

“Blended learning to foster learner agency and accelerated learning”

Catherine E. Duplisea

Lamar University

Author Note

Catherine E. Duplisea, Department of Educational Leadership Student, Lamar University

Catherine E. Duplisea, Academics Department, Cleveland Metropolitan School District

Correspondence concerning this article should be address to Catherine Duplisea

Contact: cduplisea@lamar.edu

Abstract

This paper explores the various blended learning models and the implications of implementing blended learning as it relates to student agency and achievement. The four recognized blended learning models are each unique, giving us an opportunity to look into the literature and research that has been done around how the models have been implemented and the implications of implementing blended learning in a variety of education settings. I have read several published articles and books pertaining to blended learning, and discovering the various approaches and beginnings of research around blended learning.

Keywords: blended learning, student agency, achievement

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Education shifted once again, during the covid-19 pandemic, to create a culture of digital access for all. Many school districts provided 1-to-1 technology, internet access, and learning management systems to provide equitable learning opportunities for all learners. This shift of providing the technology and access alone has yet to change academic outcomes for scholars. In fact, many districts are reporting great learning loss post-pandemic. John Dewey’s work analyzing “traditional” and “progressive” education has laid the foundation for the idea of moving forward with possibilities. The possibility presented here is blended learning (Dewey, 1997,p.89). If we provide a learning environment that encourages choice and ownership, students will do the thinking. Blended learning can provide the structures for a learning environment that encourages choice and ownership that allows the learners to do the thinking. The opportunity gap and achievement gap are challenges we face in the American education system. Can blended learning be the answer to close these gaps through providing student agency and accelerate the learning process for our learners?

We’re all instructors to realize that the quality of mental process, not the production of correct answers, is the measure of educative growth something hardly less than a revolution in teaching would be worked (Dewey, 1916, p. 207).

Now that we have returned to brick and mortar buildings, post pandemic, the focus can shift to learning with technology integrated into the process, with blended learning to personalize the experience and foster student agency and accelerate learning. The objective of this review is

to explore blended learning models and what the literature says about blended learning; specifically the implications of blended learning, how blended learning can promote personalized, anytime, anywhere learner agency, and opportunities for acceleration with blended learning (Horn, Staker, & Christensen, 2015).

Blended Learning

Blended learning is any formal education program in which a student learns at least in part through online learning, with some element of student control over time, place, path, and/or pace. The student learns at least in part in a supervised brick-and-mortar location away from home, and the modalities along each learning pathway within a course are connected to provide an integrated learning experience. There are four widely accepted models of blended learning including rotational model, flex model, a la carte, and enriched virtual (Horn, Staker & Christenson, 2015). There are some contradicting definitions that allow blended learning to fully take place online without stepping foot in a brick and mortar school building, but I will focus mainly on blended learning defined as partially online and partially in person in a brick-and-mortar building for this review.

In the words of Horn and Staker (2015), “Blended learning is the engine that can power personalized and competency-based learning” (p. 10). “It provides a simple way for students to take different paths toward a common destination,” and it allows “teachers to become learning designers, mentors, facilitators, tutors, evaluators, and counselors to reach each student in ways never before possible” (Horn & Staker, 2015, p. 10-11).

There are a few recognized blended learning models to consider. I am most interested in the rotational model, as elementary schools seem to gravitate toward this model because of familiarity with stations or centers as a common practice, and all of the schools I currently work with have selected station rotation blended learning model as a priority in their academic achievement plan documents that guide each school's efforts for the following school year. Knowing the schools chose station rotation out of familiarity with small group instruction and learning stations, I am curious if station rotation is truly the best blended learning model for PreK-8 Schools. Which blended learning model provides the greatest impact on student agency and accelerated learning? What are the implications of the rotational model? The four recognized models are briefly described below.

Rotation Model

The rotation model of learning utilizes the traditional face-to-face learning with online learning. Learners typically rotate through online learning, small group instruction and independent work. This model includes four sub-models; station rotation, lab-rotation, flipped-classroom, and individual rotation. Each sub-model varies slightly from the next, but have the mentioned basic components and rotations for different learning tasks (Horn, Staker & Christenson, 2015). This model allows students to receive differentiated learning experiences with both online and brick and mortar face-to face learning. This model gives agency to students to learn at their own pace, and combines traditional classroom teaching with a variety of online resources. "They station rotation model of instruction systems changes the way the learners learn and also changes the way the teachers teach, students have access to more activities, learn

thought teacher-led instruction, collaborate with peers, and have access to a computer with the internet” (Akinoso, S., Agoro, A., Alabi, O., (2020).

