effective (6)	N/A (7)
Elements of a Supportive Culture (1)	❍	❍	❍	❍	❍	❍	❍
Responsibilities of Leadership (2)	❍	❍	❍	❍	❍	❍	❍
Strategies for Engaging Stakeholders (3)	❍	❍	❍	❍	❍	❍	❍
Cultural Shifts Needed in my School (4)	❍	❍	❍	❍	❍	❍	❍

Answer If session Is Equal to 3 Or Please indicate the session you most recently completed. Session 3 | Shifting Teaching and Learning Is Selected

Q6 How effective was Session 3 in deepening your understanding of the following blended learning components:

	Very Ineffective (1)	Ineffective (2)	Somewhat Ineffective (3)	Somewhat Effective (4)	Effective (5)	Very Effective (6)	N/A (7)
Traditional vs. New Instructional Models (7)	❍	❍	❍	❍	❍	❍	❍
Student-Centered/ Personalized Learning (1)	❍	❍	❍	❍	❍	❍	❍
Curricular Strategies (e.g. PBL, flipped classroom, game-based learning) (2)	❍	❍	❍	❍	❍	❍	❍
Universal Design for Learning (3)	❍	❍	❍	❍	❍	❍	❍
Digital Curriculum Options (e.g. OER, licensed, teacher-created) (5)	❍	❍	❍	❍	❍	❍	❍
Use of Time in BL Models (6)	❍	❍	❍	❍	❍	❍	❍
Instructional Shifts Needed in my School (4)	❍	❍	❍	❍	❍	❍	❍

Answer If session Is Equal to 4 Or Please indicate the session you most recently completed. Session 4 | Supporting Teachers through Professional Learning Is Selected

Q7 How effective was Session 4 in deepening your understanding of the following blended learning components:

	Very Ineffective (1)	Ineffective (2)	Somewhat Ineffective (3)	Somewhat Effective (4)	Effective (5)	Very Effective (6)	N/A (7)
Key Elements of Effective Professional Learning (7)	❍	❍	❍	❍	❍	❍	❍
Key Blended Learning Teacher Competencies (1)	❍	❍	❍	❍	❍	❍	❍
Principal's Role in Leading Professional Learning (3)	❍	❍	❍	❍	❍	❍	❍
Planning for Professional Learning (2)	❍	❍	❍	❍	❍	❍	❍
Use of Technology to Support Professional Learning (5)	❍	❍	❍	❍	❍	❍	❍
Communicating Success Stories (13)	❍	❍	❍	❍	❍	❍	❍
Professional Learning Needs in my School (4)	❍	❍	❍	❍	❍	❍	❍

Answer If session Is Equal to 5 Or Please indicate the session you most recently completed. Session 5 | Implementing and Sustaining Blended Learning Is Selected

Q8 How effective was Session 5 in deepening your understanding of the following blended learning components:

	Very Ineffective (1)	Ineffective (2)	Somewhat Ineffective (3)	Somewhat Effective (4)	Effective (5)	Very Effective (6)	N/A (7)
Nuts and Bolts of Implementation (7)	❍	❍	❍	❍	❍	❍	❍
Strategies to Grow and Sustain Implementation (1)	❍	❍	❍	❍	❍	❍	❍
Strategies for Communication with Stakeholders (10)	❍	❍	❍	❍	❍	❍	❍
Implementation and Sustainability Needs in my School (4)	❍	❍	❍	❍	❍	❍	❍

Answer If session Is Equal to 1
Q9 Have you implemented the School Technology Needs Assessment with your staff?

- Yes (1)
- No, but I plan to. (2)
- No, and I do not plan to. (3)

Answer If session Is Not Equal to 1
Q10 Have you implemented any ideas or suggestions resulting from your focus group or informal conversations with stakeholders?

- Not at this time. (2)
- Yes (Please describe.) (1) _____

Answer If session Is Not Equal to 1
Q11 Have you made any changes at your school or in your professional practices as a result of your participation so far?

- Not at this time. (2)
- Yes (Please describe.) (1) _____

Q12 How effective were the following session activities in supporting your professional learning?

