

Open at Scale: Project Guidelines

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Introduction

Background

With a goal to collaboratively design and develop common modules to core courses across several disciplines, eCampusOntario is sponsoring our college and university partners to contribute their in-house experts in subject matter, educational technology, information management, curriculum development, and instructional design. Under the umbrella, *Open at Scale*, eCampusOntario wants to support consistent design and development for open educational resources (OER) for these projects, and ensure maximum impact and consistent experience for learners.

The purpose of this short guide, part creation and part curation by eCampusOntario Program Manager, Peggy French, was to provide a springboard for discussion during a f2f meeting with interested education stakeholders in March 2019.

From these basic elements, the group of representatives from Ontario's post-secondary Nursing and Business teaching and learning communities, who convened in Toronto, assisted in building an acceptable template and guiding principles to provide high-quality and consistent learning modules for designated modular content. Beyond concentrated savings in these disciplines, eCampusOntario is hopeful that this coordinated design and development further will build the open community across Ontario's colleges and universities.

However, the guide remains a living document, edited and revised as the *Open at Scale* projects progress.



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WHAT IS OER?

OER definition

Definition

The term OER (Open Educational Resources) was first defined by UNESCO in 2002 as “any type of educational materials that are in the public domain or introduced with an open license” and can “range from textbooks to curricula, syllabi, lecture notes, assignments, tests, projects, audio, video and animation.”

Although many people think of OER and Open Education as generally referring to online-only material and courses, this is not the case. Many open textbooks, for example, are also available in hard copy, or can be printed if a user prefers.

The 5 Rs of Openness

OER differ from traditional educational resources in their licensing and permissions. Namely, the “open” aspect of OER can be defined by David Wiley’s *5R Framework*.

Retain

the right to make, own, and control copies of the content

Reuse

the right to use the content in a wide range of ways (e.g., in a class, in a study group, on a website, in a video)

Revise

the right to adapt, adjust, modify, or alter the content itself (e.g., translate the content into another language)

Remix

the right to combine the original or revised content with other open content to create something new (e.g., incorporate the content into a mashup)

Redistribute

the right to share copies of the original content, your revisions, or your remixes with others (e.g., give a copy of the content to a friend)

*This material was created by David Wiley and published freely under a Creative Commons Attribution 4.0 license at: <http://opencontent.org/blog/archives/3221>

OER Myth busting

Think OER are too difficult to find or complicated to use? Worried that they will take too much time and effort to implement? Concerned about copyright and intellectual property protection? The OER Policy for Europe has addressed many of these concerns on their OER Myth busting! site.

Attributions

The 5R Framework on this page was retrieved from SFU's Open Educational Resources research guide and is used under a CC BY 4.0 license.

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Why use OER?

Benefits of using OER

As can be seen in the infographic below, there are many reasons to use OER, including increasing student retention, providing more relevant materials for your classes, and saving students money.

Open Educational Resources and You



➤ Impact!

Adapting, creating, and sharing OER increases dissemination of your work.

➤ Freedom

Finding, adapting, and creating OER gives you more freedom in your course design by providing opportunities for you to customize and localize your content to the needs of your students

➤ Innovation

Open teaching practices allow you to tailor your courses to current research, align outcomes, and engage students as learning partners and co-creators

➤ Success

OER ensures that students have the current and relevant course materials they need from day one of the course – they don't have to spend time searching for older editions, rental options, or other ways of "sharing" textbooks –allowing them to get to work on your course

Want to know more about Open Educational Resources (OER), email us at oer@ecampusontario.ca

Why Open Education matters

The following video explains why the move to Open Education (and the use of OER) is so important.



An interactive or media element has been excluded from this version of the text. You can view it online here: <https://ecampusontario.pressbooks.pub/openatscale/?p=614>

Why Open Education Matters from Blink Tower on Vimeo.

Faculty Perspectives on Open Textbooks

The following video describes the journey of David Simon, a faculty member at Lambton College, into Open Education.



An interactive or media element has been excluded from this version of the text. You can view it online here: <https://ecampusontario.pressbooks.pub/openatscale/?p=614>

My OER journey from Design House on YouTube.

For a lengthier video, view the eCampusOntario Faculty Focus Webinar from Open Education Week 2019:



An interactive or media element has been excluded from this version of the text. You can view it online here: <https://ecampusontario.pressbooks.pub/openatscale/?p=614>

eCampusOntario Faculty Focus Webinar by eCampusOntario on Youtube.

Attributions

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Where to Find OER

All content used or adapted for resources created as part of *Open at Scale* should be openly available – be it images, videos, or textbook chapters. As part of our *Open at Scale* Business and Nursing environmental scans, we’ve already uncovered existing OER in each discipline to get you started:

- *Open at Scale* Business OER Environmental Scan
- *Open at Scale* Nursing OER Environmental Scan

eCampusOntario has also developed a working spreadsheet to document existing OER that can be adapted for each of the Nursing projects.

However, there are a multitude of other OER out there to borrow or adapt, including textbooks, courses, multimedia, data, and supplementary materials. These can be found by searching regular search engines (like Google) using certain keywords and limiters, but it is easier to find them through dedicated OER repositories or websites. Below are a sampling of such repositories and websites.

Repositories

eCampusOntario Open Library – The Open Library is the home of open educational resources in Ontario. Since the initial launch in 2017, eCampusOntario has continuously improved the library to meet the needs of Ontario post-secondary educators and learners.

Oasis – “Openly Available Sources Integrated Search (OASIS) is a search tool that aims to make the discovery of open content easier. OASIS currently searches open content from 80 different sources and contains 331,461 records.”

SOL*R (Shareable Online Learning Resources) – This is BCcampus’ OER repository.

OER Commons – A large collection of a variety of types of OER, including textbooks, courses, and ancillary materials.

MERLOT – MERLOT is “a curated collection of free and open online teaching, learning, and faculty development services contributed and used by an international education community.”

OER Handbook for Educators – The Handbook is “a guide for those who are just getting started in the creation of open educational resources (OER).”

The Orange Grove – A digital OER repository of instructional resources that can be reused, remixed, and redistributed.

Textbooks

BCcampus's BC OpenEd Resources page – Provides general information about OER and a list of textbooks that have been “created...or...re-created from existing [OER] by BC post-secondary faculty, reviewed by B.C. faculty and made available under a Creative Commons license.”

OpenStax – Supported by Rice University, OpenStax has a huge collection of open, peer-reviewed textbooks on a large variety of subjects.

Project Gutenberg – The collection contains tens of thousands of digitized books available for download; audiobooks are also available.

AU Press – Athabasca University's AU Press publishes open access journals and books with a focus on Canada, the North American West, and the Circumpolar North.

Libretexts – Open, accessible, free, interactive textbooks.

Open Textbook Library – This library includes a number of open, accessible books that can be downloaded for free or printed for a low cost.

Multimedia

Creative Commons Search – A repository of various types of media, including images, music, and videos.

Vimeo – Videos with a CC license can be found through Advanced Search options.

Flickr: Creative Commons – Flickr is an “online photo management and sharing application” and many photos are available under CC licenses; Flickr allows searching by type of license.

Pixabay – Pixabay allows you to download and share royalty free photos and videos.

Unsplash – All photos published on Unsplash (taken by photographers around the world) can be downloaded and used for free.

Pexels – This searchable repository provides access to free stock photos licensed under a Pexels license.

Courses

Khan Academy – A collection of instructional videos and practice exercises on topics including math, science, programming, history, English, economics, and standardized test prep.

MIT OpenCourseWare – Offers free access to almost all MIT course content.

Saylor Academy – A non-profit organization committed to providing free and open online courses.

Coursera – An educational platform partnered with dozens of prestigious universities and institutions (including MoMA, Stanford, Yale, the University of Toronto, and the University of London).

Open Course Library – A collection of quality, free, downloadable courses that can be used for teaching.

Utah State University Open Courseware – Offers free access to a number of courses offered at Utah State.

SUNY OER – Offers ready-to-adopt courses in a variety of areas.

Supplemental materials

Supplemental, or ancillary, OER materials can include lecture notes, lesson plans, PowerPoint presentations, assignments, and activities.

PhET – Interactive math and science simulations with lesson plans and activities.

OER Commons – A large collection of a variety of types of OER, including textbooks, courses, and ancillary materials.

Citizendium – A community of authors developing quality, free knowledge that can be shared.

Connexions – OpenStax CNX is available in two formats – Pages and Books – which are accessible and can be reused.

HippoCampus – Free and accessible videos, presentations, and simulations.

Internet Archive's OER Library – A library of OER that contains a number of accessible courses, video lectures, and supplemental materials from universities in the US and China.

IOER (Illinois Open Educational Resources) – Offers free, open, quality educational and career content. The tools can be used to find, share, and produce resources.

National Science Digital Library – A library of resources that educators can access to reuse or revise for their own courses.

Skills Commons – Free OER that can be used in workforce development and training.

Teaching Commons – A collection of OER including open textbooks, syllabi, and lectures that can be reused, revised, and redistributed.

Lumen Learning – Offers open, accessible OER materials to improve learning.

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Additional resources taken from:

OER Knowledge Cloud. (n.d.). OER Repositories and Resources. Retrieved from <https://oerknowledgecloud.org/content/oer-repositories-and-resources>

Community College Consortium for Open Educational Resources (n.d.). Retrieved from <https://www.cccoer.org/learn/find-oer/general-oer/>

LICENSING AND COPYRIGHT

Copyright

Copyright definition

In Canada, copyright is defined as the “sole right to produce or reproduce a work or a substantial part of it in any form” and it “provides protection for literary, artistic, dramatic or musical works (including computer programs) and other subject-matter known as performer’s performances, sound recordings and communication signals.”

Copyright and Creative Commons

You might remember that in the *Open at Scale* invitation, contributors were asked to agree that all work produced during the duration of *Open at Scale* be licensed with the Creative Commons Attribution Sharealike 4.0 International (CC BY-SA 4.0) license.

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The video below discusses how Creative Commons licenses allow creators to modify copyright terms.



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Creative Commons Kiwi from Creative Commons Aotearoa NZ on Vimeo.

Attributions

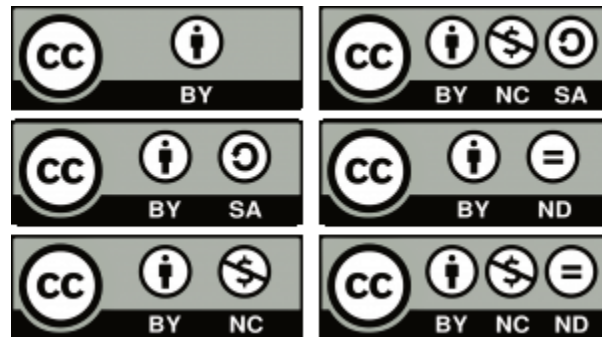
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Below are the symbols and definitions of each of the Creative Commons licenses, to help you understand how you can use open content for *Open at Scale* projects.



