



TECHNOLOGY INTEGRATION



“ULTIMATELY, THE POWER OF TECHNOLOGY SHOULD BE HARNESSSED TO SUPPORT INNOVATION AND DISCOVERY, NOT SIMPLY TO AID TEACHING. WE NEED TO ENGAGE LEARNERS TO USE THESE NEW TECHNOLOGIES AS DESIGNERS AND CREATORS OF KNOWLEDGE.”

“The Learning and Technology Policy Framework (2013) is a major step towards realizing one of the four policy shifts identified by Inspiring Education. Policy Shift 4: Technology to Support the Creation and Sharing of Knowledge is critical to achieving the vision of supporting students to become engaged thinkers and ethical citizens, with an entrepreneurial spirit.”₁

In this digital age where knowledge is easily retrieved, the role of the educator is “changing from that of a knowledge authority to an architect of learning—one who plans, designs and oversees learning activities.”

The idea of a knowledgeable person changes to someone who “can gather, analyze and synthesize information...in order to create knowledge or find solutions to problems.”₂



STUDENT-CENTRED LEARNING

“Learners should be supported as individuals with learning opportunities to support their unique needs and interest. Furthermore, activities that consider the abilities of learner and encourage creativity and imagination should become the norm.”³

Technology is used to support student-centred, personalized, authentic learning for all students.

OUTCOMES

Students use technology, online learning and digital learning to:

- a. access, share and create knowledge
- b. discover, develop and apply competencies across subject and discipline areas for learning, work and life, as described in the *Ministerial Order (#001/2013) on Student Learning*, to enable students to:
 - know how to learn: to gain knowledge, understanding or skills through experience, study, and interaction with others
 - think critically: conceptualize, apply, analyze, synthesize, and evaluate to construct knowledge
 - identify and solve complex problems
 - manage information: access, interpret, evaluate and use information effectively, efficiently, and ethically
 - innovate: create, generate and apply new ideas or concepts

- create opportunities through play, imagination, reflection, negotiation, and competition, with an entrepreneurial spirit
 - apply multiple literacies: reading, writing, mathematics, technology, languages, media, and personal finance
 - demonstrate good communication skills and the ability to work cooperatively with others
 - demonstrate global and cultural understanding, considering the economy and sustainable development
 - identify and apply career and life skills through personal growth and well-being
- c. develop and apply digital citizenship and technological skills
 - d. demonstrate what they know and are able to do through effectively using a range of resources and media
 - e. monitor their learning progress and inform decisions through the use of data and evidence-based reasoning

ACTIONS

School Authorities will create a technology-supported, student-centred learning environment to:

- a. continually engage in the Notre Dame High School vision
- b. align technology with all subject areas
- c. create an interdisciplinary approach
- d. allow for opportunities to use technological devices on a daily basis⁴

PROFESSIONAL LEARNING

The “role of the teacher [is] changing from that of a knowledge authority to an architect of learning—one who plans, designs and oversees learning activities.” The teacher would consider the interests, passions, talents and natural curiosities of the learner. He or she would inspire, motivate and plant the seed for life-long learning.”⁵

“Teachers, administrators and other education professionals develop, maintain and apply the knowledge, skills and attributes that enable them to use technology effectively, efficiently and innovatively in support of learning and teaching.”

“While extensive understanding and use of emerging technology is necessary in today’s classroom, it is equally important for leaders and staff to demonstrate their understanding of the advice provided in Alberta Education’s Making a Difference. As reflected in the following quote **technology is not the learning outcome**. Rather it is only a tool to support effective learning and student success.”⁷

“Technology should be used in natural and substantial ways and should be built into activities, rather than tacked on. The utilization of technology is only one part of any instructional solution. Thoughtful planning, ongoing monitoring and assessment and on-the-spot instruction and support will still be needed.”⁸



OUTCOMES

Digitally confident teachers, administrators and other education professionals:

- a. are well prepared to use technology and digital resources innovatively and effectively for learning, teaching, leadership and administration
- b. use technology and research to design personalized, authentic and student-centred learning opportunities to meet the diverse needs and interests of all students
- c. engage in professional growth opportunities that are broadened and diversified through technology, social media and communities of practice

