



511 Major Inquiry Project

How do you create the ideal blended learning environment?

Expanding the BVEC - Creating a Learning Commons

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Overview

Horn and Staker (2015) define blended learning as “any formal education program in which a student learns at least in part through online learning, with some element of student control over time, place, path and/or pace” (p.34). School District #54 (Bulkley Valley) has an established Distributed Learning Program, the Bulkley Valley Education Connection (BVEC), which has strong success largely due to the ability of the teachers to meet face to face with their distance students. This proposal aims to build upon the successes of the BVEC and make enhancements in areas where we have identified weaknesses or problems that need to be solved.

One of the largest (and most expensive) elements of this plan is the modular architectural changes - both of physical architecture and the digital components of the online courses. Flexibility and choice in the student experience are in line with the BC Education Plan (2015), and planning for modular courses and classroom set up should meet the community’s demand for “customized course selection instead of further functionality along the lines of the factory model” (Horn & Staker, 2015. P. 195). Perhaps the largest changes needed will be the mindset and cultural shifts away from teacher control and towards student agency, which are so crucial for successful blended programs (Morgan, 2017).

Goals

1. Increase student engagement and success by integrating choice and personalization
2. Increase individualized and student-centred nature of courses through multiple modalities and modular course structure as “learning in multiple modalities yields more and better data that creates an integrated and customizable learning experience” (Bailey et al, 2015, p.2)
3. Combat scheduling issues in the mainstream school due to declining enrollment
4. Increase visibility of student success and progress
5. Combat loss of funding dollars to distributed learning schools outside SD54

Team Organization

The team required to redesign the BVEC and integrate it into a Learning Commons within Smithers Secondary would have to be a Heavyweight team. Horn and Staker (2015) state that “heavyweight teams are ideally suited for designing innovative configuration of

classrooms, departments, and other components within the school and district (p.125). Because our change would include elements beyond a single classroom and would need architectural changes to create the Learning Commons, team members from many levels and with varying levels of control would need to be on board.

Bailey et al (2015) identify key stakeholders with whom it is crucial to build support when shifting learning from a traditional factory style system to one that is more flexible and student-centred. For our project, we require support from the following stakeholders:

- Superintendent
- School Board
- Principal of BVEC
- Principal of Smithers Secondary
- Teachers and Staff
- Union leadership
- Community, students, and families

Large scale shifts in mindset require large scale support. As Bailey et al (2015) remind us, “The process of building and maintaining support will be enhanced by continually reminding each group of the overall learning shifts that form the foundation for the shift to blended learning” (p.15).

The Student Experience

Time, Place, Path and Pace

Ultimately our students should have ownership of what they are learning and will develop the skills necessary to learn and be successful in a rapidly changing world. This will be accomplished by providing a student-centred blended learning experience, where a digital course backbone, split into customizable modules, will be delivered through our SD54 Moodle server.

Collaborative Opportunities coupled with Individual Pacing

Horn and Staker (2015) describe the two main reasons students come to school as the “core jobs” that education serves from a teen or child’s point of view (p.143). These fundamental experiences that students want to have at school are to feel successful and to have fun with friends (Horn and Staker, 2015. p.143). Locating the BVEC in a Learning Commons (which will be described in more detail later on) will help students achieve these goals.

Students will have project-based learning and collaborative opportunities designed into their modular course choices. This will allow for structured social time. They will

also have access to unstructured social time in a free-flowing learning space that serves students across grade levels and content areas, where we hope to continue building our inclusive and nurturing class culture.

Use of visuals to indicate success along the course trajectory from “just starting” through to “finished” will help students experience a sense of progress, and individual pacing based on achievement rather than “time in the seat,” will enable students to gain a real sense of achievement, rather than many of the conflicting emotions that arise when one is forced to march along with the peer group regardless of actual learning and understanding.

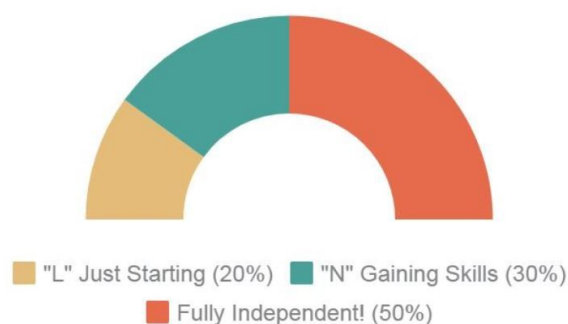
Graduated Learner “Licensing”

Experience teaches us that not all students are successful independent learners, and that there are actually a number of supports and skills that a student must have in order to be successful. These supports will be provided to students as a “graduated licensing” system for independent learners.

