

Modeling Blended Learning to Increase the Use of Blended Learning

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Abstract

The goal of this literature review is to provide a definition of blended learning, briefly explain the models of blended learning, explore various benefits of blended learning, and consider the research-based professional development needs required for changes in practice. Combining an understanding of professional development requirements with the need for deliberate blended learning training for teachers will help to design effective structures to support teachers as they transition from exclusive face-to-face teaching to a rotational model of blended learning. Because blended learning in its simplest definition combines the best of online and face-to-face instructional practices in an effort to guide students along individualized learning paths, assisting teachers as they design and create their own blended learning environments through modeling and co-teaching may be a catalyst that results in changes in practice.

Definition and Benefits of Blended Learning

What is Blended Learning?

An internet search of the term blended learning yields a very similar definition from a plethora of sources. In the most basic of terms, blended learning combines, in a seamless and connected fashion, the best of face-to-face instructional practices in conjunction with the best online instructional practices. However, a more in-depth look at blended learning reveals that it is more significant than having students complete a few things online before or after a face-to-face lesson. In other words, blended learning is so much more than simply incorporating educational technology in the classroom. Blended learning, according to Horn and Staker (2015, pp. 34-35), requires that “a student learns at least in part through online learning, with some elements of student control over time, place, path, and/or pace.” The student must also learn “at least in part in a supervised brick-and-mortar location away from home.” Lastly, the online portion of learning and the brick-and-mortar portion must be connected in a way that provides “an integrated learning experience.”

Benefits of Blended Learning

If blended learning puts the ownership of at least some part of the learning process in a student's hands, it makes sense that personalization is one of the many benefits of blended learning. In a 2014 study by Fadde and Vu, some of the other advantages of blended learning include increased access to materials, lectures, conferences, and discussions. Recording allowed for permanent access to items that might traditionally only exist in real time. Fadde and Vu also pointed to increases in critical thinking because learners were presented with additional time to develop and expand on their thoughts because conversations and communications could be

carried over from face-to-face sessions to online arenas. Learner engagement was also determined to be a benefit of blended learning.

Blended Learning Structures

Blended Learning Models

The website Blendedlearning.org is a wealth of information when it comes to understanding the various models of blended learning. Many blended learning resources, including Blendedlearning.org as well as its parent organization, the Christensen Institute, identify four main models of blended learning: the rotation model, the flex model, the a la carte model and the enriched virtual model.

The rotation model. The rotation model is, in essence, a design in which the students rotate through a variety of activities based on a fixed schedule. The bulk of the activities are completed at school, while some homework assignments are completed off-site. The rotation model is often further divided into additional subsets.

The flex model. The flex model provides a great deal of flexibility for students to work in the space and on the activities they need. Flex models require brick and mortar locations to be divided into breakout rooms, collaborative spaces, intervention areas, science labs, study areas, and social areas. A combination of certified teachers and other paraprofessionals manage the various locations depending on the needs of the students.

The a la carte model. The a la carte model is used primarily to offer online courses that might not otherwise be available to a campus for either remediation or advancement. A student may take most of their courses in traditional face-to-face settings but then work through a single course or two exclusively online.

The enriched virtual model. The enriched virtual model allows students to work exclusively online if they choose, but also provides face-to-face supplementary instruction that may or may not be required on a daily basis. For example, some students may only attend their brick and mortar school building two days a week.

Blended Learning Rotational Models

As mentioned previously, blended learning rotational models are often further divided into four sub-categories: station rotation, lab rotation, individual rotation, and flipped classroom.

The station rotation model. The station rotation model is familiar to many education professionals who use already digital “centers” or learning stations as part of their lesson planning in their classrooms. Often, the teacher is the facilitator of the rotation schedule, asking students to move or change stations after a designated amount of time.

The lab rotation model. The lab rotation model is similar to the station rotation model in that the teacher decides when the rotations will happen, however, the rotation takes students out of their classrooms and into a computer lab setting. This model can use both certified teachers as well as paraprofessionals to guide and facilitate the learning and time spent in each location.

The individual rotation model. The individual rotation model allows students to move through the stations needed to best support the learning of that individual student. Not every student will rotate through every station. A personalized student schedule is created by the teacher or even specialized software.

