



Together for Learning

School Libraries and the
Emergence of the Learning Commons



A VISION FOR THE 21ST CENTURY

Ontario School Library Association Acknowledgements

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Responding to an Era of Complex Change

Today's schools are experiencing a great deal of change. Just as the rest of the world's political, social, economic, and scientific realities have been shifted by swift advances in information and communication technology, so too has education. These forces are altering the way people work, play and learn.

Schools are being challenged to harness the unfamiliar yet incredibly fascinating opportunities presented by this transformation... all while ensuring students emerge with the skills they need, not only to survive, but to *thrive*.

Development of a Learning Commons addresses this challenge.

What is a Learning Commons?

A Learning Commons is a flexible and responsive approach to helping schools focus on learning collaboratively. It expands the learning experience, taking students and educators into virtual spaces beyond the walls of a school.

A Learning Commons is a vibrant, whole-school approach, presenting exciting opportunities for collaboration among teachers, teacher-librarians and students. Within a Learning Commons, new relationships are formed between learners, new technologies are realized and utilized, and both students and educators prepare for the future as they learn new ways to learn.

And best of all, as a space traditionally and naturally designed to facilitate people working together, a school's library provides the natural dynamics for developing a Learning Commons.

Why a Learning Commons?

There is growing consensus among educators that students need to learn transferable skills in order to work efficiently and successfully in our future world.

To achieve this, students will need to become critical consumers of information, effective problem solvers, capable decision makers and innovative communicators as well. They will require the skills and ability to flow with change. And most of all, students will need to understand that these transferable skills give them the capacity to make a difference in this world... personally.

A Learning Commons provides boundless opportunity for growth. It is based on a cross-curricular perspective that recognizes literacy, numeracy, knowledge, thinking, communication, and application as foundations for *learning how to learn*.

A Learning Commons becomes the physical and virtual catalyst where inquiry, imagination, discovery, and creativity come alive and become central to growth — personal, academic, social and cultural.

The Role of the School Library in a Learning Commons

The school library, a key component of a Learning Commons, has an integral and transformative role to play in implementing this fresh and innovative vision for education.

Every member of a school's population will ultimately participate in the creation of a Learning Commons, but the concept's early coordination and leadership will rest with school library expertise.

Where properly developed, a school's library is *already* the hub for networking and information access. As the Learning Commons' concept grows, a school library's collection-based facilities will continuously change and expand, creating *access-based services* suited to a school community's needs.

This process will mean changes in the operations of a school's library. Resource collections will need to be reshaped even more rapidly and readily than they are currently to reflect their communities *as well as* the world at large. It is the only way a library's access to the global, interconnected and interactive communication networks of the future — whatever they may be — can be assured.

The New Learner

Educators of today understand that when students are provided with rich learning experiences and opportunities to explore areas of interest, *they* learn better. When they're given tools to solve problems and encouraged to think creatively, they're ultimately better equipped to make useful connections with the real world. The search for more relevant content and experience has driven much educational practice in recent years.

But it is *how* this needs to be done that is undergoing incredible change. Technology is rapidly modifying the nature and significance of information. The context for finding relevance is in radical transformation.

For those younger than 25, a technologically-rich environment is a natural part of everyday life. The interactive and social nature of digital technologies is woven seamlessly into their lives. To them, the online world is a reflection and extension of the offline world. For this generation, it is not about the technology, *it is about life*.

- Young people are very social, and depend heavily on technology to keep in constant touch with one other.
- They use social media routinely and through their use, define themselves as individuals.
- They are growing up in a media-saturated environment; information and ideas are accessed and shared in extremely visual, multi-media formats without concern or deliberation.
- They expect that you can have conversations with anyone in the world.
- They use multiple technologies to obtain and share information on an "on demand" basis. Most "wear" a variety of portable devices allowing them to stay in contact with friends and family, access the

Internet, listen to music, watch videos, play games, and take photos and videos.

- They expect to have access to electronic information quickly and easily. Most have never known a world where this wasn't possible.
- They embrace new technologies readily and transfer their skill with one technology to each new technology.
- They are comfortable learning informally with their peers as the technology brings them together socially.
- They are multi-taskers. It is not uncommon to see them chatting on cell phones, surfing the Web, sending instant messages, watching TV or listening to music, all while doing their homework.

The Challenge

The structure of school learning was built more than a century before digital communication was developed, and since then the structure has not changed significantly. It is no wonder there is a growing disconnect between the way students live with technology *outside* school, and the far more restricted use of technology they experience *inside* a school.

Many students are finding it almost impossible to make meaningful connections between what they learn at school and what they need to know outside in the world.

The skills needed to be successful in life, technology notwithstanding, remain largely the same. As much as ever, a learner must be able to attain the ability to think critically. But the tools to carry out decision making are expanding and merging with remarkable speed and subtlety. What a student will need to be able to do in a school, in a workplace, or at home is experiencing radical change.

How we teach time-honoured skills has to change as well. The Learning Commons provides the environment for this transformation.



The Emergence of the Learning Commons

Vision

The Learning Commons integrates the new and the old in a seamless physical and virtual space in which all formats can be assimilated and studied.

The Learning Commons liberates the exploration of ideas and concepts, encouraging inquiry, imagination, discovery and creativity through the connection of learners to information, to each other and to communities around the world.

For schools, the Learning Commons incorporates the classroom, the school library and the school board to connect students to the real and virtual worlds that are growing and maturing around them.

Just as the Internet has created a web of global connections, information and interactions, the Learning Commons creates a network of information, people and programs for learning within a school and beyond. Universal access ensures that learning is within reach of everyone at all hours... day or night.

Key Components of the Learning Commons

Physical and Virtual Space

The Learning Commons seeks to expand and integrate the real and virtual choices learners have to share their experiences. Safe, inclusive and welcoming environments throughout a school are imperative to meet the diverse abilities and learning styles of individuals, teams and groups. Virtual learning spaces increase this potential.

Equitable Access

The moment educators encouraged independent study and individual thinking through exploration of multiple resources, inequities were revealed — inequities between rural and urban, small and large, and rich and poor schools. These inequities have become increasingly serious. The emergence of virtual resources and new powers of search can help make access more equitable.

Learning Partnerships

The Learning Commons provides a space where everyone in a school can work together. Teachers, teacher-librarians, principals, technical staff, students... all can collaborate in learning partnerships. And all can switch the emphasis from teaching to learning. With everyone modeling how to learn, the learning process will become a natural part of a student's being.

Technology in Learning

Students appear to have natural abilities to use emerging technology. But the reality is, while students easily grasp the entertainment and communication value of the devices they use, they need to be taught how these tools can be used in learning and critical thought. This is a task for the Learning Commons.



The Learning Commons Creates Empowered Learners

In the Learning Commons, everyone is a learner. Learning within the curriculum becomes personalized, individualized, motivating and enlightening.

The Learning Commons addresses multiple learning styles and learning levels. It creates virtual spaces that are flexible and inviting. It ensures equitable access for all. And the Learning Commons seamlessly integrates technology with working together.

The Learning Commons helps students view learning as a life pursuit. Students will see learning modeled by everyone in a school. As a result, students of a school with a Learning Commons will become empowered by *learning how to learn*.

Implementation in the School Library

To establish the Learning Commons, a school will need to shift both its perspective and its focus.

Both physical and virtual space will need to be reconsidered. Equitable access will need to be assured, and partnerships for learning will have to be enhanced. Students will need to be empowered to direct their own learning. Learners will need to see the communication, information and knowledge revolution in the spaces and places they inhabit within a school.

In embracing the Learning Commons, a school library plays a pivotal role. It is already established as a physical and virtual cross-curricular space. A school library already has a multi-grade focus and a mandate to support the needs of all learners. It can model and facilitate the enriched learning opportunities inherent in the Learning Commons.

Physical and Virtual Space

The time has come for school libraries to welcome an ever-widening variety of learning practices and activities. This can be accomplished through the provision of real and virtual spaces that encourage and facilitate expanded engagement.

