Engaging K – 12 Students through Blended Learning

Brad Silvus

Wright State University

AUTHOR NOTE

Correspondence concerning this should be addressed to: BRAD SILVUS.

Abstract

Blended learning has become a hot topic in K − 12 education. As the digital age changes much of how we interact and learn, teachers strive to utilize new instructional methods that are engaging to students. This review examines the effectiveness of blended learning as a means to engage students in a more active learning environment. Evidence suggests that an effective blended or online learning program increases the engagement of students in many different subjects and grade levels. There are common characteristics in the research that demonstrate what an effective blended learning classroom looks like. These include, but are not limited to, concepts such as activities to promote positive interactions, opportunities for students to work across disciplines during project-based learning, and technology rich, inquiry-style experiences.

Keywords: Blended learning, online learning, student engagement

Many teachers throughout our country face a common problem each day: how to get students more engaged in learning. This issue has gained increasing amounts of attention over the past twenty years as our world entered the digital age. Popular belief is that students are no longer "entertained" in a traditional classroom environment due to the variety of experiences they now have access to, digitally, on a daily basis (Barnes, 2007). In the past, students that were not "engaged" in learning were merely forced to conform to the protocols and processes used in the traditional classroom setting, or face severe consequences both behaviorally and academically (Clark, 2015). Finding new instructional methods to engage students in different ways has become a required activity for most teachers (Cavanaugh, 2009). Concepts such as "learn by doing" and "self-directed learning" have received much attention in educational research arenas.

Therefore, teachers must make changes to address different forms of instruction to engage learners. Glenn (2000) states that today's students need self-directed learning opportunities, interactive environments, multiple forms of feedback, and assignment choices that use different resources to create meaningful learning experiences. Using blended learning as a method for delivery provides the learner with many of these experiences.

In the Education profession, the term "blended learning" is generally defined as the practice of using both online and in-person (face-to-face) learning experiences when teaching students. Blended learning can take many forms such as "flipped classrooms", "blended classrooms", or even "one-way online classrooms." Flipped classrooms take the concepts of a traditional classroom and reverse them. For example, typically in a math class a teacher will use class time to complete a direct instructional lesson and then

assign homework for students to complete that evening. In a flipped classroom, the student completes an online direct instructional video/interactive lecture in the evening and then comes to class the next day prepared to demonstrate their understanding by solving problems related to the previous evening's lesson.   Blended learning often utilizes the best practices of traditional classroom instruction, but does so in an online format that allows greater freedom for students to meet their own individual needs (Kassner, 2013).   The last, least frequently discussed model is a one-way online learning model. This is described best as basically a textbook recreated online in a format that requires students to read and complete the lesson in a completely self-paced manner with no interactions with teacher or students (Kassner, 2013).

Student Engagement Theory

Student engagement is defined by Willms (2003) as students' attitudes towards schooling and their participation in school activities. In many cases, student achievement is linked to student engagement, making the assumption that if a student is engaged he/she will perform academically better, and vice versa.   Willms (2003) notes that students who identify themselves as engaged show more positive perceptions about learning and school life in general. Other researchers use phrases such as students actively participating in educational activities and making connections with the content, peers in class, and instructor to describe what student engagement looks like (Ariani, 2015 & Lewis, 2015)

Teachers strive to find teaching methods that increase student engagement. Some of the more effective models include Community of Inquiry model (Golding, 2015),

constructivist learning models (Jones, 2015), and experiential models (Yardley, 2012). All of these models require students to actively participate in their learning. By utilizing these types of learning models, students will high achieve better engagement and therefore higher academic achievement (Willms, 2003 & Ariani, 2015).

Student engagement has historically been measured by characteristics such as graduation rates, attendance rates, and other similar manners to show students are going to school. According to Taylor (2011), more recent research is focusing on qualitative data obtained from surveys, individual interviews, and group interviews. This data has provided much insight into the previously described themes that seem to be necessary for successful engagement in an online learning environment. Simply having a textbook posted in a manner that students go onto the computer and read it is not effective learning or teaching. As the number of learning options increases, online learning must be able to defend itself as a viable, productive learning possibility (Taylor, 2011). In order for online learning to be effective it must mirror the same areas for student engagement as traditional and face-to-face learning (Lewis, 2015).