The station rotation model offers a clear avenue for traditional schools and teachers to integrate online learning into the classroom setting, even if they have limited access to technology. Teachers can use this model to create small collaborative learning groups within the larger class setting to design differentiated tasks to challenge various skill levels and spend more time working individually with students (Tucker, Wycoff, & Green, 2017, p.109). The station rotation model seems to be the most familiar and common blended learning model in our district’s PreK-8 schools and classrooms. As a district, we are struggling to get blended learning up and running in our 100 plus schools, and it is a difficult sell to our educators with the lack of aligned targeted research to back up the “why” we should do this for our learners. The studies and research on blended learning and specific to models, subject areas, and age groups are scarce.

In one study done on the “Effect of station rotation mode of instructional delivery for mathematics in the era of advancing technology, in secondary schools in Nigeria, they found that the control group learning with station rotation had a significant difference in achievement from the control group receiving conventional instruction (Akinoso, S., Agoro, A., Alabi, O., 2020). This study suggests that station rotation can influence student achievement, but it is important to know that it was done with high school age learners in Nigeria, and the control groups were relatively small in size.

The station rotation model of learning, if adopted in might make a significant change in the students' academic performance by heightening the interest of the students potentially change their attitude towards the subject matter. Attitude is another important construct in learning (Akinoso, S., Agoro, A., Alabi, O., 2020, p.1).

Unfortunately there is not significant research on the implications of blended learning in specific content areas, specific blended learning models, or elementary school implications to utilizing the rotational model. There are some studies to suggest it can work to increase student performance, but more research is needed in this area to influence our educational system to make blended learning through the rotational model a priority.

Flex Model

The flex blended model is conducted fully online. Flex blended learning model is when learners physically come to the brick-and-mortar building to do the learning fully online. This model personalizes the learning to accelerate or remediate as needed fully online, but in a building with access to devices and internet. The origin of this model was to help close learning opportunity gaps for learners through online learning (Horn, Stacker & Christenson, 2015). The flex blended learning model creates an opportunity to have access to a device and internet if needed for students learning online, that wouldn't otherwise have reliable access or a setting conducive to learning. The school or building serves simply as a physical space that is conducive to learning and provides internet access to participate in online learning. This may be of interest to schools that are fully serving students in online learning, such as remote schools. My district

currently offers a fully remote model, and this might be a possible solution to inequities in access opportunities several communities face in the United States.

A Le Carte

Another recognized model is A Le Carte. This model is any entirely online course taken while also attending a brick-and-mortar school. The online teacher is the teacher of record for the course, and this is an individualized option of learning that can be taken from school, home, or anywhere they have internet access. A Le Carte offers an element of personal learning choice that can differ from their classmates. This model offers the opportunity to accelerate, remediate, and deepen learning because the experience is individualized is separate from the brick-and-mortar classroom instruction. It has been successful in providing accelerated course work, such as advanced placement courses, to students who are ready to move on and be stretched (Horn, Stacker & Christenson, 2015). Although an interesting model, I will not be focusing on this model, as our district elementary schools have selected station rotation for initial implementation, and my goal is to support their efforts by analyzing, reflecting, and adjusting our plans to best meet the needs and successes of our learners in grades PreK-8.

Enriched Virtual

Enriched Virtual model is when the learner has some required face-to-face time, but the majority of the learning is done at the learners choice of pace and place. The face-to-face time is not often, and may vary based on progress of student. This model is mostly virtual, and the teacher for the online portion and face-to face portion are usually the same (Horn, Stacker & Christenson,

2015). This model was difficult to find research on, but from the Pandemic school shut down academic achievement slide with elementary learners, this model will not be the focus of research nor do I plan to use this for initial implementation of blended learning in our elementary schools at this time. The enriched virtual blended learning model may be another consideration for remote schools to incorporate face-to-face time with scholars to provide personalized intervention.

