

Original Paper

Effective Practices of Successful Blended Learning Schools

Anne Mathews^{1*} & Cheryl Ward¹

¹ San Diego State University, San Diego, USA

* Cheryl Ward, San Diego State University, San Diego, USA

Received: April 4, 2019 Accepted: April 18, 2019 Online Published: April 25, 2019

doi:10.22158/fet.v2n2p88

URL: <http://dx.doi.org/10.22158/fet.v2n2p88>

Abstract

Blended learning is a teaching technique utilizing face-to-face teaching and online or technology-based practice in which the learner has the ability to exert control over the pace, place, path, or time of learning. Schools that employ this teaching method often demonstrate larger gains than traditional programs due to their increased ability to differentiate and quickly assess student learning. This study sought to determine ways blended-learning models contribute to student success, how blended-learning schools are measuring student success, and how administrators are supporting teachers in their use of blended techniques.

In this mixed-methods study, survey data were collected from 230 teachers and 43 administrators in blended-learning programs. Interviews were conducted with teachers and administrators at two school sites in the Southwestern most region of the United States, along with classroom observations and reviews of participating schools' Local Control Accountability Plans (California Department of Education, 2017) and mission statements. Results yielded five consistent themes: an understanding of student needs to drive individualized instruction, varied and individual success criteria, strong relationships with students tied to decision-making that fosters individual achievement, student needs as a driving force behind the development of school programs, and an increased level of student choice to combat low motivation.

Keywords

blended learning, online education, differentiation, k-12 education

1. Introduction

Since technology has become a ubiquitous force in our lives, schools must prepare students for a 21st century, technology-rich world (Marsh, 2012). With the rise of technology in both the workplace and in schools, and with the appeal of the autonomy that blended learning can offer, the number of K-12 students enrolling in both online education and blended-learning programs is growing (Corry &

Carlson-Bancroft, 2014). Today, the use of technology and online learning at school and in the workplace has become commonplace. Not only has knowledge become decentralized from classrooms and schools, people now create identities for themselves more than ever before based on social media platforms and through online communities (Greenhow, Robella, & Hughes, 2009). “Blended learning research, although relatively new, is related to both educational technology research and distance education research” (Graham, Henrie, & Gibbons, 2013, p. 13).

Blended-learning environments augment face-to-face instruction with technology. Often, educators employ blended-learning tools because they find that environments that are “technology-rich where students and teachers have the tools needed to enact better interactions, inquiry, and feedback” are helping students who may have found less success in more traditional environments (Bregard, 2016). Initiatives such as flipped teaching and distance learning are at the forefront of educational technology research and both have been used in the development of what practitioners refer to today as blended-learning (Stacker & Horn, 2012). These teaching techniques are helping students achieve success because they offer educators the ability to differentiate and provide multiple ways of learning for different learners simultaneously. Technology can augment classroom practices because it helps instructors organize, alter, and deliver course content to different learners within the same class at the same time—a task that teachers often struggle to master in primarily face-to-face classrooms.

The purpose of this study was to research practices within classroom-based and whole-school blended-learning programs that school leaders and teachers believe positively impact student success, how these practitioners implement these practices, and how school leaders support and lead the implementation of these structures. This study researched how blended-learning models can function as a better way than traditional models for schools to meet the needs of students who require differentiation and assistance.

1.1 Definition of Blended Learning

Although there are many definitions of blended learning in research and educational publications, Staker and Horn (2012) have published a widely-accepted definition of the term that describes a crucial element of blended learning: the ability of the learner to exert some level of control over the time (learning is not restricted to the school day or the school year), place (learning is not restricted to a classroom or single school location), path (learners use adaptive technology or can choose from a menu of activities to demonstrate content mastery), and/or pace of instruction (learning occurs at the learner’s own pace, not that of a classroom comprised of multiple learners). This type of approach may allow students higher levels of autonomy, relevance, and connectivity, which are important to 21st century learners (Lemley, Schumacher, & Vesey, 2014). With the focus on the student and his or her particular needs and skill development, “blended-learning technologies can help ... by enabling teachers to create lessons for both inside and outside the classroom that benefit the student, helping them to become a fully functioning global citizen” (Jimison, 2011, p. 67).

1.2 Blended Learning as an Innovative Pedagogical Approach

While research in this area is still new, several current theories classify specific learning actions within blended-learning programs. Picciano (2009) stated that blended learning can take on many configurations, but that all must employ both face-to-face and online instruction that includes content delivery, social/emotional engagement, dialectic questioning, synthesis of information, and some form of collaboration. Additionally, Alonso, López, and Manrique (2005) named seven aspects of learning and teaching with technology: analysis (of the learning task), design (of the learning process, or lesson), development (of concepts), implementation (creating lessons), execution (interacting with the learner via the online portal), evaluation (of learner's progress and data collected during lessons), and review (with the intent to refine the learning process for subsequent lessons).

