

Edward Frison

Background on Learning Environment

Our school was commissioned to meet the needs of learners that had some factor restricting them from taking courses in their local brick-and-mortar school. As we know, these factors are quite varied and can range from timetable conflicts to student/teacher conflict, to being home educated, etc.. Thus, our scope immediately made us a Distributed Learning school with all the attendant requirements to provide programming to students all at a distance from the teacher. At the same time our school was commissioned, blended learning as a type of programming was just being promoted and experimented with in our system. As you might expect, due to the research about how blended learning can take place with different models, we were looked at as a non-option for blending as we were not seen as having any face-to-face component. As we looked at building our programming we looked at past data on Yukon students that had taken some form of DL programming through BC correspondence and DL schools. These programs typically sent the student a learning kit for the year with books and materials to work through under supervision of a parent. This evolved somewhat into converting materials and content to a digital format. Regardless of the paper or digital format, we found that, on average, approximately 30% of the students actually completed high school courses. When past students and parents were polled, a pattern of responses emerged suggesting that students were not able to keep engaged as they had little to no teacher contact. Our aim, then, became how to provide distance programming and still maintain the teacher presence in each course. Subsequent program development for us followed the Community of Inquiry Framework (Anderson, Archer, Garison, 2000). The biggest hurdle we had was how to build in the required teacher and social presences into our practice if our course delivery was to be 100% online.

Problem Solving Through Change

Is it possible to make a secondary science course more blended in an online environment?

Using Horn and Staker's (2015) definition of blended learning, it is difficult to see how to address the need for face-to-face (f2f) with our students. In the original context of our school design, we looked for a way to replicate this component in a virtual manner. As with any online course, there has to be a way to deliver course content to the students. This was fairly easy for us using Moodle as our LMS to provide course content including assessment tools and grade data collection and reporting. So, examining the typical ways a classroom teacher is able to build relationship with their students and the students with each other, we felt we had to have a way for the teacher to have direct and real-time connections with the students to be able to converse with them (deliver a lesson), show them visually

how to solve various problems related to the content while dialoging with them, see examples of student work during the lesson, ask and answer questions with immediate response, and also provide class or group discussion.

Required Software and Hardware

Hardware and software for students:

Individual computer; USB Headphones with built in microphone, scanner/printer; high speed internet connection; Up-to-date suite of operating software including browser, Java, Media Player, MS Office, Moodle account, and others downloaded at teacher direction.

For teachers:

Same as above as well as BrightLink touchable projector with Smart technology, annotation/drawing slate.

Role of the Teacher

The teacher role is a complex mix of multi-course prep work using BCLN and self-made course shells, collaboration with other teachers sharing the same students, familiarity with the technology used to prepare, store, and deliver content as well as track student progress and assessment. Understanding of online environments is critical for the teacher as is a knowledge of Web 2.0 tools and strategies. The teacher needs to be trained in using virtual environments such as Blackboard, Hangouts, Skype, etc. The teacher will meet with their students in a real-time virtual environment for scheduled meetings throughout the week to deliver lessons, tutorials, and office hours. They are responsible for using Moodle to store content, assessment and grade data. It is expected that they will use email to regularly communicate to the student outside of scheduled virtual classes.

Role of the Student

The student needs to commit to making as many of the real-time virtual classes as possible in every subject. They have the option of dropping in to tutorial times or making appointments to chat with the teacher. They have control over the place where they will access their lessons and where they will do their assignments through Moodle. They have some control over pace as well in that they can choose to follow a semester or linear pace set by the teacher. Unless dictated by a BCP exam, there are no hard set times for students to finish a course other than that of the school year.

Physical Environment

Our virtual f2f time is accomplished primarily via Blackboard. However, to be more aligned with Horn and Staker's definition of blended, we need to create opportunity

for students and teachers to be in the same physical location at the same time. To this end, we have commissioned a new facility for our school that comprises separate 'office' size rooms for the teachers to deliver their virtual programming and a large open classroom that will be used for a variety of f2f meetings. Where possible, those students in proximity to our facility will be able to write all important assessments in person. These include unit and final tests, FSA assessments, BCP exams, School Wide Writes, DART's, etc. We also wanted to have the opportunity to have students be able to drop in for teacher-led science labs, Planning 10 and Grad Transitions group activities, writing labs, and in-person tutorials.

Modalities

As described above, according to Horn and Staker, we would not be considered a truly blended program. They would say we would fall into primarily an enriched virtual model. This, I think, is a matter open to debate. If we hold on to the idea that f2f can only occur in a physical location, then we would have to agree with the authors. However, based on where most of our students are at, they would describe their interconnectedness through the internet as very much a social place where relationships are very possible. I may not entirely agree with that either, but it is a valid point from their perspective. Thus, our model of replicating f2f encounters via synchronous audio/visual means online and the opportunity to meet, where possible, in teacher driven activities in a physical location, combined with asynchronous content delivery, provide our mix of modalities.

How these modalities mesh, in their entirety, remains to be seen. We do not fall into the standard DL school model nor into the completely online model. Perhaps we are disruptive innovators to some degree. What we have experienced so far would suggest the integration of modalities is fairly seamless, but much experimentation and work still needs to be done.