Design components of 21st century learning spaces need to consider collaboration, comfort and community. Wherever possible, learning spaces should be colourful, inviting and playful. Learning is fluid and participatory... as a result, space should not place limits on learning. Instead, space should encourage collegiality and intellectual development.

In this age of ultra-connectivity, virtual spaces are possible. Learning can be happening 24 hours a day, 7 days a week. Students already use social tagging, social networking and individualized online spaces in their personal lives. In the Learning Commons, by using identical tools and with the help of educators, they can now create personal learning spaces.

The challenge is discovering how to reconfigure our current spaces both inside and beyond a school and a school library's walls to reflect this new reality. Access to the technology that makes it possible, obviously, is critical.

■ Ideas to Consider

- **See your space as part of a creative learning environment without walls.**
- **Establish an “online presence”. This does not have to be limited to creating a website, writing a blog or establishing a wiki. Look at multiple formats where users can access information.**

- Create online meeting spaces for learning that utilize social media concepts.
- Investigate the centrally purchased and freely available resources provided by OSAPAC and Knowledge Ontario
- Invest in e-books, databases, video-streaming and other relevant digital resources.
- Alter your “hours of operation” and rethink your assumptions about “acceptable activities”. (e.g., email, SMS, cyberarts, multimedia mash-ups , etc.)
- Reduce the amount of furniture clutter and choose furniture that can serve varied purposes and can be easily moved around.
- Make use of new technologies in your displays and set-up.

Equitable Access

The rapidly changing realities of a wide and growing range of online media, information sources and communication technologies necessitate a regular analysis of a library’s program. It’s also important to consider how a school’s community makes practical use of a library’s collections, both physical and virtual. Remember that equitable access to qualified library staff — not as pre-scheduled set periods but on an as-needed basis during and outside the school day — is just as important as access to resources.

■ Ideas to Consider

- Examine the concepts behind differentiated learning and reflect it in your collection
- Develop a plan for purchasing both physical and virtual resources that meet the needs expressed by learners based on ongoing gap analysis
- Encourage the placement of assistive technology and assistive devices in the Learning Commons
- Collect and supply tutorials by all learners for all learners
- Take advantage of student expertise to develop these “how-to guides” in different ways

Learning Partnerships

Seeing everyone as a learner is at the crux of the Learning Commons.

In the past, teachers taught and students learned. But in this environment, everyone is engaged in the learning process.

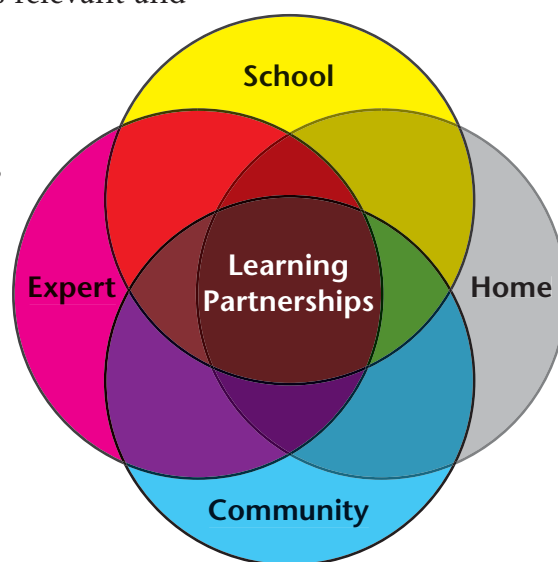
Teachers become learning coaches and facilitators of new learning. By drawing on the expertise of everyone — students, teacher-librarians, library technicians, community members — learning becomes relevant and dynamic.

Virtual and physical learning partnerships extend collaboration to include all members of a school's community. Technology-enabled learning partnerships foster the mutual exploration of ideas, and lead to innovation and creativity. Both parallel the social ways by which today's students are naturally choosing to learn and network.

These integrated learning opportunities are:

- global, connected, and social
- real world, cross-curricular, and interdisciplinary
- active, fluid, and flexible
- complex and resource-rich
- respectful of all ideas

Careful planning ensures that all partners determine how best to model learning together.



■ Ideas to Consider

- **Work with classroom teachers and students to plan, teach and assess learning**
- **Explore professional learning networks to find experts that broaden currently held ideas**
- **Rethink assumptions about who can be an expert and utilize search techniques for people resources**
- **Recognize yourself as a learner and model your learning experience**

Technology in Learning

While students are readily drawn to social media, they do not necessarily use them critically to gain deeper understanding. The Learning Commons can build on the entertainment value that students find in social media to further learning opportunities for critical and creative thought.

Using the tools available in the communication world outside of school is one way to bridge the current learning gap experienced by students today.

■ Ideas to Consider

- Consider cell phones as potentially powerful computing devices (e.g., use them to gather student responses, find information, read downloads of news articles, read books and reviews, explore Google maps, act as a GPS, record interviews, take digital photos, play language games, etc.)
- Use collaborative virtual spaces for class projects; include the use of avatars
- Use bookmarking web technology (e.g., Diigo, Del.icio.us, Shelfari) for building reading lists with students; encourage them to add to the list
- Explore Web 2.0 applications for their potential to engage learners (e.g., Wordle, YouTube, Audacity, Facebook)
- Match Web 2.0 applications with student needs (e.g., create collaborative virtual learning centres using wikis, Ning, Google Apps to allow 24 hour access)
- Use tools such as interactive white boards and document cameras to tap into visual learning
- Explore gaming (MMORPGs, simulations, board games) as a way of learning
- Share successes and challenges with other professionals through Professional Learning Communities and Personal Learning Networks

The Role of Differentiated Instruction

An effective Learning Commons will accommodate all learners and address multiple learning styles and learning levels.

In working together, teacher-librarians in partnership with others can modify the process, content, product and environment to meet the needs of a diverse student population. The result will be empowered learners.

■ Ideas to Consider

Opportunities	Examples
<p>Process</p> <p>The opportunities for learners to make sense of the content</p>	<ul style="list-style-type: none"> • supports and scaffolds for learning (e.g., pathfinders, graphic organizers, checklists, learning tools) • explicit skill instruction • just-in-time intervention • appropriate assistive technology • fostering metacognition of the skills and knowledge being learned
<p>Content</p> <p>The means by which learners become acquainted with information</p>	<ul style="list-style-type: none"> • professionally selected resource collection to support diverse learning styles, abilities, reading levels and interest with specialized resources for all learners and students with identified learning needs • dedicated areas within the school library to support specialized hardware and software (e.g., speech input software, adaptive keyboards, screen magnification, amplification devices)
<p>Product</p> <p>The vehicles through which learners show and extend understanding</p>	<ul style="list-style-type: none"> • real world examples of products (exemplars) • student choice in displaying new learning and understandings • students sharing knowledge acquired as a result of rich inquiry tasks
<p>Environment</p> <p>The conditions that set the tone and expectations of learning</p>	<ul style="list-style-type: none"> • multiple spaces for individual, small group, and whole class learning • virtual library spaces for study, support, and relaxation available 24/7 • homework help from the school library webpage • management of student information resources and work spaces, both physical and virtual



As we increasingly move toward an environment of instant and infinite information, it becomes less important for students to know, memorize or recall information, and more important for them to be able to find, sort, analyze, share, discuss, critique and create information. They need to move from being simply knowledgeable to being knowledge-able.