Student Engagement in Blended/Online Learning Environment

To effectively implement the use of blended or online learning as a teaching strategy, teachers must consider the characteristics described above. Creating activities that are engaging in any classroom have many common characteristics. However, some teachers do not have the experience with technology to understand what that engagement would look like in an online environment. Much attention has been given to area in research, particularly at the collegiate level (Ariani, 2015). The results from research in

the K – 12 setting show that teachers already have many of the components in their instructional arsenal (Lewis, 2015).   Concepts such as student collaboration, inquiry based learning, assessments that show student growth, activities using technology as a learning tool, and developing material that crosses multiple disciplines are examples of frequently cited practices.

Collaboration

   Collaboration among peers and between students and teachers must be embedded in the online learning environment. Positive, challenging and open learning climates are crucial for a productive learning environment. Students should be willing to take risks and be involved in the decision making about the course (Kassner, 2013). Professional Learning Communities working together to plan, research, develop, share and implement new research, strategies, materials (Kellerer, 2014).   One study found that a section of students perform better in an online environment when they worked independently, as opposed to the concept of peer collaboration. When an instructor is constructing a blended learning experience, the content should be considered when planning collaborative activities (Gerbic, 2011). For example, using a math equation as a focus of collaborative discussion may not be as productive as offering multiple equations with specific instructions on how to compare and analyze the grouping (Clark, 2015).

Inquiry Based Learning

   All members of the group are expected to participate and responsible for their own learning (Chang, 2010). Active, hands-on opportunities promote more student engagement.   These characteristics also relate to increased perception by students about their ability to understand the topics (Willms, 2003). Constructivists believe that giving

the learner more control of the learning allows for greater intrinsic motivation and deeper

learning (Jones, 2015).   Blended activities that pose problems for the learning to dive

into not only provide opportunity for more engagement in learning but assists in building

collaboration if the activity is structured effectively (Kassner, 2013).   It should be noted

that lessons that are not well planned can leave the learner frustrated and with a lack of

understanding related to the expectations (Kellerer, 2014).

Assessment for Learning

   As opposed to simply assessing students at the end of a lesson in a summative fashion,

effective instruction includes ongoing, formative assessments to help students grow. This

gives more immediate feedback to students which can influence their attitude towards

effort and engagement (Willms, 2003).   Regular assessments can be built into activities

using tools such as Quizlet. Another great tool to assess a student's understanding

involves a reflective journal. This tool allows the learner to recall the information

learned and assist in moving it into a more permanent state of memory. One caution

from research relates to the overuse of low-level questions/quizzes. If students are only

asked to recall basic information, they will be less likely to fully engage in effective

learning and memory of the material (Henrie, 2015).

Integrated Technology

   Learning must look different today, than it did 40 years ago. If we are still utilizing the

same practices, we are behind.   Integrating technology use into a learning tool provides

greater options for student learning. In the past, computers were used to run software

programs and basic word processing functions (Barnes, 2007). Students need these

skills, but can use them to achieve higher levels of learning when given the appropriate

training and effective online instruction.   Students can thrive in a technology rich

environment, as long as the technology is used for higher level learning activities

(Delgado, 2015). Having students create a presentation that has to defend a position or

compare multiple perspectives can provide this opportunity for higher levels of learning.

Kellerer (2014) notes that if the instructor is not comfortable assisting learners with the

use of technology, a student is less likely to have a positive experience.   Unfortunately,

all too often this is the case with teachers in the K – 12 setting. They have less

experience with skills beyond those basic areas described.   Professional development is

critical for the effective integration of technology as a successful teaching strategy

(Kellerer, 2014).