Younger students and those who have not yet demonstrated independent learning skills would have a set number of days they would need to attend our classroom, and a set number of hours they would be required to focus on their flex course(s). These would be the “L” learners - attendance and regular progress checks would be built into their program.

For the “N” learners, who had proven themselves to be on the track to fully independent, they would have more control over location for working and pace, perhaps through setting their own schedules and having fewer required check ins (provided work was being submitted regularly).

Finally, students could receive their “Fully independent” learner “license” in which they would have basically total freedom over all four elements of Horn and Staker’s (2015) definition of blended learning, as we would expect these students to have the foresight and self-knowledge to check in with the teacher as required.



Independent Learning Skills Rubric

works independently	difficulty meeting expectations	progressing toward expectations	meeting expectations	surpassing expectations
	<ul style="list-style-type: none"> - ignores work missed due to absence - make-up work not completed - work done only under direct teacher supervision: frequently off task - easily distracted by self and others creates a distraction for others - ignores independent work or misplaces work 	<ul style="list-style-type: none"> - asks for help in understanding missed work - some delay in making up work - stays on task with reminders and attempts to focus on assigned tasks - easily distracted by others but seldom creates distractions - attempts independent work, but soon runs into difficulty 	<ul style="list-style-type: none"> - seeks peer and or teacher assistance to make up missed work - make up work is handed in with a few or single reminder - usually focused in completing assigned tasks - tries had to ignore distractions and seldom creates distraction - undertakes independent work, asking for help when necessary 	<ul style="list-style-type: none"> - consistently ensures missed work is made up and checks with peers and then teacher - hands in assignment upon return - consistently focused on completing assigned tasks - works through distractions and causes none - independent work completed on time or early with occasional request for clarification - actively attempts projects or independent work

<p>uses time efficiently</p>	<p>difficulty meeting expectations</p> <ul style="list-style-type: none"> - seldom uses class time to complete tasks or to clarify assignments - little attempt to complete task or assignment unless under direct teacher guidance - loses focus in transitions from one activity to another 	<p>progressing toward expectations</p> <ul style="list-style-type: none"> - sometimes uses class time productively - attempts to complete tasks/assignments in school time: needs reminders - manages transitions from one activity to another with guidance 	<p>meeting expectations</p> <ul style="list-style-type: none"> - usually uses class time to complete tasks and to clarify assignments - seldom needs prompting to complete work - manages transitions effectively from one activity to another in most circumstances 	<p>surpassing expectations</p> <ul style="list-style-type: none"> - completes task/assignments regularly and on pace with individual schedule - uses time constructively --works on own interest or projects - moves smoothly from one activity to another, keeping focus
<p>works with partner/small groups</p>	<p>difficulty meeting expectations</p> <ul style="list-style-type: none"> - ignores or is unkind to group members - rarely listens to others ideas - does not contribute to group work - does not fulfill role expectations; perhaps leading to group breakdown 	<p>progressing toward expectations</p> <ul style="list-style-type: none"> - interacts with group members with encouragement - occasionally negative - sometimes listens to others ideas - contributes sporadically to group work - fulfills role expectations and shares in work with assistance 	<p>meeting expectations</p> <ul style="list-style-type: none"> - interacts positively with group members - usually listens to others ideas - willingly performs own tasks to meet group goals - fulfills role expectations, helping group accomplish tasks 	<p>surpassing expectations</p> <ul style="list-style-type: none"> - interacts positively with group members, assist others - listen actively to others ideas and gives feed back - enhances group product through sharing and helpfulness to others - exceeds role expectations assisting others to fulfill their roles in accomplishing tasks

Adapted from Rubric Code: **D6W756** found at www.iRubric.com

The Teacher Experience

Guide on the Side, Mentor & Counsellor

Content is delivered online or through independent study. The role of the teacher would be to support inquiry, answer questions, and to aid in the personalization of content and delivery. Our program will, as Horn and Staker (2015) state, “integrate mentorship into its design by training teachers to forget about their next lecture and focus instead on developing deep, personal relationships with students” (p.175).

One of the largest roles of the teacher is to facilitate these social connections and build community. Teachers will strive to be a safe person for students to approach with questions, and to support them as a caring and responsible parent would. Furthermore, they will model curiosity and a growth mindset.

Teachers will support student course choices and help them solve both scheduling issues and ensure they have access to prerequisite courses for post-secondary program entry and graduation requirements. This would be achieved either during our intake meetings when we make the student learning plan, or individually as changes need to be made throughout the school year.