There is a scarcity of research with the enriched virtual model as well, although it is a growing model in higher education. In an article summarizing action research done in a special education class in higher education found that this blended learning model “allows the facilitators to design, organize learning materials and achieve the learning outcomes. The implementation of the model also leads to increased learner engagement”, but also suggested further research is needed (Rahman, A., Selvaraj, V., Tamilarasan, P., Harshini, P (2020).

Of the four widely accepted blended learning models, station rotation will be the focus of my future action research. I am hoping to gain very explicit data to help pave the way for blended learning in the elementary schools in my district. Eventually, the hope is that schools will mix and match models to meet the needs of their learners and the school’s vision of learning as comfort and capacity grows with device fluency and usage. For now, the initial goal of my action research is to figure out what the implications are of utilizing the station rotation blended learning model on student agency and accelerated learning opportunities in elementary and middle schools, as measured by standardized test scores and student perception based off of a survey.

Implications of Blended Learning

Hattie (2007) assures us that blended learning models do not replace teachers or face-to-face instruction. “What teachers do matters, especially those who teach in a most deliberate and visible manner” (Hattie, 2007, pg. 22). Blended learning models offer a different approach in education where students have agency to interact with content and teachers in new ways. As humans and technology continue to evolve, our educational system is also changing.

With technology making a strong presence in our educational system, we can implement intentional blended learning models that have benefits to our learners. All of the models can create smaller learning communities within larger classes, employ a variety of tasks and activities to provide choice of path and pace, and they free up the teacher so they can spend time personalizing instruction for individuals or small groups to improve learning outcomes (Tucker, Wycoff, & Green, 2017 p.110). Alan November has published some work on preparing our learners for success in the digital age. A term that surfaced in the literature of student agency and the use of technology was *Digital Learning Farm Model*, where the learner has autonomy, mastery, and purpose as the motivation. This model represents a learning environment that can foster the skills and qualities that manifest autonomy, purpose, and mastery students need in order to flourish as lifelong learners. Technology is used as a transformational learning tool (November, 2012, p.12). The idea of utilizing the technology to foster a learner's mindset and reinvent what learning looks and feels like in our schools is revolutionizing education. “Learning for the sake of learning is a joyful and beautiful experience” (Shareski, 2017, page 8). How do we get to this point of learner efficacy and agency in the learning process through joyful learning

with technology? Blended learning can lead us there, however, some of the blended learning models, as previously noted, are more disruptive than others.

Hybrid of brick-and-mortar with online learning can stay in the hybrid zone with blended learning in the form of rotational model, specifically station rotation, lab rotation, and flipped classroom, because it can happen within a the traditional schooling model. The disruptive blended learning is where students have individual rotation, flex model, A La Carte, and/or Enriched Virtual model, because these models replace the traditional schooling model with something different (Horn, Staker, & Christensen, 2017).

Designing the online portion of the learning needs to be considered as well. This is an important place to personalize instruction and give student choice over path and pace. A few corners to see around when implementing blended learning are skill level and easy to capture reflection or learner thoughts. “One of the biggest challenges is making sure that all participants have the necessary skill level with the communication tools that will be used” (Conrad & Donaldson, 2004, p.37). Capturing reflection or thought process via technology can provide insight for instructors on their teaching and for students on their learning. Reflective feedback allows instructor to evaluate the effectiveness of the students’ experiences and also personalize the experiences by seeing misconceptions, strengths, and weaknesses (Conrad & Donaldson, 2004).

The need for further research on Blended Learning and the measurable outcomes is prevalent in many articles I read, however, the research findings on student engagement

increasing with the implementation of blended learning helps make the case for getting scholars to increase learning outcomes through increased engagement with the learning process (Argyriou, Benamar & Nikolajeva, 2022). In the words of John Hattie, “One only needs a pulse and we can improve achievement” (Hattie 2007, p.16), but the research isn’t clear on the implications of implementing blended learning models and how that correlates to student achievement. The opportunities to have choice and some control as a learner are benefits worth exploring, and the opportunity to accelerate learning through personalization may be the plan we need to revamp our educational system.