	Very Ineffective (1)	Ineffective (2)	Somewhat Ineffective (3)	Somewhat Effective (4)	Effective (5)	Very Effective (6)	N/A (7)
Session Facilitator (1)	❍	❍	❍	❍	❍	❍	❍
Online Discussions (2)	❍	❍	❍	❍	❍	❍	❍
Online Pre-Work (i.e. Foundation and Case Studies resources, Application Activities) (3)	❍	❍	❍	❍	❍	❍	❍
Face-to-Face Session(s) (4)	❍	❍	❍	❍	❍	❍	❍
If session Is Not Equal to 1 Focus Group/Stakeholder Conversations from Prior Session (5)	❍	❍	❍	❍	❍	❍	❍
If session Is Equal to 1 School Technology Needs Assessment (STNA) (6)	❍	❍	❍	❍	❍	❍	❍

Q13 What was the most valuable aspect of this session?

Q14 What recommendations do you have for improving this session?

Answer If course Is Equal to 5

Q15 Please select the partner organization with which you are affiliated.

- Fulton County Schools (7)
- Greeley-Evans School District (1)
- LEAP Innovations (2)
- Mentor Public Schools (14)
- Oakland Unified School District in Partnership with Rogers Family Foundation (3)
- Ohio Blended Learning Network (4)
- Rhode Island Association of School Principals (5)
- Rocketship Education (6)

APPENDIX B
END OF COURSE SURVEY

Q1.2 Leadership in Blended Learning Year-End Participant Survey

Q1.3 This survey is designed to assess your overall experiences as a participant in the Leadership in Blended Learning (LBL) program. Please respond to each item candidly, as your responses will contribute to the overall evaluation of the effectiveness of professional development training provided by LBL.

Q2.1 PARTICIPATION

Q2.2 Did you complete all five LBL program sessions, including both face-to-face and online components?

- Yes (1)
- No (2)

Answer If Did you complete all five LBL program sessions, including both face-to-face and online components? No Is Selected

Q2.3 Please select the LBL session components that you DID NOT attend or complete.

	Face-to-Face Component (1)	Online Pre & Post Component (1)
Session 1 (1)	❍	❍
Session 2 (2)	❍	❍
Session 3 (3)	❍	❍
Session 4 (4)	❍	❍
Session 5 (5)	❍	❍

Q2.4 Were there any factors (e.g., time commitment, school transition, district obligations, etc.) that prevented you from fully participating in the program?

- Yes (4)
- No (5)

Q2.5 If yes, please describe.

Q2.6 Please indicate your preference for the amount of time spent on the following LBL components: I would have preferred to spend...

- More time in the face-to-face sessions. (1)
- Less time in the face-to-face sessions. (2)
- No change: I liked the amount of time we spent in face-to-face sessions. (3)

Q2.7 I would have preferred to spend...

- More time in the online modules. (1)
- Less time in the online modules. (2)
- No change: I liked the amount of time we spent in the online modules. (3)

Q2.8 I would have preferred to spend...

- More time in LBL as a whole. (1)
- Less time in LBL as a whole. (2)
- No change: I liked the amount of time we spent in LBL as a whole. (3)

Q3.1 PROGRAM EFFECTIVENESS

Q3.2 Overall, how effective was this program in preparing you to lead blended learning initiatives in your school, district, or organization?

- Very Ineffective (1)
- Ineffective (2)
- Somewhat Ineffective (3)
- Somewhat Effective (4)
- Effective (5)
- Very Effective (6)

Q3.3 Please explain your selection.

Q3.4 Beyond the broader goals of the program, did you have a specific personal learning goal or problem in your school or organization that you anticipated LBL might help you address?

- Yes (4)
- No, not really. (5)

Answer If Beyond the border goals of the LBL program, did you have a specific personal learning goal or problem in your school or organization that you anticipated LBL might help you address?
Q3.5 Please briefly describe your personal learning goal or problem.

Answer If Overall, how effective was this program in helping you address your personal learning goal or specific issue?
Q3.6 Overall, how effective was this program in helping you address your personal learning goal or problem?