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long as they credit you and license their new creations under the identical terms. This license is often compared to “copyleft” free and open source software licenses. All new works based on yours will carry the same license, so any derivatives will also allow commercial use. This is the license used by Wikipedia, and is recommended for materials that would benefit from incorporating content from Wikipedia and similarly licensed projects.

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This license is the most restrictive of the six main licenses, only allowing others to download your works and share them with others as long as they credit you, but they can't change them in any way or use them commercially.

Adapting an existing textbook

If you are adapting an existing open textbook, the adaptations you make will be released with whatever open license you choose, while the rest of the book will be released under the license of the original book. In other words, you need to respect the license of the original work. You cannot license what you do not create. You can only attach a CC BY (Creative Commons Attribution), or other open license to the parts of the book that you have created and that are new. The same thing goes for multimedia use.

However, there is a catch. If the textbook you are adapting has a **Share-Alike** condition (CC BY-SA 4.0) stipulated, then you must release the entire book using the same license as the original book.

What about using something that isn't openly licensed?

Within an OER, it is acceptable to link to and/or reference a work that isn't openly licensed, as long as you are not plagiarizing the work. However, because *Open at Scale* aims to create open and widely accessible educational resources, we ask that most items referenced within any OER created for *Open at Scale* be open access (as in, not behind a paywall).

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Attribution Statements

Attributions

Regardless of the Creative Commons license assigned to a work, *all* CC licenses require at least an attribution to the original creator of the work (the “BY” part of a CC license). Below are some examples of how to create attribution statements for text and media items that are incorporated into *Open at Scale* projects.

Examples of attribution statements

All Creative Commons licenses contain an attribution (BY) clause. This means that you must include a statement that gives credit to, or attributes, the creator of the work from which you have borrowed, whether it is text, an image, a video, or another item. If you have made a change, indicate that in your attribution statement.

As far as how and where to place attribution statements for text or media taken from another source or sources, best practices state that you should place them at the bottom of each affected web page. Clearly mark all of these with a heading called: “Attributions”. Several attribution statements can be listed under this heading. Here are examples.

Example of an attribution statement for adapted text

This chapter is an adaptation of *Natural Disasters and Human Impacts* (on Open Geography Education) by R. Adam Dastrup and Maura Hahnenberger, and is used under a CC BY-SA 4.0 International license.

Note:

- The statement is clear, simple, and contains all elements required for a complete attribution:

title of the work used, author(s), and license type. A link is provided to the original work, the home page of the website (this is optional), and the license type.

- There is no need to name the adapting author in this statement.
- At the bottom of the **Chapter** page in Pressbooks, there is an option to set the license type for that page which will override, for this page only, the overarching license chosen for the book on the Book Info page.
- If the chapter contains some original material AND some material from another source, then rather than saying “This chapter is an adaptation of....”, say “This chapter contains material taken from....”.

Example of an attribution statement for an adapted image

Figure 1.2

Dog by David Locke is used under a CC BY 2.0 license. Modifications to this photo include cropping.

Note:

- The statement is clear, simple and contains all elements required for a complete attribution: title of the image, photographer, and license type, as well as a note of the changes made. A link is provided to the original work, the home page of the photographer (if available), and the license type.
- For *Open at Scale* projects, attribution should also be included directly below a media item.

Keep a record of all changes and additions

As the author, you retain copyright of all new material you create. This means that even if the new material you create is released under an open license, you will receive attribution for your contribution.

As you edit and make changes (text and images) and/or add new material to pre-existing resources, such as a chapter or section within a chapter, keep a list so these additions/changes:

- Can be included as part of the **Copyright Notice**

- Can be accurately attributed to you, the author

Minor changes, such as fixing grammatical or spelling mistakes, don't need to be documented.

Attributions

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INSTRUCTIONAL DESIGN TEMPLATE

For consistency across OER, we ask that *Open at Scale* projects teams follow the instructional design template outlined on the next page, incorporating all of the sections and elements that are identified. The design template aligns with Col's Teach Presence sphere and the four phases of cognitive development, which you can read more about in our Frameworks, Phases, and Structure chapter. For an example of how the instructional design template can be applied to a chapter, see the chapter, Sample chapters for Open at Scale.

Chapter Template to Follow

Our instructional design template outlines that each chapter in OER created for *Open at Scale* must include the following, in the order identified:

1. **Learning Outcomes**
2. **A pre-assessment** (with the heading, **Show what you know**)
3. **Content** (including **interactive elements**, **multimedia**, **tips/additional reading** blocked off in text boxes, and **interactive assessments**)
4. **Reflective questions**
5. **Key takeaways**

For guidelines on how to format – and what to include – in each chapter, we’ve provided the following template:

Learning Outcomes

Learning Outcomes

The Learning Outcomes box is generated automatically by selecting Textboxes > Learning Objectives in the WYSIWYG editor. You will need to change the heading from “objectives” to “outcomes”

Include 2-5 learning outcomes in the textbox. Learning outcomes should contain a measurable action verb that accurately aligns with the level of learning that students should achieve, as per Blooms Taxonomy.

- First
- Second

Show what you know (pre-assessment)

This can be a short multiple choice or true/false question, or you can get creative! As long as you are assessing learners’ prior knowledge.



An interactive or media element has been excluded from this version of the text. You can view it online here:

<https://ecampusontario.pressbooks.pub/openatscale/?p=820>

Content

Each chapter should be no more than 2-4 pages in length (in a Word document) and include:

- Interactive learning objects built with H5P



An interactive or media element has been excluded from this version of the text. You can view it online here:

<https://ecampusontario.pressbooks.pub/openatscale/?p=820>

- Educational multimedia – pictures, audio clips, videos



Photo by John Cameron on Unsplash

- Tips/additional reading blocked off in a text box

Tip:

Emphasize important content in your chapter by blocking it off with a text box.

- **Test your knowledge** self-assessments built with H5P



An interactive or media element has been excluded from this version of the text. You can view it online

here:

<https://ecampusontario.pressbooks.pub/openatscale/?p=820>

Reflective questions

Reflective questions

The Reflective questions box is generated automatically by selecting Textboxes > Learning Outcomes in the WYSIWYG editor. You will then need to change the title.

Type 2-4 questions here:

- First
- Second

Key takeaways

Key takeaways

The Key takeaways box is generated automatically by selecting Textboxes > Key takeaways in the WYSIWYG editor.

Include your key takeaways here, making sure that they are aligned with the learning outcomes indicated at the beginning of the chapter.

- First
- Second

STYLE GUIDE

Communicating consistently

Although much of the style in communication for your curating and creating will be formatted as you follow accessibility guidelines, we will complement these with other style decisions to provide a consistent look and feel for *Open at Scale* resources.



Photo by Jason Rosewell on Unsplash licensed CC0

Grammar, Punctuation, Format

With the goal of consistency within and across the OER developed through *Open at Scale*, we've developed a Style Guide to accompany our instructional design template. The following is our general Style Guide, with separate chapters each dedicated to Business and Nursing nomenclature.

In general

- Use the second person e.g., “You are responsible” rather than “The learner is responsible”.
- Use active voice instead of passive voice.
- Geographically localized examples are required.
- All language must be inclusive (e.g., *folks not guys*, *humankind not mankind*, *a person with a disability not disabled person*).

Spelling

- In general, follow Canadian spelling. Any spelling exceptions will be outlined in this guide.

Citation style

- All *Open at Scale* works will follow APA Style. Please refer to the OWL Purdue APA Formatting and Style Guide for details about in-text citations and reference lists, as well as headings, tables, figures, and captions.
- All OER require in-text citations and a full reference list at the end of each chapter.

Spacing

- Use only one space after a period (i.e., between sentences) and after a colon (:).

Punctuation

- *Open at Scale* will incorporate use of a **serial comma** (or, **Oxford comma**), i.e., a comma placed immediately before the coordinating conjunctive (and, or, nor).
- Follow e.g. (for example) and i.e. (in other words) with a comma.
- Do not use the ampersand (&); spell out *and* in full.
- Use double quotation marks for all quoted matters. Single quotation marks should be reserved to enclose quotes within quotes.
- Do not capitalize the first letter of the first word after a colon unless the colon introduces two or more sentences.
- With em dashes (–), insert a space on either side.
- For bullet points:
 - Always start the bullet point with a capital letter.
 - Use a period (full stop) after every bullet point that is a sentence (as these bullets do).
 - Use a period after every bullet point that completes the introductory stem.
 - Use no punctuation after bullets that are not sentences and that do not complete the stem.
 - Use either all sentences or all fragments, not a mixture.

Boldface

Boldface is reserved for key terms within the body text, which may or may not appear in the glossary (see Glossary below). It should not be used for emphasizing a word or phrase.

Numbers

- Follow APA numbering:
 - Use words for numbers from one to nine.
 - Use numerals for numbers 10 and up.
 - Use commas in numerals over 999 (e.g., 1,000; 2,099).
 - Always use words for numbers that begin a sentence, title, or heading.
 - For fractions, spell out in text with a hyphen (e.g., three-fifths).
 - Use numerals with school grades (e.g., Grade 6).
 - For number ranges in text use “to” (50 to 100mg) except for years (e.g., 2017–2018) and pages (e.g., 199–200), for which you are to use en-dashes.

- For number ranges in tables and parentheses, use an en-dash (e.g., 50-100 mg).
- For percentages, use numerals and the % symbol. The symbol should be repeated with each number in a range or series (e.g., from 1% to 4%).
- Measurements:
 - Use numerals for any number followed by a unit of measurement; expressions of statistical or mathematical functions (5 times as many, the 77th percentile); numbers that represent scores.
 - For temperatures, use Arabic numerals and the degree symbol (37.8°C).
- Times of day:
 - Use a colon only when a fraction of an hour is indicated (9:05 a.m.; or else 2 p.m.). Always specify a.m. or p.m.

Measurements

- Canadian metric measurements are to be used. As in, use kilometres, not miles; millimetres, centimetres, and metres instead of inches, feet, or yards; kilograms not pounds; and Celsius (C) not Fahrenheit (F).
- If an existing OER is being adapted, convert measurements to metric and round off the result. For example, 10 inches equals 25.4 centimetres, which should be recorded as 25 centimetres.
- Spell out units in parentheses after their first use. Afterwards, units may be recorded in their abbreviated form, with a space between the numeral and the unit (e.g., 50-100 mg).

Acronyms, abbreviations, initialisms

- Spell out acronyms and initialisms in parentheses after their first use and then use the short forms.
- Acronyms must be uppercase.
- Do not use periods in acronyms, abbreviations, or initialisms unless noted in this guide.

Links and URLs

- Do not open links in a new window or tab (accessibility) unless the link falls under one of these criteria.

- If a link must open in a new window or tab, a textual reference must be included in the link information (e.g., [NewTab]).
- The link must be meaningful in context, without generic text such as “click here” or “read more.”

Headings

- Except in chapter titles and in the case of proper nouns, capitalize only the first word in the headings and the first word after a colon as well as all proper nouns.
- Do not use a period (full stop) after headings.
- **If authoring directly in Pressbooks**, content in the chapters with <h1> tags will show up under chapters in the book. This allows learners to link directly to important content within chapters. The example below shows the standard chapter title, “Teamwork in Business” with important, discrete content highlighted using h1 tags. All sub-headings should then be tagged with h2, h3,
- **If authoring in a Word document**, indicate new chapters using **Heading 1**.

