

## Innovation Funding Report 2015-16

<p><b>Who participated?</b></p> <p>2 Superintendents</p>
<p><b>Where the program or project investigated was located?</b></p> <p>Innovation Summit Boston Convention and Expo Centre</p>
<p><b>What was learned?</b></p> <p>The theme of the conference is to “Prepare students to be problem-seekers AND problem-solvers” and will be explored through the following main areas:</p> <ul style="list-style-type: none"> <li>• Design Thinking and Problem Based Learning</li> <li>• Unleashing Creativity and Making Thinking Visible</li> <li>• Leadership and Innovative Teaching Practices</li> <li>• iPads, Chromebooks, Google Apps and more</li> </ul> <p>In 4 different session types:</p> <ul style="list-style-type: none"> <li>• Keynotes</li> <li>• Knowledge Sharing</li> <li>• Dive-ins</li> <li>• Innovation Labs</li> </ul>
<p><b>Application in your district school board</b></p> <p>The Lakehead DSB has just completed the implementation of a 3 year IT plan that invested \$3.7 million into infrastructure, wi-fi, devices and the beginnings of training. The new three year plan was taken to trustees in the spring of 2016. Learning from this conference will be used to support the vision and implementation of the new three year plan. (Attached)</p>



## Rethinking Teaching and Learning

Rapid advances in technology have led to **profound shifts** in how we live, communicate, learn, and work. To prepare our students for the world they will soon enter and for a **future** we cannot yet imagine, **education** must not only **adapt** to these changes but **innovate**.

**Deep learning** and innovating education goes far **beyond** just **learning** how to use **new tools**. It requires us to **rethink** how we teach and learn. Students become life-long learners by learning about life as they live it and then seek to improve it. Everyone becomes an entrepreneur in the sense that they do something worthwhile with whatever resources they have and can generate. All of this happens through **new pedagogies** that make new things possible in the realm of learning.

**Education as it's always been done is not enough in the digital age.** With access to anytime, anywhere access to a universe of facts, an emphasis on top-down knowledge delivery and rote memorization no longer makes sense. Instead, we must embrace new pedagogies that make the most of our students' innate drive to learn, **create**, and **collaborate**. Likewise, in a competitive global economy that demands innovation and strategic thinking, we must help students build their **critical-thinking** and **problem-solving** skills. And in an environment where **change** is the only constant, we must foster a lifelong love of learning.

Lakehead Public Schools will enhance student achievement through the use of technology to expand how, when, and where learning takes place, authentically engage our students, and provide students with the skills to excel in a digital age.

### ALL LEARNERS NEED AND DESERVE 21ST CENTURY LEARNING OPPORTUNITIES TO THRIVE AS TOMORROW'S LEADERS, WORKERS, AND CITIZENS.

#### Authentic Student Engagement

- Learning designed to stimulate independence, collaboration, engagement
- Empowerment – self-directed, self-paced
- Anytime/Anywhere – shift from learning “in the classroom” to lifelong, borderless learning

#### Inspiring and Inspired Teachers

- Support and Capacity-building (tools, strategies)
- Assessment – inform learning/instruction, enhance assessment/moderation
- Anytime, Anywhere Learning (balance, interpersonal connection)

#### Skills for a Digital Age

- Creativity and Innovation (create, collaborate, innovate)
- Critical Thinking (reason, analyze, understand)
- Communicate (range of purposes, listen, multiple media/technology)
- Collaboration (work effectively, flexibility, adaptability, contribute, common goal)
- Responsible Digital Citizenship
- Ethical use of technology (digital footprint)
- Promote ethics and values in ‘connected’ relationships
- Acknowledge accountability



## Integrating Technology Enabled Teaching and Learning

Student learning in our schools is **facilitated** by skilled staff incorporating sound instructional practice in safe and caring learning environments. In preparing students for the 21st century, it is vital to develop **pedagogy that leverages learning technologies to enhance student learning.**

For maximum impact on student learning, technology integration needs its own set of ‘enablers’. Systems cannot simply buy a device for every student and expect new pedagogies and deep learning to ignite. **Technology in schools changes the conditions, but does not by itself shift practices.** In “A Rich Seam”, Michael Fullan and Maria Langworthy identify the following elements as crucial to effective technology integration:

- digital resources that align with learning and curriculum goals;
- technology training for staff as well as professional learning focused on building pedagogical capacity;
- high speed Internet access;
- integrated assessment and progress monitoring systems;
- reporting mechanisms to allow frequent learning from the work;
- communications with parents and stakeholders;
- infrastructure that includes security and privacy protections; support and maintenance for the equipment; and
- a digital citizenship policy.<sup>1</sup>

The following guiding principles have been used in refreshing our plan for technology:

- Student achievement and the ability to learn can be enhanced and improved through effective use of technology.
- Technology can improve student ability to access, create and communicate information and ideas.
- All students should have equal opportunities to develop knowledge and skills through the use of technologies.
- Successful implementation of technology in educational and administrative settings will require long term planning and budgeting.
- Effective use of technology can improve the efficiency and effectiveness of the Board.
- Technology should be routinely integrated into instruction and teachers must be given the tools and training to help them do so.

