

Blended Learning: an overview

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Blended Learning

The *Oxford English Dictionary (OED)* defines learning as, “The action of receiving instruction or acquiring knowledge; ... a process which leads to the modification of behaviour or the acquisition of new abilities or responses, ...” (“Learning,” 2014) The *OED* provides no dictionary entry for blended learning or for hybrid learning; however, the word blended is defined by the *OED* very simply as, “Mingled, intermixed.” (“Blended,” 2014)

From these definitions, it may be surmised that all learning is blended learning. From the moment of birth, learning takes place through the comparison of previous experience (in the womb) to current experience (outside the womb). In all learning, other people act as facilitators or teachers through their modifications of the experiences, i.e., the mother’s diet, speech, activities, listening habits; the birthing staff’s actions immediately following the birth. Throughout life, all learning happens through a blend of learner, media delivery method, and instructor. The individual (learner) who picks up a book (delivery media) to learn a skill independently is functioning under the guidance of the author (instructor); therefore, all learning can be considered blended learning.

Bonk and Graham (2012) describe blended learning as face-to-face instruction combined with computer-mediated instruction. (p. 66) Glazer (2012) further delineates the description of blended learning as a combination of in person and online learning activities. (p. 1) Sharma (2010) supports Glazer’s description, but adds additional definitions, including “a combination of technologies” (p. 456) and “a combination of methodologies” (p. 456), to what he calls the classic definition of “a combination of face-to-face and online teaching.” (p. 456)

For the purpose of this study, blended learning will be discussed within the following parameters: high school students (learners) in formal communication with instructional

facilitators (teachers) utilizing computers to varying degrees (delivery media). This discussion will move from the most teacher-centric blended learning model—teacher as instructional provider and computer as support tool—to the least teacher-centric blended learning model—computer as instructional provider and teacher as evaluator and facilitator only.

Teacher Centered Blended Learning

Found most often in high schools where the teacher is a novice at utilizing online resources for instructional delivery and/or where a greater percentage of the students do not have regular online access—or even simple computer access—outside the classroom. Teacher-centered blended learning still has the teacher as the primary disseminator of information, through lecture, demonstration, and teacher-created printed materials. The teacher in this teacher-centered blended learning environment will utilize online videos and other curated materials as teaching resources, having the students access the materials themselves if enough computers are available, or presenting the information via digital projection if necessary.

The teacher in this model may be a veteran high school teacher more comfortable with the traditional lecture method of instructional delivery and not confident enough in her technology skills to feel motivated to make extensive use of whatever technology might be available. The high school teacher in this model may not have ready access to a sufficient number of computers, and may believe limited use of technology would be less effective and more disruptive than more traditional methods. A teacher using this more teacher-centered model at the high school level may be highly motivated to use more online resources for instructional delivery, but may be hindered by students' inequitable access to technology beyond that provided by the school.

Even in what seems an ideal situation--motivated teacher, one-to-one computer access in the classroom every day, online access, and available online resources—a teacher may be hampered by disrupters such as blocked access to websites such as YouTube.com and email as mandated by district policy. Such a teacher may find it simpler to revert to more traditional methods of delivery rather than a continual search for workarounds. In this situation, a teacher might simply use the computers and online access as tools for research and creation of assignments, rather than as a media for curriculum delivery and collaboration.

Staker and Horn (2012) describe this limited online educational experience in their Rotation model, defined as a rotation by students among instructional modalities with at least one having instruction delivered online; this rotation might be on a fixed schedule or at a teacher's discretion. (p. 8) Using this rotation method, a teacher with as little as one computer with online access can provide some online blended learning experiences for all students. Staker and Horn (2012) provide the example of KIPP LA Empower Academy's kindergarten classrooms utilization of the rotation model with the entire class rotating between online, teacher led, and collaborative activities. (p. 9) While the example given is that of kindergarten rather than high school, a similar approach might be utilized by multiple teachers in a high school setting sharing a single computer lab.