In a mixed methods comparative study to find out how technology affects students, Shapley, Sheehan, Maloney, and Caranikas-Walker (2011) conducted research over the course of three years on a one-to-one laptop initiative in Texas public schools. By collecting data from both control groups and treatment groups (with 42 schools total participating in the study), researchers administered pre and posttests to students and collected data through surveys to monitor the extent to which skills and learning opportunities were augmented by the use of technology. Shapley and colleagues found that with technology integration into elementary, middle, and high schools, students received fewer disciplinary infractions and had slightly higher performance levels than those schools without technology. Learner-to-learner interactions and collaboration increased, and students reported participating in a wider range of activities than at the control schools (Shapley et al., 2011).

1.3 Ingredients of a Successful Blended Learning Program

To create a successful 21st century blended-learning program in the K-12 public school arena, educators look for ways to facilitate higher-order thinking and inquiry through the use of technology. Highlighting this idea, through collecting achievement data on 40 fourth and fifth grade students and measuring critical thinking levels through linguistic analysis during interviews, Simpson (2010) found that students who participated in online discussions about their work demonstrated a higher critical thinking level in those online discussions than in face-to-face activities.

1.4 Individualization

McKeown and colleagues (2014) surveyed faculty members of a first-year blended-learning model at the collegiate level and found that while a lack of face-to-face interactions posed complications, online learning increased instructors' ability to assess students, to provide meaningful feedback, and to guide student participation. By eliminating the need to confine learning, coaching, and assessment to class hours, instructors of blended-learning programs were able to specialize their feedback and instruction for individual students.

In an overview of successful blended and technology-rich programs, Launer (2010) identified several components of a successful blended-learning program, including individually paced study (self-study). Launer (2010) found that students in the self-study phase of the learning continuum tended to

demonstrate higher learning outcomes because they were able to more thoroughly learn content as they read and progressed at their own pace. Individualized learning such as this can create a more authentic learning environment in which the learner is interacting with the content instead of acting as a passive learner, as they may in a classroom full of various students all receiving the same lesson at the same time and in the same way (Launer, 2010).

1.5 Professional Learning

Creating successful blended-learning programs also, in part, depends on professional development that leads to long-lasting and meaningful change in schools that use primarily face-to-face teaching methods. Palak and Walls (2009) studied the relationship between teacher beliefs and their instructional practices regarding the use of technology in the classroom. The researchers found that teachers were only successful in bringing in new technological supports and techniques to enhance their teaching after participating in professional development that specifically addressed creating student-centered lessons and activities (Palak & Walls, 2009). By surveying 113 educators in grades Pre-K through 12 conducting classroom observations, interviewing students, and analyzing lesson plans, researchers found that professional development, over access to an abundance of technology, had a larger effect on teachers' instructional practices (Palak & Walls, 2009). Teachers stated that the most important factors that facilitated changes in their pedagogies were their own confidence in using technology and their understanding of how technology can be used to integrate student-centered structures into their classrooms, such as project-based learning and cooperative learning (Palak & Walls, 2009). Furthermore, the researchers stated that practitioners should appreciate small changes and take into account the fact that all participants, students and instructors alike, need extensive training and support (Heilesen & Josephsen, 2008). In addition to meaningful professional development that demonstrates how technology can be used to drive student-centered learning, other crucial elements in instituting blended learning into traditional classrooms or schools include a context for the change, a sense of urgency, financial support, collaboration, and a catalyst for change (Carbonell et al., 2013).

1.6 Learner-Content Interactions

Within blended learning models, repetition, practice, inquiry, writing, video conferencing, auditory and visual input, note-taking, and self-assessment are just some of the ways in which learners interact with content. These blended programs often have the ability to address the needs of students who are at risk of falling behind their grade level through a student-centered pedagogy that allows students to become self-reliant through asserting some level of control over their own learning (Muir-Herzig, 2004). Through surveying college faculty members at 14 colleges and universities around the world who taught courses using a blend of face-to-face and online activities, Lee and Dashew (2011) found that instructors rated the ability of their blended-teaching techniques to help students access material as 4.62 on a scale from one (low level of usefulness) to five (high level of usefulness). Effective blended-learning programs are using technology to help students collaborate and increase their depth of understanding in different content areas. As Singh (2003) explained, online learning has changed from accessing online content

similar to content offered in face-to-face lectures, to interacting with the online content and using it in such a way as to increase the effectiveness of the learning experience.