An emphasis on “deeper learning” requires a shift in the role of teaching from “focusing on covering all required content to focusing on the learning process, developing students’ ability to lead their own learning and to do things with their learning. Teachers are partners with students in deep learning tasks characterised by exploration, connectedness and broader, real-world purposes”

(Fullan & Langworthy, 2014, p. 7).

## 21<sup>st</sup> Century Competencies

<sup>1</sup> Fullan, Michael and Maria Langworthy. “A Rich Seam – How New Pedagogies Find Deep Learning”: January 2014



Lakehead Public Schools *Technology Enabled Teaching and Learning* aligns with the following six competencies as identified by the **Ontario Ministry of Education** in the new “**21<sup>st</sup> Century Competencies**”<sup>2</sup> (draft) document:

1. Critical Thinking and Problem Solving

*Critical thinking is described by Michael Fullan as the “ability to design and manage projects, solve problems, and make effective decisions using a variety of tools and resources”. Thinking critically requires students to “acquire, process, interpret, rationalize, and critically analyze large volumes of often conflicting information to the point of making an informed decision and taking action in a timely fashion”<sup>3</sup>.*

2. Innovation, Creativity, and Entrepreneurship

*Creativity is often described as the pursuit of new ideas, concepts, or products that meet a need in the world. Innovation contains elements of creativity and is often described as the realization of a new idea in order to make a useful contribution to a particular field.*

3. Learning to Learn / Self-Directed Learning

*Learning to learn engages learners to build on prior learning and life experiences in order to use and apply knowledge and skills in a variety of contexts: at home, at work, in education and training.*

4. Collaboration

*Fullan (2013) states that collaboration in a 21st century context requires the ability to work in teams, learn from and contribute to the learning of others, use social networking skills, and demonstrate empathy in working with diverse others. Collaboration also requires students to develop collective intelligence and to co-construct meaning, becoming creators of content as well as consumers. New skills and knowledge are necessary to enable team members to collaborate digitally and contribute to the collective knowledge base, whether working remotely or in a shared physical space.*

5. Communication

*Many frameworks include information and digital literacy in the concept of communication. Digital tools and resources represent a new realm of communications interaction in which the ability to navigate successfully is essential for success in the 21st century.*

6. Digital (global) Citizenship

*Digital Citizenship requires greater awareness of the importance of respecting and protecting privacy and information, given the volumes of information to which we have access through digital networks.*

These competencies support the development of learning in all subject areas, including foundational skills in literacy and numeracy, and apply to both the face-to-face and the online world. Each competency is further defined by a number of descriptors which support and enhance Lakehead Public Schools’ priority areas for technology: authentic student engagement, inspiring and inspired teachers, and skills for a digital age.

The role of students, support and teaching staff, and school and system leaders includes actions to facilitate deeper learning through technology enabled teaching and learning.<sup>4</sup>

<sup>2</sup> [http://www.edugains.ca/resources21CL/About21stCentury/21CL\\_21stCenturyCompetencies.pdf](http://www.edugains.ca/resources21CL/About21stCentury/21CL_21stCenturyCompetencies.pdf)

<sup>3</sup> Shifting minds: A 21st century vision of public education for Canada. Retrieved from: [www.c21canada.org/wp-content/uploads/2012/11/Shifting-MindsRevised.pdf](http://www.c21canada.org/wp-content/uploads/2012/11/Shifting-MindsRevised.pdf).

<sup>4</sup> Fullan, Michael and Maria Langworthy. “A Rich Seam – How New Pedagogies Find Deep Learning”: January 2014



### Students

- Identify learning partners and mentors among peers, teachers and communities, and make sure they understand aspirations and interests.
- Reflect on own learning progress, ask trusted learning partners for feedback and give feedback in return; engage in teaching with and learning from peers.
- Begin to define own learning goals, connecting learning to personal aspirations and interests, and then work toward achieving those goals.
- Challenge teachers and fellow students to be learning partners in the pursuit of deep learning.

### Teachers

- Begin to practice a partnering approach to learn from and with students.
- Understand students' aspirations and interests.
- Identify the deep learning tasks that are taking place in school or broader community.
- Begin to redefine learning tasks for and with your students, building in more opportunities for knowledge construction, problem-solving and implementation in the real world, and connecting the tasks to students' aspirations.
- Collaborate with other teachers and stakeholders on what is working to engage and advance student learning.
- Challenge colleagues and school administration in the direction of the new pedagogies linked to deep learning.

### School Leaders

- Begin to practice a partnering approach to learn from and with teachers.
- Identify deep learning task examples within school; share and analyse these tasks with other teachers focusing on how students are engaging and what are the results.
- Develop ongoing rhythms of collaboration with students, teachers, parents, other school leaders and system leaders, all focused on defining, developing and implementing ideas to achieve deep learning goals.
- Identify and develop new ways of measuring student, teacher and school success that all align with deep learning goals and the implementation of new pedagogies.

### System Leaders

- Place building the pedagogical capacities of teachers at the center of all policies and priorities.
- Identify and develop new ways of measuring student, teacher and school success that all align with deep learning goals and the implementation of new pedagogies; Ensure these new systems of measures are used primarily to support learning progress at all levels.
- With deep learning and new pedagogies as the drivers, develop and support holistic digital access programs.
- Reduce negative accountability in favour of building capacity around the new pedagogies linked to deep learning.



## Timeline