— Wesch, 2008

Learning to Learn: From Information to Knowledge Creation

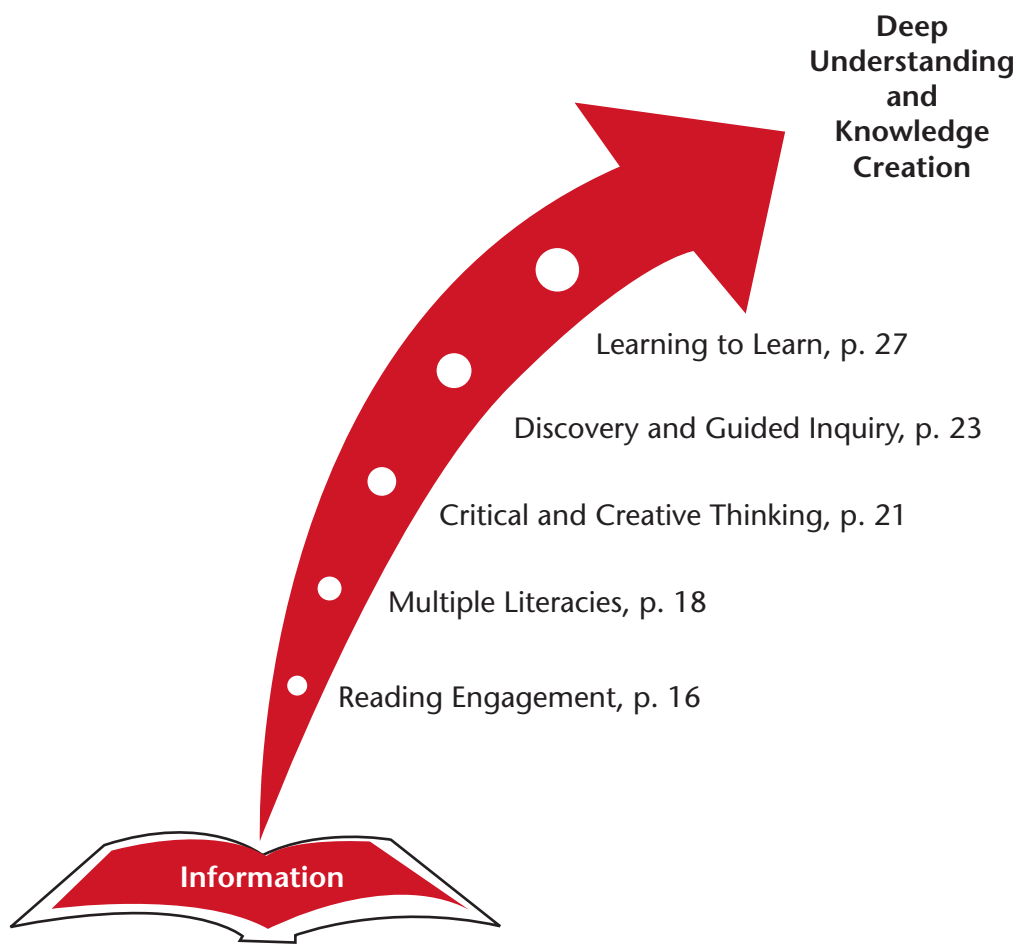
Vision

The real mandate of the Learning Commons is to design, facilitate and support dynamic learning experiences that utilize the best available resources, technologies, strategies and learning environments.

Learners move beyond merely retrieving factual information to constructing personal meaning and building individual and collective knowledge. As learners read, research, experiment, discover, perform and create in the Learning Commons, they collaborate with others to test, confirm and enrich their learning.

Guiding learners along their information to knowledge journey, and providing needed instructional interventions, is the focus of all partners in both physical and virtual learning spaces.

Exploiting resources for information and mastering technological applications to gain information is just the beginning of this journey. When teaching partners design higher order thinking learning experiences that take advantage of the social dimensions of learning, the potential for deeper understanding and the building of collective knowledge is enhanced. When learners take responsibility for learning — when they begin building their own personal learning networks — learning for life is on the horizon.



Throughout all activities in the Learning Commons, both students and teachers strive to improve. Metacognition of content understood as well as skills and processes gained helps to build learning to learn skills and attitudes and responsibilities.

The rich variety of resources and technologies as well as flexible physical and virtual spaces in the Learning Commons enhances differentiated instructional opportunities in the information to knowledge creation process.

The school library program has a central role to play in nurturing the Learning Commons' culture of imagination, discovery and creativity.

Implementation in the School Library

Reading Engagement

When students are encouraged to pursue their own interests and passions and are free to choose from a rich collection within an inviting environment, they are motivated to read and their reading and depth of understanding improve.

The Learning Commons can nurture good reading habits among students.

■ Ideas to Consider for Motivating Readers

- Connecting individual students to 'just the right' book or other reading material
- Providing opportunities for learners to see themselves reflected in what they read
- Providing incentives and celebrating individual reading achievements
- Supplying titles and genres to meet specific individual interests
- Honouring student choices and views with physical and virtual displays
- Promoting a wide variety of reading materials through booktalks, readers' choice displays, book blogs, etc.
- Providing an open and inviting physical and virtual space

■ Ideas to Consider for Connecting Readers

- Organizing and leading online and face-to-face book clubs
- Encouraging students to prepare and share book talks and critical reviews in multiple formats
- Utilizing social networking tools to activate discussions (e.g. social bookmarking sites and Interactive Video Conferencing)
- Inviting authors, illustrators, poets and experts to work with students
- Partnering with public libraries to promote their resources and literacy programs
- Connecting with other community resources (e.g., inter-generational and buddy

■ Ideas to Consider for Supporting Readers

- Providing a rich and diverse collection with equitable access for all
- Creating an atmosphere that fosters intellectual freedom and the power to choose to explore ideas, question beliefs and reach personally significant understandings
- Providing a trusting environment that respects the privacy of readers, their selections and explorations of diverse ideas
- Modeling and facilitating active reading (e.g. reflecting, questioning, predicting, connecting and evaluating)
- Teaching effective search strategies that enable independent and relevant learning
- Creating a collaboratively developed virtual library collection
- Providing audio books and assistive technology tools to meet all student needs

■ Ideas to Consider for Fostering Reading Communities

- Selecting the best resources and technology tools to support differentiated instruction
- Implementing sustained silent reading programs (e.g., SSR, DEAR)
- Celebrating reading through special events (e.g. Canada Book Day, Freedom to Read Week, etc.)
- Facilitating reading programs such as the Ontario Library Association's Forest of Reading® programs (e.g. Blue Spruce, Silver Birch, Red Maple, White Pine, Le Prix Tamarack)
- Building a physical and virtual collection of professional reading materials and websites
- Facilitating professional learning communities
- Reflecting school plans for literacy improvement in the Learning Commons

Ontario research shows that where enthusiastic leadership in a library exists, learners enjoy reading and a school enjoys higher levels of student achievement.

— Klinger et al,
Queen's University,
2006

Defining literacy is a process of continuous negotiation that is fueled by social, economic and technological changes. To be literate is to have the skills and knowledge to make meaningful connections between what one knows and what one is trying to understand, apply, or communicate.

— Loertscher, Koechlin & Zwaan, 2008

Multiple Literacies

New communication tools, emerging technologies, and social and cultural forces are constantly redefining what we mean by “literacy.” Students now need to use a broad range of literacies to achieve their immediate learning objectives and to recognize and develop their own creative possibilities.

Many students are already collaborative writers and content creators in the digital world. This world provides learners with unprecedented and powerful opportunities to develop multiple literacies. In doing so, learners can develop deeper understandings of the global community. Making writing more meaningful and relevant to today’s students means engaging them in this interactive online environment. The Learning Commons helps schools address these challenges.