1.7 Learner-Learner Interactions

Critics of blended learning cite a lack of collaboration and peer interaction as a downfall of blended learning. Thus, practitioners in blended-learning programs are finding new ways for learners to interact with one another in meaningful, content-driven ways to enhance their learning and build online communities experience for students. In a meta-analysis of various blended-learning approaches, Lam (2014) described a model that took into account the needs of learners to socialize and collaborate with one another while still allowing them to work at an individualized pace. Lam (2014) introduced multiple perspectives important in a blended-learning course, including technological, institutional, pedagogical, and of course, social perspectives. Online platforms such as shared workspaces that allow students to collaborate on work (Google, Wikis, etc.), discussion platforms, chat rooms, and audio or video conferencing are a few of the tools educators use to facilitate interactions among learners in a blended environment. In his study of 93 third graders participating in blended-learning and online programs, Chen (2012) found that students learning in blended environments performed significantly better when asked to recall facts and information.

1.8 Applications of Blended Learning in K-12 Education

The more technology becomes a driving force in our lives, the more it will be used to enhance educational experiences for students. Gallardo-Echenique, Marques-Molias, Bullen, and Strijbos (2015) performed a review of literature that included 127 research studies in an attempt to categorize learners today and their attributes. After clustering texts into 48 themes, researchers found that students today can be categorized as “digital learners,” meaning they are able to access technology for learning easily because they have been exposed to technological tools for most of their lives. Gallardo-Echenique and colleagues report that students are not “digital natives” because they are not necessarily born with the ability to use technology or are predisposed to its use, but rather have learned how to use it in their everyday lives and, as a result, are able to seamlessly integrate technology tools into their learning and academic studies. Thus, these students could be considered digital natives in that they naturally and instinctively used technology for socializing and learning (Ting, 2015).

Light and Pierson (2014) studied educators and students as they implemented a blended model for the first time at their school site. Through observing 25 math lessons in fourth through twelfth grade classrooms with the use of an observation guide to note student interactions with the program they were using and their reactions to it, as well as the actions and reactions of the instructors while teaching, Light and Pierson found (2014) that using Khan Academy (an online instructional delivery site in which the user watches short videos on a topic of their choice and engages in learning activities afterward) as the primary instructional delivery tool in fourth through eighth grade classrooms allowed students to work on tasks that were appropriate to their ability level regardless of their grade level. This helped students master more skills (as indicated through standardized assessments) and concepts than before the use of

the program as they moved along the prescribed continuum at their own pace. Light and Pierson (2014) also found, through observations, that students spent more time on task when using the online program in the classroom and seemed more engaged than when participating in solely face-to-face class interactions. Kenney and Newcombe (2011) conducted an action research study to determine the most easily digitized and most helpful activities used in a blended-learning format. They stated that the blend of learning activities will continue to foster content delivery via an online platform in an asynchronous environment with face-to-face interactive, higher-order learning activities that complement and reinforce content. Focusing on five areas of student experiences in a blended course (improving learning, increasing engagement and involvement, preparing students for course demands and cognitive load, preparing students for face-to-face portions of class, and increasing overall interest in course material), Kenney and Newcombe conducted surveys and observations to find that 77% of students stated the blended course format in which they participated contributed to their overall learning. Additionally, 84% stated that the online assignments contributed to their learning and 59% stated experiencing an increased interest in course content (Kenney & Newcombe, 2011). When discussing the right blend of activities to most efficiently assist students in a blended program, researchers stated that the students in the blended learning environment will continue to learn course content online and using class time for interactive, higher-order learning activities that complement and reinforce the content (Kenney & Newcombe, 2011). Research points out though, that simply supplying schools with technology is not the best way to enhance learning. Instead, “efficient and effective use of technology depends on the equity of access to resources by teachers, students, administrators, and staff” (Gulbahar, 2007, p. 953). Leading to this conclusion, Gulbahar (2007) gathered data through questionnaires and unstructured interviews from 105 teachers, 25 administrators, and 376 students that aimed at finding the impact of technology use within a Turkish school, how the schools could create a successful technology integration plan, and how staff could tailor their blended-learning program to the needs of students. Results showed that 91% of students preferred to learn from teachers who were “technology-competent” and integrated blended-learning practices into their classes, and 92% stated that they wanted to use more technology-driven learning programs both in and out of class (Gulbahar, 2007). This research shows that by using technology to match learning activities to student needs, instructors may increase interest in content.

2. Method

This study aimed to uncover the organizational and programmatic decisions made by educators and administrators within the field of blended learning and to find how well practitioners believe these methods are helping students achieve school goals. This study sought to answer the following questions:

- 1) In what ways do blended-learning models used by schools utilizing blended-learning contribute to student success?
- 2) How are administrators and teachers of schools that utilize blended-learning models using blended learning to help their students attain success on established outcomes?

