

Defining Blended Learning in K-12 Schools
Focus on Special Needs Population

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Focus on Special Needs

Literature Review

Research on blended learning within the United States has over the past twenty years increased in the Higher Education setting. While researchers attempt to explain its appeal to students, schools and society there has been a lack of research that focuses on blended learning used in the K-12 setting as it relates to students with disabilities, particularly low incidence disabilities. Wang, Han, and Yang (2015) note that the term blended learning has been substituted with “mixed mode learning”, “hybrid instructions”, and technology-mediated/enhanced learning”. This review will identify a working definition for blended learning that encapsulates the special needs population, identify from within the literature leading models in use in the k-12 educational setting, their application in the K-12 educational setting and the support offered to the k-12 diverse population. Topics discussed in the original literature may have correlated to a related theme, for the purpose of this review the framework will be in their relationship to blended learning as it impacts the k-12 special needs population.

Definitions

Blended Learning has been reviewed in the educational community over the past decade as a possible solution to the current concerns facing a failing U.S. school system with over crowded classes, limited number of highly qualified teachers and a lack of innovative personalized instructional options being the major. Often in a brick-and-mortar environment, blended learning is described as learning that is at least in part through online delivery with some element of

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student control over time, place, path, and/or pace Stacker and Horn (2011). The authors have since improved upon their definition adding, at least in part at a supervised brick-and- mortar location away from home. With the inclusion of the supervision component in the hybrid – blended models constructed by Stacker and Horn (2012), learners of all levels have the facilitated support from supervisors many may require to maximize blended learning. This new clarity on the need for supervision is a point that holds validity in the application of the blended learning movement when considering the inclusion of students with disabilities.

Previous research found online learning in the k-12 setting very appropriate as it allows students freedom to manipulate and control their learning based upon personal proclivity. Bonk and Graham (2004). While often cited in the literature, relying totally upon Graham’s definition that blended learning systems combine face-to-face instruction with computer-mediated instruction, in todays’ rapidly evolving technological landscape fails to incorporate the increase of valid interactive modalities now available to educational settings. Norberg, Dziuban and Moskal (2011) in their Time- Based Blended Learning Model added the component of prototype boundary object in their attempt to define blended learning first proposed by Star (1999). The ability to unite those who find similarities within the ideology that blended learning could provide to students with diverse levels and styles of learning is encapsulated through this view.

Models used in K-12

The evolution of virtual schools has merged with the blended-learning movement in the K- 12 environment according to Cavanaugh and Hargis (2010). The current system for the delivery of blended learning is based on a combination of similar models as identified in the literature. Cavanaugh and Hargis (2010) serviced-based model builds on the research produced out of The Center of Online Learning and Students with Disabilities. Frey, Fisher and Pumpian

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(2013) defined a framework which is intended to identify quality instruction in online delivery. The majority of literature cites a composite of the mixed-hybrid rotational blend model by Stalker and Horns (2012) as the base for the development of blended learning systems in most environments.

Applications for K-12 and Special Needs

States and schools are adopting the blended learning approach to deliver educational content to students in K-12 education at a growing rate for a variety of reasons. The literature identifies these as the most prevalent points; ability to meet the diverse needs of school populations and financial savings over traditional delivery, Alijani, Kwun, Yu (2014). Students report having increased flexibility with time on task, the personalization of material and a feeling of being provided individualized attention to be beneficial in their improved outcomes. The adaptability and personalization of instruction for students with disabilities was identified within the literature as a selling point used by for profit companies that populate the majority of online offerings in the k-12 market Willsea (2015), Smith, Basham, James (2014), and Hashey, Stahl, (2014). Another reoccurring theme in the literature as it relates to students with disabilities is the usability of online content for diverse students.

Content designed to meet the learning style of the typical student may not account for the issues faced by atypical learners. According to Smith & Associates (2014) asynchronous learning is student prompted –motivated study in an online environment. Synchronous is the education process in which teacher and student interact simultaneously in the learning process. Cooke (2013) in his review of the literature compared traditional learning environments and online learning in K- 12 schools acknowledged, that to be a successful online learner the ability to be independent and responsible for work assignments is required. The delivery method of

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instruction while a major point in the favor of online instruction for the individual learner necessitates an instructor who is suitably trained in the instruction techniques, design components and accessibility requirements of the non-typical learner. These points disclose one of the major flaws in the application of blended learning in k-12 settings as it relates to the special needs population.

Greer, Rowland, and Smith recognized the discrepancy in the number of teachers who are prepared to deliver appropriate content that is designed to meet the accessibility issues of all students and the increase demand for services. The authors found that there was a need for teacher preparation programs and professional development opportunities that addressed the evaluation of design, accessibility, and learning engagement options for the differently abled student. Universities are attempting to prepare student's in education programs to better meet the needs of the 21st Century learner by requiring students to complete coursework on online and blended learning. These courses may include accessible instructional material be it hardware and/or software applications, accessibility related to the universal design for learning framework and best practices in delivery and assessment of content.

K-12 Supports

As blended learning continues to expand as an option for students with disabilities there is a need for quality supports to promote these students successful inclusion as members of learning communities. Smith & Associates definition of usability states that a user's ability to reach a set goal effectively, efficiently and with a sense of satisfaction is a requirement for usability, the knowledge that access is not the defining factor in a disabled student's ability to digest information has reached the mainstream populace. There have been in recent years an influx of products designed to support all learners in the online environment with the backing of

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government regulation through Section 508 of the Tech Act of 1988 and the redefining of the legal rights of all disabled individual's by the U.S Department of Education's Office of Civil Rights, by which digital content schools and businesses have been legally charged with providing accessible content and delivery options. The current NMC Horizon Report: 2015 K-12 Edition points to blended learning as being a trend that has a short term impact in education with its adoption in K-12 settings within the next two years. iNACOL's outlines five areas for officials to undertake to change K-12 learning: creation of competency based education systems, improving student access and equity, measuring and assuring quality from inputs to outcomes, supporting innovative educators, and supporting new learning models through connectivity, data systems, and security.

Findings and Conclusion

The impact on K-12 education with the development of disruptive innovations as marked by Christensen, Horn, and Johnson in their book *Disrupting Class: How Disruptive Innovation Will Change the Way the World Learns*. Disruption that causes an unexpected change to the learning environment can be motivational with regards to the innovated inclusion of technology to act as a systemic change agent. When a system is unwilling to adapt to the inclusion of the new disruptive technology or systematic change agent, the system will ultimately fail.

Christensen, Horn and Staker (2013) identified five steps that leaders would need to incorporate to facilitate disruptive innovation:

Create a team within the school that is autonomous from all aspects of the traditional classroom. Focus disruptive blended-learning models initially on areas of nonconsumption. When ready to expand beyond areas of nonconsumption, look for the students with less demanding performance requirements. Commit to protecting the fledgling disruptive project. Push innovation-friendly policy.

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The literature identifies a need for further research in the area of blended learning for the k-12 population particularly in its attempts to address the disabled learner. An area that was vastly underdeveloped in the literature was the application of blended learning for students on the moderate to severe end of the disabilities spectrum.

The K-12 educational setting currently sits upon a ledge and is teetering in its attempts to define a direction. One path leads to the continued reliance on the known approach to instruction found in brick and mortar settings, while the other calls for a leap of faith supported by the preparation of infrastructure maintenances, design mechanics that incorporate a universal design for learning, instructors who are prepared to address, design and evaluate opportunities for learning for a broad range of learners including those with disabilities and the ability to identify the path that technology disruption in education will follow.

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