PUTTING IT IN ADULT LITERACY

Tips and Strategies for Integrating Computer and Information Technology into Adult Literacy Programs

Literacy Nova Scotia

Acknowledgements

Literacy Nova Scotia (LNS) is a non profit organization supporting literacy in Nova Scotia. Its **mission** is to ensure that every Nova Scotian has equal access to quality literacy education. Its **vision** is that Nova Scotians, as part of learning communities, have access to the resources and opportunities that form the cornerstone for achieving their goals and potential.
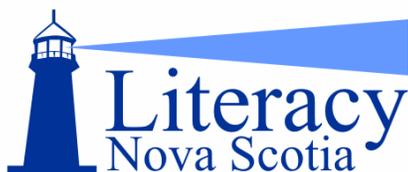
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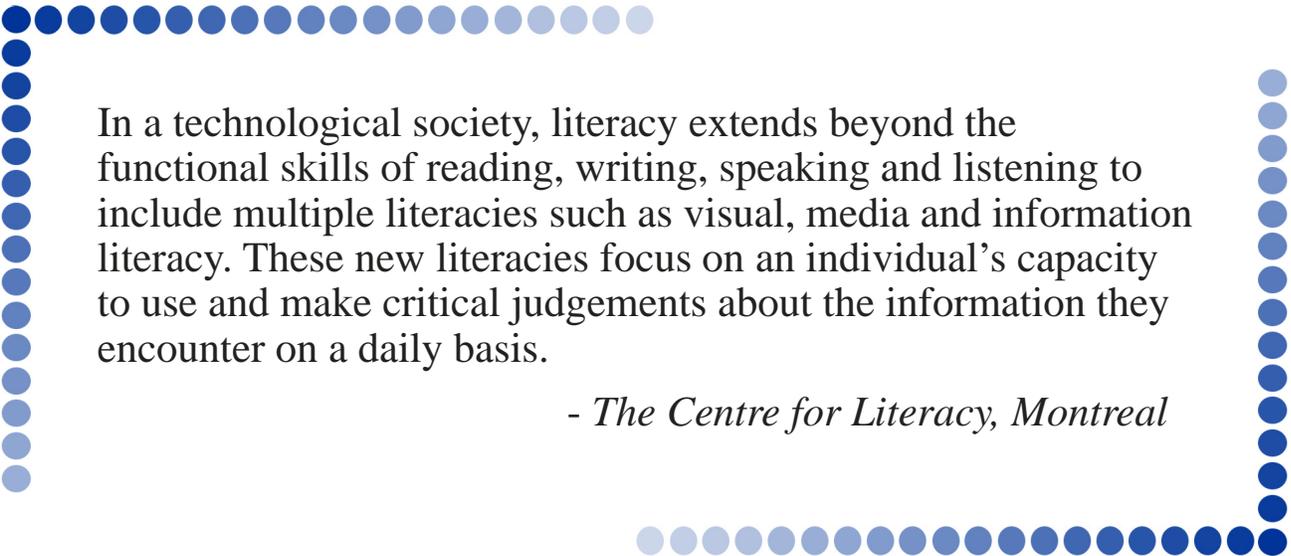
In a technological society, literacy extends beyond the functional skills of reading, writing, speaking and listening to include multiple literacies such as visual, media and information literacy. These new literacies focus on an individual's capacity to use and make critical judgements about the information they encounter on a daily basis.

- The Centre for Literacy, Montreal

Contents

Introduction

The "digital divide" – the gap between those who have access to the latest technologies and those who do not – is well documented. Class, educational background, differences between countries, and differences between regions within a country can all contribute to perpetuating this gap (TechTarget 1999). Bridging the gap is partly about providing technical skills and access to computers but it is also about teaching people how to use technology in ways that are meaningful and empowering.

Using technology meaningfully will be different for everyone depending on each person's needs and interests. To a child, it could mean growing up with access to computers, electronic games and educational resources. For an unemployed adult, it could mean learning how to use the Internet, word processing, and email in a job search. People of any age can explore new horizons in multimedia art which combines images, sound and movement in unique ways. As new technologies become cheaper and easier to use they become more accessible to increasing numbers of people. As a result, a world of possibilities is opening up to those who have, until now, been on the "have not" side of the digital divide.

Technology can help us do what we already do better, faster, or more conveniently.

But it can also allow us to do things that we couldn't even imagine without them. This guide seeks to inform educators and learners about modern digital technologies (including computers, software, the Internet, and audiovisual tools), and to highlight the incredible creative and practical opportunities these technologies offer.

As technologies become more advanced and more pervasive, their influence is redefining traditional concepts of literacy. For example, Bolter discusses and attempts to re-define literacy in the context of the Internet (Bolter 1998, as cited in Reinking et. al). While word processing is now the dominant form of writing in North America, straight linear word processing may become as passé as the yellow tablet due to "hypertext." In hypertext, we can combine various symbol systems in what is known as "multilinear" formats. Amazon.com's website illustrates this – it features a main page with graphics, images, and text. Readers can select any of a number of predetermined choices (books, toys, etc.), or can use the search engine to make different choices. Multilinear texts have no standard or natural reading order. The reader can choose where to start, where to go next, whether to use the buttons offered, or whether to search for other information.

> *The widespread availability of and access to these technologies...raise questions about the implications of these technologies…These questions are both utilitarian (How can they be used effectively?) and cultural (What are their wider cultural implications?)*
> *- Abbott & Masterman 1997*

Typically, Adult Basic Education (ABE) has taught only the most basic of digital literacies, such as how to use word processors or spreadsheets, or send email or search the Internet. However, beyond imparting technical skills lies a bigger and more complex goal: teaching learners how to become digital creators and thinkers. Kafai states:

> "Just as fluency in language means much more than knowing facts about the language, technological fluency involves not only knowing how to use new technological tools, but also knowing how to make things of significance with those tools, and (most important) develop new ways of thinking based on the use of those tools." (Kafai 2001, p. 5, as cited in Hayes (n.d.)).

By starting with the learner, and how technologies can support his or her own goals, we seek to offer a deeper and more supportive approach to IT literacy. We cover basic skills such as Internet searching, shopping, and creative expression, in a way that seeks to inspire learners to continue exploring the technology on their own. We focus on simple, practical, and goal-oriented approaches that make information technologies relevant for adult learners. Because technologies change rapidly, an exhaustive review would be impossible. So rather than emphasizing specific tools, we focus on increasing learners' confidence in their ability to explore and try things on their own. We use practical examples and suggestions to provide concrete personal motivations for using various technologies. We hope you and your learners think up many more. We have assumed that keyboarding and general computer skills will be taught separately.

Technologies have unsettled many of English's most basic assumptions and compelled us all to look again at what we mean by communicative competence, reading, [and] writing.

-Abbott & Masterman 1997

Our goal of instilling a sense of independence and exploration in adult learners is illustrated beautifully by Joan's story. Joan, a woman in her senior years, never felt comfortable with new technology. It took her a long time to get used to the idea of a microwave oven; she still only uses it to reheat meals. She never read the manual to learn the advanced features of her programmable sewing machine, her oven timer, or other appliances. But as she got older, Joan began using a computer to write email. Her grown children and their families had moved out of town, and this was a great way to stay in touch with them. After a while, her daughter set her Internet browser so it would open to a financial website where she could look up her RRSPs. Joan became an expert at checking the value of her assets, and she began taking an active part in her investment decisions.

Joan recently realized how comfortable she was with the new technology when she had to deal with a computer problem. Describing the experience to her daughter, she said, "I just looked around, clicked a few links, and solved it myself. That's all you do when I ask you to fix my computer problems anyway. So I decided to try it myself first. If it didn't work, I still could have called you. But I'm proud to say I solved this one on my own!"

In this document, our goal is to help adult learners gain basic technical skills, but beyond that, we hope to encourage learners to explore and try things on their own. It isn't an instant transformation – Joan had been using computers for years before she gained that degree of independence. By intentionally fostering a sense of adventure in learners, we hope that they will quickly gain the confidence to take charge of their own learning.

Words to Know

Anti-virus software: software that scans your computer for viruses and cleans them off. See "virus."

Application: a computer program that performs a specific task such as word processing. It's another name for "computer program" or software.

Blog: a specific kind of website that is organized by the date its articles, or "entries," were written. It is easy to create a free blog. Blogs are also called "weblogs."

Browser: a computer program that allows a user to view websites. It's also sometimes called an "Internet browser."

Byte: a unit of measure of computer memory, equalling 8 bits. This is enough to encode one Latin letter or symbol. It is more common to refer to the size of a computer file in kilobytes, megabytes, or gigabytes, than to refer to bytes.

Chat: to communicate through text "real time" (at the same time), using a chat program such as Windows Live Messenger or Yahoo! Messenger.

Click, clicking the mouse: positioning the mouse pointer over an image or words on the screen, and then pressing and releasing the left mouse button one time.

Desktop publishing software: software programs that allow you to combine text and images to create a publication, such as a newsletter or a book.

Download: move information from Internet onto your computer. The opposite of "upload."

Ecommerce: the buying and selling of goods and services over the Internet.

Email: short form for "electronic mail," which you can send or receive directly on your computer using an Internet connection.

Emoticons: symbols that express emotions in email and online chats.

Encrypted website: a website where your personal information such as address, credit card number, or bank account information is digitally "scrambled" so that no one but the intended recipient can see it. You can tell that a webpage is encrypted because its address begins with

"https://," not "http://" Most browsers also have a symbol, like a lock, that shows you when a site is encrypted.

estore: a store that operates on the internet, sometimes called an "online store."

External storage, external storage devices: a device which is attached to the computer by a cable used to store or backup digital information,. These include CD burners, DVD burners, USB flash drives, and external hard drives.

File: a digital "document" that can contain any type of information – words, music, software programs, etc.

Firewall: a computer program that helps protect your computer from being "broken into" while you are connected to the internet.

Firewire: a way of transferring data between devices. You may also talk of a firewire port or cable. Firewire is a popular method of downloading video footage from a camcorder.

Flash drive: a small device used to store digital information. These are also called pen drives or USB keys. (See USB flash drive)

Font: a complete set of typographic characters of a certain size and style, such as Arial.

Gigabyte (Gb): a unit of measurement of computer memory roughly equalling 1 billion bytes.

Hard drive: the main area where information is stored within the computer. The hard drive is located within the computer case.

Hardware: all of the physical components of the computer which you can see and touch.

HTML (Hypertext Markup Language): the basic computer language used to create webpages.

Host: a company that stores all of the files for a website on a computer that is constantly connected to the Internet. Also called a "web host."

http://: the beginning letters of every website address. "http" stands for "hyper text transfer protocol" which is the "language" of the Internet.

ICT: Information and communications technologies. A wide range of services, applications, and technologies, using various types of equipment and software, that communicate information. They include telecommunications, the Internet, and older technologies such as TV and radio (European Commission 2001).

Image manipulation software: software programs that allow users to create and edit images like photographs, drawings, and paintings.

Internet browser: a computer program that allows a user to view websites. It's also sometimes just called a "browser."

IT: Information Technology. Hardware and software that enables the processing of information, including computers and computer programs (software).

Kilobyte (Kb): a unit of measurement of computer memory roughly equalling 1 thousand bytes.

Megabyte (Mb): a unit of measurement of computer memory roughly equalling 1 million bytes.

Microsoft Windows: an operating system for IBM and other compatible personal computers (PCs). Other modern operating systems include OS/X for Macintosh computers, and Linux which can run on both PCs and Macintosh computers.

Modem: a device that allows computers to communicate with other computers using the telephone line.

Monitor: the screen that the user looks at when interacting with the computer.

Mouse: a hand held tool used to point at and to select items on the screen.

MS: Microsoft.

Offline: off the Internet.

Online: on the Internet.

Operating system: a software program which enables you to operate the computer. The most popular operating systems are MS Windows for PCs, OS/X for Macintosh computers, and Linux for either PCs or Macintosh computers. You need to know what operating system (and which version) your computer is running when you are buying and installing software programs.

PC: Personal computer. The term "PC" is often used to distinguish MS Windows-based computers from Macintosh computers, although both are personal computers.

PDA (Personal Digital Assistant): a handheld computer.

Peer-to-peer (P2P): networking individual PCs over the Internet so that they can exchange files such as mp3s, or run software that takes a lot of computing power.

Pen drive: a small device used to store digital information. These are also called USB flash drives or USB keys.

Phishing: The term phishing (pronounced "fishing") refers to luring techniques used by identity thieves to "fish" for personal information via the Internet. Using bogus email addresses and websites that are designed to look like they come from well-known, legitimate sources, they attempt to gather personal information, financial information, and passwords.

Podcast: a digital media file distributed over the Internet that can be listened to on a computer or MP3 player. The word is a combination of "iPod" and "broadcast." Many podcasts are like homemade radio shows.

Port: a small opening on a computer which allows you to plug in printers, USB flash drives, speakers, etc. USB ports are essential. S-Video and firewire ports are important for transferring video footage.

RAM (Random Access Memory): the computer's short-term memory which is needed to carry out a program's instructions. RAM is measured in MB (megabytes) or GB (gigabytes). It is important that your computer have enough RAM to handle the programs you run.

Real time: being online at the same time, such as during a "real time" chat, or a "real time" online seminar.

Right clicking: positioning the mouse pointer over a specific object and then pressing and releasing the right mouse button once.

Screen saver: a software application that temporarily replaces the screen with a moving picture so that a static image does not damage the monitor. When a key is touched or the mouse is moved the screen saver shuts off and the original screen reappears.

Scrolling: changing the portion of a document, image or webpage that is visible by moving it up, down, or across the screen. When a file is too big to fit on the screen, vertical and/or horizontal "scroll bars" appear on the side or bottom of a window, allowing you to move around within your document.

Search engine: a particular type of website that allows you to search for websites by keyword or topic.

Software: the programs, applications, files, and data used to run a computer.

Spam: unwanted, unsolicited email.

Spam filters: Special software programs that "read" your email and automatically move those suspected of being spam into a "spam folder."