Interdisciplinary/Relevant

   One of the most effective strategies for delivering content is to make it relevant to

students (Kassner, 2013). In an inquiry-based or constructivist model, real world

problems, situations or examples are required for effective learning to occur. A manner

in which this can be accomplished is through cross-disciplinary or inter-disciplinary

units.   Combining multiple content areas around a cluster of related topics can greatly

increase the learning, synthesizing and understanding of complex ideas (Kellerer, 2014).

One example described in research includes the creation of a marketing plan to sell a new

soda product. Learners must consider topics from English, Social Studies, Mathematics,

Art, and Communication in developing an effective plan.   The use of this type of activity

is not a common practice in the K – 12 setting (Means, 2009). Therefore, students must

be trained how this type of activity is structured and expectations must be clearly defined

to assist in this understanding.

Conclusion

To summarize improving student engagement, the themes and ideas that occurs most often in the literature reviewed are: embedded collaboration, integrated technology, inquiry-based learning, assessment for learning, and making learning interdisciplinary and relevant to real life. Kassner (2013) states that effective online or blended learning involves quality interactions, student engagement, and the formation of connections with the material. Wang (2009) notes that the most effective blended learning environments have thorough orientations for students to understand the process of the course, contain shorter learning activities that require interaction with other students, and allow for creative interactions between students and facilitator. These interactions are not primarily teacher to student, rather the best interactions are student to student. Creating opportunities for students to interact and engage in the content leads to formation of connections within the discipline being studied while building acceptance within the classroom environment. Student perceptions also identified better use of time within the class and a higher quality of instruction from teachers in the blended classroom.

Given the conditions described above, research shows great promise for utilizing blended learning as a strategy to engage learners. As with any teaching method, those characteristics that create the best opportunity for success need to be incorporated and teachers need training in implementing this new method (Kellerer, 2014). Of the thirty articles reviewed, twenty-four showed data to support an increase in student engagement and perception of learning through the use of a form of online or blended learning. Several articles even went to the level of demonstrating significant increases in student engagement through the use of technology (Wang, 2009).

Barnes (2007a) states that while students' perceptions show they prefer blended learning to traditional classroom settings, there is little evidence to support that students perform better academically.. Student engagement does not automatically mean academic performance will increase. More research is needed in this arena to determine the effect of positive student engagement on academic performance.

The digital age is upon us and continues to change every day. In order for teachers to effectively meet the needs of all of their students, embracing new teaching strategies is essential. The use of blended or online learning has produced positive results across many subjects and grade levels.   Teachers would be wise to branch out into this readily available resource and find ways to utilize it within their classrooms. Given the appropriate environment for learning, students will be more likely to embrace this method and become a better, more engaged learner.

References

Ariani, D. (2015). Relationship model of personality, communication, student
        engagement, and learning satisfaction. *Business, Management and Education,*
        13(2) 175–202.

Barnes, K., Marateo, R. & Ferris, S. P. (2007a). Teaching and learning with the net
        generation. *Innovate Journal of Online Education, 3*(4). Retrieved from:
        http://www.innovateonline.info/pdf/vol3_issue4/Teaching_and_Learning_w
        ith_the_Net_Generation.pdf .

Cavanaugh, C. S. (1999). The effectiveness of interactive distance education
        technologies in K-12 learning: A meta-analysis. Retrieved from
        http://www.eric.ed.gov/contentdelivery/servlet/ERICServlet?accno=ED430
        547.

Cavanaugh, C., Barbour, M., & Clark, T. (2009). Research and practice in K-12 online
        learning: A review of open access literature, I*nternational Review of*
        Research in Open and Distance Learning, 10(1), 1 - 22.

Chang, C., Shu, K., Liang, C., Tseng, J., & Hsu, Y. (2014). Is blended e-learning as
        measured by an achievement test and self-assessment better than traditional
        classroom learning for vocational high school students? *International Review of*
        Research in Open and Distance Learning, 15(2), 213- 231. Retrieved from
        http://www.eric.ed.gov/contentdelivery/servlet/ERICServlet?accno=EJ1030111 .