Student Agency

Student agency over time, place, path, and pace is important. Large urban districts are experiencing rising numbers of truancy, and this may be a way to eliminate that hurdle. Sending devices home with an intentional blended learning plan can provide the anytime and anywhere learning with self-paced and choice of path (Horn, Staker, & Christensen, 2015). Frederick Reif (2008) explains the application of cognitive science in education, and talks about learning conditions. “A learning task is usually constrained by various limitations, such as the time available for learning, the abilities and prior preparation of the students, the help available to students, and the available resources” (Reif, 2008, pg. 347). Blended learning frees up time for the teacher, and can allow for anytime and anywhere learning, extending the available time to learn from an environment other than the brick-and-mortar school building.

With all of those shifts in control come some amazing changes in outcomes as students and educators benefit from the motivating drives of autonomy, mastery, and purpose (November, 2012, pg. 23).

The pedagogy of John Dewey and the idea of having child centered learning at the heart of the process to prepare students for their future and giving them this opportunity for ownership of their learning process are the same opportunities fostered through blended learning that provide agency over path, pace, time, and place (Dewey, 1997; Horn, Staker & Christenson, 2015). The neuropsychology research has put emphasis on learner choice because the brain is now in control and engages the cortex portion of the human brain. “When they feel in control, they take ownership of the activity and the behaviors exhibited are rational, logical behaviors determined by the cortex as opposed to the more primitive sub cortex regions. When teachers allow students that type of control, the entire dynamic of the class changes” (Nunley, 2004, p.17). If teachers are truly facilitators of the learning, and providing choice of path and pace, the depth of learning can increase. This is not suggesting we throw out everything we know about traditional education and content knowledge, rather reexamining the techniques that can foster deeper learner ownership of the learning process. “The way of the reconstruction is not through giving attention to form at the expense of substantial content, as is the case with techniques that are used only to develop and refine still more purely formal skills” (Dewey, 1920).

Blended learning aligns with this pedagogy as the various models offer opportunities for student agency and deeper learning. Students have the capacity to develop executive functioning skills so they can think and in turn, construct the future (Dewey, 1971). Tucker, Wycoff, & Green (2017)

speak to increased student engagement “by the power of technology to engage students and help them to find their voices” and shared how easy it was to make a student centered learning environment with blended learning (Tucker, Wycoff, & Green., 2017, p.108).

In Heacox (2002) work, she references Gardner’s eight intelligences and she explains that learners should be aware of them to help make good decisions when given choices for learning or demonstrating learning. It is important that educators see the value of knowing the learners. Teachers play an important role in an effective blended learning classroom. “You have to know the kids in front of you, and they have to see value in and deeply understand why the content is important” (Couros, Novak 2019, p.35). Technology can be the vehicle to elevate a good a teacher into greatness, but technology doesn’t “fix” bad teaching.

According to Maria Hvid Stenalt (2021), in a published Frontline Learning Research journal article, “The relationship between agency and digital contexts of learning has been given little attention in research addressing student agency and digital technology. A tendency has been to subsume the digital to educational intentions, frame digital agency as competencies required to control the digital world, or skip definitions of agency”(page 54). There is, however, studies on student choice and ownership of learning that provide students agency the learning process is beneficial. Wendy Ostroff (2016) references the work of de Charms (1976) that suggests that the implications of student choice and agency are beneficial. “When students were given ownership of the learning situation, the students reported being overwhelmingly more satisfied and intrinsically motivated. Importantly, these students also showed superior academic performance (Ostroff, 2016).

In a study done by Argyrio, P., Benamar, K., Nikolajeva, M. (2022), they investigated whether student engagement with different online blended learning activities predicts academic performance as measured via a multiple-choice online exam for an undergraduate cognitive psychology course. They found that higher completion rates of weekly online quizzes were a predictor of achievement on the final exams. This information was used to look at student engagement and also figure out where students needed remediation and supports. The study concluded that more research is needed to make the connections between blended learning and student achievement (Argyrio, P., Benamar, K., Nikolajeva, M. (2022)).