Spreadsheet program: a computer program that allows you to work with numbers and text in rows and columns. Spreadsheet programs are often used for doing math, working with financial information, or for creating databases.

Spyware: malicious programs that can send details like your Internet browsing history to strangers.

Storage device: a device used to store computer files. On a computer, the main storage device is the computer's hard drive. It may also have built-in devices to backup and share data, such as a CD or DVD burner. These are called "internal" storage devices. It will also have "ports" that allow external storage devices to be plugged into the computer.

Tablet: A specialized flat surface that can be touched with a stylus pen to move the mouse, write, or draw on the screen. This allows more natural drawing and writing.

Upload: place information onto the Internet. The opposite of "download."

URL (Uniform Resource Locator): another name for a website address.

USB (Universal Serial Bus): a way of transferring data between devices. You may also talk of a USB port on a computer, a USB cable, or a USB flash drive, for example.

USB flash drive, USB key: a small device used to store digital information. These are also called pen drives or flash drives.

Virus: small, hidden software programs that can cause damage on your computer. Viruses can be sent through email, through documents such as Word files, or as hidden components of free software you download.

Webcam: a video camera, often attached directly to a computer, whose images can be seen on a website.

Weblog: a specific type of website that is organized by the date its articles, or "entries," were written. It is easy to create a free weblog. Weblogs are also called "blogs," for short.

Web host: a company that stores all of the files for a website on a computer that is constantly connected to the Internet. Also called a "host."

Wiki (pronounced wick'ee): a special type of website that allows either a public or private group to co-create it. The most famous wiki is Wikipedia, the online amateur encyclopedia written by anybody who wants to contribute knowledge (www.wikipedia.org).

Window: a rectangular, framed area on the computer screen used to display an application or a document.

Wireless: technology that connects devices by sending information through the airwaves using electromagnetic waves instead of using a physical connection like a wire or a cable. Cellphones use wireless technology. Computers can also be connected to the Internet by wireless technology.

Word processing program: a computer program for creating and editing text documents.

Section One

Understanding Information Technology

Objective

This section highlights some of the many opportunities that digital technologies offer for both productive and creative pursuits. We discuss information technology (IT) literacy as a student- and goal-oriented pursuit rather than simply a transfer of technical skills.

Introduction and Concepts

Computers and information technology are powerful resources but, like any tool, using them effectively requires particular skills and knowledge. Teaching students technical skills is important. However, IT literacy should also involve helping learners understand *why* they might want to use technology, *when* to use technology, and *which* technologies are appropriate for specific tasks. Learning to use Internet technologies also involves developing the critical thinking skills necessary to evaluate information and protect against Internet fraud.

Many of us think of computers, and increasingly the Internet, as the foundations for IT literacy. These are two of the most flexible and powerful tools but they are not the only ones. Nor are they necessarily the best place to start. A digital camera, for example, might be a more appropriate jumping off point for adult learners. It is very easy to use; it provides instant feedback and satisfaction; it is immediately practical; and it provides a purpose for learning about email, weblogging, and the Internet in the interest of sharing

photographs and their accompanying stories. Other accessories that can provide an entry point to IT literacy include scanners, video cameras, audio recorders, MP3 players, and personal digital assistants or PDAs, such as Palm Pilots.

Computers are incredibly versatile tools that can be put to many different uses. Accessories such as speakers, a microphone, and maybe even a midi instrument, can turn a

> *"The ways in which these technologies will be used in the English classroom will be vital to the wider processes of social and cultural inclusion or exclusion."*
>
> *-Abbott & Masterman 1997*

computer into a mini digital music studio. With a web camera, a computer can be transformed into an amateur television studio. An external drawing tablet with an electronic stylus or "pen" can become an artist's digital palette. Software can take you to other countries, other times in history, virtual science labs, or even virtual realities.

By connecting a computer to the Internet, a world of opportunities opens up. Today, residents of urban and rural Canada can access local media from around the world without leaving their home. They can read The New York Times, see Al Jazeera broadcasts in English or Arabic, or read citizens' and journalists' experiences from Afghanistan to Zambia. The Internet presents exciting opportunities for bridging cultural and geographical divides. But using the Internet also requires critical thinking since many online sources lack filters like editors, publishers, or broadcast regulating bodies.

In addition to being a source of information, the Internet is also a huge marketplace where users can bank, browse, buy, and sell all kinds of goods and services. Just like the physical marketplace, some online shops are more trustworthy than others. However, in contrast to physical shopping where you can see and touch things before paying for them, online shopping often requires payment before the delivery of goods. In addition, online stores can open and close quickly, making it difficult to exchange or return items bought online. Although the benefits of online commerce are valuable, knowing how to evaluate an online business is critical.

Perhaps more important than being able to access a huge amount of information, entertainment, and merchandise, modern technology can put publishing into the hands of the individual. Learners might start by publishing photos that relatives from other cities can view online, but the possibilities are endless. They could write to people around the world who share their hobby, document their opinions or life experiences through a blog, publish their resume online, post their original music or artwork, or even telecommute from home.

In summary, information technologies – or more accurately, information and communication technologies (ICTs) – provide a wealth of possibilities for literacy learners. Learning to use new technologies can profoundly impact learners' quality of life whether they are using a digital camera, reading news, playing simulation games, corresponding with friends or family, publishing personal stories, or searching for a new job. Not only can it tap into creative expression and provide new ways of telling stories, it can also help learners gain critical skills that are essential for living and working in a modern, technology-based society.

For Fun

Visit www.cnet.com, choose any technical category that interests you, from software to digital cameras, and browse the current articles.

Strategies & Tips

(D) **Discuss the general topic of Information Technology:** Brainstorm with learners about their current knowledge of computers and information technologies.

- Where do they see these technologies in their day-to-day life (e.g., bank machines, voicemail services)?

- How do these technologies make them feel?

- How do these technologies change their day-to-day experience? Are there new things they can do, or things they can't do because of information technologies?

- The term "digital technologies" doesn't only refer to computers; it also includes audio devices (like MP3 players), video devices (like digital cameras and camcorders), and cell phones. What non-computer technologies do the learners use? Do they feel differently about these technologies than they do about computers?

- Allow for a free-flowing discussion about hardware, software, the Internet and whatever else emerges from the group. Keep the discussion moving. Don't focus on specifics. Emphasize concepts and draw visuals to reinforce central ideas.

(D) **Discuss culture and practice:** One of the impacts of ICTs is how quickly information is shared. Real-time newscasts, frequently updated websites, and the almost instant arrival of email have made our everyday lives faster.

- How have learners felt the impact of this? What is positive about this, and what is negative?

- Are we at the mercy of a high-speed life, or are we in control of it?

- The world has been called a "global village," indicating our interconnectedness and closer ties because of ICTs.

- Have learners experienced the "global village" through new technology? In what way? (Some examples might be: purchasing music or clothing from the other side of the world, being able to keep up with local news from other countries, writing email or sharing photos with family members who live far away, etc.)

- What opportunities do ICTs offer that did not exist before?

A **Some activities for integrating:** Start by having learners think about their own goals. For example:

Ask students to reflect on some of their life goals. It could be something they want to learn, a place they would like to travel, or a task to do around the home or garden. It does not have to involve new technology. Have them choose one of these goals and record it as a "touchstone" while learning IT literacy. As you introduce new topics in IT literacy, remind students about their "touchstones" and brainstorm as a class how they might use the new skills they are learning to further their "touchstone" goal.

P **When planning and organizing your teaching/administrative activities, think of logical ways to integrate different technologies**. For example:

- Have learners take digital photographs to enhance assignments.

- Ask learners to use online searches to research assignments.

- Make learners aware of online Literacy Tools, such as www.dictionary.com and www.thesaurus.com that they can use in their learning.

S **Whenever it seems appropriate, promote self-learning activities.** For example:

- Encourage learners to be adventurous in exploring technology. Have them ask friends or relatives to show them how to use a device.

- Ask them to bring in digital devices (cameras, cell phones, etc.) to demonstrate to the class.

- Arrange a field trip to a computer store or the technical department of a department store (or encourage independent visits). Browse software titles to learn about new opportunities to pursue hobbies and interests (e.g., gardening, gaming, learning another language, learning games for children). Ask for explanations and demonstrations of cameras, camcorders, MP3 players, cell phones, etc.

Section Two

Communicating With a Computer

This section has two parts: writing with a word processor, and reading and writing email.

Writing with a Word Processor

Objective

Writing is one of the main ways that people use computers. As people get more comfortable writing with computers, the way they use the computer often shifts. In the beginning they might picture the computer as a fancy typewriter, but as they gain experience, they start to think of the computer as a writing, editing and organizational tool. Considering how working with information technologies is different from working with a pen or typewriter may help learners take advantage of these opportunities faster.

Introduction and Concepts

Computers are excellent tools for creating documents. Compared to paper and pen or typewriters, word processing documents have lots of benefits:

- Adding, moving, deleting, and editing text is very easy.

- The result is immediately legible, and can be laid out attractively.

- Digital documents can be shared via email, or converted into other types of documents.

- Many people can work on the same document, making collaboration easy. Special features of word processors (like change tracking and comments) can help you manage collaborations.

- Word processing programs include helpful tools such as spell checkers and grammar checkers, which can help track down spelling errors or awkward writing.

- Word processing documents can automatically create tables of contents, page numbers, heading numbers, and other helpful features.

- Text from the Internet and other documents can easily be "cut and pasted" into a word processing file.

Because of these features, computers and word processors are best understood as new types of writing tools, rather than as replacements for a typewriter. In practice, you can start with the basics of creating, typing, and saving documents, but a vision of how these steps fit within the larger picture of research, writing, and publishing will help learners expand their horizons beyond basic skills. One way to help learners understand this paradigm shift is to review the advantages of word processors, demonstrate their advanced features, and show them examples of how they can be used in conjunction with the Internet to make researching and writing more holistic.

Anecdotal evidence suggests that most writers go through a transferring stage where they use technology much as they used to use paper, but that as they get more expert they then develop new strategies and approaches.

-Abbott 1998a

Strategies & Tips

As educators have become more experienced in teaching word processing, they have learned that emphasizing writing techniques and strategies, rather than just technical skills, helps learners understand the writing process more fully. For example, learning *how* to cut and paste text is a technical skill, but learning *when* and *why* to cut and paste can help a learner understand how to communicate ideas more clearly. "If computers help writers engage with their texts at this deeper level, a major benefit will have been achieved" (Abbott 1998c). This strategic use of a word processor as a writing tool assumes that computers are used throughout the writing process, and not just to type the final copy.

That being said, knowing how to use a computer effectively for writing includes deciding when to use it. Some activities are still easier with a paper and pencil than a computer. Examples of this might be writing a shopping list, brainstorming, drawing, or taking notes during classes or meetings.

A Special Look at Spelling

While a spellchecker is useful at the editing stage of writing, it is not recommended as a tool for teaching spelling skills; there are better tools for teaching someone how to spell. For example, symbol processors use pictures to portray many common words, which are spelled out under the symbol. An introduction to the use of symbols for literacy can be found at http://www.widgit.com/symbols/about_symbols/literacy/index.htm.

In addition, correct spelling is not very important in an informal email or in a chat room. In fact, short forms that reduce typing are common, for example, "lol," which means "laughing out loud." Guide learners to put an appropriate emphasis on spelling – less in informal environments and more in formal communications such as business correspondence.

Beyond Word Processing

Writing with ICT tools encompasses more than just word processing. The computer allows the inclusion of sounds and images as well as words. For example, a picture, chart, or graph can be embedded or created with word processors. Desktop publishing programs allow much more flexibility for laying out text while multimedia packages can combine text, image, sound and video for even richer communication. Individuals can create slideshows and multi-media presentations for use in boardrooms, classrooms, and religious institutions.

Copyright and Plagiarism

Just because it is easy to cut and paste materials from other sources into your own work doesn't mean it is always appropriate, or even legal, to do so. When assigning writing exercises to learners, you may want to review copyright laws and rules about plagiarism.

Copyright prevents the use of others' words, music, images, or videos unless you have the creator's permission. Sometimes a fee is required for the privilege of using other people's work. Now that the Internet and computers make it easy to copy existing work and integrate it into your own files, a lot of attention is being paid to copyright, people's rights to make money from their work, and the public's right to use others' work for free. The legal battles over music file sharing, which closed down the Napster peer-to-peer file sharing service, was one of the first big legal and philosophical battles about copyright.

D **Discuss style and content:**

- What different types of documents can you write on a computer (e.g., letters, assignments, résumés, books, recipes, diaries, etc.)?

- What style guidelines apply to documents you create with a word processor?

- Are there any standard contents that must be included in a word processing document?

D **Discuss culture and practice:**

- How have personal computers and word processing programs changed our expectations for written documents?

- How has this affected learners? Is the impact different for different learners?

- How have personal computers and word processing programs changed work environments? Are these changes positive, negative, or neutral?

D **Discuss the general topic of word processing:**

- Brainstorm with learners about when they would use a word processor and when they would not.

- What are some of the advantages of writing with a computer?

- What are some of the disadvantages?

D **Discuss format:**

- With a word processor, are you restricted to 8 ½ x 11, portrait, single-sided layouts? What other options exist? Show some examples of documents with various layouts and discuss whether they would be easier to create with a word processor or with a different type of software, like desktop publishing or image manipulation software.

- Demonstrate the word processing menus where format selections can be made and ask students to brainstorm when they might use different features.

A **Some activities for integrating:** Ask learners to do any of the following:

- Produce a simple written assignment using a word processor. Keep it short so that the word processing, rather than the typing skills, is emphasized.

- When appropriate, incorporate some of the advanced word processing options, such as page numbers, a table of contents, a header or footer, or an embedded graphic.

- Have students practice collaborating on word-processed documents by working in pairs. For example, half of the class could write a series of questions, and the other half answer them within the document.

- If appropriate, demonstrate the "track changes" or "compare versions" features of the word processor on one of the answered questionnaires.

- If appropriate, show students how to use the "style" function in the word processor, which are formatting rules that can easily be applied to text by assigning it a style name (different word processors might call "styles" by a different name). Use this function to mark the questions and answers in one of the questionnaires. If this is too advanced, you can show them how to change the font colour, or use italics, asterisks, or other methods to highlight their text.