In the Learning Commons, the teacher-librarian designs multiple literacy experiences with teaching partners so that students will:

- Pursue academic and personal reading and writing interests
- Examine ideas, information and interpretations critically and creatively
- Engage meaningfully with multiple kinds and levels of texts and multimedia in a resource rich environment
- Develop information literacy skills (e.g., analyze conflicting data and ideas through the inquiry process)
- Utilize appropriate technologies to learn and communicate collaboratively
- Demonstrate respect for intellectual property and practice academic honesty

■ Ideas to Consider

Literacy Type & Competencies	Implications for Learning
<p>Traditional Literacy</p> <ul style="list-style-type: none"> • Reading and writing with depth and understanding • Transferring information to new learning situations 	<ul style="list-style-type: none"> • Broader definition of “texts” includes print, media, and digital media • Learners respect a wide variety of viewpoints in reading material

Literacy Type & Competencies	Implications for Learning
<p>Information Literacy</p> <ul style="list-style-type: none"> • Accessing, processing, transferring, and communicating information • Adapting to changing information and communication technologies • Envisioning new ways to use these technologies to display new understandings 	<ul style="list-style-type: none"> • An open, safe environment for exploring innovative uses and applications of technology is required • Equitable access to technology • Power and impact of social networking tools • Reality of “just in time”, 24/7 access to information • “The medium is the message”
<p>Media Literacy</p> <ul style="list-style-type: none"> • Constructing meaning through the combination of several media “languages” – images, sounds, graphics, and words. • Applying critical thought to what is viewed, heard and read • Understanding the intended audience and purpose for communication 	<ul style="list-style-type: none"> • More informed consumers of information and ideas • Utilizing emerging tools to critically assess and analyze both the media and its messages • Awareness of increasingly complex forms of media persuasion • Engagement and relevance
<p>Visual Literacy</p> <ul style="list-style-type: none"> • Interpreting, creating, and using visual images • Thinking, decision making and communicating • Being aware of emotional impact of visuals • Analyzing for patterns and trendsgraphics, and words. 	<ul style="list-style-type: none"> • Information increasingly represented visually with complexity, and used to convey changes, patterns and data to the world • Visual models used increasingly to create or demonstrate understanding • Developing visual special intelligence

Literacy Type & Competencies	Implications for Learning
<p>Cultural Literacy</p> <ul style="list-style-type: none"> • Gaining understanding and appreciation for cultural diversity • Communicating effectively with diverse cultural groups • Respecting differing cultural points of view 	<ul style="list-style-type: none"> • Increased respect for a wide variety of cultural norms, perspectives, and realities • Created awareness of personal biases • Common goal of increased global harmony • Understand and contribute to Canadian identity
<p>Digital Literacy</p> <ul style="list-style-type: none"> • Understanding, evaluating and integrating information in multiple formats • Constructing information from multiple sources • Utilizing multidimensional and interactive skills 	<ul style="list-style-type: none"> • Fluid construction of knowledge and understanding • Communicate learning in real time • Shared learning experiences • Networked and participatory
<p>Critical Literacy</p> <ul style="list-style-type: none"> • Looking at multiple sources • Analyzing, synthesizing, retelling, relating, and reflecting • Bringing personal experiences and understandings to information 	<ul style="list-style-type: none"> • Text to text / self / world connections • Knowledge transferred and applied to predictable and unpredictable situations • Demonstrated awareness of personal significance • Critical consumers of information, ideas and opinions

Critical and Creative Thinking

Critical and creative thinking have always been — and still remain — essential components of learning. What has changed is the sheer volume of information available and how it is presented.

Being able to think critically and creatively will prepare learners to approach opportunities with intelligence. Learning requires flexible and inquiring minds that not only take in information, but also question it. Students need multiple opportunities to practice and test their abilities through inquiry.

The Learning Commons gives learners opportunities to develop their own learning experiences. As a result, they will be able to build the reflective practice of learning for life.

■ Ideas to Consider

The Learning Commons develops learners who:

1. **Read and write for different purposes:** Students read and write for pleasure, for personal discovery, and for inquiry into topics of personal and academic interest. A school library program helps students to discern the kind of text needed to achieve their purpose (e.g., a graphic novel for recreational reading, an international newspaper for current events, an online journal for a research article).
2. **Evaluate texts:** Faced with the abundance of reading materials and information texts available, students need to be critical users of information. A school library program helps students develop criteria for selecting materials for personal and academic reading and for assessing the reliability and relevance of resources (e.g., distinguishing between materials found in subscription databases versus general search results).
3. **Navigate and create texts in a variety of formats:** Students are exposed to text in a growing number of formats. A school library program helps students navigate and create different types of texts (e.g., online texts with hyperlinks allow students to read not only across and down, but also through to related materials).

Good questions are the driving force of critical and creative thinking and therefore one of the best indicators of significant learning. Good questions are those that force students to challenge their taken-for-granted assumptions and see their own underlying biases. Oftentimes the answer to a good question is irrelevant – the question is an insight in itself. The only answer to the best questions is another good question. And so the best questions send students on rich and meaningful lifelong quests, question after question after question.

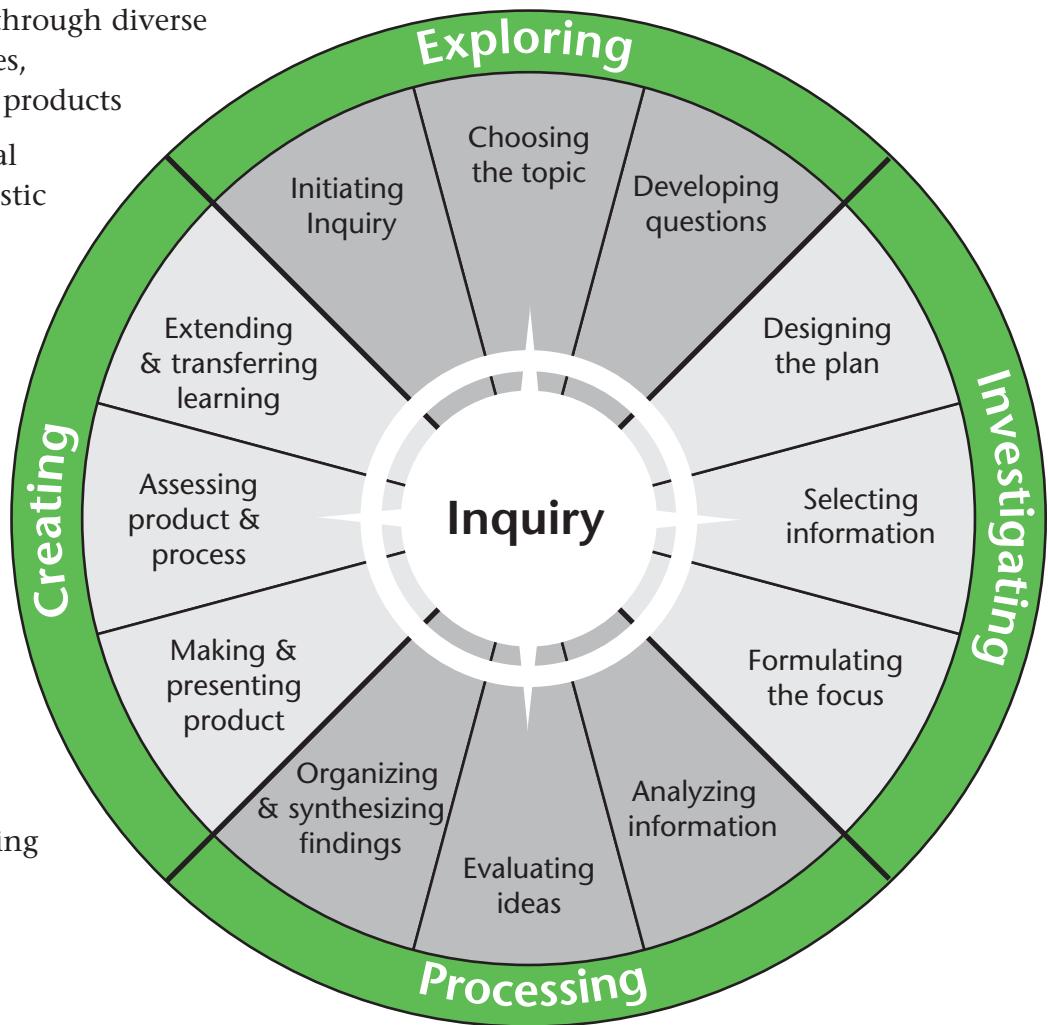
— Wesch, 2008

4. **Interpret media texts:** The sharing of information and opinions is shifting increasingly from text-intensive to media-intensive formats, both online and offline. The school library program helps students evaluate the value and credibility of information in this complex environment.
5. **Interpret images and graphics:** In image-rich environments, students require both the ability to interpret images and the skill to critically assess how the manipulation of images affects meaning. The school library program helps students deconstruct how information is presented in many visual formats.
6. **Think deeply:** As the amount of information grows exponentially, critical readers and writers need to reflect, question, predict, and connect texts to build understanding. A school library program helps students in their reading and writing to differentiate between fact and opinion, assess credibility, and to think critically about the information and ideas they encounter and communicate.
7. **Build knowledge interactively:** Interactive sites facilitate online conversations and collaborative content-building. A school library program helps students to appropriately utilize social networking technologies such as blogs and wikis.

