

Essential Elements of ICT Literacy

What Students Need to Know about ICT Literacy

Choose appropriate technologies to complete particular tasks and learn new technologies when needed:

- Become familiar with the strengths and weaknesses of various technologies for supporting different tasks (e.g., writing, research, presentations, creating artwork).
- Have a working knowledge of locally available technologies.
- When completing educational tasks, consider which technologies may help and use those that are available.
- Incorporate appropriate new technologies as they become available.

Use technologies to develop strong thinking skills and extend capabilities:

- Use built-in assessments, or self-assessment tools, to increase skills and understanding of their learning processes (metacognition).
- Effectively and rapidly evaluate information to make decisions.
- Approach authentic tasks with flexibility and persistence; adapt technologies to make them useful.
- Use technology to seek out diverse perspectives and develop multiple solutions.

Use technologies ethically and safely:

- Comply with current copyright laws.
- Use borrowed technology with respect and care.
- Never use technology to bully, coerce, or harass any other person; be accountable for conduct when using technology.
- Be aware of safety issues related to all technologies, but specifically communication technologies.
- Follow the division's current guidelines for ethics and safety (identified in each division's acceptable use policy).

Understand the nature of information in a global world and the characteristics of various media:

- Become informed about other cultures so all global communication can be made respectfully.
- Recognize when information is needed and determine where to locate the appropriate information.
- Evaluate information based on accuracy, relevance to a task or question, and appropriateness.

- Be aware of the strengths and weaknesses of various types of media and how media (including one's own creations) can influence people.
- Be able to deconstruct and construct media messages.

Use technologies to facilitate collaboration and teamwork:

- Show respect and care for others at all times, even when technology makes them seem *not real*.
- Actively pursue collaborations with both local community members and people in other communities.
- Be flexible in taking different roles (e.g., leader/follower, orator/listener) on teams as the situations require.

What Parents, Grandparents, and Caregivers Need to Know about ICT Literacy

Technology is just one tool for learning:

- Children should not learn everything through technology; there must be time for real-life play, activity, and interaction.
- Time spent with technology should be limited in a child's earliest years, with increasing use allowed as the child matures.
- Participate in technology interactions with young children, allowing more and more autonomy as the child matures and learns norms of behavior.

Technology, by itself, is neutral but can be used for both good and bad things:

- Provide good role models for acceptable behavior and respect for others.
- Learn how to identify safety or ethical problems encountered by children and have a plan for handling these issues before they arise.
- The content of some media is objectionable. Establish rules about what is acceptable. Ratings systems are not reliable indicators.
- Be aware of state and federal laws governing technology and its misuse and communicate problems with school personnel.

Children may be more conversant with technology than their parents, but parents have more practical experience in real-life situations:

- Help children understand that all media messages are constructed and promote deconstruction and construction of media messages.

- Help children learn how to evaluate the motives of various media messages.
- Be aware of the strengths and weaknesses of various media and point these out to children as situations arise.

Good thinking skills enable students to use technology as a powerful learning tool:

- Help students learn how to think critically and creatively.
- Support student collaboration and teamwork.
- Encourage persistence and flexibility in problem-solving tasks.

What Teachers, Instructional Technology Resource Teachers, and Library Media Specialists Need to Know about ICT Literacy

Technology is best used to support curricular goals:

- Make students aware about which types of technologies are available for their use in school and which of their own technologies may be used for schoolwork.
- Engage in professional development to learn how to use available technologies in their own instructional and day-to-day activities.
- Assign authentic tasks that use authentic technology to prepare students for working effectively and living responsibly in the 21st century.

Responsible use of technology must be taught and emphasized during regular school work:

- Be thoroughly familiar with the division's acceptable use policy and ensure students are also.
- Teach technology ethics and safety continuously, both in school and in other areas of students' lives.
- Be good role models for acceptable behavior.
- Learn how to identify ethical or safety errors and know the procedures for addressing these situations before they arise.