- After the learners have gained some Internet skills, assign them a lesson that requires them to incorporate online quotations and links into a document.

- Ask the learners to reflect on the goal they defined at the beginning of the course. Do they need to write a letter, make a plan, keep records or notes, or create any other kinds of documents to help them move forward?

P **When planning and organizing your teaching/administrative activities, think of logical ways to integrate word processing**. For example:

- Excerpt some content from a literary source into a word processor. Add some questions at the bottom of the text for learners to answer, or ask them to annotate the contents and highlight their contributions in a distinct style using a word processor.

S **Whenever it seems appropriate, promote self-learning activities.**
For example:

- Make sure learners know how to organize documents into folders on the computer, and search for documents on the computer by name or by contents.

- Encourage them to use the word processor's "Help" feature to learn word processing skills themselves, such as how to create or apply a style or insert a table of contents.

- Introduce them to the word processor's "Tutorials" feature (or an online manual) to learn about advanced word processing features.

- Show them how to search the Internet for a dictionary, thesaurus, writing guide, sample résumé format, or other information about writing rather than word processing *per se*.

- Demonstrate how to cut and paste information from one program to another. For example, ask them to copy their résumé into an online résumé or application form, such as www.workopolis.ca, or to copy text from a web page into a word processing document.

Reading and Writing Email

Introduction and Concepts

Email is dramatically altering human communication and making the world a much smaller place. Like regular mail, email is fundamentally about communication. Yet the sheer *speed* and *scope* of email communication make for some big differences. What does it mean when we can send a message that can be read within seconds? What does it mean when we can send the same message to dozens of people simultaneously? Because of the speed and scope of email technology, a new set of communication practices is evolving. Although it will be important to help learners develop technical email skills, helping them understand these new *cultural practices* is what will allow them to access the real power and purpose of email communication.

Spam

"Spam" is unsolicited marketing email. Over the years, spam email has become an annoying and frustrating inconvenience, forcing email users to sort through advertisements for free software, cheap drugs, pornography, sexual aids and "physical enhancements" in order to read their personal email.

You can get added to a spam list by posting your email address on a website, blog, or forum. Spam software can also "read" your email from webpages. When you register for some online services, websites, or newsletters, your email could be shared or sold to others. Read privacy policies carefully before you sign up for a contest, newsletter, etc. While you can never completely avoid spam, here are some strategies to minimize it:

- If you are contributing to a blog, forum, auction, etc., leave anonymous comments if possible.

- When you use an interactive website where you need comments or feedback (such as for a classified ad), you sometimes have the option of asking the forum or website to hide our email address while still allowing you to receive feedback.

- If you need to publicize your email address online, consider spelling it so that people can read it, but automatic spam programs cannot, such as:

        joan "at" mycompany "dot" com
        john <at> mycompany.com

- If you want to join a music website or download software that requires a registration, create a "disposable" email account (there are many free internet services like Hotmail or Yahoo!). If you don't need to contact the service again, you can let the email account go dormant, or you can keep it active and use it for other registrations in the future.

- Use a separate email address for newsletters you receive. You can use the same one for all of your newsletters or one each so you can better track any sources of spam. If you receive spam to that email address you can abandon it.

Prevention helps, but unfortunately there is no cure for spam; it is a chronic condition that can only be managed. If you use online email accounts, like Hotmail and Yahoo!, there are buttons you can click to label unwanted messages as spam, which will send it to a "Spam" or "Junk" folder. If you use a desktop email program, like MS Outlook, you can buy or download additional spam protection programs called "spam filters."

If you have a spam filter that guesses which email are spam and automatically directs these to your "spam" or "junk" folder (which is very convenient), it is important to review your spam folder every few days and delete the spam. Sometimes a legitimate email will be labeled spam by accident and end up in your "spam" or "junk" folder.

Viruses and Other Threats

The Internet is a two-way communication channel. You send information out from your computer, but information can also be sent to your computer from other people on the Internet. Unfortunately, there are many threats to your computer caused by this two-way communication and it's important to under-stand how to protect yourself and your computer.

Viruses are small, hidden software programs that cause damage on your computer and can even cause a total system crash or the loss of files. Viruses can be sent via email, via documents such as Word files, or as hidden malicious components of free software you download. As soon as you have your own computer and Internet connection you should install anti-virus software. Anti-virus software will search your computer for viruses and clean them off. Because new viruses are being developed all the time, anti-virus programs need to be updated regularly.

Spyware programs are malicious programs that can send details like your Internet browsing history to strangers. You may want to install an anti-spyware program which will check your computer for spyware and remove it.

Personal information such as passwords, credit card numbers or bank account numbers can be stolen from files on your computer or even by tracking your keystrokes as you surf the Internet. It is therefore important to use a **firewall** program which can protect your computer from being "broken into" by someone else on the Internet. Modern operating systems, such as Windows XP and Vista, and Internet browsers, such as Mozilla Firefox, offer standard and add-on security options.

In short, turn on your operating system's firewall, install anti-virus and spyware programs and don't open email from people you don't know unless you have a good reason to think they are genuine.

Tip

If you are looking to buy protective software, McAfee and Symantec Norton products are popular. AVG offers both free and premium anti-virus protection. A good website for recommendations is www.download.com. Search for the keywords you need – spam filter, virus protection, or spyware, for example.

Strategies & Tips

It's important for learners to become comfortable with the various parts of an email, and to understand the various options they can use when they send and receive email. It's also important to learn about the cultural norms around sending and receiving email. Here are some elements you may want to cover when you teach learners about email.

Email addresses have three parts: the recipient's name or nickname; the @ symbol; and the recipient's service provider or website name (for example, "name@provider.com"). When you send an email, certain things like your email address and the date will appear automatically; you don't have to type them in. Other information needs to be filled in by the sender.

The following table describes the six sections of an email that a sender can fill in:

To:	Put the recipient's email address here. Note that you can include more than one recipient on the "To," "cc," and "bcc" lines.
Cc:	"Carbon copy." If you want to send your email to people other than the main recipients, you would enter their email addresses here (sort of like you might "cc" a written letter to someone). All the recipients in the "To" line and the "cc line" will be visible to everyone who receives the email.
Bcc:	"Blind carbon copy." Any email address you enter on this line will not be visible to any of the recipients. Everyone in the "bcc" line will get the email, and see the names of all of the "To" and "cc" recipients, but no one will be able to see the email addresses in the "bcc" line. This is very useful when you are sending information to people who don't know each other, and you want to protect their privacy.
Subject:	A short title for the email.
Body:	The contents that the sender writes.
Attachments:	You can attach any type of document with the email – a PDF file, a word processing file, a picture, video, or sound file – anything at all. The possibilities are endless, but remember that sending very large files can slow down or crash the recipient's computer.

A signature is a short amount of text that can be set to appear at the end of every email you send. Some people include their name or email address, interesting quotes, or other information. The information in a signature can be edited or deleted when you write your email.

Emails are usually short and conversational in nature because emails are sent (and often replied to) instantaneously. Email has the informality of a conversation, but unlike speaking in person or on the telephone, we can't see body language or hear the tone of the other person's voice. As a result, it is easy to "mis-read" someone's motivation or intention in an email. Before sending an email, it's a good idea to read it over, remembering that the person receiving it won't be able to see you or hear your voice.

In order to help email communications, some standards have emerged that convey emotional meaning. In emails, using CAPITAL LETTERS is the equivalent of shouting. People also sometimes use symbols called emoticons to indicate emotion. Some advanced emoticons are animated, showing motion such as laughter. Here are a few examples:

Smile, happy	Typed as :-)
	The colon represents the eyes, the hyphen is the nose, and the bracket is the mouth. Some programs automatically convert these keystrokes to a smiley face like this: ☺
Frown, sad	:-(or ☹
Wink	;-)
Wide grin, happy smile	:-D
A slight frown (skepticism, annoyance, dissatisfaction, etc.)	:-/ or :-\
Surprise, shock	:-O
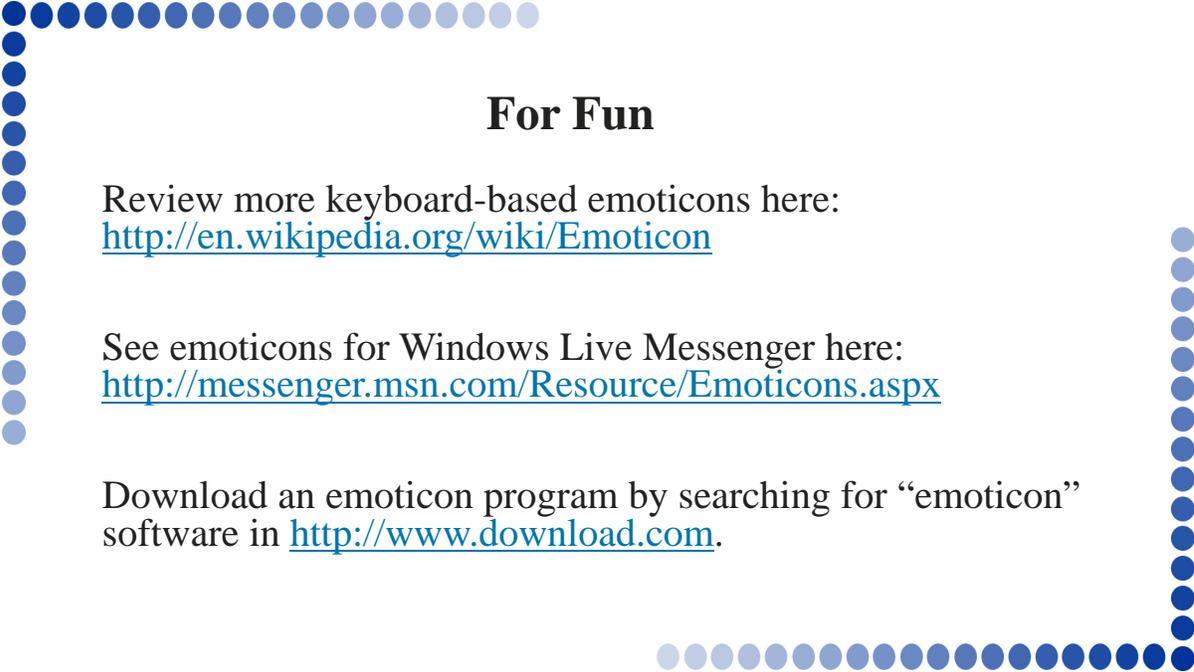
For Fun

Review more keyboard-based emoticons here:
http://en.wikipedia.org/wiki/Emoticon

See emoticons for Windows Live Messenger here:
http://messenger.msn.com/Resource/Emoticons.aspx

Download an emoticon program by searching for "emoticon" software in http://www.download.com.

Email can be saved indefinitely, and forwarded to others. It's important to be careful about what you say since a copy could be sent to someone without you knowing. And because we have access to so much information from so many sources, some people feel they are suffering from "information overload" and don't like receiving extra email. It's easy to forward fun information like jokes or interesting websites but be aware that some people may not want to receive these kinds of email.

D **Discuss the general topic of email:**

- Brainstorm with learners about what they already know about email, and how it might differ from regular mail.

- What are the advantages and disadvantages of communicating by email? How could email help learners in their daily lives?

D **Discuss email format:**

- Show several sample emails to learners. Include samples from several types of email programs if possible. Be sure to include an online email service such as Hotmail or Yahoo!, which is how many users of public computers send email. Discuss the similarities and differences between the different email programs.

- Discuss the three components in the body of the email: a greeting, the main message (one or more paragraphs), and a closing.

D **Discuss style and content:**

- People writing email often use informal greetings. For example, it would be more typical to write *"Hi John"* instead of *"Dear John."* Are there exceptions to this rule (for example, when applying for a job by email)? How do you know when to be formal and when to be more relaxed?

- What kinds of files can you attach to an email? Discuss how your learners might use the ability to attach files (for instance, in sending a resume with a job application, or to share a photo with their family, or to send you their home-work).
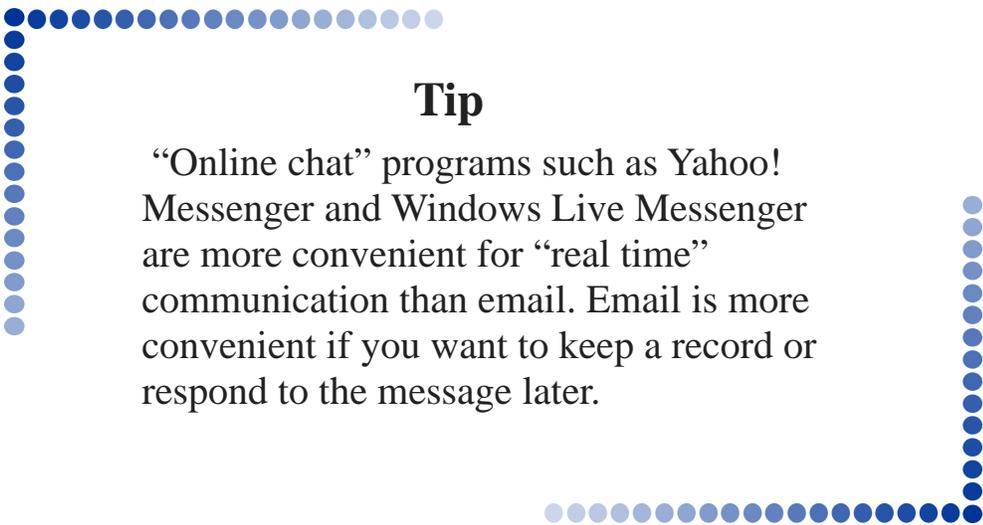
Tip

"Online chat" programs such as Yahoo! Messenger and Windows Live Messenger are more convenient for "real time" communication than email. Email is more convenient if you want to keep a record or respond to the message later.

D

Discuss email culture and practice:

- What kind of information do you get about someone's mood, intention or motivation when you read an email? How does this compare with talking to someone on the telephone, or in person? What techniques could you use in writing email to make sure that the reader understands your meaning?