1. Teamwork in Business	—
Learning Objectives	
Show What You Know	
The Team and the Organization	
Why Organizations Build Teams	
Why Teamwork Works	
The Team and Its Members	
Key Takeaways	

Example: Chapter with h1 tags showing as sub-headings

Glossary

- Any key term highlighted in boldface should have a glossary definition associated with it. Inserting a glossary term with the WYSIWYG editor will automatically add a definition to the back matter, and make the definition immediately visible to a the reader with a mouse rollover.

- Keep definitions short and easily reviewed rather than providing too much information. Disregarding articles (the, a) and keeping to a sentence or two at most is preferable.

Tables

- Before creating a table, refer to the APA Style Guide to 1) determine the necessity of conveying your information in a table, and 2) ensure that your table will be formatted according to APA guidelines.
- To ensure easy export into OER in all formats, your table should have no more than four vertical columns.
- Tables may not have merged or split cells.
- Do not add tables as images. Create the tables using either the WYSIWYG editor or the plug in TablePress. There is more interactivity with TablePress, as users can sort and search (shown below).

WYSIWYG table

First Name	Last Name	Institution
Eva	Peisachovich	York University
Celina	Da Silva	York University
Michelle	Hughes	Centennial College

TablePress table

First Name	Last Name	Institution
Kim	Carter	Conestoga College
Lisa	Koster	Conestoga College
Kevin	Baker	Durham College
Kathy	Dumanski	George Brown College
Mary	Vaughan	Seneca College
Sarah	Arliss	Seneca College
Isaam	Dawood	Lakehead University
Adam	Hustwitt	Conestoga College
Brian	Gould	Mohawk College
Karen	Murkar	Seneca College
Andrew	McTear	Mohawk College
Evan	DiValentino	Mohawk College

Nomenclature: Business

With different teams working on different projects within the discipline of business, agreeing on common language and conventions to use throughout the creations becomes important. If there are multiple names or synonyms for a business term, using one across the OER and discipline provides clarity and consistency. For example, is it S.C.O.T Analysis or S.W.O.T analysis?

This nomenclature page will be updated as conversations emerge regarding preferred terminology. It will also assist in ensuring creations use inclusive language, like for example, *businessperson* rather than *businessman*.

Please refer to the alphabetical listing below for our preferred term list. If you would like a preferred term and its synonyms added to this page, please contact Emily Carlisle – Editorial Lead, Open at Scale (ecarlisle@ecampusontario.ca)

Preferred terminology

A-C

- businessperson NOT businessman

Nomenclature: Nursing

With different teams working on different projects within the discipline of business, agreeing on common language and conventions to use throughout the creations becomes important. If there are multiple names or synonyms for a business term, using one across the OER and discipline provides clarity and consistency.

This nomenclature page will be updated as conversations emerge regarding preferred terminology. It will also assist in ensuring creations use inclusive language; there may be recently evolved language helpful to highlight.

Please refer to the alphabetical listing below for our preferred term list. If you would like a preferred term and its synonyms added to this page, please Emily Carlisle – Editorial Lead, Open at Scale (ecarlisle@ecampusontario.ca).

Preferred terminology

A-C

D-E

F-H

healthcare practitioner NOT nurse

Media Best Practices

PRESSBOOKS

Pressbooks enables you to include three types of media in your book: images, audio and video. These media types are different than interactive elements built with H5P, which engage readers in an immediate call to action.

Supported media file types

Many types of media can be uploaded into your book. These files can be uploaded directly into the chapter using the Add Media feature or through your Media Library.

Images	Audio	Video	Files
<ul style="list-style-type: none">• jpg• jpeg• png• gif	<ul style="list-style-type: none">• mp3• midi• Mid• m4a	<ul style="list-style-type: none">• mov• avi• wmv• mp4	<ul style="list-style-type: none">• pdf• epub

Storage

- All media file uploads must be under 10 MB, but we recommend keeping them under 2 MB.

Accessibility

- Always give your photo a caption. Photos without captions will not render properly in all e-readers.
- Always add a title and description for your image.
- Do not use colour as the only visual means of conveying information.
- **If an image is intended to serve educational purposes**, it's best practice to write Alt Text, which will be read to visually impaired readers by a screen reader or accessibility device. The Alt Text should serve as the equivalent purpose of the non-text material. Sound practice limits the alt text to 100 characters.

- If the diagram/image/photo is complicated and requires a lengthier description, add a brief description in the alt text field and add a [Long description available]. Add a Long Description section at the end of the chapter. Link [Long description available] to the Long Description section.
- **If an image is purely decorative** or if the descriptions or surrounding text adequately explain the same content, put "" in the alt text field. The screen reader should just say "graphic" and move on rather than read the file locations.
- Any media with audio should have captioning or a supporting transcript, including:
 - speaker's name
 - all speech content
 - relevant descriptions of speech
 - descriptions of relevant non-speech audio
 - headings and subheadings

Attributions

The content in this chapter is adapted from Pressbooks User Guide by Book Oven Inc. (PressBooks.com) under a Creative Commons Attribution 4.0 International License.

FRAMEWORKS, PHASES, AND STRUCTURE

Your institution may subscribe to a design and development process with its own loyalty to a framework or methodology. As eCampusOntario is supporting *Open at Scale* projects, one goal is consistency among the various OER created. To that end, eCampusOntario has curated recommendations for designing and developing OER for these initiatives, which are modelled in the Chapter Template to Follow and in our sample chapters. The frameworks that guide our chapter template are outlined in this section.



Photo by Jessica Ruscello on Unsplash licensed CC0

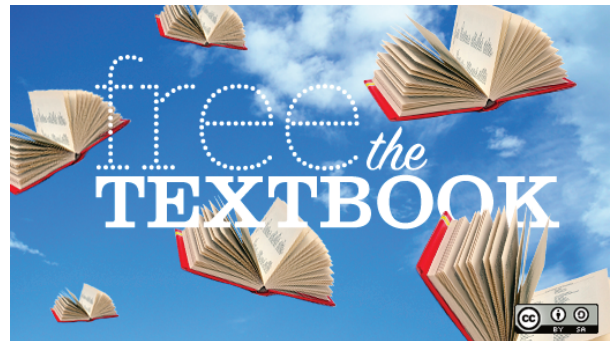
Textbooks: Flat to fabulous

Textbooks are no longer tomes of text or flat content. They have evolved across the educational landscape and expanded beyond traditional understandings to incorporate technology, interaction, and feedback. These developments open up a world of possibilities for impacting learners' success and engagement while facilitating educators' expertise and creativity. eCampusOntario's preferred platform for resource development, Pressbooks, provides opportunities and supports for educators to enrich their learners' experiences.

Once experiencing Pressbooks, you will likely wrestle with the very idea of Pressbooks being promoted as a platform to create **textbooks**. Currently, it is capable of doing so much more and has a commitment to continue to evolve.

Pressbooks background

Established in 2011, Pressbooks is a Canadian company committed to improving its open source software and keeping control of content in the hands of creators. It transforms a multi-site WordPress install into a 'book'. Working with OCADU's Inclusive Design Research Centre, accessibility is a main concern of the platform and it continues to improve accessibility on both the front facing and backend.



Openness is another tenet:

Image by opensource.com licensed CC BY-SA

In addition to being open source, we are also active advocates of the **open web**, **open content** and **open education**. Of course, Pressbooks doesn't force content to be "open" – this is the user's decision. But the power of open is at the core of how Pressbooks is built, and how we run our company. (<https://pressbooks.education/pressbooksedu-plans/>)

Accessibility and openness combine in other features of Pressbooks. With its multiple export options (nine as of March 2019), users can connect with Pressbooks content in way(s) that make sense for them e.g., PDF print copy, EPUB3, mobi. eCampusOntario has also entered into a partnership with the University of Waterloo to ensure creations on Pressbooks have an option for low-cost, professionally printed and bound copies. Thanks to the University of Waterloo's commitment to learners, it is a cost recovery model with no extra cost.

One of eCampusOntario's first supports for Ontario educators and learners was its investment in Pressbooks EDU. The EDU platform option includes the bells and whistles facilitating a more engaging and interactive experience. eCampusOntario provides free access to the platform and has sponsored many of enhancements now benefitting the wider community of Pressbooks EDU users:

- academically-friendly themes ~ McLuhan and Jacobs
- more options and greater accessibility of pre-formatted textboxes
- whitelisting popular websites e.g., TEDtalks, YouTube
- H5P plugin activation option
- and more to come!

View a quick introduction to Pressbooks:



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PressbooksEDU Intro Video by Pressbooks on YouTube.

Our Meta Frame: UDL and Beyond

Universal Design for Learning (UDL): Foundation

Embraced by a majority of institutions, UDL is helpful in creating more accessible learning environments. BCcampus, in its open text on accessibility, curated a clear and concise overview of the principles of UDL:

Universal Design is the process of creating products (devices, environments, systems, and processes) that are usable by people with the widest possible range of abilities, operating within the widest possible range of situations (environments, conditions, and circumstances). Universal Design emerged from the slightly earlier concept of being barrier-free, the broader accessibility movement, and adaptive technology and assistive technology. It also seeks to blend aesthetics into these core considerations. (<https://opentextbc.ca/accessibilitytoolkit/>)

Two common definitions of Universal Design provide a solid foundation:

Definition 1

Universal Design or Universal Instructional Design (UID) is an approach to teaching that consists of the proactive design and use of inclusive instructional and evaluation strategies. This approach provides academic access to a broad range of learners, including those with disabilities, while:

- maintaining academic standards
- reducing the need to retrofit after a course is already underway.

Definition 2

Universal Instructional Design (UID) is an approach to designing course instruction, materials, and content to benefit people of all learning [preferences] without adaptation or retrofitting. UID provides equal access to learning, not simply equal access to information. UID allows the learner to control the method of accessing information while the instructor monitors the learning process and initiates any beneficial methods. ...It should be noted that UID does not remove academic challenges; it removes barriers to access.

A picture is worth at least 500 words

CAST (Center for Applied Special Technology) is a leader in growing awareness and practice of UDL. Access CAST's UDL Graphic Organizer with active links or review the graphic below with its hotspots (+) highlighting how *Open at Scale* plans to support and foster UDL principles.



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<https://ecampusontario.pressbooks.pub/openatscale/?p=100>

Point people, with advanced experience and knowledge of accessibility in design, will also be attached to the *Open at Scale* projects.

Growing beyond UDL: Inclusive design

Although it does not have the permeation in colleges and universities, Inclusive Design stacks additional benefits and considerations on top of our understanding of UDL.

As communicated by Ontario's own Inclusive Design Research Centre at OCADU, Inclusive Design is, "...design that considers the full range of human diversity with respect to ability, language, culture, gender, age and other forms of human difference" (<https://idrc.ocadu.ca>).