Job Hygiene and Opportunity

Horn and Staker state that the “responsibility to design well for teachers is significant [and] may be the single most important determinant of whether the rise of blended learning will net out as a win” (2015, p.170). They paraphrase Herzberg’s 1968 article “One More Time, How Do You Motivate Employees” by emphasizing the two factors that make a job meaningful and enjoyable: hygiene and motivators (p.177). Basically, these factors play a large role in determining how valued teachers would feel, and the satisfaction that they would be able to achieve working on our team.

Our plan acknowledges that teachers need satisfying work conditions and work relationships, in addition to the ability for growth and achievement within their positions. A major hygiene factor that Horn and Staker (2015) identify is the ability to team-teach (p.178). In our Learning Commons, many teachers and support staff would be working within the same space, and expand upon the successful team teaching environment that has already been established in the BVEC.

Having the opportunity to explore new course design options and content areas would provide enrichment and growth opportunities that are not available within the confines of a fixed schedule. The digital delivery system also allows great

teachers to extend their reach beyond those randomly assigned to their classes (Horn and Staker, 2015. P. 179), providing the satisfaction and acknowledgement of skill that comes from students who choose to “vote with their feet” and join your classes.

Finally, freedom from the factory classroom setting relieves many of the classroom management and behaviour issues that plague teachers and cause so much dissatisfaction. Students working at individual paces and on content that is of their choosing are far less likely to be disruptive or unhappy in their learning environment, and this results in happier teachers too. In combination with the concentrated efforts to develop a positive school culture (to be discussed below), the expectations and environment are expected to result in conditions that are what Horn and Staker (2015) describe as “the magic [that] happens when schools design experiences that fulfill the jobs [i.e. what we really want out of an experience rather than the literal definition of what is provided by the experience] of both students and teachers” (p.176).

Hardware, Software, and Physical Space

Hardware & Software (the easy stuff)

School District 54 is already well equipped to run a blended program, as we are operating what could be described as combination of Enhanced Virtual and Flex school. The existing BVEC provides online courses using local Moodle servers and British Columbia Learning Network course materials, which are adapted by teachers and modified for individual student learning plans. We also have bought a license with Study Forge for a more integrated experience for our math students. This provider has built in more of the student-centric loops for instruction that support a truly integrated blended learning experience. We have 8 available desktop computers, 2 laptops, several ipads, and wifi connections for students to access materials using their own devices.

Bailey et al (2015) recommend that Flex programs, such as that we are hoping to develop, have a 1 to 1 device to student ratio, so we would need to access a larger number of desktop computers. Luckily, the existing Smithers Secondary facility has four computer labs in addition to a class set of desktop computers in the library, and we have the ability to move the machines from one or more into the proposed Learning Commons quite easily and without added expense.

Small ticket technological items that we would need include a set of headsets for student use and access to the library sets of shared iPads. Combining the resources

of Smithers Secondary and the BVEC should allow for a tech-rich environment with limited additional cost.

Physical Space (the expensive stuff)

The physical reconfiguration of the Learning Commons is what will require the largest financial investment, but is also what makes the program we envision possible. Figure 1 (below) depicts the spaces that will be utilized to construct the Learning Commons. Reconfiguring the facilities requires an architectural redesign of the space. Our plan calls for the following additions and changes, pictured in figure 2 (below).

- Remove walls between the library, computer lab & video conference room
- Replace these with “semi-permeable membrane” in the form of roll-down garage style doors, preferably with plexiglass to allow lines of sight and natural light to travel through
- Install glass entrance on corner of computer lab and waist height windows along other walls to again allow for lines of sight and natural light
- Replace multi-media room with “cafe” and kitchen area
- Move fixed computer lab configuration to put computers around the edge of the space, with collaborative work space in the centre (similar to existing BVEC)
- Repurpose video conference room into Makerspace, as it already has tables on wheels, smartboard, and other facilities conducive to this learning environment - relocate 3D printer and other mobile tech to this space
- Teacher spaces to be peripherally located within the new Learning Commons space, to meet student needs as they arise, and to facilitate team teaching and planning with other teachers within the school and the teacher librarian
- Vacate the existing BVEC space

The rationale for this major facility upgrade is well founded in research and supports trends towards 21st century learning initiatives. For example, Bailey et al (2015) state that as we move away from traditional age-peer groupings towards multi-age groups of students working in the same space, facilities need to be adapted to allow for these larger student groupings (p.42).

This Learning Commons also supports our educational goals of allowing for a more personalized and student-centred environment, as students will have the opportunity to alter their schedule around their own needs and access all of their teachers at any given time, rather than being restricted by traditional bell and class rotation schedules. Furthermore, the “physical constraints of classroom walls and the egg-crate shape of the building [may impede] the flow of students necessary for a Flex model” (Horn & Staker, 2015. p.232).