The flipped classroom model. The flipped classroom model is the last of the rotation models and transposes the location of traditional activities done at school. Often times, lectures

are replaced by online activities (videos, readings, and discussion boards) that are usually accessed outside of class time. This allows more time in class to focus on collaboration, labs, projects, and practice with peers, the course instructor, and other professional guests or experts.

Professional Learning for Changing Teaching Practice

The implementation of blended learning requires education professionals to participate in pedagogical learning to understand the purpose, benefits, and strategies for introducing blended learning methodologies in their classrooms. According to the 5 Principles of Effective PD, as outlined by the Center for Public Education (Gulamhussein 2013), in order to effectively learn and about and implement new, different, or improved teaching strategies, teachers need time, support, active exposure, and modeling in content specific environments. Teachers could need up to 50 hours of instruction, coaching, and practice as they work to master a teaching strategy. During those 50 hours, they also need support and live examples through modeling and co-teaching in classrooms similar in content and grade level to their own.

Deliberate Blended Learning Training for Pre-Service and In-Service Teachers

As blended models of learning increase in their frequency of use, a larger number of states are adopting legislation that mandates students have online learning experiences prior to graduation from high school (Kennedy & Archambault, 2012). The skill set of a seasoned, high-quality classroom teacher does not always match up with the skills required for quality online instruction. Current and future educators should be prepared to teach online across any grade level. Having a foundational knowledge of good online pedagogy as well as online teaching and learning experience will ensure that teachers stay relevant and progressive.

Five hundred twenty-two colleges responded to a survey by Kennedy and Archambault with 80% reporting that their teacher preparation programs do not currently include any online K-12 field experiences. However, half of the responding colleges feel that their institutions should include online K-12 field experiences. Wisconsin, Florida, and Idaho are among states that require specialized professional development for online instructors. If teachers are expected to be able to teach online and/or blended courses, authentic, web-based field experiences during their pre-service classwork and preparation programs are a necessity. During these authentic field experiences, future teachers learn many skills including the management of an online classroom, best practices for digital interactions, motivational strategies with online students, and content design and structure.

Blended Learning Design and Implementation

In 2016, Clement, Vandeput, and Osaer investigated a blended learning teacher preparation course. The program goal was ultimately to produce a peer-reviewed blended course blueprint, including some content pieces, as well as a next steps plan to continue to develop, improve, and assess the quality of the course during the design process. When teachers with limited time are designing course lessons the night before they are delivered, little time is usually set aside for reflection upon the lesson plan and goal. Additionally, in many instances, instructors are hired for content expertise in a field instead of for their quality lesson plan design. A blueprint course would aid in the development of higher quality online courses. Five different universities brought together 17 teams for approximately four months. Live course meetings, small group meetings, and collaborative tasks were all utilized throughout the design phase. Within a year of the program, ten of 17 teams were able to launch the blueprint course to create

online course offerings at their institutions. The participating design teams indicated that the relatively fast timeline of their original coursework, coupled with supervision and intervention were factors that impacted success.

Shand and Farrelly (2017, p. 9) report that increased, equitable access to teaching, learning, and productivity tools as well as the ability to individualize instruction are benefits of blended learning. However, prior to individualization, increased equity and improved productivity, online instructors must recognize the challenges to their learning environments and plan to minimize or assist the challenges as they arise. During a 16-week, blended learning course, 38 pre-service teachers participated in a teacher preparation course using the Canvas Learning Management System (LMS). Eight modules that followed a very specific format were employed to facilitate understanding expectations and satisfaction with the course. LMS communication tools were used to share due dates. All course content and activity such as submissions, quizzes, projects, discussions, and feedback were housed within the LMS. Factors such as organization, sequencing, transparency, and support including examples, rubrics, directions and tutorials aided in the successful use and completion of the course. The teachers in the course valued their face-to-face time to build community and appreciated the ease of the instructor's online presence. Shand and Farrelly are hopeful that the teachers who participated in the study will use the lessons learned and apply them to their own classrooms.

A Global View of Blended Learning

In 2017, Mozelius and Rydell of Sweden pinpointed a series of factors that affect blended learning implementation: documentation and support, introduction and training, time, and didactics (the knowledge and skills). While universities note that the advantages of blended

learning such as increased access to knowledge, cost-effectiveness, ease of course revision, automation, and flexibility, they also recognize that instructors want and need time and training for the most effective use of online tools while also taking into consideration the social and emotional needs of their learners.