Accelerated Learning

Dean Shareski (2017), an established and well versed educator shares that “If the work we do with students is meaningful and important, I don’t think we’ll want to describe it or label it as rigorous. Challenging, complex, meaningful, and purposeful are all better ways to describe learning” (Shareski, 2017, page 9). This idea that student ownership and relatability to the learning is where we learn more deeply and make meaningful connections. He argues that “the majority of the things learned in life have been very pleasurable and a natural consequence of being in a healthy learning environment exploring something I was interested in” (Shareski, 2017, p.9). This notion of choice continues to come up in almost every book and article I read. Student efficacy relies heavily on this notion and we need to do this for every learner.

Meeting the needs of all learners in our class is an expectation for the teaching profession, yet figuring out how to do this efficiently and effectively is the challenge. Blended learning can provide opportunities to differentiate instruction and personalize the learning

process. Diane Heacox (2002) published work on differentiating instruction, and breaks down the responsibility of the educator. “As a facilitator of differentiated instruction, the teacher has three key responsibilities: providing and prescribing differentiated learning opportunities, organizing students for learning and using time flexibly” (Heacox, 2002, p.11). Blended learning allows for personalized pace and pathways so that learners can accelerate and deepen learning. It also provides learning models that free up the teacher to meet one-on-one with students or small group to scaffold and remediate while those who are ready can continue progressing in a seamless flow. Heacox stressed the importance of making differentiation “invisible” so students don’t feel different or unfairly treated. Utilizing technology to push out differentiated or modified assignments is a private and efficient way to provide that “invisible” personalized learning while striving for the goal of differentiation, to personalize and accelerate the pace of learning for each learner (Heacox, 2002). Blended learning environments can provide each learner with what they need to be successful.

The research on accelerating the learning through blended learning is not definitive, as many studies do not have clearly defined features and have many variables. Most of the studies are also with older learners in high school and post secondary learning environments, which the research findings may differ from what would happen with younger learners. It would be beneficial to study what implications each specific blended learning model has on learning when defined subjects and/or age groups and subject areas are identified to utilize. I am looking forward to focusing on a specific grade, block of time, subject area, and rotational blended learning model to get local impact of blended learning in my district. My hope is do several cycles of action research over the course of the next few years, narrowing in on grade levels,

subject areas, and specific blended learning models to see if we can consistently accelerate learning as measured by standardized tests.

Conclusion and Future Study

After reviewing the literature and research on Blended Learning; specifically the implications of blended learning, how blended learning can promote personalized, anytime, anywhere learner agency, and opportunities for acceleration with blended learning, the benefits to improving schools through this approach outweigh the uncertainty and detriment of our traditional education system (Horn, Staker, & Christenson, 2015). With technology access for learners as the new norm, we have options for blended learning models that can personalize the learning experience, and promote learner agency of path, pace, place, and time. Improving our schools with blended learning can provide learner choice and agency, but how does this effect student achievement, especially in elementary school? If indeed providing student agency with blended learning can increase student achievement and accelerate learning for our youth, then we need to capture this through action research in very specific age groups, content areas, and defined learning models to truly know what we should promote to better our schools and the learning experience we are providing our youth.

In pursuit of data that can influence educators in my district to disrupt our current educational system and utilize the technology to embrace student agency and personalization for accelerated learning opportunities, I plan to focus my action research on first grade literacy utilizing the station rotation model over a four month period of time to see if intentional implementation of blended learning during the literacy block in first grade has any implications

on student achievement and/or student perception of the learning process with learner agency. This action research will provide specific, current, and local research data that will be shared locally with educators to create excitement and buy-in around full implementation of blended learning in the Cleveland Metropolitan School District.

Ultimately that solution will have many dimensions, including a strategy for staffing, devices, content, facilities, model, and culture. But the starting point for design, before any of these considerations, is to crawl inside the head of students and look at school through their eyes. (Horn, Staker & Christenson, 2015, p. 137).

The time to act on this opportunity to personalize the learning for all through blended learning is now. We have the technology, access, and desire to provide our learners choice, personalization, and promote learning with a real sense of purpose and ownership. We have a choice to reflect on our current practices and see how blended learning can amplify the learner experience we are providing to create conditions for personalized, anytime, anywhere learner agency and opportunities for acceleration of learning. Intentional planning, data tracking, and reflection will help pave the way for educational evolution.

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