- 3) How are administrators supporting teachers in their use of blended-learning models?
- 4) How are blended-learning schools measuring student success?

To answer these questions, a mixed-methods research design was employed. The first step was to collect quantitative data from surveys. After quantitative data were collected, two school sites were chosen at which qualitative data were collected and analyzed. The qualitative research was conducted as a multiple case study including two school campuses with a quantitative data priority.

2.1 Participants and Instruments

2.1.1 Administrators

Surveys were sent to 514 administrators overseeing blended-learning programs in primary and secondary district, charter and private schools throughout the United States to anonymously participate in this study. Of those emailed, 43 completed the survey. Surveys consisted of 19 questions pertaining to the goals, programmatic decisions, and school-wide structures put in place by the administrators at their school sites. Prior to sending out surveys to potential participants, the researcher contacted two local school researchers and leaders in the southern California area with whom the researcher had a working relationship, to preview the survey and offer feedback and changes, as a means of securing content validity. Administrators who agreed to complete the survey varied in levels of education and experience and were contacted regarding the study via email.

After survey data were collected, the researcher selected two blended-learning schools to participate in the case study. Administrators were interviewed individually using a semi-structured interview protocol. These interviews lasted approximately 30 minutes and were digitally recorded and transcribed. Questions offered opportunities to describe a typical day at their school site, to explain the goals they have established and the various programmatic decisions they have made, their perceptions regarding their program's effectiveness, and the approach they take with preparing and supporting teachers at their school site.

2.1.2 Teachers

Surveys were sent to 1,372 teachers who were invited to anonymously participate in this study through email. Teaching experience among this group of participants varied. Of those emailed, 230 completed the survey. Surveys consisted of 20 questions pertaining to the classroom practices, assessment, and data collection protocols, and teaching techniques used by teachers at their school sites. From this group of survey participants, four teachers were selected to participate in interviews and observations conducted by the researcher. These four teachers were selected after the schools involved in the case study accepted the researcher's invitation to participate and administrators at these sites had already agreed to participate. The researcher did not use student achievement scores or other performance factors to determine which teachers would participate.

Each teacher was interviewed individually using a semi-structured interview protocol. These interviews lasted approximately 30 minutes and were digitally recorded and transcribed. Questions offered opportunities to describe a typical day at their school site, to explain their teaching goals and the various

pedagogies they employed, instructional techniques they used and their perceptions regarding their effectiveness, professional development, and coaching they engaged in at their site, and the approach they took with supporting both struggling and accelerated learners.

Two teachers from each school site who agreed to participation were observed in their classroom settings at a time determined to be mutually agreeable between the researcher, the teachers being observed, and their administrators. The observations lasted approximately 90 minutes each, depending on the coursework and activities the teachers were presenting or facilitating. Students were not directly observed; rather the focus of the observations was on the teacher, the decisions he or she made, and the techniques he or she used throughout the course of his or her teaching. The researcher took field notes that were coded after all observations were concluded using an open coding system to find trends in the data collected.

2.1.3 Document Analysis

The researcher obtained the Local Control Accountability Plan (LCAP) [California Department of Education, 2017] and mission statements, which were all available for public viewing, from each school participating in the case study. Documents were reviewed and coded using an open coding system, as the researcher identified themes that emerged as the documents were analyzed. It was the researcher's hope that adding document analysis to this research methodology would add meaning to the cases and provide an additional framework from which to view the other data collected.

2.2 Research Variables

Several independent variables were present within this research study for which the researcher could not account prior to conducting research. Some of these variables included student motivation, ability levels, teachers' levels of motivation and institutional knowledge, administrators' levels of motivation and institutional knowledge, and other environmental factors that were present during interviews and observations for which the researcher could not account. All appropriate measures were taken to ensure the data collected were valid despite the presence of these and other possible unknown variables.

3. Result

The following is a discussion of the researcher's findings as they relate to each research question.

3.1 *In What Ways Do Blended-Learning Models Used by Schools Utilizing Blended-Learning Contribute to Student Success?*

Differentiation was selected by teachers as the largest contributor to student success, followed by face-to-face lessons and, next, by differentiation via technology-based platforms. The elements determined by teachers as contributing to student success, however, varied. Teachers in enriched virtual blended-learning models (in which students have required individual or small-group face-to-face learning at times determined by the student and instructor, and complete the rest of their courses online at home) selected face-to-face lessons and differentiation via technology-based platforms as the largest contributors to student success, while teachers in a-la-carte programs (in which students take an entirely

online course to supplement learning that takes place at a brick-and-mortar site) identified practice worksheets as most contributing to student success along with differentiation and differentiation through the use of technology.