- Very Ineffective (1)
- Ineffective (2)
- Somewhat Ineffective (3)
- Somewhat Effective (4)
- Effective (5)
- Very Effective (6)

Q3.7 Overall, how effective were the following sessions in preparing you to lead blended learning initiatives in your school, district, or organization?

	Very Ineffective (1)	Ineffective (2)	Somewhat Ineffective (3)	Somewhat Effective (4)	Effective (5)	Very Effective (6)	Not applicable. I did not attend this session. (7)
Session 1: Defining Blended Learning (1)	❍	❍	❍	❍	❍	❍	❍
Session 2: Creating a Culture for Blended Learning (2)	❍	❍	❍	❍	❍	❍	❍
Session 3: Shifting Teaching and Learning (4)	❍	❍	❍	❍	❍	❍	❍
Session 4: Supporting Teachers through Professional Learning (3)	❍	❍	❍	❍	❍	❍	❍
Session 5: Implementing and Sustaining Blended Learning (8)	❍	❍	❍	❍	❍	❍	❍

Q3.8 Overall, how effective were the following components in supporting your professional learning?

	Very Ineffective (1)	Ineffective (2)	Somewhat Ineffective (3)	Somewhat Effective (4)	Effective (5)	Very Effective (6)	N/A (7)
Online Pre-Work (3)	❍	❍	❍	❍	❍	❍	❍
Face-to-Face Sessions (13)	❍	❍	❍	❍	❍	❍	❍
Online Post-Work (12)	❍	❍	❍	❍	❍	❍	❍

Q3.9 Overall, how effective were the following activities in supporting your professional learning?

	Very Ineffective (1)	Ineffective (2)	Somewhat Ineffective (3)	Somewhat Effective (4)	Effective (5)	Very Effective (6)	N/A (7)
Course Readings (1)	❍	❍	❍	❍	❍	❍	❍
Case Study Videos (20)	❍	❍	❍	❍	❍	❍	❍
Other Course Videos (14)	❍	❍	❍	❍	❍	❍	❍
Online Discussions (2)	❍	❍	❍	❍	❍	❍	❍
Face-to-Face Discussions (4)	❍	❍	❍	❍	❍	❍	❍
Blended Learning Roadmap (8)	❍	❍	❍	❍	❍	❍	❍
Stakeholder Focus Groups (5)	❍	❍	❍	❍	❍	❍	❍
School Technology Needs Assessment (STNA) (6)	❍	❍	❍	❍	❍	❍	❍

Q4.1 Knowledge and Skills

Q4.2 Please indicate your level of agreement or disagreement with each of the statements by selecting the appropriate response. Through my participation in LBL, I have improved my capacity as a school or district leader to...

	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)	N/A (6)
develop a shared vision for the attributes of a next generation school. (9)	❍	❍	❍	❍	❍	❍
develop and implement a plan for transforming our teaching and learning system through blended learning. (10)	❍	❍	❍	❍	❍	❍
create a collaborative school culture. (11)	❍	❍	❍	❍	❍	❍
lead an engaging, application and problem-based learning environment that supports creativity, critical thinking, and problem solving. (12)	❍	❍	❍	❍	❍	❍
support my teachers in making optimum use of technologies, digital resources, and data systems. (13)	❍	❍	❍	❍	❍	❍
support my teachers in creating personalized, competency-based, flexible learning environments. (1)	❍	❍	❍	❍	❍	❍
build community support for new approaches to teaching and learning. (14)	❍	❍	❍	❍	❍	❍
access external expertise and resources in the private sector. (16)	❍	❍	❍	❍	❍	❍
use proven approaches for leading and managing the necessary changes specific to this work. (15)	❍	❍	❍	❍	❍	❍

Q4.3 What was the greatest insight, if any, you gained from participating in LBL?

Q4.4 Application

Q4.5 Have you applied the knowledge and/or skills gained from participating in LBL within your school, district, or organization?

- ◦ Yes (1)
- ◦ Not at this time. (2)

Q4.6 If yes, please describe the most significant application of your learning and how you anticipate this will impact your school, district, or organization.