Discovery and Guided Inquiry

To create a school-wide focus on the inquiry process, participants in the Learning Commons collaborate to promote the use of an inquiry model which:

- Expands personal horizons and knowledge base
- Encourages the collision of ideas
- Engages the learner in rich, real-world tasks that interest and motivate
- Embeds essential and recurring skills and knowledge
- Provides a strategy for processing information
- Benefits from intentional, guided intervention
- Scaffolds learning for success
- Promotes open-ended thinking in all phases of the process
- Extends learning through diverse strategies, resources, technologies, and products
- Balances sequential learning with holistic learning and differentiated instruction
- Develops multiple literacies
- Fosters metacognition, i.e., learning how to learn in both familiar and new contexts
- Encourages a collaborative approach to learning



A Model for Inquiry

Phase of Inquiry	Student Feelings (adapted Kulthau, 2007)
<p>Exploring</p> <p>Students explore by initiating the inquiry, choosing an appropriate and personally engaging topic, and developing deep questions around the topic chosen.</p>	<ul style="list-style-type: none"> • Apprehension at work ahead • Uncertainty, confusion, anxiety • Brief elation after selecting topic
<p>Investigating</p> <p>Students investigate their topic by designing a plan for inquiry, finding sources and selecting appropriate information, and formulating a clear and interesting focus.</p>	<ul style="list-style-type: none"> • Anticipation of prospective task • Optimism • Realization of extensive work to be done
<p>Processing</p> <p>Students process what they have found by analyzing the information, evaluating their ideas and those from selected information, and organizing and synthesizing their findings.</p>	<ul style="list-style-type: none"> • Confidence in ability to complete task • Increased interest
<p>Creating</p> <p>Students create knowledge by making products that present the results of their inquiry, assessing their product and the process they used to construct it, and extending and transferring their learning to new contexts and inquiries.</p>	<ul style="list-style-type: none"> • Sense of relief • Sometimes satisfaction • Sometimes disappointment

See appendix A for further development of Model of Inquiry and Ontario Curriculum expectations.

Creating a Culture of Inquiry

Inquiry is a complex process of constructing personal meaning, applying critical thinking skills, solving problems, creating understanding, and questioning.

In its truest form, the inquiry process requires an individual to look deeper and beyond the obvious, examine information for validity, point of view and bias, and construct meaning from all of these endeavours.

Effective application of an inquiry model can transform novice learners into interdependent and independent learners, confident of their information power.

To implement an inquiry model, teacher-librarians and teachers can establish a culture of “Guided Inquiry” which integrates inquiry skills and content knowledge.

The Learning Commons is essential in helping students see the school as a dynamic learning place where they can continually connect new ideas and the curriculum to their own world.

■ Ideas to Consider

Instructional Staff	Learners
<p>Content</p> <p>Teacher/teacher-librarian directed</p> <ul style="list-style-type: none"> • Delivers integrated curriculum • Acknowledges background information • Establishes the context • Guides the process • Scaffolds instruction and learning throughout • Designs inquiries based on real world situations • Encourages developing open ended questions • Models and teaches specific information literacy skills (e.g., information organizers, online databases, social media tools, presentation formats) 	<p>Learner generated</p> <ul style="list-style-type: none"> • Individually explores area of interest • Makes connections to other texts and transfers experiences • Generates deep inquiry questions • Uses a wide variety of print, media, electronic and human resources • Displays learning in personally significant way

Instructional Staff	Learners
<p>Collaborating</p> <p>Teacher/teacher-librarian enabled</p> <ul style="list-style-type: none"> • Allows for flexible groupings based on interest • Facilitates inquiry process • Connects learning partnerships with outside experts, using technology • Monitors outside experts consulted • Contributes to/joins learning partnership(s) • Models learning during process • Leads with questioning 	<p>Learner enabled</p> <ul style="list-style-type: none"> • Determines scope of partnerships • Seeks expertise beyond the school setting • Contributes to a team according to own learning style and aptitudes • Contributes to collective knowledge creation • Reflects on learning with others • Shares in the responsibility of ownership of collaborative products
<p>Process</p> <p>Teacher/teacher-librarian enabled</p> <ul style="list-style-type: none"> • Emphasizes multiple sources • Emphasizes safe and responsible use of information • Provides template for source validation • Provides guidance in effective search strategies • Targets specific lessons necessary to build reflective practice • Conferences at significant stages of the inquiry • Fosters the metacognition of the skills being learned and emotions encountered • Models reflective thinking/practice 	<p>Learner enabled</p> <ul style="list-style-type: none"> • Applies prior experiences, synthesizes with new information and transfers the learning • Seeks multiple sources • Validates multiple sources for authority, bias and relevancy • Uses effective search strategies • Reflects on learning and shares feelings, findings and perspectives with different audiences • Reaches understandings which are personally significant • Thinks creatively to solve problems and make decisions

“Learning is the work.....whatever is taught must be steeped in learning through reflective action.”

— Fullan, 2008

Learning to Learn

The “work” of the Learning Commons is to facilitate and lead a new culture of learning, one that addresses the needs of 21st Century students.

Learning to learn is a critical component of student success. The Learning Commons’ information-rich and media-savvy environments facilitate learning to learn. The Learning Commons’ networked learning experiences and directed metacognition of what is being learned — and how it is being learned — facilitate learning to learn as well.

To improve their learning, students need feedback and formative assessment throughout a unit or project. They also need opportunity and time to reflect and discuss their findings with others. The instructional staff, in partnership can help design face-to-face and virtual opportunities that can include:

- Ongoing conferencing with peers and teachers
- Implementing reflective journaling during the learning process
- Utilizing self-assessment organizers throughout the learning process
- Building collaborative rubrics within learning partnerships
- Setting goals for improvements and next steps
- Relating new information and understandings to prior experiences
- Assembling a portfolio

■ Ideas to Consider

Content	Process
Students work in small groups to compare their research findings on a topic and chart similarities, differences, and discrepancies. They then discuss why they had differing results.	After reflecting on successes and problems during an information search, students create a tutorial of effective search strategies to help others.

Content	Process
<p>Students create a web of their knowledge after a unit of study. In groups students consolidate their knowledge webs into big ideas about the unit.</p>	<p>Students discuss the strategies and processes they applied during a project then develop questions for self assessment of their own learning skills and set goals for next steps.</p>
<p>In groups, students reflect on what was personally surprising and significant from the research recently completed. In small partnerships they find a way to share these discoveries.</p>	<p>Using organizing tools that allow an objective view, students analyze the collaborative skills that were used in the learning partnership. Collaboratively, they set goals for the next project that address improvements in the team building skill needs of the group.</p>



Quality education includes the education of the heart as well as the head; it includes a focus on the whole person—the cognitive, affective and behavioural domains of learning. It means preparing students to be concerned citizens who have empathy and respect for people within their increasingly diverse communities. It means providing opportunities for students to understand deeply the importance of civic engagement and what it means to be a global citizen in an increasingly interdependent global community. An approach to teaching that is infused with character development is education at its best.

— Glaze, 2006

Developing the Individual in the Learning Commons

Vision

Society needs citizens who have respect for others and who understand their responsibilities in participating in a safe and lawful society. Issues such as plagiarism, privacy, intellectual property, copyright, bias, stereotyping and gender all require deep understanding, as well as reasoned acceptance or rejection. With today's nearly unlimited amount of information available and vast amounts of unfettered content to be shared, these considerations have become even more sensitive and significant.

As a key partner in the Learning Commons, school libraries and teacher-librarians can offer expertise in navigating this vast array of information.

Creativity is now as important in education as literacy and we should treat it with the same status...We need to celebrate the gift of human imagination, seeing our creative capacities for the richness that they are and seeing our children for the hope that they are...Our task is to educate their whole being so they can face the future.