- Are there any drawbacks to using email? Are there any types of messages you would be cautious about sending?

- How do you decide what method of communication to use when you need to speak to someone (telephone, email, mail, in person, etc.)? Are some types of communication better suited to some conversations?

A

Some activities for integrating: Start by having learners communicate with someone they know. Ask learners to do any of the following:

- Receive an email from a family member or friend (or a classmate, or you).

- Reply to an email.

- Send a message to a family member or friend.

- Receive an email with various attachment types (.doc, .pdf, .jpg, etc.), and open them. Note: different computers sometimes use different software programs to open the same kind of file. If the computer has never opened the kind of file you are asking it to open, it will ask which program you would like to use to open the file.

- Send a message with an attachment.

- Assign an "Interactive Journal" exercise. Ask students to email you questions about the course material each week. Or email students each week with a new question about how they would use ICT in different situations. You can ask them to reply in the body of the email, or ask them to attach their answers in a word processing document so they can practice their word processing skills at the same time.

- Ask the students to reflect on the goal they defined at the beginning of the course. How could they use email to move forward with their goal?

(P) **When planning and organizing your teaching/administrative activities, think of logical ways to integrate email communications.** For example:

- Use email to send assignments and receive assignments from learners, and to send feedback and corrections.

- Create a class newsletter and ask each learner to email a contribution.

- Encourage learners to collaborate on projects or share information with each other.

(S) **Whenever it seems appropriate, promote self-learning activities.** For example:

- Ensure that learners know how to delete unwanted email, organize email into folders, store and retrieve addresses, and search for email using various criteria (subject, sender, contents).

- Encourage learners to contact experts online about topics that interest them, from medical advice to plumbing.

- Help learners find an online pen pal who shares an interest with them, or who lives in a different country and wants to meet someone from another part of the world.

Section Three

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The Internet

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Objective

This section provides an overview of the Internet, the World Wide Web, and describes some of the things you can find in cyberspace. It provides information on how to conduct online searches and think critically about information sources on the Internet. Some popular types of websites are reviewed; we explain how to create a website.

Introduction and Concepts

The Internet, or World Wide Web ("www" or "web" for short), is a "virtual" universe of ideas, news, stores, banks, and other types of digital information. Often these two terms are used interchangeably, but to be precise, the Internet refers to the computers and communications channels between them, while the World Wide Web means the information that is stored on these computers, including websites, music, etc.

The physical infrastructure of the Internet consists of computers all around the world, large and small, which run software that lets them "talk" to each other. This "talking" is done through telephone wires using dial-up modems, over cables using cable modems, and over airwaves using wireless modems.

A **website address** (or **URL**, which stands for "Uniform Resource Locator") usually looks something like this: "http://www.something.com". The "http://" is part of every address, and stands for "Hyper Text Transfer Protocol," the "language" of the Internet. Because it is part of every single web address, most browsers allow you to leave it off website addresses (so you could type "www.something.com" instead.) After "http://", you will usually find "www", which stands for "World Wide Web". The middle part of the address (the part between the two dots) is the description chosen by the website's owner. The last part of the address (the two or three letters after the second dot) indicates either the type of site – commercial, educational, governmental, etc., or its location (eg, ".com," ".ca," ".edu," etc.).

When you want to visit a website, you tell a computer program, called an **Internet browser**, to take you to your destination. A common starting point on the Internet is a **search engine**, which is like a phone book where you can look up a website by topic if you don't know its name. Google is a popular search engine. If you wanted to visit Google, you would type "www.google.com" into your browser (or "www.google.ca" for the Canadian

version). The browser then shows you Google's website. If you already know the address of a website you would like to visit, you can directly access it by typing the address into the browser. There are many more websites that provide directories and advice about interesting places on the Internet to visit – and even real phone books, like the Canadian yellow pages (www.yellowpages.ca).

For Fun

Many country and language versions of Google exist. Browse the list of country top-level domains in the link provided above and see how many of them have a Google search engine. For example, try looking up the Italian Google by entering "www.google.it."

The World Wide Web has created new ways of interacting with the world and new models of business and communication. For instance, many stores that you can visit in the real world, like Future Shop, also have stores online. Other stores, such as iTunes, only exist online. iTunes does not need a warehouse, delivery trucks, or staff to fulfill online orders because their products are digital. The songs and music videos they sell are delivered as files to the shopper's computer. Even the exchange of money occurs online.
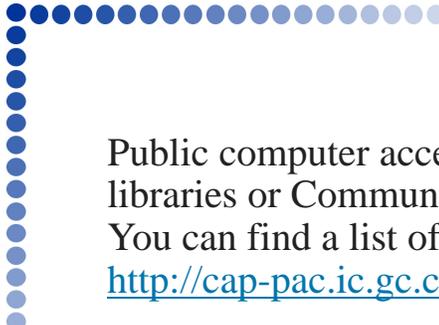
Tip

Public computer access can often be found at public libraries or Community Access Program (CAP) Sites. You can find a list of CAP sites here: http://cap-pac.ic.gc.ca/pub/index.html

It is important for new Internet users to learn how to find information online determine whether it is trustworthy. Learning how to contribute to online discussions and post their own information on the Internet will open up new possibilities for learners. Demonstrating these concepts in class is more helpful than simply discussing them. If you don't have Internet access in your classroom, you may want to conduct part of the class somewhere with computer access. You can also bring in a laptop and show webpages that you have saved on your hard drive. In a pinch, printouts are better than nothing.

Strategies & Tips

What You Can Find on the Internet

The World Wide Web offers something for everyone. You can explore your hobbies, find and share recipes, ask for advice, browse pictures taken by strangers, or share your own photos – either privately with friends or publicly with the world. You can listen to music, watch videos, go shopping, and check your bank balance. The possibilities are endless! Here are some ideas for where to start browsing the Internet:

- Many cities and provinces have websites that offer various types information. Residents of Nova Scotia might need to find information about government services (www.gov.ns.ca and www.ednet.ns.ca, for example), or guides to Halifax movies, events, golfing, and more (e.g., www.canada.com/cityguides/halifax/index.html, or www.halifaxinfo.com). You can also look up your local bus schedules, or buy bus and train tickets to other cities.

- Visitors to Nova Scotia might enjoy exploring tourism websites such as www.novascotia.com or Destination Nova Scotia (www.destination-ns.com).

- You can check the weather at:

  ∗ CBC (http://www.cbc.ca/weather/map.jsp)
  ∗ The Weather Network (http://www.theweathernetwork.com)
  ∗ Environment Canada (weatheroffice.ec.gc.ca/forecast/canada/index_e.html?id=NS).

- Maps and directions can be found at: www.mapquest.ca

- Google Maps and Google Earth (which requires a desktop software download) are other great geographical tools.

The best way to discover and participate in the World Wide Web is to go exploring. Our main goal is to give you the basic information and tools that you need so that you can do this yourself, and instil the confidence to do so in your learners.
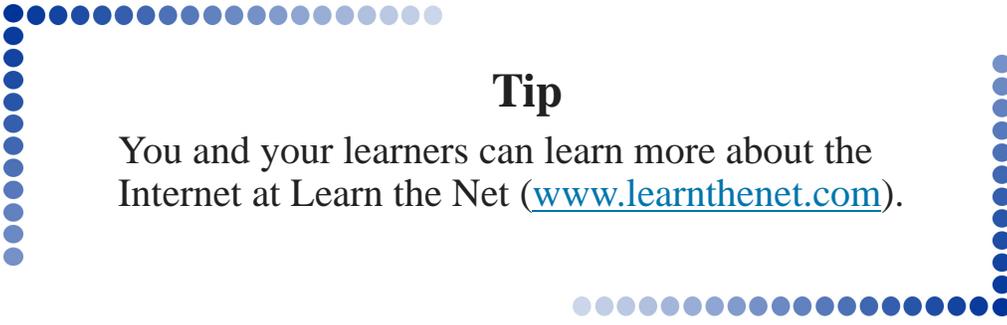
How To Find Information on the Internet

As we discussed, the Internet hosts many files. There are literally billions of webpages. Finding information that you are looking for can be as simple as typing in its address (like "www.cbc.ca"). However, if you know what type of information you are looking for but you don't know the specific address, or the name of the person or company you are looking for, you can look for it in a number of ways.

One way is to use a search engine, which "reads" web pages, and indexes all of the words on that webpage. Pages rank higher in the index for each word depending on its location on the page, how often it is repeated, and other criteria. These words are called "keywords." "Keywords" is a synonym for the words that you use to search for something. As you can imagine, the number of pages that have the same words on them is enormous, so using more than one keyword is helpful. For example, if you wanted to buy a car and you lived in Halifax, there are several combinations of keywords you might use. Here are a few:

- **buy car** – typing in this search term is probably too general, since search engines will find sites anywhere in the world that include these keywords. At the time of writing, Google returned 174 million "hits" for this search.

- **buy car Halifax** – this is better, and you might start here. Today it returned 1.14 million results. That's much better than 174 million, but it still includes irrelevant results, such as cars in Halifax, North Carolina.

- **buy car automobile Halifax Nova Scotia** – this is very specific, and it provides two potential terms for car, so it may find more websites depending on the terminology they use. It returned 1.2 million hits – more results than the previous search, but different ones.

- **buy car automobile Halifax "Nova Scotia"** – by enclosing a phrase in quotation marks, you are telling the search engine to treat the words inside the quotes as one phrase instead of individual words. Putting quotations around "Nova Scotia" reduces the search results to 1.1 million.

- It is sometimes very helpful to exclude a word, especially when there are two meanings for one of your search terms. In Google, the way to exclude a word is to put a minus sign in front of it (check the rules for other search engines, because they can differ). If we wanted to search for webpages on buying a car, but exclude any pages with the word "Lada" on them, we would enter this:

   buy car automobile Halifax "Nova Scotia" -Lada

   In this case, the search resulted in 1.09 million "hits".

Search results usually appear ten at a time. A good rule of thumb is to preview the first two or three pages of results. If you don't find what you are looking for, revise your search keywords and try again. Don't hesitate to experiment. Search results can be very different depending on things like the order of the words, adding or taking away terms, and using alternate words for what you are looking for. Most search engines have an "Advanced Search" link, or something similar, which can also help you find what you need.

There are many search engines online. Some are general search engines. Some popular general search engines are Google, Yahoo!, and MSN. "Ask" is a search engine that responds to English-language queries, such as "Where can I buy a car in Halifax Nova Scotia?"

Tip

For legibility, when a website address starts with "www" and ends with ".com," sometimes it is referred to by only its main name in this document. For example, you can find the "Ask" search engine at www.ask.com

If you enter the same keywords into two search engines, you will get different results. This is because each one of them "ranks" webpages differently. They may have different webpages in their index and these pages may have changed since the last time the search engine "read" them.

There are also many specialty search engines that focus on a single topic. Google Scholar specializes in academic publications (scholar.google.com); Google News specializes in the press (news.google.com). Google Maps, Google Earth and Mapquest specialize in maps (maps.google.com, earth.google.com). You can link to Google's video, image, map and news specialty search engines from Google's home page. On www.google.ca, you can specify whether you only want to search pages from Canada.

Directories are another source of information. While search engines are computer-generated lists of websites, directories are human-edited lists. LookSmart is a combination of human-edited and computer-generated results. On its home page, you can either enter a keyword query, or click on a topic. Open Directory (www.dmoz.com) is one of the oldest Internet directories. Google Directory (www.google.com/dirhp) refines Open Directory's results, which may be more helpful in some instances. For example, while Open Directory lists no results for "buy car Halifax Nova Scotia," Google Directory offers 330 suggestions.

Another "guided tour" of the Internet is About. On www.about.com, editors write custom content about their area of expertise, and offer suggestions about other websites for further information.

● Not Just Text Anymore

The Internet is no longer a text-only universe. Especially since the advent of high-speed Internet connections, images, music, and videos are available online. You can browse paintings, photography, and visual arts; listen to music from popular bands or independent songwriters; watch amateur videos; or download movies. Some popular multimedia destinations include YouTube with its collection of amateur videos, or Flickr, with its collections of photographs.

● Matters of Trust

Because anyone can post information on the Internet, it is hard to know when to trust the information you find. Just like in the physical world, it is good to learn how to evaluate the information you receive. When you are trying to decide which search results are promising, there are at three things that might be helpful: the title, the description, and the website address. Look at each of these things and see if there are any clues about who is posting the information. If you recognize the source of the information and trust it, you can take greater

confidence in clicking that link. For example, if you were searching for a car, and found the website of a dealer or manufacturer you know and trust, you could probably click it with confidence. If you found the name of a dealer you have never heard of, you might want to find out more about them before you buy a car from them!

In general, if you only have basic knowledge of the topic you are exploring, you may want to check for opinions and information in many places rather than relying on one source. You can also talk to other people about the information you have found and share your ideas about whether it seems trustworthy.

Remember that the people posting the information you find may have different values than you, or may be in a different situation or location. Don't be afraid to explore the Internet but be careful of where you place your trust.

The more important the topic, the more important confirming the reliability of the information you find becomes. For example, if you were looking for health information you might want to start your search with the name of an organization you trust, such as Health Canada, or the Canadian Cancer Society. Starting with the name of the condition or treatment might bring you interesting and valuable results – just be careful to verify them with a trusted source, such as your doctor, before acting on them.

Some Types of Websites

While each website is unique in content, and perhaps in its form and functionality, there are a few specialized, standard types of websites that are helpful to know about.

A **"wiki"** (pronounced wick'ee) is the name for a special type of website that allows a group of people to co-create it. Sometimes creating the website is restricted to a private group, but sometimes anyone can add information to a wiki. To add or change the content on a page on a wiki site, check for a link named "edit." Clicking on this link will bring you to a webpage where you can type text onto the page, similar to the way you edit text in a word processor. There are usually formatting options to make text bold, italic, or bigger and smaller, but these are optional and usually easy to learn. Once you are comfortable editing pages, you can add new pages, upload attachments or files, and create links. Different

wikis may have different ways of doing these things; look for a "Help" link to learn more. Feel free to contribute – that's what wikis are for. And if you change your mind, you can click "edit" again and undo your updates.