Use technologies to develop strong thinking skills and extend capabilities:

- Model critical-thinking and evaluation skills for students.
- Use built-in assessments, or self-assessment tools, to monitor one's own thinking strategies and to increase skills.
- Provide opportunities for students to evaluate information effectively and rapidly in order to make decisions.
- Encourage students to approach authentic tasks with flexibility and persistence.

- Provide a balance between direct instruction and authentic learning experiences.

Provide opportunities for students to experience both the nature of information in a global world and the characteristics of various media:

- Seek opportunities for students to work as teams and collaborate with others from their community and around the world.
- Ensure students are informed about other cultures so communication technology exchanges can be made respectfully with people around the globe.
- Help students discern when information is needed for a task and how to locate the appropriate information that can be evaluated based on accuracy, relevance to a task or question, and appropriateness.
- Be aware of the strengths and weaknesses of various media and make these transparent when involving media resources in instruction.
- Help students understand that all media messages are constructed and teach them to deconstruct and construct media messages effectively.

Technology enables a variety of measures that can be used to support both formative and summative ends:

- Ongoing formative assessments both support and are supported by the use of educational technology.
- Technology can help provide students with useful and immediate feedback to improve their performance.
- Remain up-to-date on new methods of assessment that support the evaluation of complex learning made possible through technology.

What School Administrators Need to Know about ICT Literacy

Technology, as an educational tool, provides opportunities for learning beyond current capabilities:

- Learning skills that use authentic work technologies help keep students motivated and prepare them for lives after school.
- Technology provides an opportunity for students to learn and practice strong thinking and teamwork skills.
- Using technology, students can learn individualized topics in new ways and in unique settings.
- Because technology can provide opportunities for real change in the way students learn, school leaders should allow teachers the flexibility to try new tools and methods.

- When new technologies are deemed useful, barriers to adoption need to be addressed.

Technology enables a variety of measures that can support both formative and summative ends:

- Ongoing, formative assessments both support and are supported by educational technology.
- Technology can help provide students with useful and immediate feedback to improve their performance.
- Stay up-to-date on new methods of assessment that support the evaluation of complex learning made possible through technology.
- Learn how to evaluate and support teachers' uses of technology as effective learning tools.

Leaders provide inspiration and support for teachers and students who use technology for learning:

- School leaders should be good role models for acceptable and safe behavior.
- Reaching out with information and guidance can help parents and other community members understand and support educational uses of technology.
- Administrators must engage in professional development to enable them to be effective users of technology.
- Be aware of current legal and ethical implications of technologies in education and determine procedures to deal with situations before they arise.
- Develop technology plans by encouraging a strong vision among all stakeholders and practical, innovative methods for implementing the vision.

Budgets that provide ongoing support for technology (e.g., infrastructure, personnel, training) are imperative:

- Be aware of the practical implications of existing and new technologies and hire people who can provide good guidance.
- Develop professional development plans that focus on the ICT skills that students need.
- Provide support and incentives to teachers who take risks with new approaches.

What Superintendents and School Boards Need to Know about ICT Literacy

Technology is a tool that supports learning in new ways:

- New technologies, with new capabilities, must be evaluated for their usefulness to a division's educational goals.

- Because technology can provide opportunities for real change in the way students learn, policies should allow flexibility for trying new tools and methods.

When new technologies are deemed useful, barriers to adoption need to be addressed.

Leaders provide inspiration and support for teachers and students who use technology for learning:

- Be good role models for acceptable behavior.
- Reaching out with information and guidance can help parents and other community members understand and support educational uses of technology.
- Be aware of current legal and ethical implications of technologies in education.

Schools are one place where students have equitable access to both technology and the learning of skills that enable them to use technology effectively:

- Technology-rich environments provide support for students with varying needs.
- Budgets that provide ongoing support for technology (e.g., infrastructure, personnel, training) are imperative.
- Encourage schools to use diverse means of evaluation so that 21st century skills may be appropriately measured just as content knowledge is measured.