Clark, K. R. (2015). The effects of the flipped model of instruction on student
        engagement and performance in the secondary mathematics classroom. *Journal of*
        Educators Online, 12(1), 91-115. Retrieved from
        http://files.eric.ed.gov/fulltext/ED430547.pdf

De La Varre, C, Keane, J, & Irvin, M. (2011). Dual perspectives on the contribution of
        onsite facilitators to teaching presence in a blended learning environment, *The*
        Journal of Distance Education, 25(3), 10 -24.

Delgado, A. J., Wardlow, L., McKnight, K., & O'Malley, K. (2015). Educational
        technology: A review of the integration, resources, and effectiveness of
        technology in K-12 classrooms. *Journal of Information Technology Education:*
        Research, 14, 397-416. Retrieved from
        http://www.jite.org/documents/Vol14/JITEv14ResearchP397-
        416Delgado1829.pdf .

Gerbic, P. (2011). Teaching using a blended approach - what does the literature tell us?
        *Educational Media International,48(*3), 221 - 234.

Glenn, J. M. (2000). Teaching the net generation. *Business Education Forum 54*(3), 6-14.

Golding, C. (2015). The community of inquiry: Blending philosophical and empirical research. *Studies In Philosophy & Education*, *34*(2), 205-216.

Grover,S., Pea, R. & Cooper S. (2015). Designing for deeper learning in a blended computer science course for middle school students, *Computer Science Education, 25(*2), 199-237.

Henrie, C., Bodily, R., Manwaring, C., & Graham, C. (2015). Exploring intensive longitudinal measures of student engagement in blended learning, *International Review of Research in Open and Distance Learning, 16*(3) 131 - 155.

Jones, J., Martin, M., & Flohr, B. (2015). Theories holding promise for supporting the constructivist behaviors of inquiry. *School Libraries Worldwide*, *21*(2)115-126.

Kassner, L. (2013). A review of literature: Mix it up with blended learning in K-12 schools. Online Submission. Retrieved from http://www.eric.ed.gov/contentdelivery/servlet/ERICServlet?accno=ED548381.

Kellerer, P., Kellerer, E., Werth, E., Werth, L., Montgomery, D., & Clyde, R (2014). Transforming K-12 rural education through blended learning: Teacher perspectives. International Association for K-12 Online Learning. Retrieved from http://www.eric.ed.gov/contentdelivery/servlet/ERICServlet?accno=ED561327 .

Lewis, S., Freed, R., Heller, N., & Burch, G. (2015). Does student engagement affect learning? An empirical investigation of student involvement theory. *Academy of Business Research Journal, Vol. II,* 8 – 16.

Means, B., Toyama, Y., Murphy, R., Bakia, M., Jones, K., Department of Education (ED), Office of Planning, Evaluation and Policy Development & International, Studies. (2009). *Evaluation of evidence-based practices in online learning: A meta-analysis and review of online learning studies.* US Department of Education. Retrieved from http://www.eric.ed.gov/contentdelivery/servlet/ERICServlet?accno=ED505824 .

Taylor, L. & Parsons, J. (2011). Improving student engagement. *Current Issues in Education*, 14(1). Retrieved from http://cie.asu.edu/ .

Umit, I., & Akbayin, H. (2012). High school students views on blended learning. *Turkish Online Journal of Distance Education, 13*(4). 125 - 139.

Wang, M., Shen, R., Novak, D., & Pan, X. (2009). The impact of mobile learning on
        student's learning behaviours and performance: Report from a large blended
        classroom. *British Journal of Educational Technology, 40 (4),* 673-695.

Willms, J. D. (2003). *Student Engagement at School: A Sense of Belonging and
        Participation. Results from PISA 2000.* Paris: Organization for Economic Co-
        operation and Development (OECD). Retrieved from
        http://www.unb.ca/crisp/pdf/0306.pdf.

Yapici, I., & Akbayin, H. (2012). The effect of blended learning model on high school
        students' Biology achievement and on their attitudes towards the internet, *The
        Turkish Online Journal of Educational Technology, 11(*2), 228 - 237.

Yardley, S., Teunissen, P., & Dornan, T. (2012). Experiential learning: Transforming
theory into practice. *Medical Teacher*, *34*(2) 161-164.