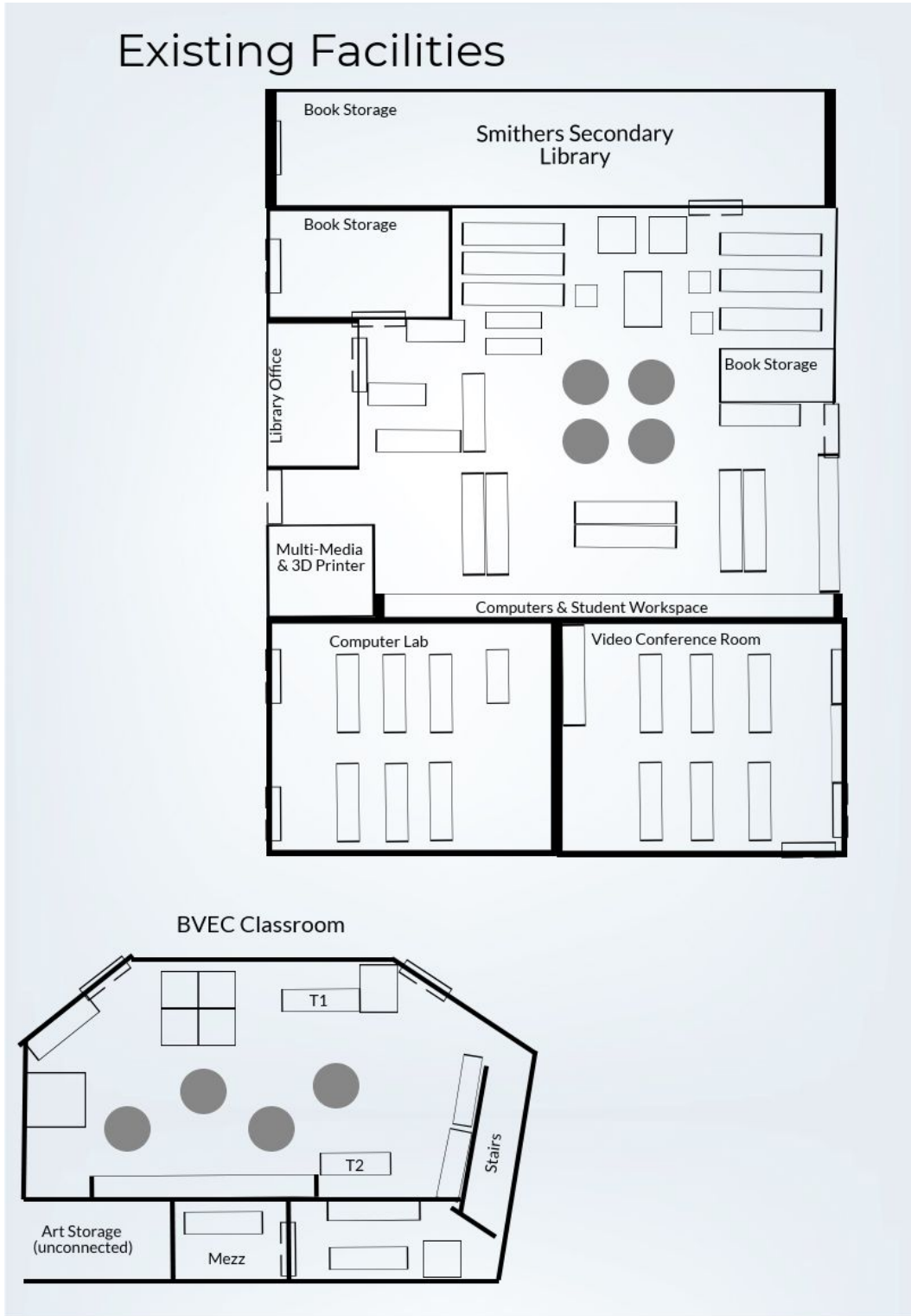


Figure 1: Existing Facilities located within Smithers Secondary

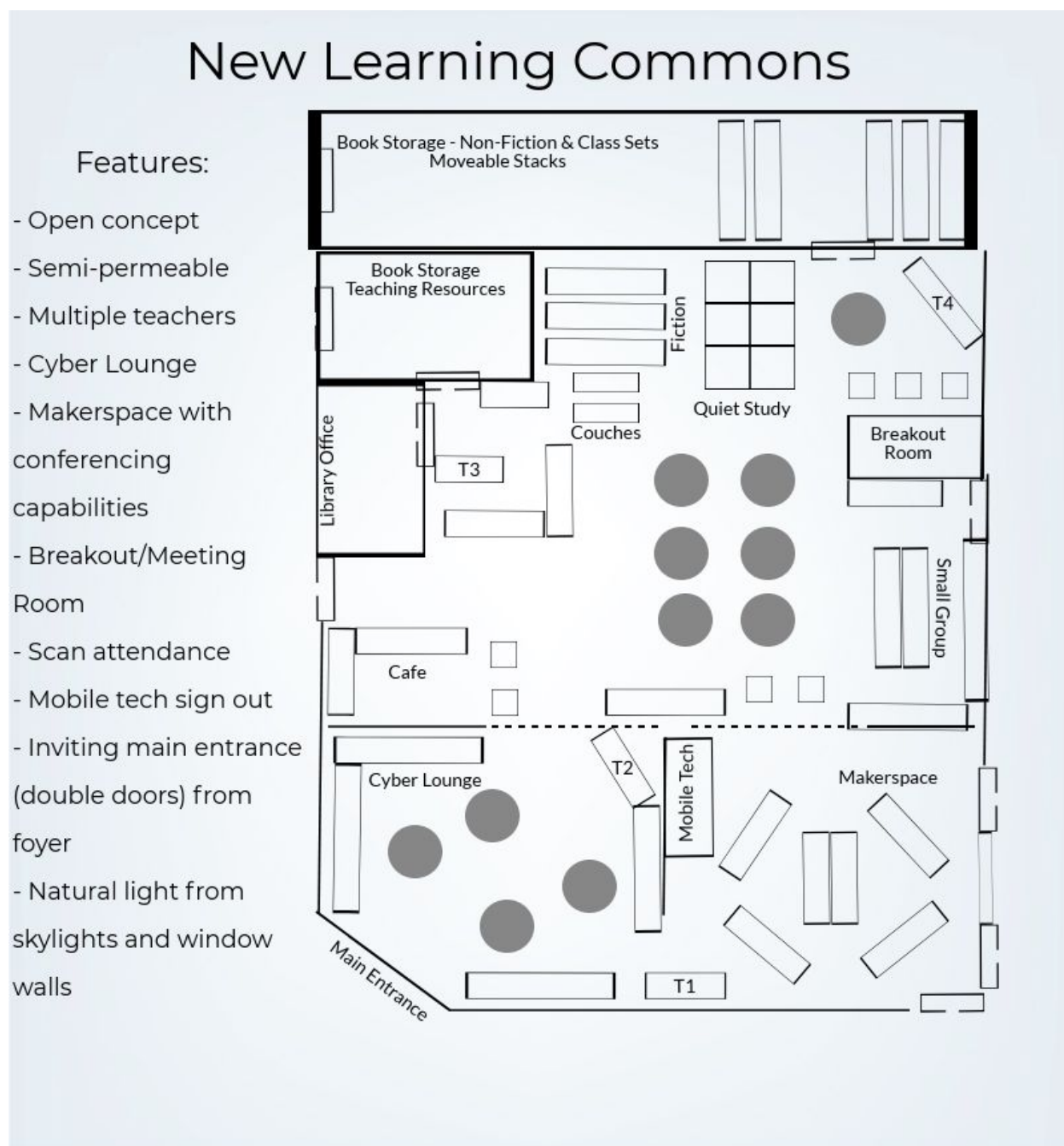


Figure 2: Proposed shared learning space: The SD54 Learning Commons

Blended Learning Model

Flex & A La Carte

The primary goal of this proposal in terms of learning model is to expand upon the successful model already being used in the BVEC, and to build in supports that will take the existing model from good to great. This reflects what Horn and Staker (2015) refer to as a discovery-driven planning (p.265). It is a refinement of the original plan devised 6 years ago, and reflects careful planning and adjustments made from teacher and student experiences and data.

Online course delivery is a must, as this is the main reason for the school's existence. Students were dissatisfied with the course selection options in a shrinking district, and were taking their learning to online schools elsewhere, often without a great deal of success. We need a way to deliver content to students who may be away for large periods of time, who want to work at their own pace, in a location of their choosing, and on content that is easily adaptable from a teacher point of view. Designing curriculum that is modular (i.e. select a certain number of modules in order to meet the learning outcomes for a particular course) fits these goals.

It is also important to us that we offer rigorous courses that will adequately prepare students for the lives after high school, and we want to be able to adapt the materials and guide the students in their journey. However, as Kennedy and Soifer state in their report "Why Blended Learning Can't Stand Still," "Online courses and Learning Management Systems (LMS) alone are not sufficient if the data is not integrated into a student-centric feedback loop." It is critical that we develop and use integrated methods of tracking student progress and adapting learning modalities and lessons based on this data.

Having a Flex program solves many of the problems we have identified, by offering the face to face support and relationships for learning that students need, with the majority of the planning burden taken off the teacher's plates. Students in the Flex cohort would enroll in their four core courses with the BVEC, and attend class in the Learning Commons (according to the restrictions and supports dictated by their independence level on the Graduated Learner "license" scale). The remainder of their educational program requirements could be met through electives taken in the mainstream class, in cohort groups accessing facilities with a BVEC teacher, or individually.