The Flipped Classroom

Piccano, et. al. (2012) concludes that blended learning utilizing online resources is becoming a significant factor of learning at the secondary level, with research showing that online and blended learning grew by 47% between 2005–2006 and 2007–2008. (p. 135) This growth is particularly evidenced in the increased use of what is called the Flipped Classroom, defined by Bergmann, Overmyer and Wilie (2013) as a class where students watch instructional

videos outside of class so as to give the students more time in class to work on key learning activities with the teacher acting as facilitator, moderator, and troubleshooter. (July 9)

Álvarez (2011) provides a success story in her article about a physical science teacher from Clintondale High School in Clinton Township, Michigan, and how he used the flipped classroom model to reduce the failure rate in his classes. (p. 18-21) In this article, not only did Rob Townsend—the physical science teacher—see significant results, his success motivated the school, the district, and the community to support the flipped classroom method. Using an online screen capture and recording software program, educators create instructional videos in lengths of less than 10 minutes. Students and their parents are then able to watch the videos on a computer or smartphone. The school opened its computer labs to students before school, during lunch, and after school to provide computer access to those students who did not have access to the technology at home.

In addition to students' being able to come to class prepared to ask questions for clarification prior to completing activities, the following additional benefits were noted in Álvarez's (2011) article:

- Absent students had access to the same instructional material
- Classroom management became less of an issue because students were able to complete the activities—previously assigned for homework—with the teacher's assistance
- A much higher rate of completion with a significantly higher rate of accuracy was achieved—no more lost, forgotten, or simply not attempted homework
- When the teacher has to be out, the video can be made available to the substitute as well to help students

While labeled Blended Learning, Yapici and Akbayin (2010) describe a flipped learning model being used in their study of high school student attitudes toward blended learning. The study concludes a highly positive reaction to viewing instructional materials via the Web from home, then communicating collaboratively with classmates and the teacher on the lessons and activities. The only significant problems mentioned in the interview portion of the study related to lack of access to technology or slow Internet connections. (p. 125)

Teacher as Facilitator

Dichev, Dicheva, Agre, and Angelova (2013) reference a 2010 survey from Simba Information which lists reasons for online courses: credit recovery, access to unavailable course, advancement, remediation or dual credit (p. 97). Students taking classes at a traditional brick-and-mortar high school may find themselves needing coursework for one of the reasons listed, yet no one class is offered to meet the student's requirements. This problem can be resolved through the use of online curriculum delivery, whether created by a teacher at the high school, offered through a local university, or purchased from a commercial digital learning provider.

In this type of blended learning model, the student would attend a class with other students who may or may not be enrolled in the same subject matter and who may be taking the class for same or different reasons. Such a class might meet during the school day, might have regular meetings on-campus after the regular school day ends, might meet on weekends, or any defined schedule as determined by the school and the teacher. In this type of blended learning model, the teacher acts almost entirely as a facilitator, setting up student accounts and coursework, reviewing reports, and maintaining documentation for the school on the status of students enrolled in the program.

As the facilitator of the online learning program, the teacher would not deliver curricula instruction to the student; any assistance needed by the student would be provided by the facilitator such as the facilitator was qualified and confident in providing. When the student's curriculum required aid beyond the facilitator's skill set, the teacher would request assistance from other subject matter experts or would provide access to additional resources.

With ever-decreasing budgets the norm for school districts, investing in an online curriculum delivery system would enable high schools in the district to offer specialized coursework to as few or as many students as needed. Requiring students to attend classes on campus would enable the school to monitor progress in real time as well as ensuring that the students are spending at least a minimal amount of time actively working towards successful completion of the assignments. In addition, web-based curriculum delivery allows students to work from off-campus as well, in their own time and at their discretion. Programs such as these allow students to work at their own pace, lessening the stress for students who work more slowly while not forcing more gifted students to a frustratingly slower pace.

Fully Online

At the other end of the blended learning spectrum is the fully online model. In this model, students take classes online with no required face-to-face interaction with classmates or teacher. Asynchronous communication tools such as email and discussion boards are used to pose questions, answers, and collaborative discussion between students and the instructor. Synchronous communications may be included through the use of audio and/or video conferencing.

Barth, Hull, and St. Andrie (Eds. 2012) found that online courses and schools are growing rapidly, with growth being pushed by both those who see opportunities in this growing

market as well as by those who promote the many advantages of digital learning. (p. 1)

Unfortunately, the online learning field—especially as it relates to P-12 education—has little solid research as yet. Barth’s 2012 report mentions that news providers, rather than educational researchers seem to be the primary sources for investigations and reporting. (p. 2)

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