The most famous wiki is Wikipedia, the online amateur encyclopaedia written by everybody who wants to contribute to it (www.wikipedia.org). Because it is collaborative, it contains broad and new subjects including interesting information about the Internet, wikis, word processing, and the other topics discussed in this guide. It also includes history, geography, pictures of art and ancient texts, and many other things that are fun to browse and search through. However, because it is collaborative and not quality-checked by specialists, it may contain mistakes and controversial opinions.

For Fun

Browse **www.wikipedia.org**, and find the most unusual content you can.

Search Wikipedia for a topic you know about and review it. Is it correct? Can you add to it?

Practice editing a wiki in a completely safe environment, the "sandbox," here:
http://en.wikipedia.org/wiki/Wikipedia:Sandbox

Ready to contribute? This link can get you started: **http://en.wikipedia.org/wiki/Wikipedia:How_to_edit_a_page**

Weblogs, or **blogs** for short, are like online journals. They can be about any topic, personal or professional. Organized by date, they are a good way to share personal stories, industry updates, or time-based articles. There are websites that allow members of the public to create their own blogs for free, similar to free online email accounts. There are also paid services and do-it-yourself tools for you to integrate a blog into your own website. Variations on the original text-based blog include **audio blogs**, where the content is shared verbally (like talk radio), and **video blogs**, or **vlogs**.
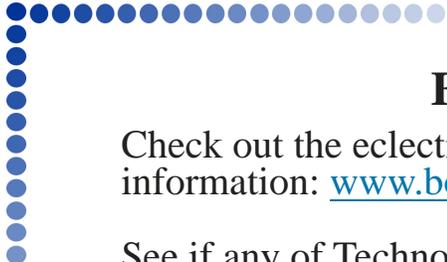
For Fun

Check out the eclectic blog of miscellaneous information: www.boingboing.net

See if any of Technorati's high-ranking blogs strike your fancy:
technorati.com/pop/blogs/?faves=1

An **online forum,** or **discussion board,** is a special type of webpage where people ask and answer each other's questions. This is a common way for more experienced people to share information with newcomers to any field. Forums are organized by topic and may contain sub-topics. Within subtopics are "threads" which are questions and answers about the same issue. Threads can be long as two or more people may "discuss" a topic back and forth through multiple messages in a thread.
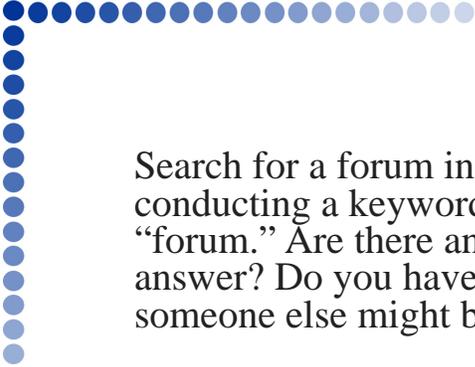
For Fun

Search for a forum in a topic you are interested by conducting a keyword search that includes the word "forum." Are there any questions there that you can answer? Do you have questions about the topic that someone else might be able to answer?

Browse the Nova Scotia Genealogy forum for your family name at:
http://genforum.genealogy.com/canada/novascotia/
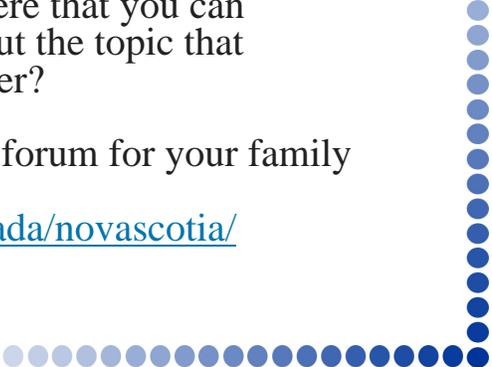
Creating a Website

Creating a website used to require technical knowledge and programming skills beyond many Internet users. Nowadays, online website services or desktop software make it much easier to create a website. If you prefer to focus more on content than technical details, you can use one of the "easy options" below to set up the format of the website, and then help the learners create the content. If you or someone in your group of learners has some technical skills and you want to create your own website from scratch, review the "Do It Yourself" section that follows.

Creating a Website –Easy Options

Here are some of the possibilities for creating a website without having to build and host it on your own:

1) If your goal is to post your own ideas or share stories, a weblog, or "blog" for short, is a great way to start. A weblog can focus on a specific topic like a hobby or a profession, or it can simply be a collection of your thoughts and ideas over time. There are several free or inexpensive blog services that take care of the programming and web hosting for you. All you have to do is sign up and register your content. www.blogger.com is one free option, but there area many others. Blogs are covered in more detail in Section Six of this guide, *Talking to the World using Blogs*.

2) One easy way to communicate with a group using email is to create an online group. A learners' group could allow learners to ask you questions between classes, help each other, or share resources and ideas through email. Many online groups also offer file sharing, photo sharing, private online chats, and access to databases through the group's home page on the Internet. You can start your own group almost as easily as you can sign up for an email account. MSN Groups and Yahoo! Groups are two of the most popular service providers. You may also want to encourage learners to start online groups to help their families, clubs, or sports teams communicate more easily.

3) If you would like a more traditional website, you can sign up with a hosting service that provides you with easy website development tools. Some are as simple as choosing a layout, uploading a logo, and filling in the blanks. This gives you the flexibility of choosing your own website name and content but is much easier than developing a website from scratch. However, it is also more limited in its design and functionality. www.1and1.com is one large web host but there are many others.
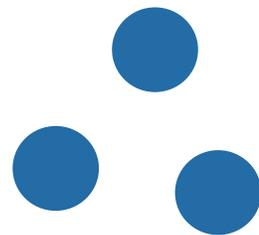
Creating a Website – The "Do-It-Yourself" Way

Creating a website from scratch requires a wide range of design, writing, and technical skills. Often people hire specialists to do one or all of these tasks. While this may be a more ambitious project than your class requires, it might still be helpful to understand the concepts.

First, you need to register a website name, which is called a "domain name" or "URL," for "Uniform Resource Locator." It is simple and inexpensive to register a website name, which "leases" the name for you for one or more years. A Domain Name Registrar can register a website address to anyone for a small fee, currently $10 - $20 per year.

Developing a website includes developing its *content* (the words, images, sounds, video, or animation in it), and its *functionality* (the ability to browse, buy, search, sort, or otherwise interact with it). *Design* is also important and includes the look of the pages as well as the way information is organized. Most word processors allow you to save any document in HTML format (the basic computer language for webpages). This will allow you to create a very simple website containing words and some images. However, if you want to create something more complex, you will probably need more specialized website development software such as Virtual Mechanic's SiteSpinner, or CoffeeCup VisualSite Designer. A more professional (and therefore more complex and expensive) tool is Adobe Dreamweaver.

Tip

www.download.com is a good source of reviews and recommendations for many types of software, including website development tools. Other reliable sources of computer information include www.cnet.com and PC Magazine (www.pcmag.com).

Once you have developed the website's programming and content it must be "hosted." "Hosting" means that all of the website files, including the HTML code, images, and multimedia content are installed on a computer that is always connected to the Internet. There are many companies on the Internet that can host your website; some are free and some charge a fee. If you already pay for an email account with a service provider, you may be entitled to a certain amount of website space at no extra charge.

A custom website is inexpensive (but not free) to create. It is more complex than a blog or online group and it offers more flexibility and creativity, but it entails more work.

D **Discuss the general topics of the Internet and the World Wide Web:**

- Brainstorm with learners about what they already know about the Internet and the World Wide Web.

- Ask if any of the students have created a website or blog. What is it about? Did they create it from scratch or did they use an easy tool they can recommend to others in the class?

- Ask if any of the students have a favourite website or a website they visit often. Why does it interest them?

- Ask if any of the students have an area of interest they want to explore online. Do any of the other students have suggestions or tips for them? Consider researching one of these topics as a hands-on lesson in exploring the web.

- If you have online access in the classroom, hook up a projector (or have students gather around the computer), and demonstrate web searches, websites, and the other topics covered in this chapter.

- Visit a search directory, such as www.dmoz.com, and explore one of their topics. See how specific you can get by "drilling down" into a topic suggested by a learner.

D **Discuss format:**

- Discuss the differences between print and online media. For example, print is linear - you begin at the beginning of the page and read to the end. To read it, you must get a physical copy. On the Internet, you can jump around by clicking a table of contents or index, but you can also click banner ads, links to external websites, or type a new website address in your browser and immediately navigate to it. Once you are linked to the Internet you can access virtually all of its contents.

- What are the advantages and disadvantages of online media and print media? How can they be used differently?

D **Discuss style and content:**

- Websites, unlike books, allow you to jump in many directions. Discuss ways of navigating a website. If possible, show an online example. Discuss clicking on underlined links, clicking on images, using a sitemap, and using a website's search function. Emphasize a spirit of adventure and the fact that there is no "wrong" click. If you end up someplace you didn't want to go, you can always go back.

- How does "reading" a webpage differ from reading a book? How do you find the information you are looking for on a website? What are some of the different ways websites can organize their information?

- Because the World Wide Web has many authors, most of them unknown to us, how can we evaluate the content we find online? How do we know if we can trust it? Some of the key concepts to discuss are expertise, authority, bias, and timeliness. You may want to develop a checklist. Potential checks include, "Who put this information here? How old is the material? Who wrote the information? What is their motivation? How can I double check the information?"

D **Discuss culture and practice:**

- Many people post personal information online, perhaps on a blog, or on a networking website like MySpace. Discuss the differences between sharing information in person, in a letter, on the telephone, and on the Internet.

- What safety issues arise from online sharing? Topics to discuss include personal contact information, whether someone can find you in person based on your online information (and whether this is desirable), and cyber "stalking" (which is like getting obscene phone calls on the Internet in an online "chat room").

- What ethical issues arise from online sharing? Consider in particular what others might take offence to or feel compromises their privacy.

- Who can view information online? Your boss? Your parents? Your children? Your neighbours? What implication does that have for what you post online?

- How could you protect your privacy when participating in online chat rooms or posting to the Internet? (Some ideas include using a nickname, signing up for a free email address to use for posting to public websites, etc.)

D **Discuss searching for information:**

- Discuss ways to find information on the Internet. For example, you can use a search engine, a directory, or go to a trusted information source and browse their content.

- Discuss the options (rather than the syntax) for doing effective keyword searches. Discuss the concepts of included words, excluded words, phrases, and date-limited searches.

- There are millions of documents on the Internet published by different types of people. Finding what you need is akin to finding a needle in a haystack. Discuss the frustrations that this can cause and strategies to overcome them.

- Navigate to the advanced search page of a search engine. Discuss the options and run a few tests. Each search engine uses different methods to help you with your searches so remember to check the help page if you are confused about how to search effectively.

A **Some activities for integrating:** Start by familiarizing learners with the Internet in fun ways. Ask learners to do any of the following:

- Search for their own name on the Internet. Ask them to share what they found.

- Use Google Earth to find their house, a town they used to live in, or a vacation spot they would like to visit.

- Ask learners to scan (rather than read) a certain webpage for a piece of information you know is there.

- As a class, review questions from visitors to Nova Scotia on the TripAdvisor forum. Are there any questions you can answer? (http://www.tripadvisor.com/ShowForum-g154967-i326-Nova_Scotia.html)

- Watch some videos on YouTube or another website (if they have high-speed access).

- Ask the students to reflect on the goal they defined at the beginning of the course. Would any Internet-based research help them move forward? What about informing or collaborating with others? Would asking questions in an online forum, joining an online group about the topic, or creating a website help?

- This exercise combines the Internet, word processing, and email skills.

  * Have students search for a clear, uncluttered map of their neighbour-hood and copy it to a word processing document.
  * Next, have them add a title.
  * Ask them to use symbols (perhaps letters or numbers) to indicate three or four things such as their house, a store, trees, water, etc.
  * Have them create a legend in a text box to explain the symbols.
  * Have them email it to you as an attachment.

P **When planning and organizing your teaching/administrative activities, think of logical ways to integrate the Internet.** For example, you can use it to:

- Find websites that demonstrate concepts. For this lesson, you might search for a visual "picture" of the Internet, a website that class members will enjoy browsing, or find a website or blog of a local business or resident.

- Create an online group for the class. This would allow students to email questions and tips to each other, and to you. You could also navigate to the group's page on the Internet to demonstrate its advanced features. For example, you could try out its online chat, create member profiles, post your lesson and assignment documents online, and show learners how to open and download them. *(Note: you may want to make this a "closed" or private group, rather than an "open" group, so that strangers cannot read learners' profiles.)*

- Create a class blog where students can practice uploading content to the Internet. See if you can include multimedia content like photos, music or audio recordings.

- To create audio content, have students interview each other about their favourite websites or hobbies.

Tip

You can create sound files with Windows' built-in Sound Recorder and an inexpensive headset with a microphone or the built-in microphone on a laptop.

S **Whenever it seems appropriate, promote self-learning activities.**
For example:

- Ensure that learners know how to search for information online using:

    * a search engine like Google
    * an amateur encyclopaedia such as Wikipedia
    * an edited directory like About

- Help them find other information they might need on a regular basis, such as local weather, movie listings, bus schedules, or the TV Guide. Lottery numbers can be checked at Atlantic Lottery Corporation (www.alc.ca).

- Show learners how to use multiple keywords to search and how to refine their searches if their results are unfruitful. Help learners evaluate the website addresses of search results to help identify the most promising results.

- Encourage learners to search for images that portray something they are reading about using a search engine like Google Images (images.google.com) or Flickr.

- Have the learners search for something that interests them or that they need. If they like cooking, suggest that they search for a new recipe online. If they are considering a purchase, suggest that they research product reviews online. Suggest that learners who are looking for work try Service Canada's Job Bank (http://jb-ge.hrdc-drhc.gc.ca), Workopolis, or Monster job websites.

- Have learners search for interesting titles and reserve books at the local library website (Halifax's library website is www.halifaxpubliclibraries.ca).