Three dimensions of Inclusive Design

1: Recognize diversity and uniqueness

Inclusive design keeps the diversity and uniqueness of each individual in mind. As individuals spread out from the hypothetical average, the needs of individuals that are outliers, or at the margins, become more diverse. Most individuals stray from the average in some facet of their needs or goals. This means that a mass solution does not work well. Optimal inclusive design is best achieved through one-size-fit-one configurations. Flexible or adaptable systems such as digital systems are most amenable to this. Inclusively designed personalization and flexible configurations must be integrated to maintain interoperability and currency. This also does not imply adaptive systems that

make choices for the user. Instead, inclusive design recognizes the importance of self-determination and self-knowledge.

2: Inclusive process and tools

The process of design and the tools used in design are inclusive. Inclusive design teams should be as diverse as possible and include individuals who have a lived experience of the “extreme users” (as coined by Rich Donovan) the designs are intended for. This also respects the edict “nothing about us without us,” without relegating people with disabilities to the role of subjects of research or token participants in design exercises. To support diverse participation and enable the design to be as closely linked as possible to the application, the design and development tools should become as accessible and usable as possible. This dimension does not denigrate the skills of professional designers but calls for those skills to become more accessible and for the design process to become more inclusive of diverse designers and consumers.

3: Broader beneficial impact

It is the responsibility of inclusive designers to be aware of the context and broader impact of any design, and to strive to effect a beneficial impact beyond the intended beneficiary of the design. Inclusive design should trigger a virtuous cycle of inclusion, leverage the “curb-cut effect,” and recognize the inter-connectedness of users and systems. Realizing this broader positive impact requires the integration of inclusive design into design in general. This third dimension supports healthier, wealthier, and wiser societies.

Why not use the term Universal Design?

Inclusive Design can be seen as Universal Design with a number of provisos. Leading the understanding of Inclusive Design, in Canada and beyond, is OCAD U and its Inclusive Design Research Centre (IDRC). It provides concise information and distinction.

Inclusive Design wants to distinguish itself from the current associations with the term Universal Design. The associations to avoid are not necessarily part of any formalized definition of Universal Design, but nevertheless are part of the popular assumptions about the term.

The distinctions Inclusive Design wants to make are:

The context: Universal design has its origins in architectural and industrial design – in education and its digital realm the constraints, design options, and design methods are very different. The

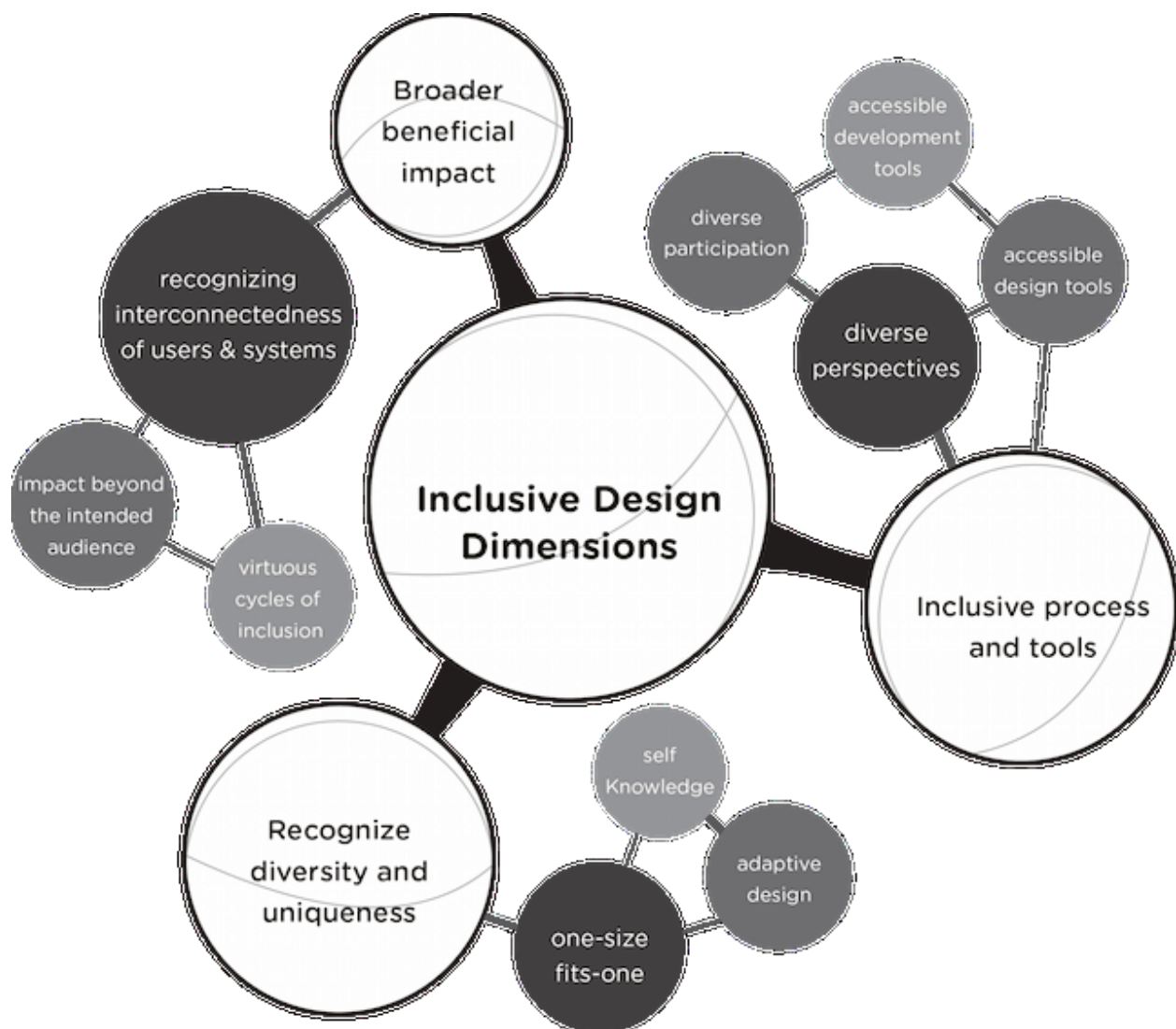
most important difference is that designers in education do not need to design one-size-fits-all; the flexibility of the digital allows for a one-size-fits-one personalized design approach to inclusion.

The user: Universal Design has become associated with disabilities and a fairly constrained categorization of disabilities. Other than the commonly quoted principles of Universal Design, much universal design guidance categorizes design advice according to constrained categories of disability. Inclusive Design wants to stress that the individual is multi-faceted and the constraints or design needs they have may arise from a number of factors or characteristics.

The method: Because educators are dealing with digital design, the design considerations are very different from the non-digital. With the common goal of inclusion, educators can have a differently configured “entrance” for each person. In fact, they can have multiple entrances for one person, each for a different context. Similarly, educators can have a different “handle” for each person, each context, or each goal. The design constraints are very different from the domain in which Universal Design originated. While Universal Design is about creating a common design that works for everyone, educators have the freedom to create a design system that can adapt, morph, or stretch to address each design need presented by each individual.

The common notions with Universal Design that Inclusive Design espouses and stresses are:

1. Designing systems so that they accommodate people with disabilities results in systems that work better for everyone.
2. Segregated, specialized design is not sustainable and does not serve the individual or society in the long run.



Visual representation of Inclusive Design from OCAD U

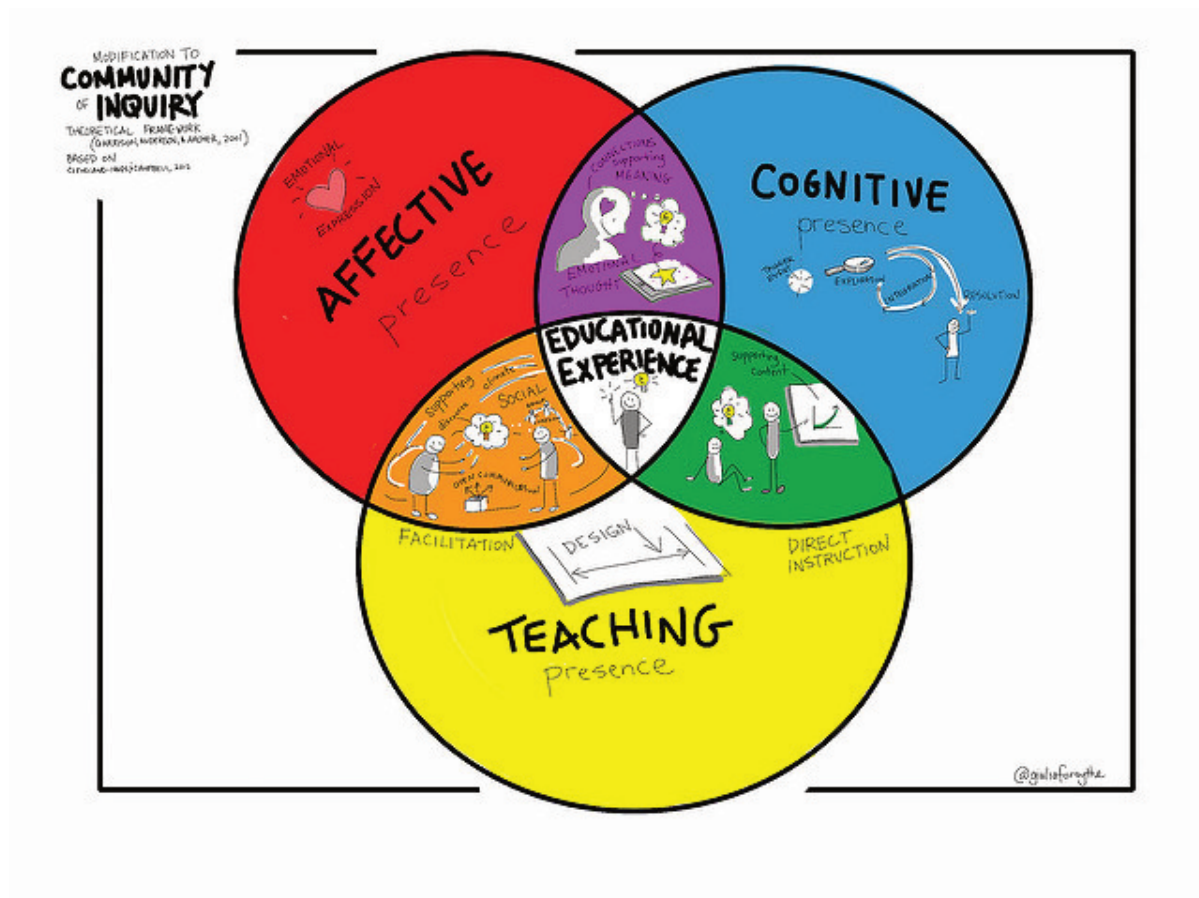
Source: <https://idrc.ocadu.ca/resources>

Manageable Micro-Framing

The Community of Inquiry

The Community of Inquiry, or other similar frameworks, have likely assisted you as you developed your educational experiences. While Inclusive Design or UDL is the overarching framework for design and development in its entirety, employing the aspects of Community of Inquiry's Cognitive Presence and its focus on cognitive development plots the actual course.