In flipped classrooms and blended-learning rotation models (in which students rotate among different stations in the classroom at a brick-and-mortar site), teachers identified face-to-face lessons as the most contributing element to facilitate student success.

Administrators of rotation models named differentiation as contributing highly to student success, but administrators in flipped classroom models named self-monitoring and higher order thinking skill development as factors most contributing to student success. Among the other types of blended models represented, increased time on task was also identified by administrators as important programmatic factors that help students achieve success.

These differing factors led the researcher to determine that student success in blended programs cannot be attributed to one single blended-learning technique. Rather, the elements that go into a successful blended program and drive student achievement differ according to the type of blended-learning model each school uses. In flipped classrooms and blended rotation models for example, where students typically spend a “regular school day” at a brick-and-mortar school site and augment their learning via technology, face-to-face lessons are essential to helping students understand content. In blended-learning flex models (in which students learn online, meet onsite with a teacher for some activities, and experience an individually customized program) and enriched virtual models, students learn course content primarily online. Thus, differentiation via technology was identified as the highest determiner of student success, primarily because students in these programs use technology for the majority of their learning activities. This learning is primarily individualized and self-directed. Thus, student success is dependent on the quality of the technology-based learning programs and teachers’ abilities to find programs that adapt to individual student needs.

In every model represented in the study, teachers indicated that face-to-face lessons were the largest contributor to student success. Among administrators surveyed, however, differentiation was seen as most contributing to student success. During observations, the researcher noted that a large amount of re-teaching was conducted via face-to-face lessons, with teachers addressing misconceptions and re-explaining concepts with students one-on-one. Additionally, opportunities for differentiation were incorporated into the technology-driven activities, during which students could work on varied asynchronous assignments simultaneously in the classroom. The face-to-face encounters and technology-based activities were observed to yield opportunities for differentiation and scaffolding.

Regarding teaching techniques, 62.5% of teachers surveyed stated that they used face-to-face instruction every day. Additionally, 54.81% of teachers surveyed stated they did not integrate discussions via online platforms at all. However, 60.58% of teachers did state that they used online platforms for differentiation. These data indicate that face-to-face approaches are used primarily for instruction and discussion. These techniques are not used by means of online programs. Online programs are used to differentiate for

students working at different levels and to allow for skill practice. Respondents from all types of blended programs surveyed stated that face-to-face instruction most contributed to student success, indicating that the type of model is not seen as a contributing factor to student success, but rather the combination of face-to-face instruction with online work, which can be a component of any type of blended programs surveyed (with the possible exception of à la carte programs, which comprised 1.76% of respondents) is what practitioners believe drives the success of their program.

Table 1. Mean Degree to Which Administrators Believe Programmatic Elements Contribute to the Overall Success of Blended-Learning Programs

Program element	Mean 1 (greatly contributes) - 3 (does not contribute)			
	Rotation Model (n = 18)	Flipped Classroom (n = 3)	Blended learning model (n = 15)	Enriched virtual model (n = 3)
Opportunities for self-monitoring	1.33	1.00	1.20	1.33
Higher order thinking skill development	1.56	1.00	1.47	1.67
Opportunities to develop social skills	2.22	1.33	1.93	2.33
Developing organizational skills	2.28	1.33	1.80	1.33
Opportunities to demonstrate self-advocacy	2.00	1.33	1.47	1.33
Cooperative group work	1.89	1.33	1.80	2.33
Assistance with	2.06	1.33	1.60	1.33

time management				
Extracurricular activities	2.56	1.33	2.27	2.33
Increased time on task	1.94	1.33	1.47	1.00
Differentiation	1.22	1.33	1.20	1.33

Teachers indicated that next to face-to-face instruction, the second largest contributor to student success (64.42%) was the online program(s) used. Again, this indicates that it is not the type of blended model used that contributes to student success, but rather the quality of online programs used, which can be employed in any type of blended program.

3.2 How Are Administrators and Teachers of Schools That Utilize Blended-Learning Models Using Blended Learning to Help Their Students Attain Success on Established Outcomes?

Results indicated that among participants surveyed, the development of higher order thinking skills is the explicitly-taught skill leading most to student success. Thus, practitioners are using blended-learning models to allow students increased opportunities to develop higher order thinking skills within their programs. Next to this, the development of self-monitoring skills, the development of organizational skills, and the development of time management skills were all identified by teachers surveyed as explicitly-taught skills within their programs that assist students in meeting established success criteria. Components of blended programs least contributing to assisting students in meeting success criteria were opportunities for extra-curricular activities, opportunities for social skill development, and opportunities for increased time on task.