We would also offer A La Carte courses for cohorts of students who still wanted to take the majority of their schooling within the mainstream, but needed to fit a

particular course (or many) into their tight schedule. These students would have different class schedules within our program than the Flex students.

Ideally, we are working towards a full-scale adoption of Flex learning for core courses within the entire building, but at this stage in development, the program would be restricted to those who choose to enroll.

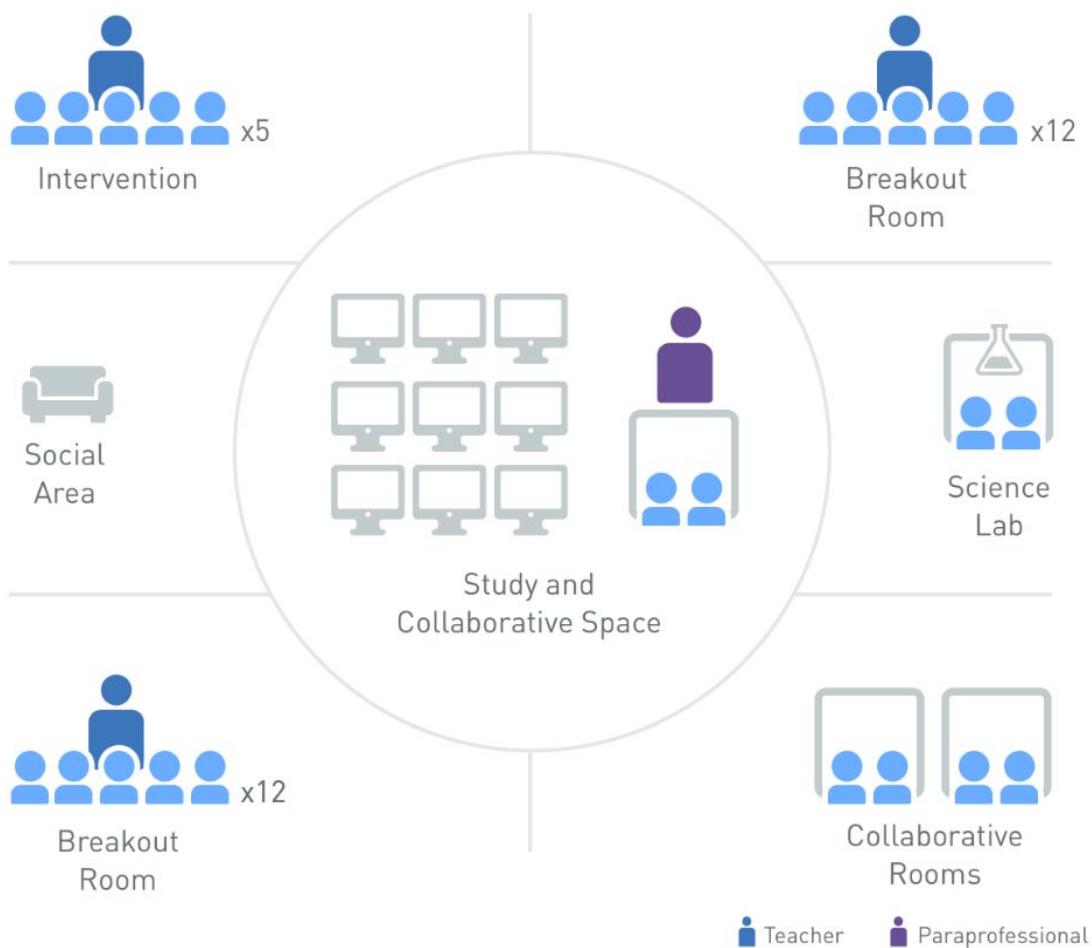


Figure 3: Flex model graphic (Maxwell, 2016)

Students in the Flex model will participate in the following weekly schedule (figure 4) until responsibility can be gradually released according to the Independent Learning Skills Rubric and "licensing" program.