Inclusive Design or UDL guides your approach and thinking, while the four phases embedded in CoI and its Cognitive Presence act as more of a step-by-step action plan when organizing and building content.



Community of Inquiry Framework adapted by Giulia Forsythe and in the Public Domain (CC0)

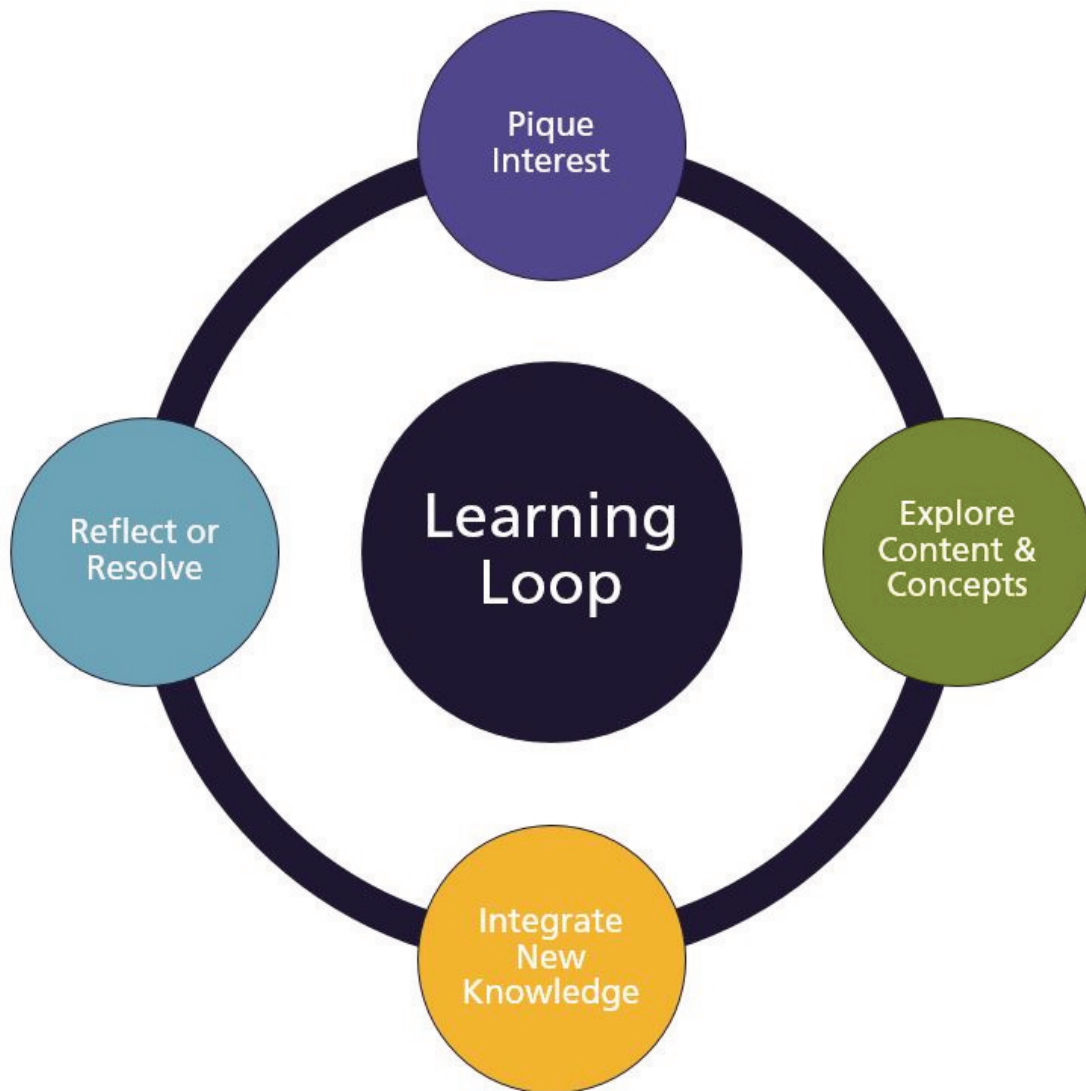
Want to learn more about
CoI?

And while learners working with course resources to prepare or reinforce in-class material has traditionally been an independent and mainly cognitive experience (blue area above), recent enhancements can inject the Affective (formerly Social) and Teaching presences into the learner's experience – all of which combines to form the sweet spot of “Educational

Experience”. Our *Open at Scale* projects intend to optimize the latest developments, allowing our subject matter experts (SME) across all domains and disciplines to use their creativity to create the most engaging teaching and learning experiences, while still providing a consistent look and feel to all *Open at Scale* resources.

Phases of Cognitive Development: Learning Loop

By zeroing in on the four phases of cognitive development from CoI's Teaching Presence sphere, we can use them to frame the resources we include in modules developed through *Open at Scale*. Together, providing 1) a hook or springboard to pique interest, 2) material to explore, 3) opportunities to integrate new information, and 4) a prompt to reflect or resolve outstanding issues, can engage learners more deeply with the content and foster a more meaningful connection with the material.



Four phases of cognitive development

Pique interest

Jumpstarting each activity with a **Springboard** or **Hook** piques learners' interest. It might be as simple as a quote that highlights the relevance of the concept or an infographic or news article that shines a spotlight on an issue or content. Other popular springboards include a short video or quick game. You could also create a springboard that provides a glimpse of what's to come in the module. For example, each module could lead off with a quick, diagnostic quiz pulling ideas and concepts covered in the module. It grounds learners in the module and alerts them to participate actively in order to acquire a mastery of core concepts.

Springboard example



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<https://ecampusontario.pressbooks.pub/openatscale/?p=47>

Piquing through templating

Underscoring the relevance and importance of the module can also act as a **Springboard**. For the *Open at Scale* projects, an aim is a consistent look and feel to the modules. To that end, *Open at Scale* projects require that each chapter opens by stating learning outcomes and underscoring the relevance of the information and learning required in the module. A similar requirement is that each activity or module be closed. For example:

Learning outcomes

By the end of the chapter, you should be able to:

1. Define entrepreneur and describe the three characteristics of entrepreneurial activity.
2. Identify five potential advantages to starting your own business.

3. Define a small business and explain the importance of small businesses to the Canadian economy.
4. Explain why small businesses tend to foster innovation more effectively than large ones.

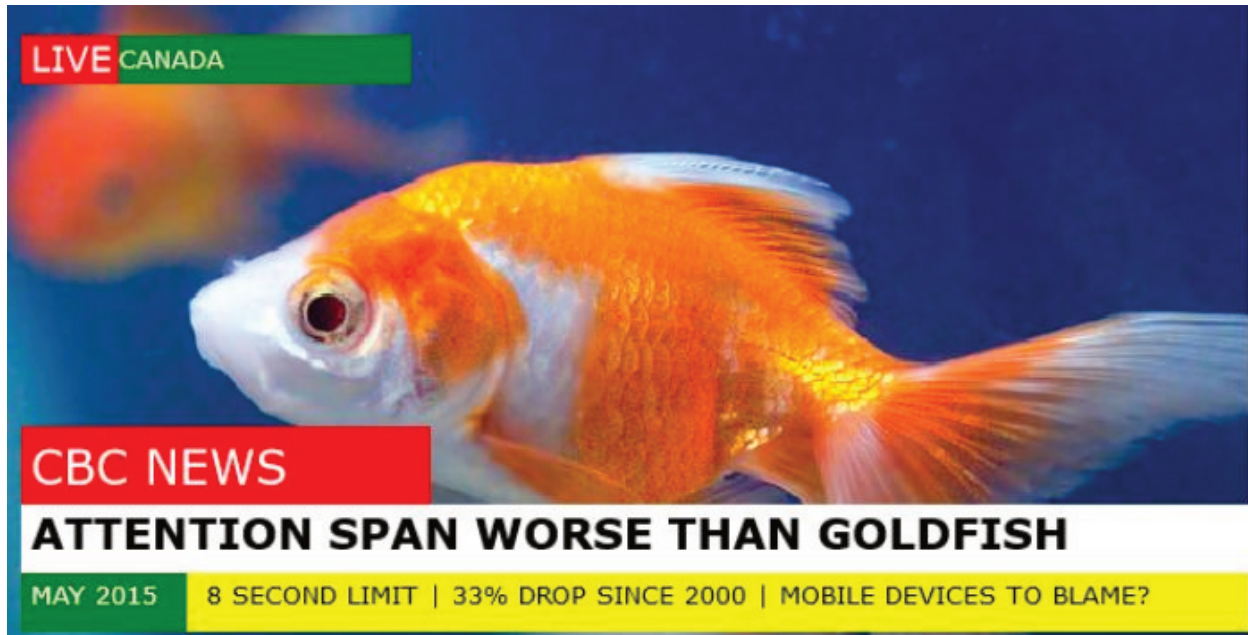
From here, learners have clear expectations and are primed for key concepts before they begin. There is the added benefit of tying this content to the larger program standards or professional standards and ultimately the career and/or academic goals of your learners, underscoring relevance and applicability.

Explore

The **Explore** phase provides opportunities for learners to dig into the topic, concept, or theme. As always, you will consider learners' different preferences and accommodations. Where possible, providing material in multiple formats is a wonderful boost, ensuring that Universal Design for Learning (UDL)/Inclusive Design principles are in place and learners' opportunities are maximized.

The **Explore** phase is traditionally the information formerly provided by the Subject Matter Expert (SME) in the form of PowerPoints and/or lecture notes. Given that this information tends to be mined from the fee-based resource assigned for the course, it will likely take some time and talent to curate or create alternate, open resources. Luckily, the Open Access movement has freed much more information into the open.

Considerations



CBC News. (2015, May 17). *Canadians' attention span worse than the average goldfish*. Retrieved from <https://www.cbc.ca/news/canada/canadians-attention-span-worse-than-the-average-goldfish-1.3077646>

Even if you don't believe circumstances to be as dire as the above article suggests, it's a good plan to avoid pages and pages of text with little to no variation. Luckily, harnessing basic technology to inject interest and activity into what would otherwise be pages of text is easily facilitated. A healthy balance of **READ + WATCH + LISTEN + DO** will engage your learners, allow you to express more of your creativity, and use educational technology tools to their full potential.

Just as you may restate concepts in multiple ways to solidify understanding in your structured class time, presenting "textbook" information in multiple ways assists the process of learning more independently.

Continuing to ask yourself the key questions of Inclusive Design is important ~ *Who is included in my design? Who is left out? Whose voice(s) am I amplifying? Whose voice(s) am I leaving out?*

Deeper dive: The science of eLearning

Whether you are creating or curating multimedia resources to complement text, be on the look out for high-quality, impactful resources. Since you are able to inject technology into learning environments like never before, it is easy to overload learners. Richard E. Mayer and Ruth C. Clark, with their decades of experience in educational and instructional psychology research, continue to contribute to a science of eLearning. Their principles can guide your curation and creation of multimedia elements.



