Investing in our Students' Future with Heritage Christian School's Learning Commons

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Abstract:
This article will address the impact that the learning commons vision is having on the future of libraries in British Columbia and Canada. Primary focus will be on the new British Columbia learning outcomes and how they will meet many of the underlying principles of *inquiry learning* and *project-based learning*, as shared in the learning commons vision (Koechlin and Loertscher). We will also focus on the use of technology to support such learning.

HCS blended learning commons is made up of a team of nine library staff. This includes both physical commons library staff and online curriculum staff. Distance learning students comprise the majority of the student population at approximately 2600 students, while our campus school includes about 400 elementary and high school students. Our goal at Heritage Christian Online School and Heritage Christian Campus School is to disciple students with Biblical integration, while meeting BC Learning Outcomes, and supporting and encouraging distance learning students in their homes. Within Ministry guidelines we strive to offer maximum flexibility for families and students; this includes providing curricular choice, personalized assignments, and a variety of reporting modalities.

Our blended learning commons vision includes the following statement:

"*HCS Learning Commons*
Creating Christian Community
Through Discipleship, Literacy and Innovation"

In September 2016 the new BC Ed Plan will come into effect, and schools, including libraries all over the province, have been working hard to compile their own textbooks and technology-based tools in order to integrate the core goals and competencies proposed in the new curriculum. These core competencies include the following: communication skills; creative and critical thinking skills; personal and social skills. The purpose behind the current redesign of British Columbia's curriculum is to inspire personalization of learning which will meet the diverse needs of BC students. Revised content also includes a focus on Aboriginal education, ecology and the environment. Students will be introduced to big ideas and basic content, they will then be encouraged to conduct their own research utilizing their own strategies of learning to answer the content-based key questions they derive following quality inquiry coaching.

The current changes being made to the British Columbia curriculum are due to an overall revamping of the education system in the Province. The BC Ministry of Education hopes to produce a curriculum that is in alignment with both new and existing pedagogies which have been established by influential educators. Throughout the redesigned curriculum it is possible to

see the influence of John Dewey, who broke away from the industrialized version of schooling and believed in the power of ideas and 'constructivism". Others whose influence can be seen include Seymor Papert, who believed students needed to explore technology and computers; Sugatra Mitra (who coined the hole in the wall classroom pedagogy); and Sylvia Libow Martinez whose groundbreaking book on making, tinkering and engineering in the classroom, *Invent to Learn,* has become a significant part of the dynamic and ever-changing educational landscape. Connecting, collaborating, making, exploring, tinkering and inquiring, as well as global community and justice, are all part of the new BC curriculum.

Heritage Christian Online school had already established the process of **personalization** over the last 11 years, with student learning plans that meet each student's needs. Teachers work closely with students to devise a whole year's plan of learning, which may include online courses, use of digital/physical kits, and other learning materials/curriculum. Prior to the advent of the new BC curriculum, the school had already established a defined virtual website, a social network (Ning and Moodle), a database for assessment and archiving student information called "Encom", and a blended commons space where students could meet face to face. This last year, the learning commons vision extended to community connection centres across the province where students meet once a week to collaborate and learn together. As we moved to a blended learning commons, we embraced the philosophy behind *Building a Learning Commons* to encourage students and staff to work towards a more democratically-aligned learning space, one which would help our students feel empowered to create and define their own learning in a manner that emphasized their passions and interests. Our learning commons team was excited and ready to implement change and lead our school into the next decade.