Table 2. Degree to Which Teachers Perceive Different Classroom Activities/Opportunities Contribute to Student Success in All Blended-Learning Programs Represented in the Survey

Activity	Does not provide (%)	Does not contribute to student success (%)	Somewhat contributes to student success (%)	Greatly contributes to student success (%)	<i>N</i>
Opportunities for student self-monitoring	0.99	3.96	32.67	62.38	101
Higher order thinking skill practice/development	0	1.96	29.41	68.63	102
Opportunities to develop social skills	0	6.86	48.04	45.10	102
Organizational skill development	2.94	2.94	49.22	57.84	102
Self-advocacy	2.94	1.96	42.16	52.94	102
Cooperative group work	1.96	5.88	43.14	49.02	102
Assistance with time management	1.96	1.96	46.08	50.00	102
Opportunity for extra-curricular involvement	22.51	11.76	48.04	15.69	102
Increased time on task	0.99	9.90	40.59	48.51	101
Increased levels of differentiation	0	1.98	40.59	57.43	101

3.3 How Are Administrators Supporting Teachers in Their Use of Blended-Learning Models?

All administrators researched offered various types of support for teachers including on-site and off-site professional development, coaching and observations, PLCs, and common preparation time for collaboration. The most widely offered type of support among all types of blended programs was administrator observation, followed by the use of professional learning communities.

Teachers identified common collaboration time as the most effective type of support offered to teachers, with 61.76% of participants identifying it as “very effective”. Also identified by teachers as helpful in developing their skill as blended-learning educators was individual coaching, with 47.52% of respondents identifying it as “very effective”. Support offered at the two schools at which qualitative data were collected included individual coaching and common collaboration time. Additionally, common collaboration time was identified by the principal of school A as an effective way for teachers at the school site to learn from and support each other, along with daily Professional Learning Community (PLC) meetings with credentialed teaching staff.

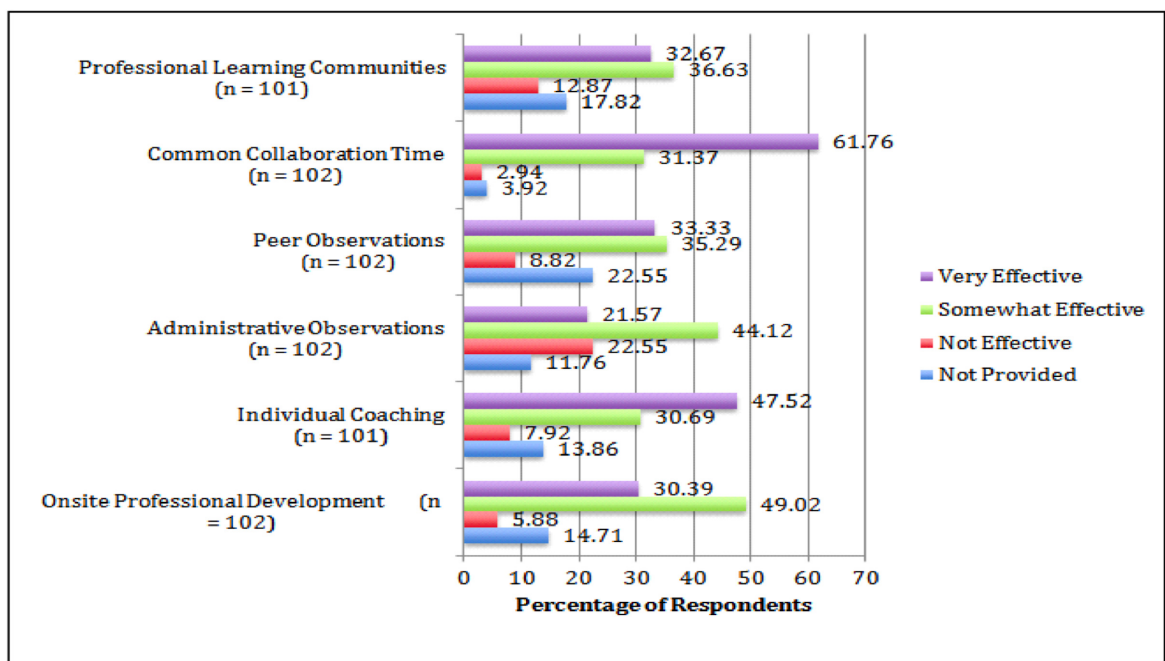


Figure 1. Types of Support Offered to Teachers at Blended-Learning Schools and Their Perceived Helpfulness