Photo by ArtsyBee on Pixabay licensed CC0

Below is a distillation of some of their key findings for fledgling online learning environments. Think of it as a crib sheet for your multimedia.

Some design principles:



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<https://ecampusontario.pressbooks.pub/openatscale/?p=47>

Show what you know!



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<https://ecampusontario.pressbooks.pub/openatscale/?p=47>

Integrate

This third phase of cognitive development, **Integrate**, often goes hand in hand with **Explore**. From their explorations, learners connect new ideas and begin to address the cognitive dissonance or challenges they faced while investigating and exploring during phase two. As your learners are working independently with this resource, you will not be there to prompt and probe organically. Any expectations for your learners to integrate new material must be clearly defined.

Many institutions have committed to using a Learning Management System (LMS). For those using an LMS, Pressbooks can be meaningfully integrated i.e., each chapter becomes a separate content piece. This allows you to build other activities around the chapters that are more easily tracked and assessed with LMS functionality. With an LTI integration and a willing IT team, the H5P assessments could also link to the LMS gradebook and/or you as the instructor will be able to see individual performance results.

Integration may be as simple as using shaded text boxes to periodically stop the flow of text and inject a challenge question, point to ponder, or a link to additional resources. See the chapter template for guidance on how *Open at Scale* resources will facilitate integration.

Reflection and resolution

This phase, more than the others, is usually tied to more formal or summative assessments. However, it is still good practice to prompt students to reflect and/or resolve any cognitive dissonance, lingering questions, or muddy areas. This is also the most often neglected phase; reflection and resolution often only come into play in assessment, thereby not providing learners opportunities to practise reflection/resolution before being required to perform it for evaluation.

Facilitating opportunities for reflection and resolution require finding an appropriate tool to capture and communicate the reflection:

- *hypothes.is*, a collaborative note-taking and annotation tool, can boost reflection.
- Using H5P's Documentation tool to more formally record connections, extensions, and clarifications is another option.
- Embedding other tools like Google Form can close the learning loop.
- Including a *Key Takeaways* section at the end of each chapter/module can lead to students reflecting or resolving outstanding issues e.g., gaps in knowledge.

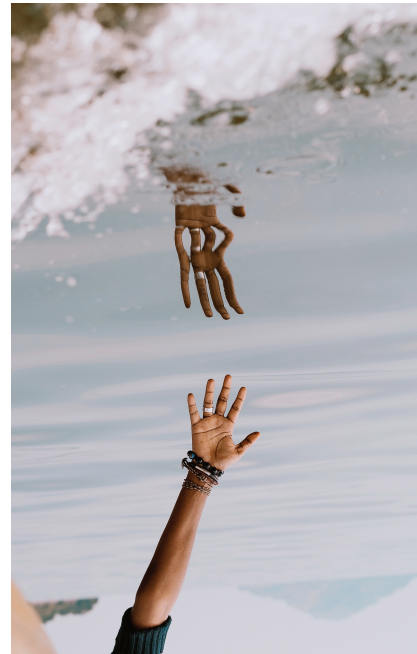


Photo by Serrah Galos on Unsplash
licensed CC0

An example of the second bookend, *Key Takeaways*, that will conclude each module/chapter created as part of *Open at Scale*:

Key takeaways

This also acts as the second bookend.

- Just as the *Learning Outcomes* 'set the scene' by communicating expectations and aligning to the discipline's larger goals, *Key Takeaways* wrap the activities and content.
- *Key Takeaways* prompt the learner to confirm that they understand the module/chapter content and link back to the *Learning Outcomes*.
- Providing a thoughtful, cohesive collection of content and activities for learners assists by modeling a learning loop that they can replicate.

SAMPLE CHAPTERS FOR OPEN AT SCALE

Potential of Pressbooks EDU

This part is a small collection to showcase the potential of Pressbooks EDU as a platform. It includes examples from a Sprint facilitated by eCampusOntario as well as highlights from the catalogue of options provided by H5P.



Potential (Photo by Stephen Mayes on Unsplash)

H5P: The Hype is Real

Core content types

H5P – a plugin to create interactive content – has a set of stable interactivities currently consisting of 38 content types offered via Pressbooks. While you are encouraged to explore the full menu, these few may be especially beneficial for *Open at Scale* projects:

Accordian: Create vertically stacked, expandable items.



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<https://ecampusontario.pressbooks.pub/openatscale/?p=239>

Chart: Quickly Generate accessible bar and pie charts.



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<https://ecampusontario.pressbooks.pub/openatscale/?p=239>

Drag and Drop: Drag words or images into blanks (separate tools for words and images).



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Question Set: Create a sequence of various question types.



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<https://ecampusontario.pressbooks.pub/openatscale/?p=239>

Timeline: Create a timeline of events with multimedia.



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<https://ecampusontario.pressbooks.pub/openatscale/?p=239>

New ways to engage

Branching: Think “choose your own adventure” within education.

Ryerson provides a wonderful example of H5P Branching in action

Dictation: Create audio samples for students to practise transcription.



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<https://ecampusontario.pressbooks.pub/openatscale/?p=239>

Virtual Tour 360: Add question, texts, and interactions to 360 environments using only a web browser.

A quick example in a YouTube 360 video.

H5P and accessibility

As much as we may think multimedia assists in making information more accessible, there are challenges with multimedia and accessibility. H5P does its best to improve the accessibility of its content types, but a subset of types will always challenge and likely require an alternate presentation of the information. Keep up to date on H5P accessibility.

Samples

Recent builds in business and nursing

In this guide we've included two sample chapters to demonstrate the direction that we would like our Business and Nursing OER to take. The sample chapters showcase some of the potential of Pressbooks as well as the implementation of the four phase design model that is discussed in the *Open at Scale: Project Guidelines*. Each chapter has been revised and shortened to serve as an example in this guide, but the original OER are available in the eCampusOntario Open Library.

Business

Over one weekend in March 2018, seven college educators from Business joined eCampusOntario Program Managers for a Sprint to develop two resources for foundational business studies at Ontario colleges. *Fundamentals of Business: Canadian Edition* was an adaptation of Virginia Tech's book of the same name. Existing open resources, *Communication in the Real World: An Introduction to Communication Studies* and *Understanding Media and Culture: An Introduction to Mass Communication*, were mined to create *Communication for Business Professionals*.

These OER were created shortly after important and impactful enhancements to the Pressbooks EDU platform including H5P and WYSIWYG editor improvements.

Shaded sidebars (in green | grass colour) communicate the design and thinking behind the design of the sample chapters.

Nursing

From the press release of *Vital Sign Measurement*, the OER in health highlighted in this guide:

An open textbook about vital sign measurement was created using a multi-modal platform that incorporates visual, audio and kinesthetic learning. The textbook is based on a progressive learning format of read, observe, practice and test oneself. It combines textual information, visual images, and video clips that facilitates learners' competence with measuring temperature, pulse, respiration, oxygen saturation, and blood pressure.

Students played an important role in contributing to the design and production of this open textbook. A student and faculty advisory team provided input into the development of the

open textbook. These advisory groups were consulted at multiple points during the creation of the book. Their input revealed existing gaps in current resources and the student group in particular shared ideas on what best helped learners. These students were also engaged in the development of this open textbook as they played the role of actors and were involved in the editing and production of the images and video clips. Lastly, both advisory groups reviewed and provided feedback on a complete draft of the open textbook prior to release.

One chapter from this resource was recreated here, using H5P and injecting educational technology.

Sample A: Ethics and Social Responsibility (Business)

Learning Objectives

By the end of the chapter, you should be able to:

1. Define business ethics and explain what it means to act ethically in business.
2. Explain why we study business ethics.
3. Identify ethical issues that you might face in business, such as insider trading, conflicts of interest, and bribery, and explain rationalizations for unethical behaviour.
4. Identify steps you can take to maintain your honesty and integrity in a business environment.
5. Recognize how to avoid an ethical lapse, and why you should not rationalize when making decisions.



Show What You Know



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can view it online here:

<https://ecampusontario.pressbooks.pub/openatscale/?p=370>

Communicating the module's Learning Objectives and "Show what you know" sets up each module and provides consistency for learners. Learners get a sense of the different concepts they will need to learn and what they are responsible for.

Canada's Leader: Passing or Failing the "Smell Test"?

Ethics is not always black and white; the ethical decision is not always obvious to all. Even leaders can fail to act ethically all the time. Recent decisions impacted two leaders.



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<https://ecampusontario.pressbooks.pub/openatscale/?p=370>

CBC News's reporter, E. Thompson, filed the following story on December 21, 2017. It provides a detailed account of the ethical issues surrounding Prime Minister Trudeau's trip to Aga Khan's private island.



Aga Khan could face lobbying probe for Trudeau trip

Democracy Watch files complaint, saying Bahamas vacation violated lobbying law.

The Aga Khan could face an investigation into allegations he violated Canada's Lobbying Act by giving

Prime Minister Justin Trudeau and his family free vacations on his private island in the Bahamas at the same time as he was discussing funding for projects.

Democracy Watch sent a letter to the Commissioner of Lobbying late Wednesday, urging her to investigate whether Prince Shah Karim Al Hussaini Aga Khan IV “violated the Lobbyists Code by giving Prime Minister Trudeau and Liberal MP Seamus O’Regan the gifts of trips to his island home”.

In the letter, Democracy Watch co-founder Duff Conacher says the Aga Khan’s actions have put Trudeau and O’Regan in a conflict of interest. It is also against the law to give a public office holder a gift that could create a sense of obligation.

“Your position must be that anyone working for or associated with a company that is registered to lobby a public office holder who gives to or does anything for that office holder... that is more than an average voter does... puts that office holder in an apparent conflict of interest,” he wrote.

The Aga Khan is the spiritual leader of millions of Ismaili Muslims and is listed as a member of the board of directors of the Aga Khan Foundation Canada. The foundation, which has received millions of dollars in federal government development aid over the years, is registered to lobby several federal government departments including the Prime Minister’s Office, although the Aga Khan is not listed among those registered to lobby on its behalf.

A search of the lobbyist registry shows the foundation has filed 132 reports since 2011 outlining its meetings with government decision makers. However, none of those reports list any meetings with Trudeau.

Representatives of the Aga Khan Foundation of Canada contacted by CBC News have yet to comment.

The call for a lobbying investigation comes in the wake of a scathing report by Ethics Commissioner Mary Dawson on Wednesday.

Dawson found that Trudeau violated four sections of the Conflict of Interest Act when he accepted a vacation on the island in the Bahamas and a ride in the Aga Khan’s personal helicopter.

While Trudeau and his family got a tropical vacation, Canadian taxpayers got a bill for more than \$215,000 in transportation and staffing costs – far more than the government initially disclosed to Parliament.

Dawson also revealed that Trudeau’s trip during last year’s Christmas holidays was one of three that Trudeau or members of his family had made to the island. Dawson disclosed that Sophie Grégoire-Trudeau stayed on the island in March 2016 with a friend and their children.

Neither the Aga Khan, nor any member of his family, was on the island during their stay.

Dawson said the Aga Khan was on the island during the Trudeaus’ Christmas-time visit last year as was a “senior American official of a previous administration,” who she did not name.