ACTIONS

School Authorities:

- a. use data and research to inform the design of professional programs and to ascertain and increase the effectiveness of such programs in making progress toward local goals and priorities
- b. use technology to provide options in the type, duration, pedagogy, location, medium and formality of professional development and to differentiate, within professional development offerings, to meet teacher-participants' needs while also achieving local goals and priorities
- c. position the school as an innovative learning community that uses technology to engage

students, teachers, administrators, other education professionals and their community in 21st century learning

- d. Teachers, administrators and other education professionals read, review, participate in, share and apply research and evidence-based practices to sustain and advance innovation in education
- e. seek out and participate in partnership opportunities (e.g., cross jurisdiction, cross-institution, community, industry) that support innovative use of technology
- f. incorporate into their planning systemic, innovative and effective uses of technology to support learning, teaching, and regularly assess progress in this regard,

ACCESS, INFRASTRUCTURE AND DIGITAL LEARNING ENVIRONMENTS

“Access, Infrastructure and Digital Learning Environments: All students, teachers, administrators and other education professionals have access to appropriate devices, reliable infrastructure, high-speed networks and digital learning environments.”

Technology is used to support student-centred, personalized, authentic learning for all students.

OUTCOMES

Students, teachers, administrators and other education professionals have support for and equitable access to:

- a. devices and peripherals
- b. digital learning environments
- c. facilities designed to maximize learning with technology

In Alberta's education system:

- d. reliable infrastructures exist that support safe, secure, efficient, interoperable and sustainable networks
- e. technology and network governance, policy and procedures ensure access essential to achieving the vision of Inspiring Education
- f. appropriate technology is available and supported

ACTIONS

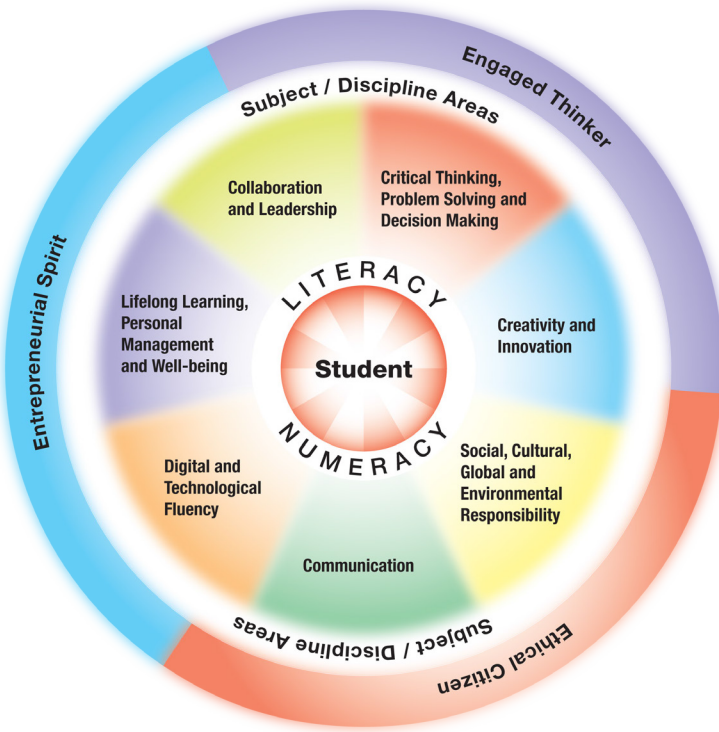
School Authorities:

- a. ensure equitable student access to devices, other technologies and, as appropriate, to assistive technologies to support student learning
- b. provide students, teachers, administrators and other education professionals with access to well-designed, high-speed, reliable and sustainable networks and technology infrastructures
- c. consider opportunities for community partnerships that expand access to technology-supported learning experiences
- d. ensure the administration of safe and secure networks, infrastructure and technologies
- e. provide students, teachers, administrators and other education professionals with access to high-quality digital learning environments
- f. provide and maintain timely technical support and services
- g. adopt and maintain effective practices and up-to-date technological standards with respect to Information Technology (IT) governance, IT management, and information security management
- h. update technology plans for systemic, community-based approaches to student-centred, personalized, authentic learning and support implementation in all schools₁₀