Communication skills and PLN (personal learning network):
In ***Building a New Learning Commons***,[1] Koechlin and Loertscher introduced the theory of a 'knowledge building centre'' as the purpose of developing the inquiry component of a learning commons. "Knowledge building can happen as a face-to-face experience, a wholly online experience, or as a combination of both. We recommend that a knowledge building website, wiki, or other virtual tool be used to create a series of learning experiences as the organizing element of "collaborative instruction." This should be the driving force for all students as they begin the process of developing a personal learning network (PLN). Whether they design a blog or website, or choose to create their PLN using social media such as Ning or Moodle, the goal is to create a digital archive of student content, and a school culture built on collaboration and belonging. This virtual space can be utilized for the big think or metacognitive skills.

http://www.schoollearningcommons.info/knowledge-building-centers

Teacher-librarians should have a wealth of tools at their disposal, including the incorporation of communication platforms such as debating, Socratic circles, project-based learning, literature circles, and research groups. Teacher-librarians have an important role to play in bringing staff and students together for team-teaching and group events. In the past several years we have

[1] "learningcommons." 2011. 6 Jan. 2016 <http://www.schoollearningcommons.info/>

discovered that hosting a platform, such as Ning, for informal learning allows students to create their own identity along with a collective identity, as they participate in group activities, blog about their learning, and cheer each other on, socializing in their own space. Additionally, we have hosted book clubs from K-12, most of which run virtually as lit circles or collaborative blogging ventures using Kidblog and Ning.

This year we had the wonderful opportunity to invite renowned author Sigmund Brouwer to host an author-in-residence program, helping to establish and promote a literacy component in the online school. Brouwer also ran well-received writing workshops from this website.

Inquiry

"Inquiry" has always been a teacher-librarian buzzword. Now it is the catch phrase for all teachers, as we strive to inculcate many types of inquiry. "Inquiry is not a 'method' of doing science, history, or any other subject, in which the obligatory first stage in a fixed, linear sequence is that of students formulating questions to investigate. Rather, it is an approach to the chosen themes and topics in which the posing of real questions is positively encouraged, whenever they occur and by whomever they are asked. Equally important as the hallmark of an inquiry approach is that all tentative answers are taken seriously and are investigated as rigorously as the circumstances permit."(1)

It is critical that teachers and teacher-librarians actively help our students learn to create essential driving questions that are personally meaningful. The inquiry process also requires academic rigour, and ongoing assessment from teacher and teacher-librarian.

Assessment should allow for self-reflection and deeper learning, rather than being primarily focused on grades. At this time, our school is researching the most effective means of assessment, including teamwork, project management skills, rubrics and performance standards. As inquiry experts we can mentor students in the project management process, encouraging and coaching students to develop their own questions, and then helping them self-reflect to refine the process.

Providing scaffolding in high schools is important, as teacher-librarians seek to develop learning challenges and promote critical thinking amongst secondary students. Secondary students thrive when presented with unique learning opportunities such as BreakOutEdu, or webquests where students are required to problem solve in a group setting within certain time limits. This aspect of learning is on the horizon for our new middle grade science and social study digital kits, as a means of introducing students to digital resources within our learning commons and beyond.

Author Seth Godin shared that "*Our new civic and professional life is all about doubt. About questioning the status quo, questioning marketing or political gains or questioning what is next.*"[2]We need to help our students develop strong evaluation skills--encouraging them to take