— Robinson, 2006

The Role of Personal Qualities

Imagination and Creativity

Imagination is a talent that atrophies when it's not used often enough. A recent study shows 98% of four year olds could be classified as divergent thinkers. By age 12, however, this percentage dwindles to 10%. Daily opportunities to use “creative muscles” result in exciting learning experiences, individualized expression and self-directed learning. End products are as unique as the people who create them. The Learning Commons encourages divergent thinking and new ways of sharing information.

■ Ideas to Consider

- Create open-ended learning activities that do not have one set answer or method
- Emphasize learning opportunities that promote higher order thinking skills
- Create a climate of risk-taking
- Surround students with rich picture books and novels and encourage ‘what if’ play with the text
- Design active learning experiences to re-create understandings through drama, music and art
- Allow different ways of expressing learned content
- Create learning opportunities that encourage a collision of ideas
- Promote reading that expands horizons and engages the imagination

Confidence and Self-esteem

Through the multiple experiences provided by the Learning Commons, students develop the ability to transfer their skills from one context to another. By having their expertise acknowledged, students see their capabilities in positive ways. Their self-esteem and confidence increases as a result — traits that are so necessary to success in life.

■ Ideas to Consider

- Credit the expertise of all members of the Learning Commons
- Model that making mistakes is part of learning

- Encourage students to offer “workshops” in areas of expertise (e.g., software applications, assistive technology, media mash-ups, social networking tools)
- Create “Who is the expert” boards for those to consult when needed

Cultural Awareness and Social Contribution

The Learning Commons plays a unique role in fostering cultural growth and a sense of national identity. School library collections are built to support learning; they develop understanding of Canada and the world’s history and culture, with respect for diversity as a foundation. Learning programs built on these collections help students find their place and voice in Canada’s cultural fabric and to relate to the world at large and their role as global citizens.

The Learning Commons is set up to assist students make meaningful contributions to the world. Engaging learners in inquiry-based experiences set within real world issues makes their exploration relevant and empowering. Through the extraordinary breadth of resources available in the Learning Commons, teams of educators can involve students in effecting change in the community and the world.

■ Ideas to Consider

- Introduce literature that presents multiple perspectives of issues relevant to students
- Explore how authors and illustrators contribute to Canadian culture
- Explore the role aboriginal peoples play in Canadian identity
- Provide resources in first languages for English Language Learners
- Discuss how emotional reactions to literature helps to define personal and national identity
- Take on the challenge of learning about and taking a position on an issue (local, national or global)
- Consciously connect learners with the local community organizations and resources
- Engage in routine discussions on current topics (utilize concepts of debate and point of view explorations)
- Look for real world contexts for curriculum based expectations

- Explore global citizenship lesson-ware (e.g., Be the Change, United Nations, Free the Children, UNICEF, CIDA)
- Have students explore non-governmental organizations to evaluate impact, organization, costs and effectiveness
- Explore the lives of activists and the impact that they have had on issues or events
- Model learning leading to action
- Capture, create and share accrued knowledge

The Importance of Individual Growth

Character education is at the soul of the Learning Commons. School staff share an obligation with parents and community members to develop caring, empathetic, and involved citizens who respect each other and understand the responsibility we all share in creating a safe and lawful society.

Issues such as plagiarism, privacy and copyright require surprisingly complex and deep understanding, as do bias, stereotyping and gender. A successful Learning Commons promotes values such as intellectual curiosity, respect, responsibility and initiative — all essential to personal and social growth.

Intellectual Curiosity

- Being open to new ideas
- Seeking information
- Considering divergent opinions
- Examining a variety of viewpoints
- Thinking critically

Respect and Responsibility

- Respecting privacy
- Respecting intellectual property
- Respecting intellectual freedom
- Valuing other individuals, ideas and cultures
- Practicing safe and ethical behaviours

Initiative

- Going beyond academic requirements
- Participating in the social exchange of ideas
- Seeking opportunities for personal growth
- Engaging in self-assessment
- Setting goals for improvement

The Learning Commons provides essential building blocks for the personal, social and cultural growth of students. Within the Commons, the school library offers a rich, broad-ranging, diverse, and inclusive resource collection, as well as a stimulating learning environment. It can foster a keen culture of inquiry.

Through learning partnerships, the school library can provide students with opportunities to explore their interests. It can encourage them to question and make sense of the world. And it can help them form strong personal relationships that support emotional and social competence.

Qualities such as imagination and creativity, confidence and self-esteem, leadership and social contribution are integral values that need to be seamlessly woven into our educational fabric. The Learning Commons creates the atmosphere for this to happen.

The Engagement of All Learners

If learning is enjoyable and challenging, learners will do it enthusiastically. Think of a video game that players are keen to concentrate on for hours. They do it because it's "hard fun." Turning hard work into hard fun requires helping students relate their work to their own lives and the culture in which they live. This type of learning, inherent in the Learning Commons, is sticky — it stays with the learner. And it creates an environment where the individual will grow and flourish.



If our children are to grow up to make important contributions to our society, it is essential that we provide them with powerful tools and experiences across the curriculum. This will require a new culture of teaching and learning that engages students as contributors.

— November, 2008

Transition and Change

Vision

In the current state of the world, creativity, innovation and imagination play key roles in children's development. Young people need to learn transferable skills that make them critical consumers of information, effective problem solvers, capable decision makers and exciting innovators. They also require a level of knowledge and a diversity of expression unprecedented in human history.

Currently, many students are finding it difficult to make meaningful connections between what they learn at school and what they need to know outside of school. The Learning Commons has the potential to bridge that gap for students. The Learning Commons can make learning more pertinent, engaging and significant.

This transition will develop differently in each school. It will need to be carefully directed and monitored. Success will depend on the contexts that are set and the commitment of the stakeholders. The process should be inclusive, well planned and measurable. Naturally, schools will experience varying levels of proficiency.

Challenges

In the transition process certain challenges will arise.

These include:

- Creating tasks and projects that fuse critical thinking, creativity and inquiry with the new, more flexible methodologies available
- Embedding creativity, innovation, imagination and risk-taking in the culture of the school
- Engaging the continually evolving technology, information flow, and changing connectivity
- Expanding access to information and communication technologies at home and at school
- Rethinking attitudes towards learning and bringing all people on board

Pedagogical Shifts Inherent in the Learning Commons

Information Seeking and Reporting		Individual and Collective Knowledge Creation
Teacher directed learning	➔	Self and participatory learning
Classroom learning	➔	Networked and global learning
Standards driven	➔	Exploring big ideas and concepts
Teaching	➔	Process and active learning
Individual teacher expertise	➔	Collaborative learning partnerships

Evidence-based ... practice uses research-derived evidence to shape and direct what we do... [We] need to systematically collect evidence that shows how... [our] practices impact student achievement; the development of deep knowledge and understanding; and the competencies and skills for thinking, living, and working.

— Todd, 2008

Tracking the Transformation

Gathering data, analyzing it and communicating ideas within the school and across professional networks will help to guide, facilitate, and assess change. By using the tools of Evidence-Based Practice and Professional Learning Communities, the school will be assisted in transforming into an effective Learning Commons and be provided with evaluation criteria and results.

■ Ideas to Consider

Evidence-Based Practice

Educators regularly gather, organize and analyze both quantitative and qualitative evidence on how their work impacts student achievement and program success. Analyzing and sharing the following kinds of evidence will help teachers collaborate to achieve professional goals and school improvement.

Evidence of Learning	Evidence of Program Success
<ul style="list-style-type: none"> • Reflective logs and journals documenting the learning journey • Student self assessment data • Portfolios of student work over time (physical and digital collections) • Project exemplars • Notes from conferencing with students • Checklists and rubrics • Before and after learning records (e.g. brainstorming, mind maps) • Anecdotal surveys (e.g., pre and post questionnaires, web-based instruments, attitudinal surveys) • Test results (e.g., EQAO, report card data) 	<ul style="list-style-type: none"> • Student-directed inquiry units implemented across grade levels and disciplines • Reflective logs of lessons/units/projects • Embedded use of technologies to enhance learning and critical thinking • Imagination and creativity evident in curriculum units • Learning partnerships integrated across grade levels and disciplines • Differentiated learning opportunities are evident • Active and ongoing sharing of planning and results in the Learning Commons

Professional Learning Communities

Professional Learning Communities help schools develop consistent and effective plans for change and improvement. They provide a framework for staff and interested community members to come together to share vision and values, and to tap into collective creativity.