- Have learners look up an address or phone number at www.canada411.ca.

- Ask learners to create and delete favourites, or bookmarks, in an Internet browser.

- Have learners change their browser's home page.
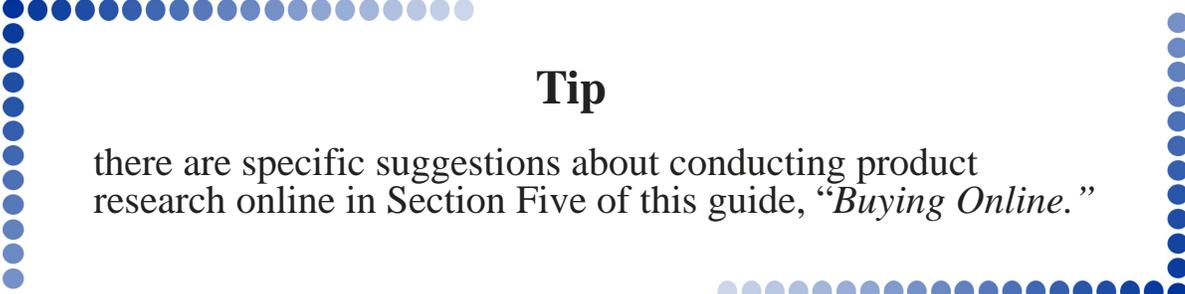
Tip

there are specific suggestions about conducting product research online in Section Five of this guide, *"Buying Online."*

Section Four

Learning for Life

Computer-Based Learning

Objective

This section introduces formal and informal learning opportunities that take advantage of computer technology. Offline learning options include educational software, simulations, and games. Online learning options include informal, peer-to-peer learning, online courses and degrees, and information sources such as online encyclopaedias and reference materials. The goal is to introduce learners to these opportunities and help them explore their own interests and learning preferences.

Introduction and Concepts

Information technologies open up exciting opportunities for both formal and informal learning. On the Internet you can take courses and even earn degrees online without needing to leave home. There are billions of web pages in many languages that focus on hobbies, skills, news, and literature. You can learn things as diverse as creating a do-it-yourself solar cooker out of cardboard and tinfoil – something you may not have even known existed before an accidental web search uncovered it for you. You can take "virtual" guitar lessons at any time of day or night, and you can find more interesting things to read, see or hear than time will allow you to browse. Twenty thousand older books that are in the public domain are available at Project Gutenberg (www.gutenberg.org), including Leonardo da Vinci's notes, English instruction, and histories of war. You can browse and buy other titles from international publishers, large and small.

For Fun

Browse the most popular titles of the day from Project Gutenberg at http://www.gutenberg.org/browse/scores/top

One of the most popular uses of the Internet is for informal knowledge sharing. Ordinary people around the world publish web pages, answer questions in forums, and write "blogs" or online journals about their areas of expertise. Some of this knowledge is provided for a fee but a lot of it is free.

There is computer software to help you practice new languages, learn how to create digital art, or improve your typing skills. You can also learn about history, politics, or human relationships through educational software and simulations that are sometimes called "serious games". Zoo Tycoon allows you to design a zoo, set prices, and try to become profitable. Simulation games like The Sims, Civilization and SimCity allow players to learn about family dynamics, war, or municipal works.

Tip

Wikipedia provides a good overview and list of serious games at:

http://en.wikipedia.org/wiki/Serious_game.

One striking example of online learning comes through the website Second Life. Second Life is a virtual reality world where users create an online character and interact with each other in real time. Many organizations are beginning to use Second Life for online meetings and lectures. This was a major component of a Harvard Law School course in 2006 (www.court-of-public-opinion.com) and is increasingly being used by schools.

Free-Ed.Net (ged.free-ed.net/free-ed/default.asp) offers self-study courses. The most interesting program is the high school equivalency diploma (GED) program, which is a moderated online group program that enables learners to collaborate and support each other. Free-Ed.Net intends to launch a real-time, virtual classroom in the Second Life website (http://ged.free-ed.net/free-ed/ged/).

Resources for Adult Literacy

Education Canada provides resources for adult literacy at: www.educationcanada.cmec.ca/EN/EdSys/adult.php. The National Adult Literacy Database (http://www.nald.ca/crd/) provides links to many online learner resources.

The BBC offers a wide selection of online learning resources on their learning site, www.bbc.co.uk/learning. Some of them are focused on UK residents but others are globally relevant. Adult learners may enjoy watching video testimonials of adult learners who overcame setbacks (http://www.bbc.co.uk/raw/beinspired/). There are also audiovisual activities such as story-telling guides and comprehension quizzes (http://www.bbc.co.uk/raw/). In the SkillsWise section, learners can get help with reading and math (http://www.bbc.co.uk/skillswise/).

An Internet search will reveal many more options.

Strategies & Tips

D **Discuss the general topic of life long learning:**

- Brainstorm with learners about things they would like to learn more about.

- Compare the advantages and disadvantages of computer-based learning and more traditional learning methods. Consider cost, access, availability, scheduling, learning styles, and hands-on skills versus theoretical knowledge.

- Are different methods better for learning different things? For different people? How could different methods be combined?

D **Discuss format:**

- What types of computer-based learning exist? Consider educational software, games created for fun, games created for learning, online informal learning, and formal classes.

- Does your organization incorporate computers into the classroom? How? What has been the impact of using computers?

D **Discuss style and content:**

- Modern North American education has traditionally emphasized reading and lectures for teaching. What new opportunities do technologies offer to support other learning styles?

- When is a computer a poor choice for learning activities?

D **Discuss culture and practice:**

- Ask the learners what teaching methods were used when they were children. Does that affect their comfort with different learning methods?

- Discuss whether learners are hesitant or enthusiastic about computer-based learning. Why?

- What supports, guidance, or experiences do learners feel would help them try out computer-based learning? If possible, follow up on some of these in future classes.

A **Some activities for integrating:** Start by having learners explore informal learning opportunities on the Internet. Ask them to do any of the following:

- Conduct an Internet keyword search on a hobby or topic that interests them. Have learners share the best websites they found with each other.

- Again, ask the learners to reflect on the goal they defined at the beginning of the course. Do they need to learn new skills, take a course, or pursue other learning activities to move forward? Are there any opportunities for computer- or Internet-based learning that are better than the in-person opportunities that exist for them?

P **When planning and organizing your teaching/administrative activities, think of logical ways to integrate computer-based learning.** For example:

- Collect an annotated list of websites recommended by the class participants. Assign an editor who will update this list on a word processor, a class blog, or a class website. Email or print a copy for each learner at the end of the course.

- Check software titles in a store, or an online store, about the topics you are teaching. If appropriate, integrate them into class.

- Search for online resources you can incorporate into your lessons, for example online guides, magazines, photos, videos, etc. A picture, photo, map, or animation can add great visual content to your lessons, especially when you are teaching about tangible things like people, places, buildings, technology, etc.

S **Whenever it seems appropriate, promote self-learning activities.** For example:

- Ensure that learners know how to search for learning opportunities online, particularly using resources like online encyclopaedias, newspapers, and the websites of respected authorities on health, cooking, automobiles, technology, etc. Print magazines often have companion websites offering free information.

- Help your learners learn to gauge the trustworthiness of information found online. Do they know the author? Is it a professional or amateur source? Is it up to date? Do they know someone more knowledgeable in the field (like a doctor or a mechanic) who can refer them to trustworthy sites?

Section Five

● ●

Participating in the Marketplace

● ●

This section has two parts: buying online and banking online.

Buying Online

Objective

This section introduces online research for purchases and online shopping, auctions, and selling online. It also reviews security considerations for ecommerce and online payments using PayPal.

Introduction and Concepts

Online shopping has many benefits. You can order specialty items that are not available in your town. Being able to shop from home saves time and offers people with limited mobility new opportunities to browse and buy. Gifts can be shipped directly to the recipients. If the service is available in your area, you can even buy your groceries online and have them delivered to your door.

Online shopping is not without risk, however. Infrequent security breaches have resulted in customer names and credit card numbers being accessed by hackers or thieves, even with large chains.

When you purchase items online, the information you send to the seller travels over the Internet. If online stores are not using appropriate security options, other people could view your private information while it is in transit. There are some safety protocols you can follow to minimize the risks of online shopping; but, because some of the security protocols are in the hands of the store and their banking partners, there is no way to guarantee 100% safety. Even so, millions of successful shopping experiences entice people to spend billions of dollars a year shopping online.

PayPal is one popular and secure way of paying for goods online. Rather than give credit card or bank information to every online retailer they buy from, users of PayPal give their bank account or credit information once to PayPal, and then PayPal processes payments at other online sites for them. PayPal is very useful for person-to-person transactions (such as purchases on auction sites like eBay). It takes a week or two to get a validated PayPal account so apply for one well in advance of the end of the auction!

When buying items privately on the Internet, be very careful about arrangements to exchange goods. If delivery is by mail, use a trusted auction site such as eBay and read the rating and feedback that other buyers have given the seller before you buy the goods. If the delivery is in person, do not give your address to strangers. Meet in a public place where you won't be alone. Take the same precautions you would if you met a stranger through a classified ad in the paper, for example.

In addition to buying things online, you can also sell things online. eBay is one of the most popular and trusted auction sites and is a good place to start. Craigslist (http://halifax.craigslist.org/) is also a popular source of classified ads for goods, apartments, and jobs, but does not provide the seller rankings that eBay does.

Finally, if you decide that online shopping is not for you, the Internet is still a valuable resource for researching products. You can find reviews, check consumer feedback, or visit sites like Consumer Reports that give unbiased industry reports (see www.consumerreports.org).

Strategies & Tips

It is very important to help learners understand how to keep their personal and financial information safe and secure online. While there are no foolproof methods, the following guidelines will help. Additional resources are provided for more information. These should be reviewed periodically since best practices evolve over time.

Ecommerce Safety 101

Before you click on the "Buy now" button, how can you reassure yourself that you are reasonably safe to trust an estore? Here are a few pointers:

1. Carefully double check the website address of the store, banking, or other important websites that you visit, such as PayPal. Sometimes hackers create imitation websites that look like the real thing in an attempt to trick you into entering your user ID and password on their bogus site. This would give them access to your account information to use on the real site. This is called "phishing" (pronounced "fishing"). You can purchase Internet safety software and subscriptions which alert you to suspected phishing websites.

2. Never answer an email, however legitimate it looks, requesting your user ID, password, or account numbers from an online store or financial institution. These are scams to get your personal information. This is another example of phishing.

3. If at all possible, buy your goods at a store you already know and trust. Many "bricks and mortar" stores offer online shopping and many well-known online stores exist. Some of the common names are Amazon and Chapters Indigo for books, CDs and DVDs, TigerDirect for computers and accessories, Staples for office supplies, and Grocery Gateway for groceries. Most department stores also offer online shopping.

4. Check for reports on the company with your local Better Business Bureau (you can look up your local Better Business Bureau at http://lookup.bbb.org/).

5. The World Wide Web is an international marketplace and predominantly American. If you prefer to shop in Canada, look for a Canadian version of the store you are browsing. Sometimes there is a "Location" option where you can select Canada or you can try typing ".ca" instead of ".com" in the website address. If you shop on Canadian websites the prices will be in Canadian dollars and you will be sure that the store ships to Canada.

6. If you cannot find a Canadian store to shop at, confirm that the store sells and ships to Canada before you invest time browsing their merchandise.

7. Feel free to browse and put things in your "basket" on an unencrypted website. But once you click "check out" or begin entering personal information, make sure that you are on an encrypted website. This means that all of the information that you send to it is digitally "scrambled" so that no one but the intended recipient can see it. You can tell that a webpage is encrypted because its address begins with "https://," not "http://" (note the "s" after "http"). Different browsers also have different symbols, such as a closed lock, which indicate that you are on an encrypted webpage. The encryption may also be referred to as "SSL" ("Secure Sockets Layer").

8. In their privacy or security policy, an online store may inform you whether they store your credit card on file, or just use it for each transaction without storing it. It is safer to give your credit card information to sites that do not store your credit card number. When given the option to store it in a profile for future convenience (e.g., to enable "one click shopping"), consider refusing this convenience in the interest of better security.