Sample "L" Level Flex Schedule

	Monday	Tuesday	Wednesday	Thursday	Friday
Morning	Monday Meeting Weekly Goal Setting Math/Science English/Socials	Math/Science (Individual) English/Socials (Cohort)	English/Socials (Individual) Math/Science (Cohort)	Math/Science (Individual) English/Socials (Cohort)	English/Socials (Individual) Math/Science (Cohort)
Afternoon	Breakout Groups Electives	Breakout Groups Electives	Breakout Groups Electives	Breakout Groups Electives	Breakout Groups Weekly Wrap-Up & Genius Hour (Inquiry)

- "N" and "Full" license learners have more control over their time and schedule
- "License" level is indicated by colour of lanyard attached to student card
- All students meet weekly with their teachers to review data and goals (Monday Meetings)
- Courses are separated by subject, but learning plans may choose to focus on 2-4 (or all 8) courses at a time
- Electives are scheduled into afternoons when possible

Figure 4: Sample weekly schedule for Flex Program

A La Carte learners will access the teachers and the space as their bricks and mortar schedule allows, meaning that they will have the same supports of the Learning License program, but within a block of time that works for them. This might include lunch or after school times, but we expect it will most likely be during a Flex Block that is timetabled into their schedule by the face to face school.

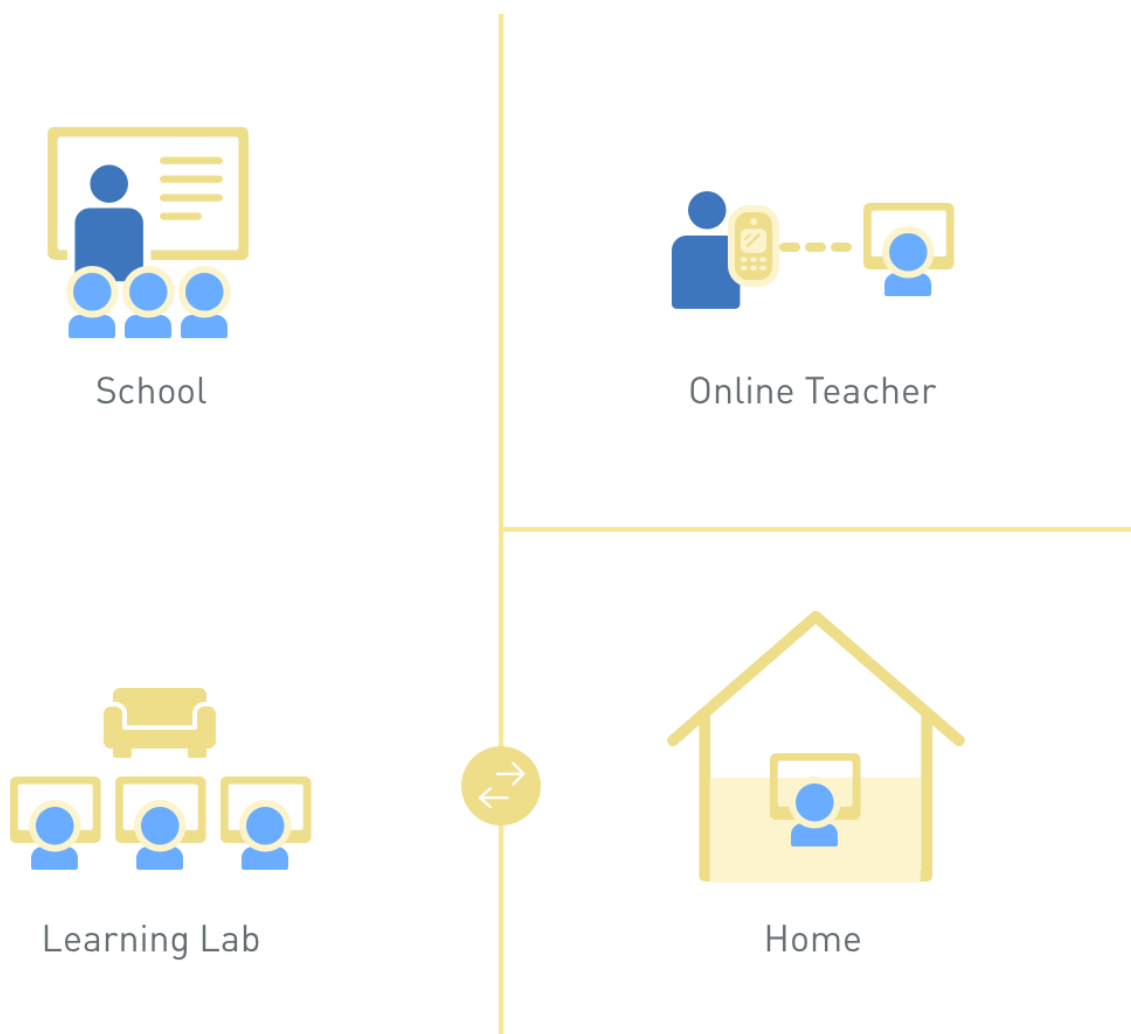


Figure 5: A La Carte model graphic (Blended Learning Universe)

Positive School Culture Building

Leadership

“A leader brings the vision and is able to articulate the instructional problem you are trying to solve” (Jordan, 2015). Teachers and administration working in this expanded BVEC program would have the opportunity to carry the positive culture that has been developed in our existing program forward into a larger venue that aims to solve many of the problems and shortcomings we feel are present in our program as it currently exists.