To be successful, all participants must share leadership, power and decision-making. This will support the changes necessary to develop the Learning Commons, and will help meet arising challenges.

Although Professional Learning Communities are created within a school, they may extend beyond its walls, to schools within a board where common experiences are occurring. The power comes from the immediacy of contact and collaboration that takes place as ideas are explored.

Teacher-librarians are active participants, but they can also contribute to the logistical success of Professional Learning Communities. They can:

- Collaborate with technology teachers/specialists to facilitate the use of technology
- Engage other specialist teachers who have a broad school outlook
- Create a physical and virtual professional library collaboratively with all staff
- Facilitate virtual discussions with experts and other learning communities via Internet or interactive video conference
- Develop virtual spaces for online discussions and study using Web 2.0 tools
- Provide cross-curricular and cross-grade connections and model curriculum sharing

Personal Learning Networks

Personal Learning Networks facilitate the gathering of information, ideas and content. They can inform and incite dialogue and connect participants beyond their local areas. Ultimately, these networks can model the very type of learning that is established in the Learning Commons.

To create a professional learning community, focus on learning rather than teaching, work collaboratively, and hold yourself accountable for results.

— DuFour, 2004

A personal... learning network involves an individual's topic-oriented goal, a set of practices and techniques aimed at attracting and organizing a variety of relevant content sources, selected for their value, to help the owner accomplish a professional goal or personal interest.

— Warlick, 2006

	School Library	School Library Resource Centre	Learning Commons	The Future
Flexible Physical and Virtual Space	Shelves dominate the space and cannot be moved. There is little if any virtual presence. The School Library is a place to go to, a room with books and print materials.	Shelves can be moved with some effort. There is a small virtual presence (i.e. a website) but it is not widely utilized. Multimedia texts are available both within the library and online.	Shelves and furniture can be moved into different configurations in multiple locations. Multiple virtual spaces are widely used. Rich and diverse collection of print, virtual, and multimedia texts are available 24/7.	The communication, information and knowledge revolution is transforming the way we learn. The future of education is in flux. New technologies yet to be shared and new possibilities yet to be imagined suggest that education itself is part of this revolution.
Equitable Access	Classes are scheduled in; library is closed to others during these class periods. Not every class has scheduled access. Collections may lack depth and breadth due to budgetary considerations.	Some open and flexible time is available in the library during school hours. Classes and individual students have access to the facility and expertise of qualified library staff when needed. Inequity in building collections is still significant.	Students and staff have access to qualified library staff and resources as needed during and beyond the instructional day. Virtual presence allows access to extend into the home, and is available 24/7. Resources are more equitably available through the vast capability of the world wide web.	

	School Library	School Library Resource Centre	Learning Commons	The Future
Learning Partnerships	Library staff pulls resources as requested by classroom teachers but there are few, if any, learning partnerships.	Principals, teachers and teacher-librarians collaborate to plan and implement units of learning. The principles of Partners in Action dominate the school library program.	All members of a school community collaborate to build virtual and physical learning partnerships in the Learning Commons. These partnerships are global, connected, social, cross-curricular and complex.	
Technology in Learning	Computers are housed separately from the library and rarely part of the inquiry process.	Some computers are found in the library and their use is limited to functional applications.	Technology and media are an intrinsic, integrated and seamless part of learning.	
Empowered Learners	Students are taught in unison; learning is only differentiated with special designation of individual students.	Learning is modified by individual student need, and is directed by the teacher. Everyone explores ideas together and products of learning are assigned.	Everyone is a learner. Together they are empowered to construct and direct their own learning. Learning is personalized, differentiated and motivating.	



Making the Learning Commons Happen

The Learning Commons must be fluid; it must grow and evolve with school needs, emerging technologies and global realities. It requires leadership to succeed, and that leadership can only come through the willing co-operation and collaboration of everyone participating in the school learning process.

Both for the personal edification of students entering a global village, with all its rich and varied possibilities, and for the practical necessity of finding meaningful, fulfilling work in such a world, our education system needs to change and change radically.

— Worzel, 2009

At the school level, the principal is key in establishing and encouraging working partnerships among staff and students. The principal must provide the climate for co-operation, experimentation and growth. The Learning Commons has great potential, but only when everyone participates.

With the help of the entire staff, start by studying how the Learning Commons would work best. Establish a timeline for its development, then list the school's real and potential learning spaces. Determine the gaps in how virtual and physical resources are accessed. Study the partnerships that have characterized the school's recent learning activities for how they can be expanded. And finally, evaluate the technology that is available for its potential use.

Beginning questions

- How will the Learning Commons logically be developed?
- How will the overall leadership of the Learning Commons be shared across the school? (e.g., administrator, teacher-librarian, representative teachers, media specialist etc.)
- How can all members of the staff contribute to the success of the Learning Commons?
- How can the school library program be essential to the success of the Learning Commons?
- How can all school learning spaces contribute to the learning taking place in the school?
- How can schools utilize the technology and social media that students bring to learning?
- How can social media enrich the potential of learning activities?
- How do resources owned, accessed and available to the school reflect the range available?
- How do virtual resources and spaces integrate with existing physical spaces?
- What flexibility is needed to allow students and staff to learn together?
- What are the potential benefits of the Learning Commons to school improvement?
- What are the professional development needs of staff to enable full participation in the Learning Commons approach to teaching and learning? How will these needs be met?
- How do we create a culture of reflective continuous learning for all?
- How will we measure the effectiveness of the Learning Commons?

As the journey to the Learning Commons progresses

As the Learning Commons starts to take shape, staff members will want to discuss the larger ideas and issues emerging.

The following questions can form the beginning of more detailed discussion.

- How has the technology and social media changed how learning is taking place in the school?
- How has modeling learning improved the level of understanding and knowledge creation experienced by students?
- What are the strengths and weaknesses of the physical and virtual learning spaces organized for the operation of the Learning Commons?
- Has the range of resources available kept pace with the needs of students and staff?
- Which learning partnerships have had the greatest impact on understanding and knowledge creation?
- How much more engaged are students in using discovery and guided inquiry within the context of the real world?
- How has the Learning Commons contributed to school improvement and student success?

Conclusion

Just how important the Internet and its networking capabilities have become in our daily lives is impossible to understate. In the 1970s, Marshall McLuhan said that a car is a physical extension of a foot... of a person's total being. If asked now, McLuhan would have to add a cell phone, a hand-held device and social media as extensions of a person's total being. It is these devices — and their evolving technologies — that constitute the natural reality of the students in our schools.

The relationship of these new communication tools with our students is what schools and libraries need to absorb and embrace. We are just beginning to realize the power of technology on our communication, research and critical thinking. A new era is still just ramping up. Where it will lead us is, as yet, unimagined. Changes will continue to be profound, exciting... and bigger than all of us. Together we stand to harness unseen potential.

The Learning Commons provides direction in the face of this great change. The Learning Commons provides schools, school libraries, educators and students with the increased flexibility and breadth of control needed for the challenges ahead.

I believe our only hope for the future is to adopt a new conception of human ecology, one in which we start to reconstitute our conception of the richness of human capacity. Our education system has mined our minds in the way that we strip mined the earth...and for the future it won't service. We have to rethink the fundamental principles on which we are educating our children.