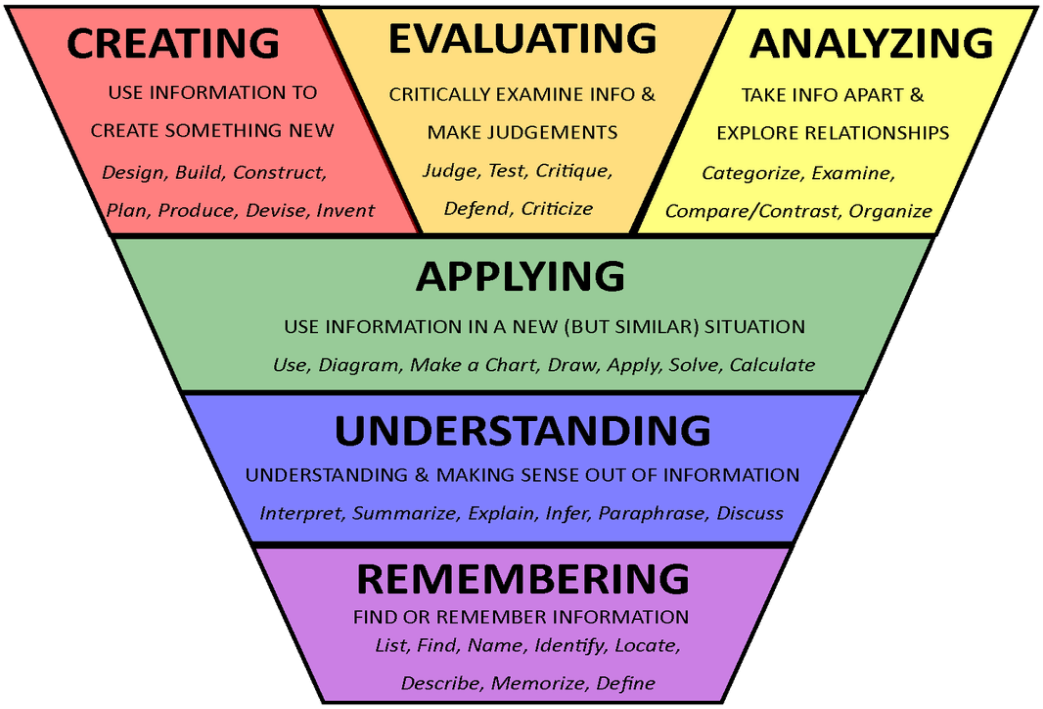
[2] Stop Stealing Dreams, 2012 http://wwwsethgodin.com/sg/docs/stopstealingdreamscreen.pdf

risks and question other people's views. Sorting and sifting through information using curation tools; analysing and interpreting data, and critiquing websites for bias goes far beyond the use of a search engine, if we can encourage students to examine their own questions. We have discovered through the gamification of learning and use of immersive technology at HCOS that students become independent social learners working in collaboration with team members to solve quests.

Creative Critical Thinking:
Setting out to extend ubiquitous access for creative critical thinking to all our students, HCS learning commons created a **Maker-Space** in the physical commons starting two years ago.

"The Maker Education Initiative's mission is to create more opportunities for all young people to develop confidence, creativity, and interest in science, technology, engineering, math, art, and learning as a whole through making." [3]

Creative critical thinking skills are enhanced in this beautiful inverse diagram of Bloom's taxonomy which highlights the big ideas and creation component of build, research and reflect, refine, evaluate, and analyze.



http://1.bp.blogspot.com/-29ppRDg5aSk/VAqTwGTXDGI/AAAAAAAALB4/eH2rWi7Xv-M/s1600/Bloom.png

[3] "Maker Education Initiative – Every Child a Maker." 2009. 6 Jan. 2016 <http://makered.org/>

The concept of a Maker-Space fit perfectly into the philosophy found in the Building a Learning Commons vision. Our students would be able to build, play and solve problems using their metacognitive skills. Our campus librarian, Jessie, was encouraged to become the Maker expert. She quickly discovered that it is the students not the librarian who own the Maker-Space and the learning. Our team purchased Makey Makey kits, Squishy circuits, Lego Mindstorms, Wedo, Arduino kits, Keva planks, K'nex kits, a Maker-Bot 3D printer and more to encourage our students to become critical and creative thinkers. Larger kits are primarily used in the physical commons, while smaller kits are disseminated to our distance learning students. These kits often prove invaluable to families who require additional materials when completing learning outcomes. Many of our original physical kits emphasized hands-on, inquiry-based learning, but now we had STEAM or STEM philosophy to support the motivation.