Structures such as the Graduated Learner License and flexible calendar will support our student-centric goals while giving our students the skills and routines they need to facilitate strong independent learning skills. We will continue to hold high expectations for rigor and demonstrations of learning, while maintaining our beliefs that students should have choice in how they choose to meet learning outcomes for a particular course.

Making Success Visible

When students choose to come to school, they choose to do so for two reasons according to Horn and Staker (2015): to have fun with friends and to make progress and feel a sense of achievement.

Building a visible trajectory into each course, graphically, rather than just as a checklist (which currently exists in Moodle) will help students see their progress and feel that they are getting nearer to achieving their goals. This will promote a culture of achievement based on learning progress, rather than “time in the seat” progress that plagues the old-style traditional classroom.

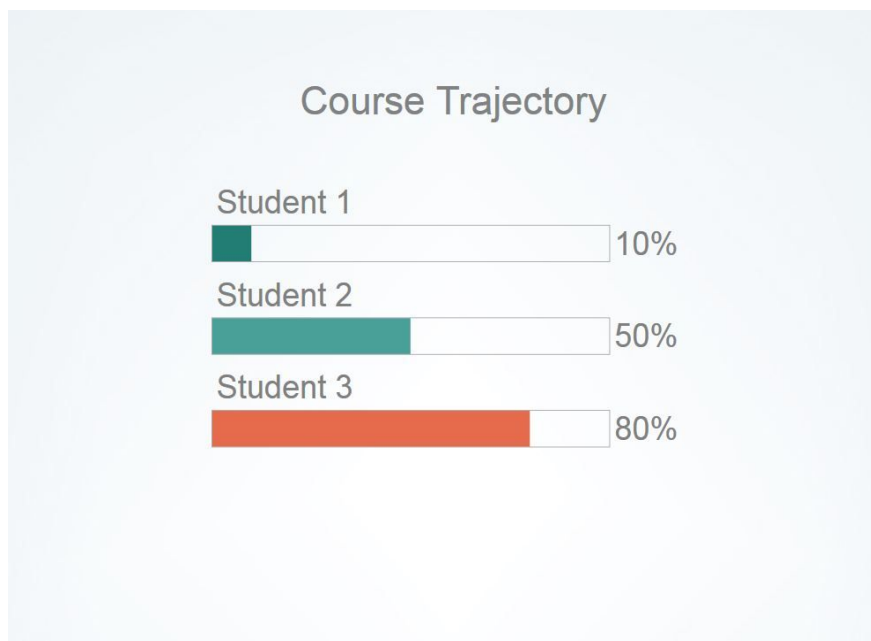


Figure 6: Sample Course Trajectory to motivate and inform students of progress

Community

Students want to have fun with friends when they are at school (Horn & Staker, 2015), and our current system, which allows for continuous entry and individual pacing, does not have a great deal of possibility for collaboration or group work. Our

Flex model, which will have students attending our program regularly and working in breakout groups, small group intervention, and collaborative inquiry groups will meet this social need. We will also continue to support our inclusive multi-age classroom, where students find acceptance working on different courses and at different stages in the same space.

The Cafe in the Learning Commons will maintain one of our largest community builders - the intentional sharing of food and the Hot Chocolate Club. We will continue to sponsor group activities, field trips, and parties to build community and inclusion in our program.

Cost Management & Budget Strategy

Reduce, Reuse, Recycle

In order to manage costs, we will repurpose as many of the materials, technologies, and furniture that are already present in our combined learning spaces as possible. We have an interactive whiteboard, numerous desktop computers, and the software needed to get started.

Multi-Year Budget

The physical renovation will be very pricey. The district has estimated that it would be more than \$500,000 for the entire project. However, split into phases, the entire project could be completed over a number of years, while spending only a portion yearly.

In terms of the learning model, the investment needs are small. Teacher time to develop the visible learning trajectories, split existing online courses into modules, and collaborate to create the structures to support the collaborative, breakout, and intervention portions of the Flex model. These are all worthy investments and budgets can be found within District Initiative funds.

Finally, as Bailey et al (2015) suggest, we will need to create our multi-year budget by researching other districts, and tracking towards sustainability based on enrollment and district needs according to declining enrolment. However, we feel strongly that this innovation is worth large-scale investment, as it will work to solve a number of identified problems while “bringing to life fundamental shifts in teaching and learning... [while personalizing] learning using modern technology and [expanding] learning opportunities” (Bailey et al, 2015. p.58).

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