— Robinson, 2006

APPENDIX A: The Inquiry Process

Phase 1: Exploring

Initiating Inquiry, Choosing the Topic, Developing Questions

Knowledge and Understanding: The student:

- identifies the purpose and features of the inquiry
- identifies how the topic suits the purpose and features of the inquiry
- uses prior knowledge and understandings to connect to the topic
- identifies a variety of questions about the topic

Thinking: The student:

- develops essential questions about the inquiry
- uses a variety of strategies and resources to choose a relevant topic
- uses evaluation criteria for building effective questions for inquiry

Communication: The student:

- explains how understanding about the inquiry developed, using a variety of forms
- uses conventions, vocabulary, and terminology related to choosing the topic for inquiry
- explains answers generated about the chosen topic, using a variety of forms

Application: The student:

- applies collaborative skills to help understand the purpose and features of the inquiry
- transfers current knowledge and skills to modify choice of topic of the inquiry
- makes connections between current and previous questions/answers

Sample Activities

Elementary	Secondary
<p>Use concept-mapping software to generate keywords and ideas.</p> <p>Brainstorm possible questions for the inquiry and topic chosen, and classify the questions according to type.</p> <p>Use question-starter words in a W5H framework or use a question matrix.</p> <p>Identify details of assignment using a variety of tools and formats (e.g., product, purpose, audience, learning partnerships, assessment and evaluation).</p> <p>Explore multimedia on the topic and summarize issues raised prior to choosing a topic for inquiry.</p> <p>Develop a physical or virtual space to build the inquiry (e.g. interactive bulletin board, blog, wiki).</p>	<p>Explore print and online reference materials to get an overview of the inquiry and topic chosen.</p> <p>Complete a K-N-R chart or guided mapping activity to give context to the inquiry.</p> <p>Use social networking applications to interview peers on what they know about the topic chosen.</p> <p>Use concept-mapping software to map, classify, and extend prior knowledge and ideas about inquiry.</p> <p>Use Bloom’s taxonomy to generate higher-order questions.</p> <p>Develop a physical or virtual space to build the inquiry (e.g. interactive bulletin board, blog, wiki)</p> <p>Develop tools to manage the project timelines (e.g. notification apps, charts).</p>

Assessment Tools

- checklists to detail purpose, nature, and timeline of assignment
- research portfolios – both digital and in print – to organize the assignment, notes, and conference details
- rubrics to establish criteria for effective inquiry
- scoring charts to record development of Phase 1 knowledge and skills

Phase 2: Investigating

Designing the Plan, Selecting Information, Formulating the Focus

Knowledge and Understanding: The student:

- identifies available sources relevant to inquiry
- identifies how selected sources support investigation of the topic

Thinking: The student:

- uses a variety of strategies to design a plan for, and determine the form of, the presentation
- uses a variety of strategies to select relevant information
- uses conferencing (physical and virtual) to discuss the topic with learning community

Communication: The student:

- expresses thoughts and feelings about the inquiry process
- describes plan for inquiry, using a variety of forms
- explains personal focus formulated for inquiry, using a variety of forms

Application: The student:

- transfers current knowledge and skills to modify plan of the inquiry
- applies knowledge of how information is organized to help locate and select information
- makes connections between the current focus of inquiry and previous foci

Sample Activities

Elementary	Secondary
<p>Browse the school library collection and search online catalogues for relevant sources and record information.</p> <p>Develop keywords to search all resources such as full-text online databases and e-books.</p> <p>Read and discuss visual information such as pictures, graphs and illustrations.</p> <p>Employ various skim/scan techniques that match the resource used.</p> <p>Conference with learning partners concerning progress in the inquiry.</p> <p>Make use of “virtual field trips” in addition to actual excursions to enlarge the scope of the inquiry.</p>	<p>Browse the school library collection and search online catalogues for relevant sources and create a preliminary checklist of material consulted. Share social bookmarks.</p> <p>Use both simple and advanced search strategies in a variety of search engines and directories to find relevant information.</p> <p>Deconstruct elements of graphic information (e.g., graphs, charts, and diagrams)</p> <p>Ensure a vast array of primary and secondary resources (e.g. people, print, virtual) are explored at this stage.</p> <p>Conference with learning partners concerning progress in the inquiry.</p>

Assessment Tools

- checklists of possible sources of information, and actions taken to locate information
- conference notes to record teacher conferences, including progress to date, teacher comments, and future plans
- organizers and templates to plan inquiry and record information and sources
- rubrics to establish criteria for selecting information, and formulating a focus
- scoring charts to record development of Phase 2 knowledge and skills

Phase 3: Processing

Analyzing Information, Evaluating Ideas, Organizing and Synthesizing Findings

Knowledge and Understanding: The student:

- identifies the purpose, features, and organization of print, media, and electronic information selected
- identifies how evidence gathered supports the conclusions of the inquiry
- identifies how information and ideas can be sorted and classified for effective organization

Thinking: The student:

- uses a variety of strategies to record information from personal knowledge and selected sources
- develops/uses criteria for evaluating ideas
- uses a variety of strategies to revise inquiry, based on new information, ideas, and situations

Communication: The student:

- expresses thoughts and feelings about analyzing ideas
- explains how new knowledge was constructed
- explains how findings were drafted, revised, and edited to present to different audiences

Application: The student:

- makes connections between personal knowledge and new information
- applies critical and creative thinking skills to evaluate ideas and information
- transfers current knowledge and skills to modify product under changing conditions
- develops conclusions that are personally significant to learner

Sample Activities

Elementary	Secondary
<p>Summarize information found in a variety of ways (e.g., sequential storyline, illustration, timeline, video clip) or use an appropriate visual organizer to jot notes to clarify understanding</p> <p>Use graphic organizers (e.g. T-chart, Venn diagram, information map) to compare information, according to content or validity (i.e. purpose, relevance, accuracy, bias, currency, and authority).</p>	<p>Discuss successes and challenges arising during the processing of information and ideas using established physical or virtual spaces.</p> <p>Explore the issues of academic honesty (e.g., plagiarism and copyright) and put into practice.</p> <p>Experiment with established and innovative ways to take notes, record information, and discuss preliminary findings.</p> <p>Create appropriate documentation of information and sources selected using various tools.</p>

Assessment Tools

- checklists to identify information still required to support inquiry
- exemplars of a variety of forms and presentations
- rating scales for evaluating and comparing websites
- rubrics to establish criteria for analyzing, evaluating, organizing, and synthesizing information and ideas
- scoring charts to record development of Phase 3 knowledge and skills
- survey forms to identify inquiry needs prior to processing information

Phase 4: Creating

Making & Presenting Products, Assessing Product & Process, Extending & Transferring Learning

Knowledge and Understanding: The student:

- identifies the features of effective presentations
- identifies the criteria for assessing the product and process of inquiry
- identifies possible topics and real-life applications for subsequent inquiry

Thinking: The student:

- uses a variety of strategies to create a product that presents findings
- use a variety of self- and peer assessment strategies to assess the product and process
- uses a variety of strategies to identify skills and knowledge required for subsequent inquiry

Communication: The student:

- expresses thoughts and feelings about presentation
- explains how assessment of product and process of inquiry improves personal learning
- explains how new questions, issues, and ideas that emerged during inquiry may generate new learning

Application: The student:

- applies knowledge of exemplary practices to make effective products and presentations
- makes connections between assessment of the current and past inquiries to track improvement information
- transfers current knowledge and skills to extend learning into new inquiries/contexts

Sample Activities

Elementary	Secondary
<p>Use the most appropriate method to support and present findings while honouring the learner's choice (e.g. visual, oral, performance, written, multimedia, digital).</p> <p>Post a presentation on an established physical or virtual space to rehearse and test its effectiveness.</p> <p>Offer opportunities to examine questions for future inquiry (e.g. journaling, online time capsule, role on the wall).</p> <p>Reflect on knowledge gained and the learning journey.</p>	<p>Use the most appropriate method to support and present findings while honouring the learner's choice (e.g. visual, oral, performance, written, multimedia, digital).</p> <p>Document sources using proper citation formats.</p> <p>Post a presentation on an established physical or virtual space to rehearse and test its effectiveness.</p> <p>Offer opportunities to examine questions for future inquiry (e.g. journaling, online time capsule, role on the wall).</p> <p>Reflect on knowledge gained and the learning journey.</p>

Assessment Tools

- anecdotal records for recording reflections about the strengths and challenges of the inquiry process used
- checklists to chart possible topics, plans, and products for extending the inquiry and transferring learning
- exemplars of a variety of effective presentations
- rating scales for assessing product and process
- rubrics to establish criteria for selecting information, and formulating a focus
- scoring charts to record development of Phase 4 knowledge and skills

Selected Resources

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