STEAM learning includes an interdisciplinary approach, focusing on science, technology, engineering, art and math. We created a page on our learning commons website sharing the philosophy, began giving talks at our school and at conferences, and slowly the fire was ignited. Our Maker librarian, Jessie, ran learning camps and clubs on a weekly basis, and now hosts open houses once a month to share her learning with staff and students. Our Maker-Bot is used by our Community Connection centres, where we run a hands-on Maker class with teacher, Todd Farion, to teach World War II history. We also use it in our campus school to teach math concepts and Tinkercad via teacher, Matt Dorie. Our music teacher, Steve Codling, in the Lower Mainland is using LittleBits to teach math and music at the same time, and we look forward to seeing his research this summer.

Across the province, teachers host camps teaching students robotics and building skills. The feedback we receive is that students are highly engaged and love the freedom and hands-on learning. Our Maker materials are booked out for the entire year, and we have had to order more to keep up with the demand. During this process we have discovered that teachers and learning commons staff do not have to be experts in order to lead the process. Rather, we need to create the space, encourage our students with learning objectives, be short on instruction and long on time.

Social/Personal Skills

Part of the new BC Ed Plan involves the promotion of personal and social competencies to help students care about themselves, others, and their society. Included in this awareness is a focus on First Peoples of British Columbia and Canada, and an understanding of how all students have a social responsibility to help their community and their society. As a way to bridge the understanding of the **First People's'** residential school issues, HCS blended commons will be creating humanities kits which include novels about the injustice and process of restoration. We have discovered many of the recommended list of books on Overdrive eLibrary which we will incorporate into curriculum kits. Book clubs at HCS Commons will include these books for sensitive discussion at specific grade levels. We hope to bridge the theme of forgiveness as a means of bringing social justice to the learning commons. All of our curriculum will carry this thread as we share a global society impacted by grace and collaboration.

Curriculum and Digital Resources

Our team of learning commons staff is at the forefront of curriculum development to encourage discipleship, critical thinking and excellent academic knowledge. HCS learning commons has for some time now worked to develop digital and physical learning kits to meet distance learning students' needs at home. Our virtual kits are designed using resources from Overdrive eLibrary. They are easily purchased and instantly available. Newer kits were designed to include many of the new learning outcomes. Some of our older kits are being reformatted for the new learning outcomes. Our curriculum consultant, Natalie Sing, and writer, Rachael Freed, started working on new kits, based on the BC Ed Plan, in August. Following the publication of the new learning outcomes we began the process of developing a new curriculum model which would be less prescriptive and encourage student choice.

Following our success with Maker Education and the inquiry-based learning we realised that developing physical and digital kits for our schools would not be overly problematic as we already had many foundational resources in place. Additionally, the philosophy of learning had been carefully established, and our students were engaged. The next step was to build our digital kits on Overdrive using resources which had inquiry as a focus. We hope to complete K-3 by spring break and grades 4-7 by summer. We have discovered some amazing resources on Overdrive eLibrary and continue to explore newer publications in our ongoing quest to provide families with high-quality materials. All of our kits are open access, allowing patrons and educators to find ideas for their own collections.