Work by Schechter, Kazakoff, Bundschuh, Prescott, and Macaruso (2017) connected student reading skill improvements and teacher excitement about blended learning. However, expecting a seamless implementation of blended learning is not likely when the only support a teacher receives is access to digital tools. Teachers need regular and ongoing training to best integrate a variety of digital tools in their classrooms. To encourage extra training during their research period, a software usage contest was designed. Participation in the contest was voluntary and included tools that automatically personalized content as well as a data dashboard that increased blended participation during the contest period but also after the contest concluded. The teachers who already had some engagement with blended learning had higher levels of participation as well as greater gains over the less engaged teachers during the contest. Implementing blended learning requires motivated, excited, and engaged teachers to continue to build on their learning and practice as well as to encourage other, reluctant teachers to try something new.

Riel, Lawless and Brown's 2016 research on the implementation of the GlobalEd2 (GE2) program by middle school teachers found that effective blended courses required teachers to have front-loaded professional learning about technology tools and pedagogy of blended learning as well as ongoing, real-time, classroom specific support during implementation. Additional areas of support included working with students on curricular activities, establishing

expectations, student self-management, and other factors outside of the classroom. Technology challenges during the study included digital fluency, available and usable technology, and the ability to address technical problems as they arise.

In 2015, a Turkish study by Gulbahar and Kalelioglu noted that effective online course instructors are not synonymous with experienced instructors with advanced technology skills. The most effective online instructors facilitated a variety of discussion types (online, face-to-face, and text-based), were readily available to answer questions, developed quality online activities and materials, and provided meaningful and timely feedback. One option to help develop online instructor skills included participating in an online course as a student or a guest speaker. Professional development, as well as collaboration with experienced online instructors, were other methods for improving online instructor skills.

King and Arnold's 2012 case study of higher education professors in Ohio identified professional development as vital for blended learning success. Professors that sought out resources and training, who were also successfully implementing blended learning inspired interest from their peers. Email, discussion boards, and face-to-face communication, as well as carefully thought out course design, were also factors in determining the success and spread of blended learning implementation.

Gaps in Blended Learning Literature

Although there is a large body of research about blended learning in post-secondary settings, less research exists in the public junior high and high school sector. Additionally, a great deal of available research is also focused on science and math courses. To better

understand how blended learning may contribute to better learning, a wider variety of courses in the middle and high school public school realm should be investigated.

Student perspective and feedback are also valuable resources to help future blended courses leverage the practices, plans, and structures that students most value when it comes to their learning goals. Collaboration is vital in blended environments. Without it, students are simply taking a rigid, structured online course void of interacting, sharing ideas, debates, discussions and a chance to fine-tune their collaboration and communication skills.

In 2016, Maxwell wrote of his concerns about educators understanding the nuances of truly blending the learning experience for students. As more educators become interested in offering blended learning opportunities to their learners, it will be important to be sure that everyone understands that technology-rich environments do not synonymously equate to blended learning environments. Many resources point to definitions and examples of blended learning, but far fewer point to identifying when blended learning may be a misnomer for the practices actually being employed.

Current Study

This action research would address an understanding of how the 5 Principles of Effective PD impact high school teachers implementing blended learning. An internet search of blended learning will yield a variety of definitions, diagrams, and interviews, but not always examples of blended learning in action through the lens of a teacher's specific grade level or content area. Modeling and co-teaching alongside a teacher would provide content specific support and active engagement.

Prior to independent implementation, scaffolded and targeted support provided to teachers to design activities, troubleshoot issues, assist with classroom management and provide meaningful feedback may help increase confidence and self-efficacy in regards to blended learning. Providing upfront support through modeling and co-teaching should help avoid the misconception that simply incorporating an increased amount of education technology tools alone can be considered successful blended learning implementation. The focus of the study will be on rotation models because of the nature of the ability to structure those models in a single classroom as opposed to working with an entire department or campus. Through the modeling and co-teaching action research plan, the researcher hopes to identify scalable trends about when a teacher is comfortable with implementing blended learning on their own via rotation models and what solidified their readiness.

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