Collaboration was identified by the principal of school B as an important factor in the program’s overall success, though the use of PLCs was not mentioned. The principal of school B stated that in addition to weekly team meetings, the staff is “a highly communicative group. Lots of emails, all day, every day”. Regarding the use of PLC meetings and collaboration, SA-TB stated, “I feel our PLCs are really centered around improving the program, which isn’t technically what it is supposed to be yet. It’s hard to look at

student data when I'm not working in an area of specialty." These responses indicate that staff at the sites researched collaborate with one another, but perhaps not in ways that discuss student growth, data, and curriculum development. Teachers surveyed identified onsite professional development and administrative observations as helpful as well, with 49.02% and 44.12% identifying them as "somewhat effective," respectively.

3.4 How Are Blended-Learning Schools Measuring Student Success?

Among teachers surveyed, curriculum-embedded assessments were identified as the most important indicators of student success. Administrators surveyed also identified scores on curriculum-embedded assessments as important indicators of student success, along with scores on school created assessments. Interview participants also named several indicators used to assess student learning, including paper-based assessments, progress on online curriculum, and number of credits earned within a specific time period (in the schools researched, this time period was identified as either 3 weeks or 1 month).

Table 3. Mean Scores Indicating Importance of Success Indicators, as Perceived by Administrators, Used in Blended-Learning Programs (1 = Extremely Important, 4 = Not at All Important)

Measure of success	Rotation Model (n = 18)	Flipped Classroom (n = 3)	Blended learning model (n = 15)	Enriched virtual model (n = 3)
State test scores	2.11	1.00	2.27	2.33
Scores on school-created assessments	2.06	1.33	1.87	1.67
Scores on curriculum-embedded assessments	2.28	1.67	1.80	1.33
Course grades	2.83	1.67	2.60	1.67
Attendance rates	2.67	2.33	2.73	1.67
Graduation/ matriculation rates	2.83	1.67	2.67	1.33

Both teachers and administrators classified state test scores as “not important” more often than most other modes of student assessment. Graduation and matriculation rates were also consistently rated as unimportant, except in blended-learning flex models, in which graduation rates were recognized as the most important success indicators for that type of program. Other than state test scores, the only success indicator identified more often as “not important” among administrators was attendance rates.

4. Discussion

Teachers using blended learning would first benefit from knowing their students well so that they could in turn become responsive to their students’ varied academic and socioemotional needs. As represented in the data collected, at the core of this type of instruction is personalization. The teachers studied during the course of this research knew their students well and personalized their educational experiences. They used a general set of instructional and program guidelines set forth by the schools in which they worked, but they deviated from these guidelines when needed on a case-by-case basis. Instead of prescribing one preset educational path for all of their students, these teachers used a variety of methods to make sure that each student met his or her learning targets. Teachers further personalized student learning experiences by modifying the times during which students came to school, the tasks they completed, and the ways in which they accessed material. This flexibility allowed teachers to make decisions in the best interest of their students, when they felt deviation from originally established educational paths was necessary.

Secondly, teachers would benefit from infusing student choice into their lessons to increase student motivation and find opportunities to engage students in discussions about decisions that drive or hinder their educational progress. In addition to high levels of personalization, student choice and some levels of autonomy were also components of the programs studied. In the learning centers visited in both School A and School B, for example, teachers allowed students to choose which assignment they worked on first, where they worked, and the pace at which they completed their assignments. When the choices students made did not yield positive results and the teachers felt students needed redirection or assistance, the teachers scheduled one-on-one meetings to talk to students about their progress, diagnose what was not working, and help their students refocus. Students were free to make decisions that may affect their educational outcomes, even if at first the decisions did not yield positive results. When this occurred, the teachers observed would intervene, but until then, it appeared that students were allowed to make choices they felt best suited their own learning styles and goals. Blended-learning schools need teachers who understand that student choice can motivate learners; moreover, teachers of blended programs need to closely monitor the choices their students are making so that they can intervene when necessary to guide students back toward meeting learning goals.

Administrators of blended programs would first benefit from understanding the support methods that teachers feel best assist them in their improvement efforts while teaching in blended programs. Secondly, administrators would benefit from understanding the laws that regulate blended-learning and non seat-based educational programs. Practitioners in the programs studied were intentional in the

instructional methods and online tools they used. Attention to detail to ensure not only the quality of curriculum but also program compliance appeared to be essential to maintaining a productive program that both meets the needs of students and meets all federal and state guidelines.

In reviewing both qualitative and quantitative data from the U.S. blended-learning schools included in this study, the researcher has the following recommendations for both practitioners in blended-learning programs and those looking to support the development or creation of new blended programs.