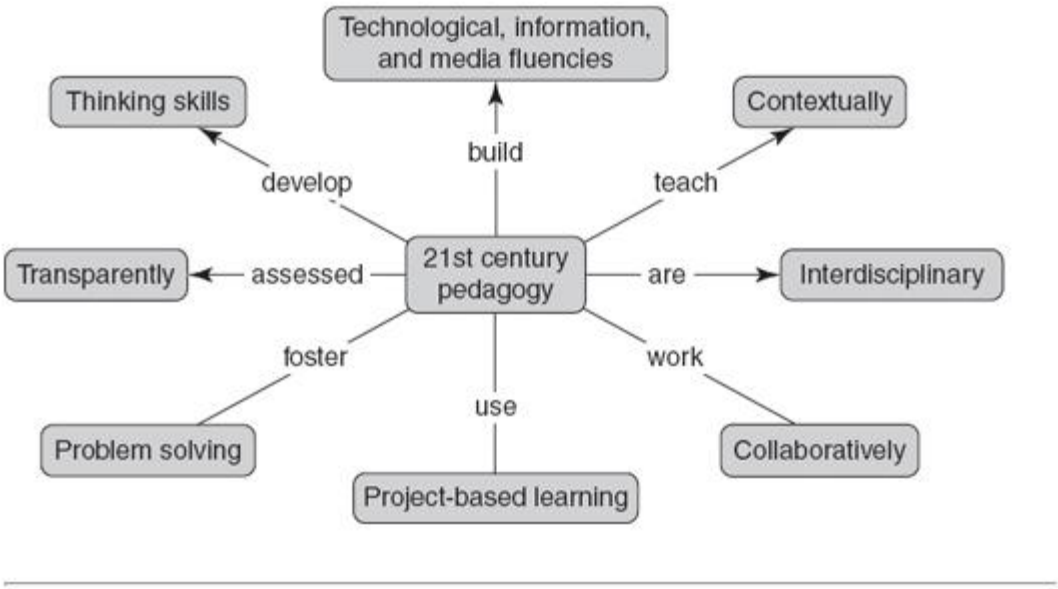
Within our kits we have included books (both physical and digital), online databases, websites, project-based learning, focus questions and many opportunities for active, hands-on learning. We are open to a variety of modes of learning and distribute resources accordingly. Our curriculum kits were developed with open-endedness in mind, thereby encouraging students to delve into those topics which interest them most. Each kit provides significant opportunity for choice, student-directed learning, and student ownership of learning.

We have expanded our Overdrive eBook library and our Online Databases as a means to share how the learning outcomes can be met easily. We have correlated many of these resources directly to the new BC Ed Plan. We have also organized the resources into easy-to-find categories and collections. We will seek to continue this work throughout the remainder of the school year with the goal of making Overdrive even more accessible for our teachers and families.

Digital Technology

Eric Sheninger in his book ***Digital Leadership*** [4]shared this image of 21st century pedagogy which accurately describes the shift the learning commons is undergoing in this transformational age. As we build technological and media fluencies we are helping our students create, solve problems, reflect, and collaborate to use all of their metacognitive skills.

[4] <http://books.google.com/books/about/Digital_Leadership.html?id=YUIbnwEACAAJ>



21st Century Pedagogy.

Digital technology, where needed to further good pedagogical principles, is used in both the physical commons and the virtual commons to encourage digital literacy skills. Some of these tools will be used to create current awareness, discussion, and digital retrieval of information.

So how does the teacher-librarian role fit this new technology drive? Our job is to scan the horizon for new and innovative trends and then implement them in projects. As we scan the net for methods and new emerging technologies, we have a responsibility to our patrons to make these accessible and easy to use. All of our staff are available 24/7 via Skype, LibAnswers (archived reference retrieval), Google Hangouts, chat via Twitter or Ning (private social awareness site for high school), and Google docs for research help. Learning commons staff can help students as they create bibliographic records, brainstorm research questions, and design projects. We also work one-on-one with families to provide instruction in regards to using Overdrive eLibrary, Maker-Ed materials, and digital tech tools.

Danah Boyd in her book *It's Complicated: The Social Lives of Networked Teens* dispels the myth that teen's don't care about privacy. If we as teachers and learning commons staff want to remain embedded in teen culture, we need to play a visible role understanding their social lives using social media. Our team uses Scoopit (business account) as an archiving and curation tool, which shares to Twitter, and maintains a web-linking library. We use Twitter as a personal learning network, but students can use Ning as a private social network and add their tweets publically if they so choose. A school Facebook group was created as a means of collaborating with families, and also marketing our collections. This is a great place to dialogue and connect about learning commons materials and parents' questions. We also curate to Pinterest and encourage students to curate on Overdrive using social media to create a list of materials they are reading for teacher access.