9. Consider using a PayPal account which keeps your bank or credit card accounts private from online stores. Alternatively, apply for a low-limit credit card that you only use for online purchases.
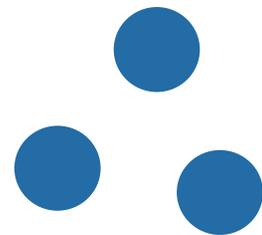
Tip

Security procedures can change over time. Make sure that you are following all of the latest precautions by visiting consumer awareness sites periodically. Here are a few recommended resources:

Public Safety Canada (www.publicsafety.gc.ca)

Phishing (www.publicsafety.gc.ca/prg/le/bs/phish-en.asp)
Online Shopping Assistant Questionnaire (http://strategis.ic.gc.ca/epic/site/oca-bc.nsf/en/ca02129e.html)

Online Auction Fraud
(www.rcmp-grc.gc.ca/scams/online_fraud_e.htm)

Online privacy
(http://www.privcom.gc.ca/fs-fi/02_05_d_13_e.asp)

See also Safety Canada's online security resources
(www.safecanada.ca/link_e.asp?category=3&topic=30).
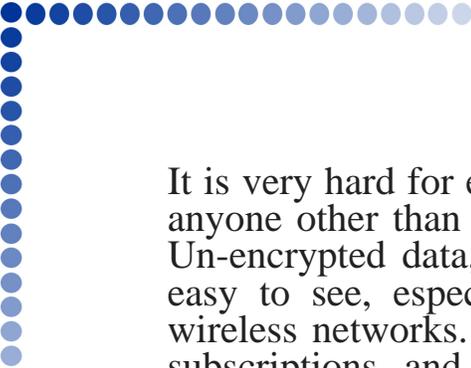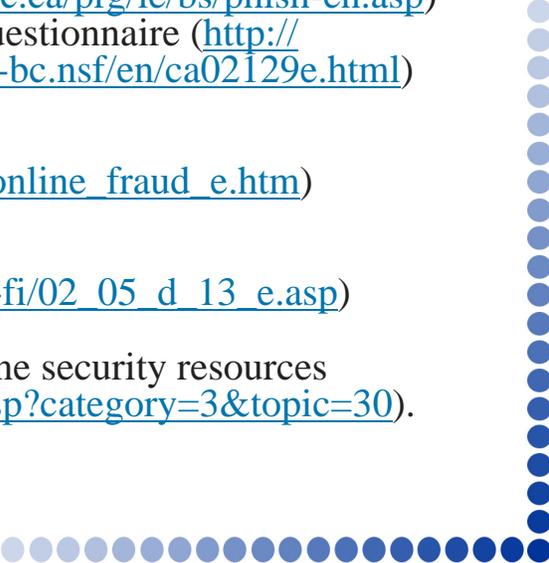
Tip

It is very hard for encrypted data to be seen by anyone other than the sender and the receiver. Un-encrypted data, on the other hand, is very easy to see, especially when it is sent over wireless networks. This includes email, online subscriptions, and the Internet sites you visit. When you are entering in personal data on any website that you do not want others to see, check if the website is encrypted. If not, you may want to send the information in a more secure method – in person, on the phone, or by mail, for example.
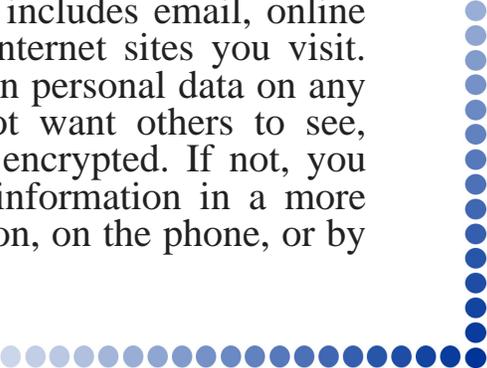
D **Discuss the general topic of online shopping:**

- Ask learners to share their experiences of online shopping or product research.

- What concerns do they have about online shopping?

- What methods can they use to protect themselves?

- Can you fully remove all risk of online shopping? What risks remain?

D **Discuss culture and practice:**

- Every year, a larger percentage of business is conducted online. Have you seen any impact of this in your town? What future impacts do you expect to see?

- How does online shopping differ from shopping in a "bricks and mortar" store? What are the benefits and drawbacks to online shopping?

A **Some activities for integrating:** Start by having learners become familiar with browsing online. Ask learners to do any of the following:

- Conduct research for a product they are interested in buying. Ask if their Internet re-search helped them get the best price or select the best brand or model.

- Imagine they have won a $500 shopping spree at Sears. Have them choose what they want to buy at www.sears.ca.

- Name their favourite three books and movies. Put these items into an online shop -ping cart at both www.Amazon.ca and www.chapters.indigo.ca. Which is least expensive?

- Ask learners to browse for an interesting book or movie at the local public library website, perhaps one you recommended for the class. If they have a library card, have them place a hold on it so they can pick it up when it arrives.

- Have learners browse at the online store of a shop they visit in person. Can they buy the same goods online as in person? Are the prices the same? Are there shipping charges?

- Again, reflecting on the goal students defined at the beginning of the course, are there any supplies, magazines, books, or materials that they can get online?

- Conduct an Internet keyword search on a hobby or topic that interests them. Have learners share the best websites they found with each other.

- Again, ask the learners to reflect on the goal they defined at the beginning of the course. Do they need to learn new skills, take a course, or pursue other learning activities to move forward? Are there any opportunities for computer- or Internet-based learning that are better than the in-person opportunities that exist for them?

P **When planning and organizing your teaching/administrative activities, think of logical ways to integrate online shopping.** For example, you can use it to:

- Research some of the products discussed in the IT Literacy course. For example, you could learn about digital cameras, buying a computer, or buying software such as a word processor. Print out, or demonstrate in the classroom, how you conducted this online research and the websites that helped you most.

- If you need to buy supplies online for home or business use, consider doing the transaction in class as a demonstration. If you prefer to keep your credit card information private, just capture screen prints of the process, and hide the credit card number using image editing software (or with a marker after printing it).

S **Whenever it seems appropriate, promote self-learning activities.** For example:

- Ensure that learners know how to tell when they are on an encrypted website and why this is important before entering in personal information.

Banking Online

Objectives

This section introduces online banking, security concerns, and some of the online services banks offer. It offers ways to introduce the concept starting with telephone banking and automated banking machines. It explains how to get started if learners want to begin online banking.

Introduction and Concepts

Online banking was introduced around 1996; the types of services banks offer have expanded quite a bit since then. At first, services were limited to account inquiries; after a while users were able to pay bills, transfer money, and trade securities. Today, you can email money to someone even if you don't know their bank account, or even their bank's name, as long as both of you hold accounts at any of the major Canadian banks. The one major thing that you can't do with online banking is withdraw money, because there is no way for the bank to send you the cash.

Before online banking became popular, banks introduced telephone banking and this service is still available. This is a great first step to help learners become familiar with electronic banking and some may prefer it to Internet banking. You will need an ID and personal identification number ("PIN") from your bank. Once you have an ID and a PIN you can use your telephone keypad to transfer money, pay bills, and so on.

There are some banks and stock-trading companies that only exist online, such as ING Direct and E-Trade Canada. Traditional financial institutions are also active online. All major banks and credit card providers provide online services where you can view statements, pay bills, and download your financial transactions into money management software

such as MS Money, Intuit Quicken, or another program – even an Excel spreadsheet. These tools make it much easier to balance cheque-books, plan for retirement, create and track budgets, and monitor debt.

One of the main concerns people have about banking online is security. In fact, your banking information is stored on the same computers whether you conduct your transactions in person, through an ATM, or through the Internet. Only the way the information is sent to the bank changes; when you bank online some of that information is sent over the Internet.

The main way you can ensure you are on a safe financial website is to check that it is encrypted (this means it starts with "https://" and may show a lock symbol as we discussed above). Most importantly, you should know and trust the financial institution that you are dealing with. You should never give out your password, even to someone claiming to be from the institution. Financial institutions take many steps to protect financial information including encrypting data, limiting access to employees who need it to do their jobs, physically locking up their servers, and protecting their Internet connections from intruders. However, some security breaches have occurred at several major banks.
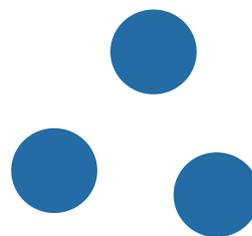
Strategies & Tips

Online banking is at the advanced end of electronic financial services. Before introducing it, you may want to talk about basic electronic financial services, such as paying by credit card, paying by debit card, and using automated teller machines (ATMs). An ATM is like online banking, but it uses a different interface than your computer and keyboard. The concept of using an ATM, which communicates electronically to the bank like Internet banking does, can help learners understand online banking more easily. Also, telephone banking may be a better place to start than online banking.

You may want to ask what financial needs and questions the learners have and discuss the most practical ways that computers can support these. Review the range of things they can do online like paying bills, transferring funds, comparing mortgages and loans, or trading stocks and mutual funds. You should also discuss security concerns and ways to handle them.

You can also extend the lesson to include budgeting, debt consolidation, and how desktop financial software can help them. This offline component could be more important than online banking for some people.

Be aware that financial services evolve over time. You may want to browse the banks' websites for new services, talk in class about products you have seen advertised, or learn more about a special financial topic of interest.

Setting Up an Online Bank Account

Once learners are interested in online banking, you may want to provide practical information about how to get started. Before you can bank online you must request a user ID (or a "login name," or "login" for short) and a password. It can be requested in person or on the phone and involves answering personal information and security steps to ensure that no one is impersonating you to get access to your accounts.

When you have your user ID and password, you are ready to login to your bank's website. It will begin with "https://" because it is an encrypted site (as we discussed above for online shopping). This means that no one can spy on the information sent between you and your bank. You can do many things from your online banking account like pay bills, transfer money, check your balance, and so on.

You can also ask the bank to email money you owe to a friend if you have their email address. This is called an Interac Email Money Transfer. To make sure that only your friend can retrieve the money, the bank will ask you to enter a security question that your friend will have to answer to have the money deposited into their account. Your friend will receive an email explaining how to get the transfer using online banking. If your friend wouldn't be comfortable with online banking, you might want to find a better way to pay them back! Note that most banks charge an extra fee for this service.

(D) **Discuss the general topic of online banking:**

- Do any of your learners have experience with online banking? What has their experience been like?

- Is online banking more, less, or equally safe compared to other banking methods?

(D) **Discuss culture and practice:**

- Older students may remember the cultural shift that occurred when ATMs were first introduced. There was a large resistance to using them when they first appeared but today they are everywhere. A similar pattern of resistance, followed by acceptance, occurs with many other types of new technologies. Discuss how your students feel about banking online. Are they resistant to the idea or do they accept it? If they are resistant, what prevents them from accepting it?

(A) **Some activities for integrating:** Start by having learners discuss electronic banking in general. Ask learners to do any of the following:

- Discuss whether they pay with credit cards and debit cards and how this is similar to, or different from, online banking.

- Discuss whether they use ATMs and how this is also an online banking channel with a different interface than a website.

- Visit the website of a major bank in your town, and read its introduction to electronic banking. They will provide information about security, services, and how to sign up for an account. If they offer an online demonstration, visit the website to demonstrate this in class or print some screenshots of it to show on paper.

- If the goal some learners are working towards involves starting a business, have them research computer-based accounting software and consider signing up for online banking for the business.

S **Whenever it seems appropriate, promote self-learning activities.**

For example:

- Suggest learners get more information about online banking from their bank. They can do this in person at a branch, on the telephone, or by visiting the bank's website.

- If they are interested in online banking, encourage them to start the process and sign up for an account.

- Help students become proactive in their own learning by knowing how to get help. For example, most banks offer telephone customer service 24 hours a day.

Section Six

Expressing for the Joy of It

This section has two parts: publishing ideas on the Internet using a blog and exploring your artistic talents through multimedia creations.

Talking to the World using Blogs

Objective

This section provides an overview of how to share your own experiences, knowledge, or creative writing through popular and easy-to-create websites called weblogs, or "blogs" for short.

Introduction and Concepts

If you are ready to post your own ideas on the Internet, a weblog, or "blog" for short, is a great way to start. **Blogs** are like online journals; they can be about any topic, personal or professional. They are organized by date and are a good way to share personal stories, industry updates, or time-based articles. They can also be used to share any type of written word like poetry, stories, and news. They can be funny, inspirational, or educational. Variations on the original text-based blogs include **audio blogs**, where the content is shared verbally (like talk radio), and **video blogs**, or **vlogs**, where content is shared through videos.

Some websites allow members of the public to create their own blogs for free, similar to free online email accounts. Blogger is one of these services; Podbean is another. An online search for "free blogs" will reveal more. Paid services also exist if you want to take advantage of advanced features or avoid advertising. Blog services take care of the programming and web hosting for you so they are the simplest way to start putting your ideas on the web. All you have to do is sign up and add your content.

For Fun

Look for blogs about your hobbies and interests in the blog search engine, http://search.blogger.com.

Watch a live webcam blog at http://justin.tv/.

The Hype Machine compiles mp3 blogs (http://hypem.com). Browse for your favourite style of music and discover a new artist.

Strategies & Tips

D **Discuss the general topic of blogs:**

- Do any of your learners read a blog? If so, which ones?

- Do any learners write a blog? Have them tell the group about it.

- What is the impact of revealing personal information in a blog? Who might find it? How can you protect your privacy (and others') while expressing yourself online?

- What ethical concerns are there about sharing the details about your life, job, or family online? How can you ensure that your freedom doesn't impact on another person's privacy?

D **Discuss format:**

- Different blogs use different mediums. Some are primarily text; others rely on audio or video files. Are different formats better for different topics?

- Ask learners what format they would be most interested in creating and reading and why?

D **Discuss style and content:**

- Are there any "rules" for blog styles and content? If yes, what do you think they are? Who decides them?

D **Discuss culture and practice:**

- Blogs are a new way of communicating that was born because of the Internet. How are they similar to or different from previous methods of communication? Are there changes in what we communicate, in addition to how we communicate, as a result of technologies like blogs?

A **Some activities for integrating:** Start by having learners read, listen to, or watch some blogs. Ask learners to do any of the following:

- Look for blogs about your hobbies and interests in the blog search engine, http://search.blogger.com. Add the keywords "audio" or "video" to search for media-specific blogs.

- Blogging is a good way to practice literacy skills and use them frequently. Design writing assignments that would be appropriate to post on a blog, whether or not learners take the final step of "posting" or sharing them online.

- A blog can be a large commitment for someone to take on alone. Consider creating a class or school blog for learners to post their creative writing in a shared space.

- Again, reflecting on the goal students defined at the beginning of the course, how could a blog be helpful?

P

When planning and organizing your teaching/administrative activities, think of logical ways to integrate blogs. For example:

- Search for educational blogs about the day's topics.

- Blogs even exist about blogging. Lorelle's blog can start you off and provides links to other resources (http://lorelle.wordpress.com/2005/08/29/learning-about-blogging-and-how-to-blog/).

S

**Whenever it seems appropriate, promote self-learning activities.** For example:

- Ensure that learners know how to search for blogs to read, listen to, or watch on their own.

- Encourage learners to start free blogs at Blogger.com or another website, or contribute to the class' joint blog.

- Inform learners that they can delete entire blogs, or blog entries, that they no longer want online. They can research the details of how to do this on their blog provider's website.

Artistic Expression using Multimedia

Objectives

This section reviews some of the ways people can use technology to express themselves using images, sounds, and video.
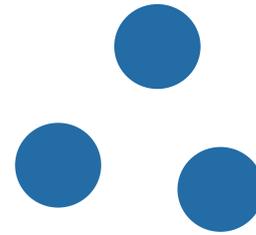
Introduction and Concepts

Computers and the Internet began as text-based mediums but over time images, sound, video and animation have become an integral part of the new technologies. Multimedia tools are one of the most exciting parts of using ICT and they are a great way to introduce learners to using computers and exploring the Internet.