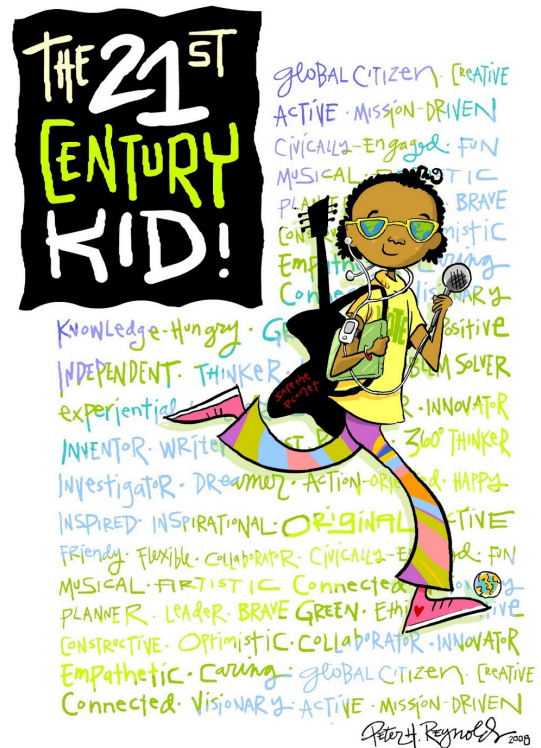


FRAMEWORK FOR STUDENT LEARNING

STUDENT LENS



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The above graphics provide two lenses: teacher and student. Alberta Education’s Student Learning Framework and the International Society for Technology in Education (ISTE) vision of learning culture in the classroom support the idea that the teacher’s role is to support learning in an integrated, concrete fashion in order for students to achieve success. Equally important to the teacher’s role is the student lens and perspective.

These two graphics convey an essential understanding that the student is at the core. Teachers and students must work in unison in order to achieve a shared goal. Both are able to provide leadership and opportunities for lifelong learning. A focus is on the learner while the teachers and staff continually advance their own knowledge and move forward in ongoing professional development.

Because digital technologies are embedded into our everyday life, all learners must embrace a more purposeful approach to technology while understanding that this is a lifelong process. Further to this, learners must fully participate in these new technologies to become engaged thinkers, ethical citizens and entrepreneurial spirits.

“The future will present more opportunities as digital technologies are embedded in everyday life and materials...we must become purposeful in our approach to technology.”¹¹

“Ultimately the power of technology should be harnessed to support innovation and discovery, not simply to aid teaching. We need to engage learners to use these new technologies as designers and creators of knowledge.”¹²

ENDNOTES

1. <http://education.alberta.ca/admin/technology/policyframework.aspx>
2. <http://ideas.education.alberta.ca/media/14847/inspiring%20education%20steering%20committee%20report.pdf>
3. <http://ideas.education.alberta.ca/media/14847/inspiring%20education%20steering%20committee%20report.pdf>
4. adapted from <http://education.alberta.ca/admin/technology/policyframework/policy1.aspx>
5. <http://ideas.education.alberta.ca/media/14847/inspiring%20education%20steering%20committee%20report.pdf>
6. <http://education.alberta.ca/admin/technology/policyframework.aspx>
7. Calgary Catholic School District Leadership Academy Series I Module 5, p. 6.
8. <http://education.alberta.ca/teachers/resources/cross.aspx>
9. adapted from <http://education.alberta.ca/admin/technology/policyframework/policy3.aspx>
10. adapted from <http://education.alberta.ca/admin/technology/policyframework.aspx>
11. <http://education.alberta.ca/admin/technology/policyframework/policy5.aspx>
12. <http://ideas.education.alberta.ca/media/14847/inspiring%20education%20steering%20committee%20report.pdf>
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