4.1 Infuse Flexibility into School Accountability Law

In response to emerging educational accountability laws under the Every Student Succeeds Act (ESSA) established in 2015, public district and charter schools must structure their programs to increase the likelihood that they will be able to meet state and federally established goals, as well as local indicators of school success. The programs that schools are able to offer are often tied to federal or state monies and grants that have specific requirements and compliance regulations. However, if educators aim to support multitudes of learners with different challenges and areas of strength, they must be allowed the flexibility required to do so. This may mean that schools use self-created success indicators to measure student progress rather than externally-created indicators of student learning. The teachers and administrators in the blended-learning programs studied knew their students well and were prepared to facilitate different learning programs for different students if it meant helping them succeed.

4.2 Reconstruct the Traditional School Year Calendar

Teachers and administrators in the blended programs studied created their school year calendars with the needs of their students in mind. School B served students year-round so that they could make up or earn extra credits and either graduate early or spend more time completing learning objectives if necessary. School A offered several tracts so that students could pace themselves as needed to complete their individualized curricular plans on time, and several administrators in the study stated that differentiating for their student population was a main factor that went into the planning of their programs.

4.3 Scaffold Learning Experiences for Students

Educators in the schools studied indicated an understanding that all students will not learn at the same pace and will not have the same challenges and areas of strength. Therefore, they used a hybrid of technology and face-to-face activities to scaffold learning experiences for their students. Teachers involved in the study were observed allowing their students to practice skills via technology for longer or shorter periods of time, depending on their understanding of that particular skill or concept. Several students in the classroom studied received one-on-one assistance in which the teacher used examples, graphic representations, modeling, and questioning to help students understand a difficult concept. The learning target was the same for all students, but the activities they completed and the assistance they received differed based on students' individual needs.

4.4 Limitations

One limitation of this study was that it only collected qualitative data from middle and high schools. Due to time restraints and a lack of elementary schools interested in participating in the study, the researcher

was not able to collect data from elementary schools. Another limitation of the study was that survey data were limited to responses from 230 teachers and 43 administrators. A larger sample size would have allowed the data to be more generalizable to blended-learning schools as a whole.

4.5 Conclusion and Recommendations for Further Study

More study in this area would benefit practitioners of blended-learning programs looking to improve their balance of technology-based and face-to-face instruction. After completing the research, it became clear that further research is still needed to determine what blend of activities best promotes student success. This would include research into the best ratio of face-to-face to online learning time, and further research into the activities that are best done via face-to-face and that are best done online to maximize student learning and retention of knowledge.

Furthermore, more research is needed to determine what blend of activities best promotes learner outcomes in different content areas and grade levels. For example, teachers in the study had their students review English language arts content and misconceptions face-to-face after practicing online. Is this the most productive blend of activities for English language arts? Would the blend of activities need to be different if the subject area were math or history? The cognitive demands of each subject require students to access various skills, and further research may help determine which blended techniques best assist students with this task. As Chen (2012) stated, “future research should continue to investigate the effect of blended learning associated with other instructional and learning variables on students’ learning achievement, such as facts, concepts, comprehensions, problem-solving, and critical-thinking skills” (p. 210). To maximize instructional time and help students meet specific content-related learning goals, further research in this area is needed.

Data from the surveys and school site visits revealed a tendency of blended-learning programs to offer highly individualized curricular paths and a variety of curricular choices for students. All programs included in the research used several types of teaching methods including face-to-face discussions, practice through the use of online and paper-based activities, collaboration, and the facilitation of activities requiring higher order thinking skills. Participants noted that increased opportunities for differentiation provided the most help to students in their programs, as well as activities facilitated through face-to-face lessons. The schools visited employed face-to-face lessons and goal-setting with students and teachers, as well as repetition and practice with the use of technology.

To measure student success, schools researched used multiple modes of assessment, but valued data from curriculum-embedded and school-created assessments above other types of assessments. State testing scores and attendance rates were seen as the least important success indicators. Additionally, schools tended to individualize the paths students were allowed to take toward demonstration of mastery. Students were expected to meet the schools’ success indicators, but they were allowed flexibility during the process to do so.

Administrators and teachers both in traditional and blended programs would benefit from using an individualized approach similar to programs included in this study. The schools researched believed that

it was their ability to differentiate that helped their students the most. Thus, schools that can find ways to offer highly differentiated programs for students in which they can make some choices about their curricular path or pace, using guidelines established by staff, will be most successful in leading their learners toward attaining learning goals. If teachers can find ways to create academic interventions tailored to individual students that offer some level of flexibility and administrators can find ways to support teachers and assess student progress on an individual basis, students of all ability levels will be more likely to make academic gains.

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