In her report, Dawson describes the relationship between Trudeau and the Aga Khan, the times they met and the questions they discussed.

Among them was a bilateral meeting on May 17, 2016 that was arranged by “representatives” of the Aga Khan. After a 15-minute chat between the two men about “personal matters, the Ismaili community in general and geopolitics,” they were joined by three of the Aga Khan’s representatives, Heritage Minister Mélanie Joly, staff members from the Prime Minister’s Office and senior officials of the Privy Council Office.

Dawson’s report says the government had found a funding mechanism to allow it to contribute to the Global Centre for Pluralism’s endowment fund and Trudeau reaffirmed the government’s \$15 million commitment during the meeting.

The Aga Khan’s pitch for government funding for a \$200 million riverfront renewal plan in Ottawa was also discussed.

Dawson ruled that Trudeau should have recused himself from two discussions in May 2016 involving the \$15 million grant.

“Two months prior to the May 2016 occasions, Mr. Trudeau’s family accepted a gift from the Aga Khan that might reasonably be seen to have been given to influence Mr. Trudeau in the exercise of an official power, duty or function as Prime Minister,” she wrote.

“For this reason, the discussions with the Privy Council Office and later with the Aga Khan about the outstanding \$15 million grant to the endowment fund provided an opportunity to improperly further the private interests of the Global Centre for Pluralism.”

While the Aga Khan is not paid to lobby government (one of the criteria under the law) Conacher said he believes the Aga Khan violated the lobbying rules. Otherwise, it would create a giant loophole, he said.

“Every single corporation, business, union, non-profit organization would start using board members to give gifts to politicians if this loophole were opened up by the lobbying commissioner.”

Conacher is also calling for outgoing lobbying commissioner Karen Shepherd and incoming lobbying commissioner Nancy Bélanger to recuse themselves from ruling on the investigation because of the way Shepherd’s contract was renewed and the way Bélanger was chosen in “a secretive, PMO-controlled process.”

Manon Dion, spokeswoman for the lobbying commissioner’s office, said she cannot reveal whether they are already looking into the issue.

A relevant, timely, and

Thompson, E. (Dec. 21, 2017). Aga Khan could face lobbying probe for Trudeau trip. Retrieved from <http://www.cbc.ca/news/politics/trudeau-aga-khan-bahamas-lobbying-1.4459561>

Point to Ponder

Could the Prime Minister and family have taken an ethical version of this vacation? If yes, how? If not, why not?

The Prime Minister's Response: <http://www.cbc.ca/news/politics/trudeau-ethics-aga-khan-1.4458220>

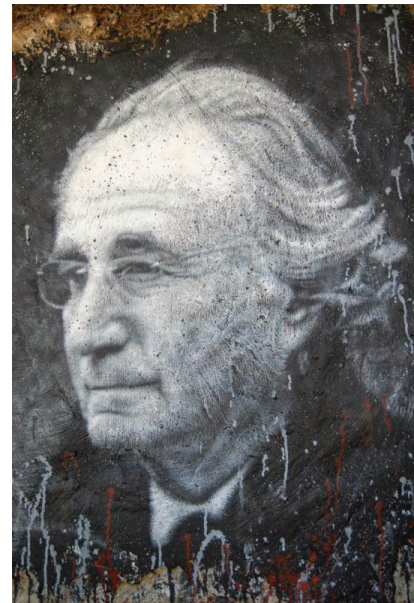
The Ethics Commissioner's Report: <https://www.documentcloud.org/documents/4334047-The-Trudeau-Report.html>

contextualized example provides a hook for learners. Their interest is piqued as they align the module with actual impact to their lives.

UPDATE APRIL 2019: Thompson, E., (2019. April 16). *Ruling in Trudeau-AgaKhan case could change rules for unpaid lobbyists*. Retrieved from <https://www.cbc.ca/news/politics/trudeau-aga-khan-lobbying-investigation-1.5100169>

Moving Ethics To the Business World

Perhaps you have heard of Bernie Madoff, founder of Bernard L. Madoff Investment Securities and former chairman of the NASDAQ stock exchange.^[1] Madoff is alleged to have run a giant Ponzi scheme^[2] that cheated investors of up to \$65 billion. His wrongdoings won him a spot at the top of Time Magazine's Top 10 Crooked CEOs. According to the SEC charges, Madoff convinced investors to give him large sums of money. In return, he gave them an impressive 8 percent to 12 percent return a year. But Madoff never really invested their money. Instead, he kept it for himself. He got funds to pay the first investors their return (or their money back if they asked for it) by bringing in new investors. Everything was going smoothly until the fall of 2008, when the stock market plummeted and many of his investors asked for their money. As he no longer had it, the game was over and he had to admit that the whole thing was just one big lie. Thousands of investors, including many of his wealthy friends, not-so-rich retirees who trusted him with their life savings, and charitable foundations, were financially



Bernie Madoff by thierry ehrmann
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ruined. Those harmed by Madoff either directly or indirectly were likely pleased when he was sentenced to jail for one-hundred and fifty years.

What is Business Ethics?

The Idea of Business Ethics

It's in the best interest of a company to operate ethically. Trustworthy companies are better at attracting and keeping customers, talented employees, and capital. Those tainted by questionable ethics suffer from dwindling customer bases, employee turnover, and investor mistrust.

Let's begin this section by addressing this question: What can individuals, organizations, and government agencies do to foster an environment of ethical behaviour in business? First, of course, we need to define the term.

What Is Ethics?

You probably already know what it means to be ethical: to know right from wrong and to know when you're practicing one instead of the other. Business ethics is the application of ethical behaviour in a business context. Acting ethically in business means more than simply obeying applicable laws and regulations. It also means being honest, doing no harm to others, competing fairly, and declining to put your own interests above those of your company, its owners, and its workers. If you're in business you obviously need a strong sense of what's right and wrong. You need the personal conviction to do what's right, even if it means doing something that's difficult or personally disadvantageous.

Why Study Ethics?

Ideally, prison terms, heavy fines, and civil suits would discourage corporate misconduct, but, unfortunately, many experts suspect that this assumption is a bit optimistic. Whatever the condition of the ethical environment in the near future, one thing seems clear: the next generation entering business—which includes most of you—will find a world much different than the one that waited for the previous generation. Recent history tells us in no uncertain terms that today's business students, many of whom are tomorrow's business leaders, need a much sharper understanding of the difference between what is and isn't ethically acceptable. As a business student, one of your key tasks is learning

how to recognize and deal with the ethical challenges that will confront you. Asked what he looked for in a new hire, Warren Buffet, the world's most successful investor, replied: "I look for three things. The first is personal integrity, the second is intelligence, and the third is a high energy level." He paused and then added: "But if you don't have the first, the second two don't matter".^[3]

Identifying Ethical Issues and Dilemmas

Ethical issues are the difficult social questions that involve some level of controversy over what is the right thing to do. Environmental protection is an example of a commonly discussed ethical issue, because there can be trade-offs between environmental and economic factors.

Tips to maintain honesty and integrity

- Follow your own code of personal conduct; act according to your own convictions rather than doing what's convenient (or profitable) at the time.
- While at work, focus on your job, not on non-work related activities, such as emails and personal phone calls.
- Don't appropriate office supplies or products or other company resources for your own use.
- Be honest with customer, management, coworkers, competitors, and the public.
- Remember that it's the small seemingly trivial, day-to-day activities and gestures that build your character.

Make no mistake about it: when you enter the business world, you'll find yourself in situations in which you'll have to choose the appropriate behaviour. How, for example, would you answer questions like the following?

1. Is it OK to accept a pair of sports tickets from a supplier?
2. Can I buy office supplies from my brother-in-law?
3. Is it appropriate to donate company funds to a local charity?
4. If I find out that a friend is about to be fired, can I warn her?

Obviously, the types of situations are numerous and varied. Fortunately, we can break them down into a few basic categories: issues of honesty and integrity, conflicts of interest and loyalty, bribes versus gifts, and whistle-blowing. Let's look a little more closely at each of these categories.

Issues of Honesty and Integrity

Master investor Warren Buffet once told a group of business students the following: “I cannot tell you that honesty is the best policy. I can’t tell you that if you behave with perfect honesty and integrity somebody somewhere won’t behave the other way and make more money. But honesty is a good policy. You’ll do fine, you’ll sleep well at night and you’ll feel good about the example you are setting for your coworkers and the other people who care about you.”^[4]

If you work for a company that settles for its employees’ merely obeying the law and following a few internal regulations, you might think about moving on. If you’re being asked to deceive customers about the quality or value of your product, you’re in an ethically unhealthy environment.

Think about this story:

“A chef put two frogs in a pot of warm soup water. The first frog smelled the onions, recognized the danger, and immediately jumped out. The second frog hesitated: The water felt good, and he decided to stay and relax for a minute. After all, he could always jump out when things got too hot (so to speak). As the water got hotter, however, the frog adapted to it, hardly noticing the change. Before long, of course, he was the main ingredient in frog-leg soup.”^[5]

So, what’s the moral of the story? Don’t sit around in an ethically toxic environment and lose your integrity a little at a time; get out before the water gets too hot and your options have evaporated. Fortunately, a few rules of thumb can guide you.

Conflicts of Interest

Conflicts of interest occur when individuals must choose between taking actions that promote their personal interests over the interests of others or taking actions that don’t. A conflict can exist, for example, when an employee’s own interests interfere with, or have the potential to interfere with, the best interests of the company’s stakeholders (management, customers, and owners). Let’s say that you work for a company with a contract to cater events at your college and that your uncle owns a local bakery. Obviously, this situation could create a conflict of interest (or at least give the appearance of one—which is a problem in itself). When you’re called on to furnish desserts for a luncheon, you might be tempted to send some business your uncle’s way even if it’s not in the best interest of your employer. What should you do? You should disclose the connection to your boss, who can then arrange things so that your personal interests don’t conflict with the company’s.

The same principle holds that an employee shouldn’t use private information about an employer for personal financial benefit. Say that you learn from a coworker at your pharmaceutical company that one of its most profitable drugs will be pulled off the market because of dangerous side effects. The

recall will severely hurt the company's financial performance and cause its stock price to plummet. Before the news becomes public, you sell all the stock you own in the company. What you've done is called insider trading – acting on information that is not available to the general public, either by trading on it or providing it to others who trade on it. Insider trading is illegal, and you could go to jail for it.

Conflicts of Loyalty

You may one day find yourself in a bind between being loyal either to your employer or to a friend or family member. Perhaps you just learned that a coworker, a friend of yours, is about to be downsized out of his job. You also happen to know that he and his wife are getting ready to make a deposit on a house near the company headquarters. From a work standpoint, you know that you shouldn't divulge the information. From a friendship standpoint, though, you feel it's your duty to tell your friend. Wouldn't he tell you if the situation were reversed? So what do you do? As tempting as it is to be loyal to your friend, you shouldn't tell. As an employee, your primary responsibility is to your employer. You might be able to soften your dilemma by convincing a manager with the appropriate authority to tell your friend the bad news before he puts down his deposit.