Once a month we share a newsletter where we actively market our Lunch 'N Learn webinars, which are instructional hourly sessions to help teach our families more about the latest technology tools and our database subscriptions. In January we have three different webinars occurring; on google docs, research skills, and for newcomers, an introduction to the learning commons. Each month new opportunities to connect with families and share information are added. Blog articles are written and shared on a weekly basis to our Wordpress site as a means of activating all of our social media accounts and reaching our patrons with news from the learning commons.

We discovered a few years ago that our new grade 8 students had a hard time finding a rhythm with online classes, particularly in regards to pacing and isolation. With that in mind we launched a mentor system where grade 10-12 students, who are in need of volunteering hours, are encouraged to mentor a younger student in grades 8/9 about all things HCS learning commons and school. Friendships are formed and students are discipled in new technologies. Students continue to enjoy using social media, tablets and smart phone as a way to connect in the digital age. Ning is used to meet and greet, create social groups, share events, such as photograph and art contests, geek ideas, tech tools, mash ups, music, and informal book clubs.

We have worked hard to promote eReading with Overdrive and discovered that active marketing via our blog on our website, as well as reading promotions and raffle competitions, have succeeded in a dramatic increase in readership. We now have over 2500 items in our eCatalogue including video streaming, audio and eBooks. Our high school students are now using electronic or audio books as a way to increase literacy and create personalized learning. Students may order materials themselves on the Overdrive website, receiving the items within twenty-four hours. This bodes well for the inquiry approach in the coming year. Our book clubs and online courses are now using eBooks as a simple way to get books into the hands of students from all over the province and beyond.

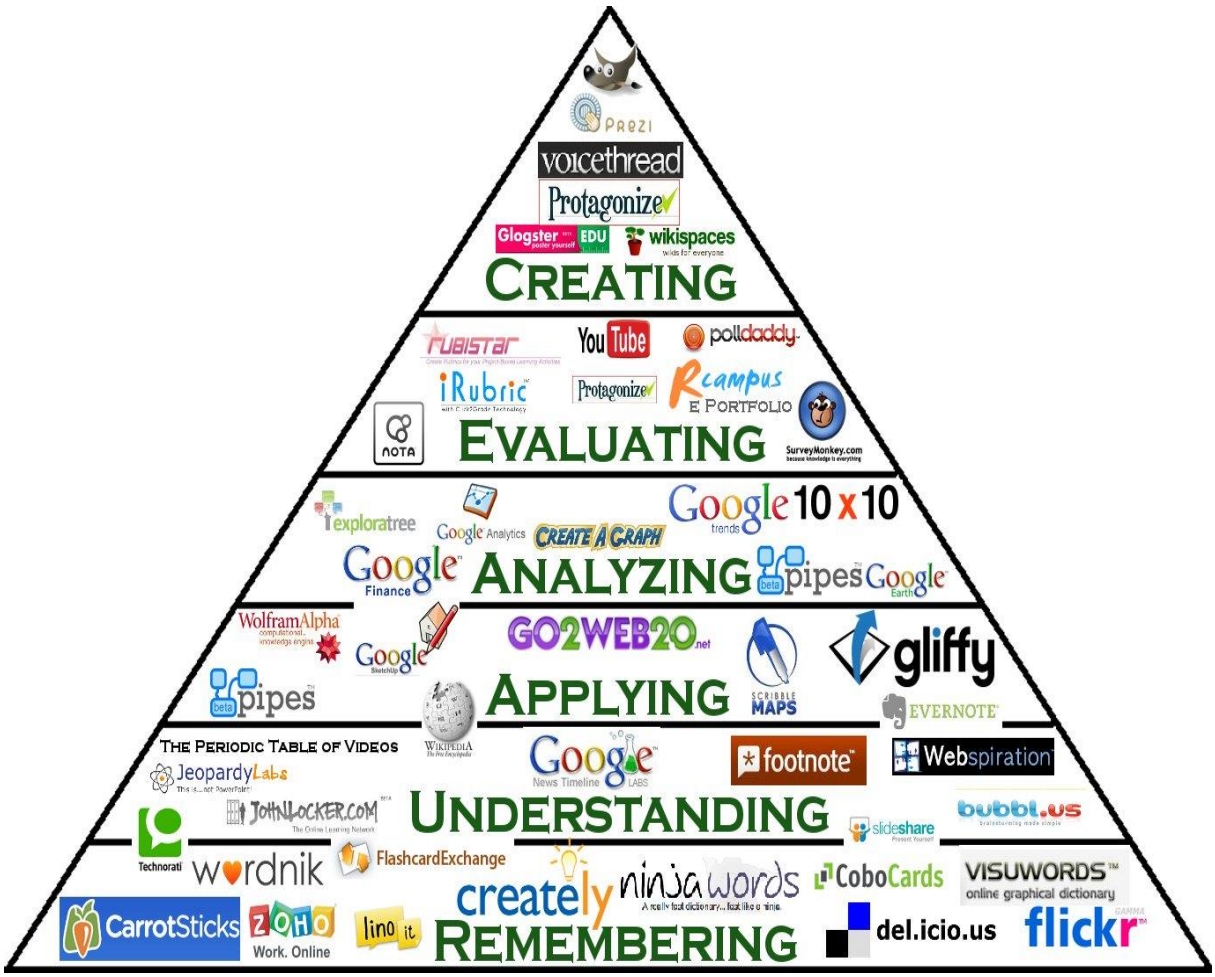
Pippa presented at the IT4K12 ERAC conference this year sharing the research behind the continuing success of e-materials in our school. To discover more about our story on Overdrive go here.

