

Cost-benefit analysis of blended & fully online learning

Professor Randy LaBonte

Christopher Sowden

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School districts across the United States and Canada have been facing ever tightening budget restrictions while trying to accommodate sweeping technological changes. Many districts have looked at ways to cut costs while maintaining the same level of service. Many districts have considered turning to fully online courses or blended courses as a potential cost-savings measure. Determining whether or not blended or fully online learning models will result in a cost-savings while maintaining the same educational standards is necessary, if school districts are to move forward with online based learning. Of course, the opportunities for new ways to learn, whether it is face-to-face (F2F), blended, or fully online methods are also driving factors for districts to pursue these varying methods of instruction and learning.

The following definitions will be used as a reference regarding the varying methods of instruction and learning. F2F learning is defined as a learning environment that occurs with both instructor and student in the same physical space. Online learning is defined as a learning environment where the instructor and student are not in the same physical space but interacting through a common online site. Blended learning is defined as having a combination of both F2F and online learning with the online content ranging from 30-79% (Kuo, Belland, Schroder, & Walker, 2014).

According to Michelle Davis, when districts first examine blended or fully online learning, their hope is that it will achieve a cost-savings (Davis, 2014). Over the long term, savings would occur when compared to F2F. A blended learning model would cost between \$7600 - \$10,200, while a F2F learning model would cost \$10,000 per student (Davis, 2014). A fully online model could cost between \$5100 - \$7700 per student. Some sources for the potential savings per student could be a higher student-teacher ratio, re-purposing classrooms for other classes, using eBooks instead of paper textbooks, and student retention. In this case, student

retention is defined as not losing students to private sector education and the money that goes with that student.

The potential savings from blended or fully online learning models may come with hidden costs. While a higher student-teacher ratio will indeed save money by having one teacher teaching more students, the increased workload for that teacher could potentially cause teacher burnout. The higher student-teacher ratio will result in less teaching positions as well. A potential added cost would be the extra workload performed by the IT district staff to maintain student privacy, upkeep, and secure the data in the online environment. Using eBooks instead of paperback books may not be a choice in a few years (DeNisco, 2012). While long term costs for eBooks will be lower than paperback, the initial cost of switching from paperback to electronic will be daunting for any district. The other potential cost is that eBooks require a tablet or some other device to view them and many students will either not have the funds or the internet to access them.

The start-up costs and associated costs for running blended programs or online programs can be prohibitive. Depending on district buying power the software and hardware may end up costing districts more money rather than less. The initial infrastructure costs for the district would include servers, tablets, interactive software and hardware, teacher professional development, and program development (Davis, 2014).

Any potential savings accrued from switching courses to blended or fully online courses may not immediately translate into cost-savings. Much of the savings are situational and depend on the technologies in place, district size, and student enrolment (Davis, 2014). What benefits

does blended or online learning bring to justify these costs and what new risks do they also bring are not easily answered.

Blended learning seems to outperform traditional F2F classrooms. Blended learning seems to be leading to stronger learning outcomes in K-12 education (Kuo, Belland, Schroder, & Walker, 2014). Discrimination is decreased while online compared to F2F from peers (Journell, 2012). Both blended and fully online learning can greater accommodate rural area students by learning and attending class from home (Journell, 2012). With the proper supports, finances, teacher training, and technology in place, blended and fully online learning could be just as educational as a F2F learning environment.

While blended and fully online learning do bring potential benefits, there are some risks that may inhibit a healthy learning environment. A lack of training in developing and/or teaching an online based course could leave students feeling dissatisfied and unmotivated (Kuo, Belland, Schroder, & Walker, 2014). Anytime a student is required to take an online course during school may also be an opportunity for a student to drop out. Students have a better completion rate if they choose to take an online course rather than the course be mandatory (Journell, 2012). There is also a perception between students and teachers about online courses. Teachers believe students don't care about their classes as they don't participate in the discussions, assignments, or forums, while students believe an online version of a course is somehow easier than a F2F course despite having the same content (Journell, 2012). Online courses are often designed as a "one size fits all" mandate and this does impact those who have learning challenges (Journell, 2012). Aside from keeping students motivated to complete online based courses, there is also the technology factor that can get in the way. Internet services may not be accessible in some areas or the service is intermittent and other people may not be able to

afford the technology to participate in the online courses. Lastly, there isn't much research done in blended or fully online courses in the K-12 public education (Journell, 2012) so moving forward with online learning without proper research may not be as beneficial as first thought.

In the 21st century learning era, school districts across North America are faced with constricting budgets and are looking to blended and fully online learning as a potential cost-savings measure. These learning models will not achieve savings in the short term, but rather the long term. It is possible to save money in the budget using either a blended or fully online model but the savings will not amount to much (Davis, 2014). The benefits can easily outweigh the risks of online learning if the risks are sufficiently addressed. Most research in this area has been done with charter or private schools (Journell, 2012). More research will need to be done in the public education system to see if the findings continue to hold true. As well, more research will need to be done in Canada to address the Canadian education systems. Blended & fully online learning models will occur in the future and so the costs and training need to be assessed so that every district can approach the blended or fully online learning models with the knowledge to make appropriate decisions.

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