Using different media such as sound or video can produce dramatically different educational results. Studies show that people have the least success recalling material that they have read and that retention rates improve as the medium of instruction becomes more interactive and multi-sensory. "We retain 10% of what we read, 20% of what we hear, 30% of what we see, 50% of what we hear and see, 70% of what we say, and 90% of what we say and do" (Pike 1989, p.61).

This is important to consider as educators. How can you incorporate different mediums into your own classes? Whether you are creating your own multimedia resources or use others' resources, multimedia tools make teaching and learning more exciting and help learners express themselves in new and different ways.

Strategies & Tips

Multimedia creations can be produced using a variety of devices, with or without a computer. You can take photographs and print them directly from the camera, shoot video and edit it in-camera, or you can use a computer to edit images, sound, and video. A wide range of software can be used to create art, including software that is primarily aimed at business users (e.g., MS PowerPoint). This section explores some of the things you can do with images, sound, and video.

Multimedia offers a world of creative opportunities. While you may want to provide an overview of various mediums, it might be easier for students to start with a message they want to convey and then decide which medium is most conducive to sharing this message, or which attracts them most.

Still Images

Still images, such as photographs or drawings, are a simple place to start. To make a computer-based image you can start with a digital or scanned photograph, drawing, or painting. You can also create components of a picture to finish online. You could scan or photograph a background that adds colour and/or texture, like a piece of cloth or Japanese paper, and subjects for the foreground. You can also start with a blank screen and create a picture on the computer from scratch. Replacing the computer mouse with a tablet and stylus "pen" lets students "draw" on a computer much more easily than they can with a mouse. New tablet PCs have this type of interface built right into them. You can also attach an external tablet and stylus to a computer.

Once you have a digital file you want to work with, you need software to manipulate the image. Adobe Photoshop is one of the most popular image manipulation programs available. It is good, hard to learn, and expensive. Easier and more affordable programs include the free open source software Gimp, and MS Paint, which comes with MS Windows and is found in the *Start > All Programs > Accessories* menu. These programs allow you to import graphics and photographs, change and overlay them, cut and paste elements, and combine images in new ways.

Sound

Sound includes the spoken word (poetry, story, rap music), instrumental music, digital music, and soundscapes. To create a sound file on your computer you will need a microphone plugged into your computer. Many laptops have a microphone already built in. You will also need audio recording software, such as the free software Audacity, Garage Band (which come with Macintosh computers), or the Sound Recorder that comes with MS Windows (look in the *Start > All Programs > Entertainment* menu). You can also use a digital recording device or PDA (such as a Palm Pilot) with a built-in microphone. The sound files can be uploaded to a computer for editing.

To create music, you might want to use a midi device, such as an electronic keyboard, to import sound to the computer. Other instruments are going digital as well – even trumpets and drums. You can also find music clips online that you can layer into new creations that include your voice or other sampled sounds.

People who want to share music, ideas and information regularly online often do this via a "podcast" (a combination of the words "iPod," Apple's popular brand of mp3 player, and "broadcast"). Podcasts do not need to be heard on iPods; they can also be heard on other types of mp3 players or a computer with speakers. They are like home-grown radio shows and many of them are quite professionally done.
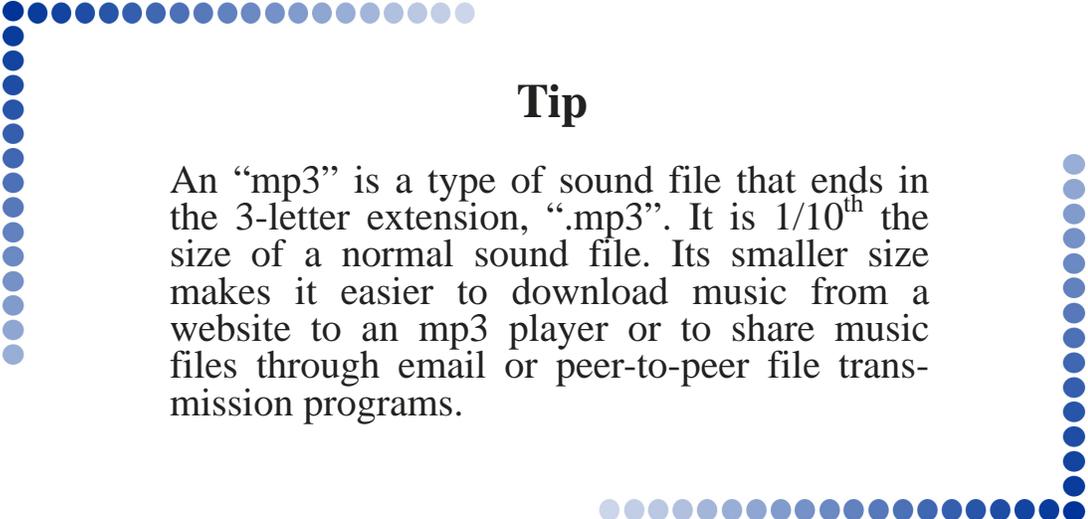
Tip

An "mp3" is a type of sound file that ends in the 3-letter extension, ".mp3". It is $1/10^{th}$ the size of a normal sound file. Its smaller size makes it easier to download music from a website to an mp3 player or to share music files through email or peer-to-peer file transmission programs.

Video

Video allows the combination of sounds and images for a multi-sensory experience. Video can come straight from a camcorder, webcam, digital camera or cell phone that can take videos. You can also create video by combining still images, songs, voiceovers, or other soundtracks. Videos can range in complexity from amateur home movies to polished productions. Lack of experience should not discourage new moviemakers from trying it – the new tools are very easy to use, you can produce results quickly, and it is a fun, versatile medium.

The simplest of videos will be edited in-camera by turning the camera on and off to transition between scenes. You can refine the results by editing video on a computer.

Examples of easy video editing software include Windows Movie Maker, Pinnacle for Windows, and iMovie for Mac. Linux users may want to investigate the free, open source editor, Cinelerra (http://cvs.cinelerra.org), or the Dream Linux multimedia suite (http://www.dreamlinux.com.br).

Literacy Nova Scotia invited a local videographer, Kimberly John Smith, to offer a videography workshop to its students. Both the teachers and learners were inspired by the video medium and how well it can convey various messages. A review of Smith's work will inspire ideas (www.creativeaction.ca) and his movie games are fun ways to practice making videos (http://www.creativeaction.ca/mgames.html).
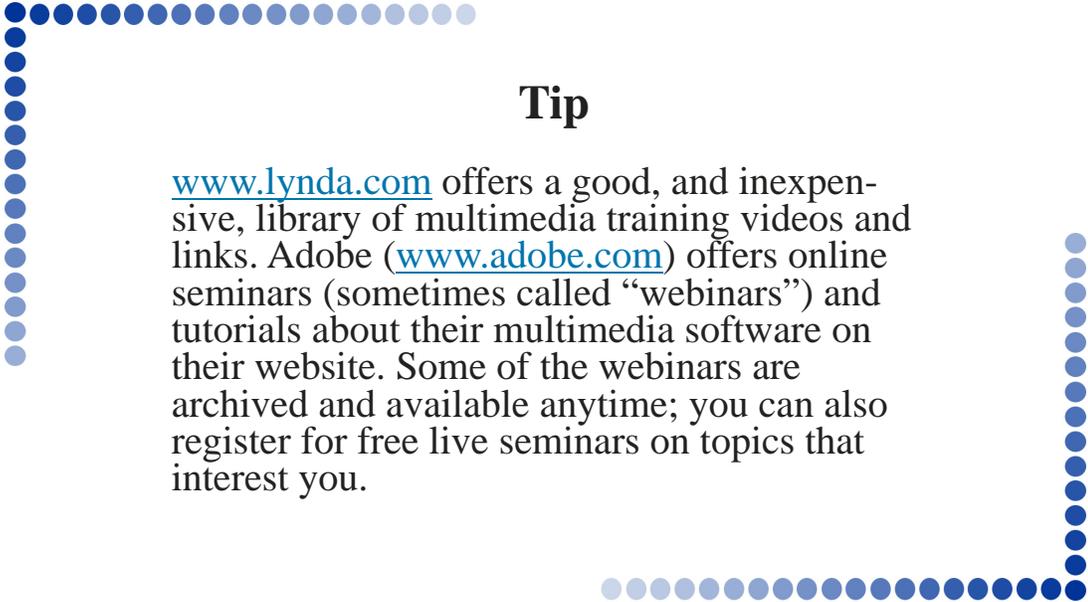
Tip

www.lynda.com offers a good, and inexpensive, library of multimedia training videos and links. Adobe (www.adobe.com) offers online seminars (sometimes called "webinars") and tutorials about their multimedia software on their website. Some of the webinars are archived and available anytime; you can also register for free live seminars on topics that interest you.

(D) Discuss the general topic of arts and multimedia:

- Do any of your learners create art now? What kind? How could new technologies add to their artistic expression?

- How can learners share traditional arts online?

- How is art changed through the use of digital technologies? ("Technologies" can include cameras, video cameras, scanners, and microphones. It also can include software like image manipulation programs, music composition programs, video-editing programs, or animation programs.)

- Can technology help you create art? What if you don't have traditional skills, such as drawing or playing an instrument?

(D) Discuss format:

- What types of multimedia formats exist (e.g., image, sound, moving image)? What are the strengths and weaknesses of each?

- Are certain types of art better suited to certain multimedia formats? Why or why not?

(D) Discuss style and content:

- What kind of creative productions can you make with multimedia? Does the media dictate style and content or are they completely independent? For example, can humour and tragedy be equally well-communicated in all mediums?

(D) Discuss culture and practice:

- What type of multimedia are your learners and their friends and families using in person or online (some examples include TV, their mp3 players, YouTube etc.)

- What type of multimedia are your learners and their friends and families creating?

- After seeing examples of others' writing, art, audio blogs, or videos online, are learners more or less encouraged about posting their own creations online?

(A) Some activities for integrating: Start by having learners browse the world of multimedia creations. Ask learners to do any of the following:

- Browse the Internet and share examples of multimedia art, images, podcasts, or videos.

- Discuss what the learners liked and disliked about what they experienced.

- What do the learners, or their friends, already create in terms of visual art, music or the spoken word, or audiovisual art (perhaps live through performance)? Would these arts translate well into digital art?

- Are there any individuals or groups in the class that want to volunteer to research one of the mediums, either by conducting online research, interviewing an artist, or trying their hand at creating digital art?

- Brainstorm whether artistic pursuits can help with their goals. Do they need a logo, graphics, audio or video for a website? For other promotion?

P **When planning and organizing your teaching/administrative activities, think of logical ways to integrate multimedia learning.** For example you can use it to:

- Teach about multimedia itself. Some resources include Adobe seminars, a tutorial from www.lynda.com, or other information from the Internet, a software store, or a bookstore.

- Buy a magazine about digital art, and discuss one of the articles in class.

S **Whenever it seems appropriate, promote self-learning activities.** For example:

- Let your learners know that creating digital art is getting easier and less expensive. There are inexpensive cameras, headsets, and computer programs that allow the creation of any kind of digital art.

- Encourage learners to explore different digital arts without being worried about their formal knowledge. You don't have to be an expert to have fun with art. If you don't like something that you create digitally, you can much more easily "undo" your work than you could in paint or other mediums, for example.

- Reassure your learners that they don't have to share their creations with anyone if they don't want to.

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Resources

Adult Literacy and Technology Network (www.altn.org/)
See in particular the Literacy Resources for teachers and students at www.altn.org/techtraining/.

Advancing Learning Technology (alt.ns.literacy.ca/)
See in particular the Student's Links and Instructional Links.

Association for Educational Communications and Technology (www.aect.org)
The annotated list of AECT Journals and publications is particularly helpful (see www.aect.org/Intranet/Publications/index.asp). AECT publishes a bimonthly journal, Educational Technology Research and Development.

Captured Wisdom™ on Adult Literacy (www.ncrtec.org/pd/cw/rest/tech.htm)
While this website has been dormant since 2005, it offers project examples and multimedia resources for learning projects.

Carter, Jeff with Quann, Steve (2003). *Under Construction: Building Web Sites As A Project-Based Learning Activity For Abe/ESOL Classes: Tips For Teachers. Boston MA: World Education.*

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*See also other articles at www.ucalgary.ca/~iejll*

Free-Ed.Net (ged.free-ed.net/free-ed/default.asp)
This online educational website offers self-study courses.

Hacker, Emily and CapeHart, Mary Ann (1999). *Surfing for Substance: a Professional Development Guide to Integrating the World Wide Web into Adult Literacy Instruction,* New York: The Literacy Assistance Center.

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Reviews software that enhances reading and writing learning, and reviews websites relevant to literacy and learning disabilities.
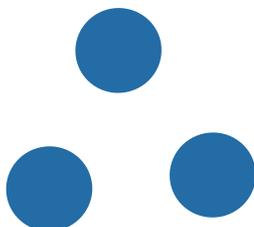
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Learn the Net (www.learnthenet.com/english/index.html)
This is a great site with lots of activities for getting acquainted with the Internet.

Literacy|Tech (www.literacytech.org/)

Microsoft Innovative Teachers Program (www.microsoft.com/education/innovativeteachers.mspx)
This site contains information on how to integrate ICTs into education.

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NorthWest Internet Gateway for Adult Education Online Resources (*www.nwlincs.org/NWLINCSWEB/Useful50.htm*)
Links to fifty adult education websites providing reading, math, IT and other subject resources.

Orey, Michael (ed). 2001-present. *Emerging Perspectives on Learning, Teaching and Technology [Online]. Available from: www.coe.uga.edu/epltt/ [May 18, 2007]*
This is a collaborative textbook published under a Creative Commons Licence, containing articles, videos, animations, narrations and images about learning and cognitive theories' and instructional theories and models.

Rosen, David J. (Ed.) (2005), *Harnessing Technology to Serve Adult Literacy: Integrating Technology in Adult Literacy Education,* Boston, MA: Newsome Associates. Available from: alri.org/harness.html [May 16, 2007]