Q4.7 The following set of statements are designed to gauge the extent to which you have applied knowledge and skills gained in LBL to aspects of your professional practice. In answering these questions, please focus specifically on the extent to which LBL trainings may or may not have helped you improve your practice as a school leader, not on whether you do these things in the first place.Please indicate your level of agreement or disagreement with each of the statements by selecting the appropriate response. I have applied the knowledge and skills gained in LBL to...

	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)	N/A (6)
develop a shared vision for the attributes of a next generation school. (9)	❍	❍	❍	❍	❍	❍
develop and implement a plan for transforming our teaching and learning system through blended learning. (10)	❍	❍	❍	❍	❍	❍
create a collaborative school culture. (11)	❍	❍	❍	❍	❍	❍
lead an engaging, application and problem-based learning environment that supports creativity, critical thinking, and problem solving. (12)	❍	❍	❍	❍	❍	❍
develop teachers' capacity for making optimum use of technologies, digital resources, and data systems. (13)	❍	❍	❍	❍	❍	❍
develop teachers' capacity for creating personalized, competency-based, flexible learning environments. (1)	❍	❍	❍	❍	❍	❍
build community support for new approaches to teaching and learning. (14)	❍	❍	❍	❍	❍	❍
access external expertise and resources in the private sector. (16)	❍	❍	❍	❍	❍	❍
use proven approaches for leading and managing the necessary changes specific to this work. (15)	❍	❍	❍	❍	❍	❍

Q5.1 Session Quality

Q5.2 Please indicate your level of agreement or disagreement with each of the statements by selecting the appropriate response. LBL as a whole...

	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
effectively modeled a blended learning experience. (6)	❍	❍	❍	❍	❍
was engaging. (14)	❍	❍	❍	❍	❍
was free of technical issues. (12)	❍	❍	❍	❍	❍
was well structured. (13)	❍	❍	❍	❍	❍
was led by an effective facilitator. (11)	❍	❍	❍	❍	❍
was relevant to my professional development needs. (2)	❍	❍	❍	❍	❍
was relevant to the specific needs of my school, district, or organization. (3)	❍	❍	❍	❍	❍
had a clear purpose. (1)	❍	❍	❍	❍	❍
was of high quality overall. (5)	❍	❍	❍	❍	❍

Q5.3 LBL as a whole included adequate opportunities to...

	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
share my knowledge and/ or experiences. (1)	❍	❍	❍	❍	❍
engage in meaningful collaboration with other participants. (2)	❍	❍	❍	❍	❍
interact with others from a similar background. (3)	❍	❍	❍	❍	❍
interact with others from dissimilar backgrounds. (4)	❍	❍	❍	❍	❍
reflect on and assess my professional growth. (16)	❍	❍	❍	❍	❍
tailor the experience to my personal learning goals and/or needs. (10)	❍	❍	❍	❍	❍
consider applications to my professional practice. (5)	❍	❍	❍	❍	❍

Q6.1 OTHER FEEDBACK What was the most valuable part of the training?

Q6.2 How could LBL be improved for future cohorts?

Q6.3 What advice do you have for future participants to make the most out of their LBL experience?

Q6.4 To what extent do you think the relationships you made with other participants will be useful to you professionally after LBL ends?

- Very Useful (5)
- Useful (4)
- Neutral (3)
- Useless (2)
- Very Useless (1)

Q7.1 ABOUT YOU How many years of experience do you have as a principal/school leader (include your time at your current and other schools)? (Format e.g., 10, not ten)

Q7.2 Are you presently working at the same school that you were working at during the beginning of the program?

- Yes (1)
- No (2)

Q7.3 Please select the partner organization with which you are affiliated.

- Fulton County Schools (7)
- Greeley-Evans School District (1)
- LEAP Innovations (2)
- Mentor Public Schools (14)
- Oakland Unified School District in Partnership with Rogers Family Foundation (3)
- Ohio Blended Learning Network (Central) (4)
- Ohio Blended Learning Network (Southwest) (18)
- Rhode Island Association of School Principals (5)