Our growing collection of databases such as EBSCOhost, BrainPOP, PebbleGo, Discovery Streaming (with Techbook coming soon) and Learn360 will help students to refine their research and discover their passions, while learning to use technology. Many of these databases are now supporting apps. DimensionU was added last year to complement the Maker-Ed component, as it encourages both literacy and math skills. In DimensionU students create an avatar, play educational games, and may compete in competitions with students from our school and from other schools.

Students needing technology to help support reading have the choice of Reading Eggs, Reading A-Z and novel studies in Beta mode PeekaPak.

We have discovered augmented reality in the physical classroom to be effective with our iBuddies (primary groups), and look forward to using new technology like Periscope and Google Virtual field trips in our virtual classrooms and physical commons. Our campus school is a Google school and the use of Chromebooks to further research using Google docs and extensions has been very popular. In our Grad Prep virtual program students do all of their research using Google classroom. Our learning commons team has attended GAFE summit for the past two years to stay abreast of new developments, and provide training for staff and patrons.

As the new BC performance standards become finalized, it won't be long before the draft digital literacy standards also become standard. With that in mind our team has been working on providing useful and meaningful ideas for technology integration by grade level. We actively promote Kidblog, Popplet and EduBuncee for the younger kids, and Glogster, Prezi, ePortfolios, Google docs, and online dictionaries in the high school years, as shared below in the diagram.



http://digitallearningworld.com/wp-content/uploads/2012/02/bloomspyramid.png

Conclusion

As we look to the future and the established learning commons vision we are thankful that once more teacher-librarians and curriculum staff are helping set the tone for the learning commons vision in B.C. and Canada. Together faculty and librarians make a huge difference in ensuring that students are provided with a digital framework and ways to integrate project management and research tools. Even though the information age cannot be contained, we can still be active as guides on the side helping our students and staff curate and tame the web, while providing data and analytics, and interactive texts on educational pedagogy and tools. I am thankful to Koechlin and Loertscher for leading the way in libraries across Canada and the US, and to a unified, and hard working HCS team. The groundwork has been established. We look forward to the next 25 years!

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