Bribes Versus Gifts

It's not uncommon in business to give and receive small gifts of appreciation, but when is a gift unacceptable? When is it really a bribe?

There's often a fine line between a gift and a bribe. The following information may help in drawing it, because it raises key issues in determining how a gesture should be interpreted: the cost of the item, the timing of the gift, the type of gift, and the connection between the giver and the receiver. If you're on the receiving end, it's a good idea to refuse any item that's overly generous or given for the purpose of influencing a decision. Because accepting even small gifts may violate company rules, always check on company policy.

Read through Bell Canada's *Code of Business Conduct* detailing its recommendations for gifts. If you cannot access the image below, find it on page 10 of the document.

Code of Business Conduct

2.3 Loans, Gifts and Entertainment

2.3.1 Loans from Bell

We do not accept, whether directly or indirectly, any loan or guarantee of obligations from Bell that are for our personal benefit.

2.3.2 Business Gifts & Entertainment

Do not solicit, accept or give gifts, gratuities, favours or unusual hospitality from or to suppliers or customers, which may compromise - or appear to compromise - our ability to make fair, objective, business decisions or may unfairly influence a business interaction.

Do not solicit or encourage gifts, hospitality, entertainment or any other thing for personal use.

Do not accept gifts having a monetary value; for example, gift certificates, cash, services, discounts or loans.

These guidelines do not change during traditional gift giving season.

We recognize, however, that building relationships with customers and suppliers is an integral part of doing business.

You may offer and accept reasonable hospitality in certain cases. You should consult your manager or contact the Business Conduct Help Line when in doubt about the appropriateness of a particular situation.

You may participate in unsolicited business entertainment depending on the function or services you perform for Bell and if the entertainment is clearly intended to facilitate business goals. If for example, tickets to a sporting or cultural event are offered, then the person offering the tickets should plan to attend the event as well.

You may sponsor events/activities for customers or potential customers where the purpose is to strengthen business relationships; however it is your responsibility to know and be sensitive to the customer's own code of conduct on these issues. Solicitation of modest gifts or prizes for Bell sponsored events which provide clear benefits to the sponsor and/or charitable organization is permitted upon approval by your manager.

You may accept unsolicited, nominal value hospitality, gifts or mementos that are customary or business related.

You may accept business entertainment in the form of meals as long as it is modest, infrequent, and as far as possible on a reciprocal basis.

Factors which you and your manager should consider when assessing the proper course of action include:

- Is Bell potentially involved in a major procurement activity with the company offering the gift or entertainment?
- Would the gift or entertainment be considered appropriate or customary, taking into account the nature of the function or services you perform for Bell?
- Would it be perceived as insulting or damaging to the business relationship to return the gift or decline the hospitality?
- Can the gift or hospitality be applied to benefit all team members rather than certain individuals?

Source: Bell. (2017). Code of business conduct: Our moral compass. Retrieved from <http://www.bce.ca/>[/caption]

Whistleblowing

Whistleblowing was defined in 1972 by Ralph Nader as “an act of a man or a woman who, believing in the public interest overrides the interest of the organization he serves, publicly blows the whistle if the organization is involved in corrupt, illegal, fraudulent or harmful activity”.

While there are increasing incentives from governments and regulators for whistleblowers to go public about corporate misconduct, protections for whistleblowers are still very limited. Few Canadian laws pertain directly to whistleblowing and therefore whistleblowers are mostly unprotected by statute.

There is, however, a patchwork of protection provisions for whistleblowers under the Canadian *Criminal Code*, *Public Servants Disclosure Protection Act (PSDPA)*, the *Public Service of Ontario Act*, 2006 as well as the *Securities Act*.

Section 425.1 of the *Criminal Code*, for example, states that employers may not threaten or take disciplinary action against, demote or terminate an employee in order to deter her/him from reporting information regarding an offence s/he believes has or is being committed by her/his employer to the relevant law enforcement authorities.

An employer cannot threaten an employee with negative repercussions to deter them from contacting law enforcement with information about the employer’s offence. Punishment for employers who make such threats or reprisals can include up to five years imprisonment and/or fines.

In early 2018, a Canadian whistleblower received worldwide recognition for disclosing the amount and kinds of data harvested by Cambridge Analytica through personal Facebook accounts. However, there are other, prominent Canadian whistleblowers.

Checking In

You have just digested a fair bit of information. Let’s make sure you have a handle on the concepts just covered.



An interactive or media element has been excluded from this version of the text. You can view it online here:

<https://ecampusontario.pressbooks.pub/openatscale/?p=370>

The Individual Approach to Ethics

Before there is too much information washing over students, consider injecting a check in to make sure students are absorbing.

How can you make sure that you do the right thing in the business world? How should you respond to the kinds of challenges that you'll be facing? Because your actions in the business world will be strongly influenced by your moral character, let's begin by assessing your current moral condition. Which of the following best applies to you

(select one)?

1. I'm always ethical.
2. I'm mostly ethical.
3. I'm somewhat ethical.
4. I'm seldom ethical.
5. I'm never ethical.

Now that you've placed yourself in one of these categories, here are some general observations. Few people put themselves below the second category. Most of us are ethical most of the time, and most people assign themselves to category number two— "I'm mostly ethical." Why don't more people claim that they're always ethical?

Apparently, most people realize that being ethical all the time takes a great deal of moral energy. If you placed yourself in category number two, ask yourself this question: How can I change my behaviour so that I can move up a notch? The answer to this question may be simple. Just ask yourself an easier question: How would I like to be treated in a given situation?^[28]

Unfortunately, practising this philosophy might be easier in your personal life than in the business world. Ethical challenges arise in business because companies, especially large ones, have multiple stakeholders who sometimes make competing demands. Making decisions that affect multiple stakeholders isn't easy even for seasoned managers; and for new entrants to the business world, the task can be extremely daunting. You can, however, get a head start in learning how to make ethical decisions by looking at two types of challenges that you'll encounter in the business world: ethical dilemmas and ethical decisions.



Case Study: How a Bottle Cap Restored a Reputation (Temporarily)

Addressing Ethical Dilemmas

An ethical dilemma is a morally problematic situation: you must choose between two or more acceptable but often opposing alternatives that are important to different groups. Experts often frame this type of situation as a “right-versus-right” decision. It’s the sort of decision that Johnson & Johnson (known as J&J) CEO James Burke had to make in 1982.^[29] On September 30, twelve-year-old Mary Kellerman of Chicago died after her parents gave her Extra-Strength Tylenol. That same morning, twenty-seven-year-old Adam Janus, also of Chicago, died after taking Tylenol for minor chest pain. That night, when family members came to console his parents, Adam’s brother and his wife took Tylenol from the same bottle and died within forty-eight hours. Over the next two weeks, four more people in Chicago died after taking Tylenol. The actual connection between Tylenol and the series of deaths wasn’t made until an off-duty fireman realized from news reports that every victim had taken Tylenol. As consumers panicked, J&J pulled Tylenol off Chicago-area retail shelves. Researchers discovered Tylenol capsules containing large amounts of deadly cyanide. Because the poisoned bottles came from batches originating at different J&J plants, investigators determined that the tampering had occurred after the product had been shipped.^[30]

So J&J wasn’t at fault. But CEO Burke was still faced with an extremely serious dilemma: Was it possible to respond to the tampering cases without destroying the reputation of a highly profitable brand?

Burke had two options:

1. He could recall only the lots of Extra-Strength Tylenol that were found to be tainted with cyanide. In 1991, Perrier executives recalled only tainted product when they discovered that cases of their bottled water had been poisoned with benzene. This option favoured J&J financially but possibly put more people at risk.

2. Burke could order a nationwide recall—of all bottles of Extra-Strength Tylenol. This option would reverse the priority of the stakeholders, putting the safety of the public above stakeholders' financial interests.

Burke opted to recall all 31 million bottles of Extra-Strength Tylenol on the market. The cost to J&J was \$100 million, but public reaction was quite positive. Less than six weeks after the crisis began, Tylenol capsules were reintroduced in new tamper-resistant bottles, and by responding quickly and appropriately, J&J was eventually able to restore the Tylenol brand to its previous market position. When Burke was applauded for moral courage, he replied that he'd simply adhered to the long-standing J&J credo that put the interests of customers above those of other stakeholders. His only regret was that the perpetrator was never caught.^[31]



Source: CNBC

If you're wondering what your thought process should be if you're confronted with an ethical dilemma, you might wish to remember the mental steps listed here—which happen to be the steps that James Burke took in addressing the Tylenol crisis. Consider how you would respond to each prompt before you expand the selection.



Again, another check in after a fair chunk of information.



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<https://ecampusontario.pressbooks.pub/openatscale/?p=370>

Making Ethical Decisions

In contrast to the “right-versus-right” problem posed by an ethical dilemma, an ethical decision entails a “right-versus-wrong” decision—one in which there is clearly a right (ethical) choice and a wrong (unethical or illegal) choice. When you make a decision that’s unmistakably unethical or illegal, you’ve committed an ethical lapse. If you’re presented with this type of choice, asking yourself the following questions and increase your odds of making an ethical decision.

1. **Is the action illegal?**
 2. **Is it unfair to some stakeholders?**
 3. **If I do it, will I feel badly about it?**
 4. **Will I be ashamed to tell my family friends, co-workers, or boss?**
 5. **Will I be embarrassed if my action is written up in the newspaper?**
-

To test the validity of this approach, consider a point-by-point look at Trudeau’s decisions.

Here use the 5 question process for ethical decision-making to determine if Trudeau made an ethical choice in his decision to vacation on the Aga Khan’s private island. Your response is anonymous and will be added to responses from other institutions using this textbook chapter.



An interactive or media element has been excluded from this version of the text. You can view it online here:

<https://ecampusontario.pressbooks.pub/openatscale/?p=370>

If you answer yes to any one of these five questions when considering an ethical dilemma, odds are that you’re about to do something you shouldn’t.

Revisiting Johnson & Johnson

As discussed earlier, Johnson & Johnson received tremendous praise for the actions taken by its CEO, James Burke, in response to the 1982 Tylenol catastrophe. However, things change. To learn how a company can destroy its good reputation, let’s fast forward to 2008 and revisit J&J and its credo, which states, “We believe our first responsibility is to the doctors, nurses and patients, to mothers and fathers and all others who use our products and services. In meeting their needs everything we do must be of high quality.”^[32] How could a company whose employees believed so strongly

in its credo find itself under criminal and congressional investigation for a series of recalls due to defective products?^[33] In a three-year period, the company recalled twenty-four products, including Children's, Infants' and Adults' Tylenol, Motrin, and Benadryl;^[34] 1-Day Acuvue TruEye contact lenses sold outside the U.S.;^[35] and hip replacements.^[36]

Unlike the Tylenol recall, no one had died from the defective products, but customers were certainly upset to find they had purchased over-the-counter medicines for themselves and their children that were potentially contaminated with dark particles or tiny specks of metal;^[37] contact lenses that contained a type of acid that caused stinging or pain when inserted in the eye;^[38] and defective hip implants that required patients to undergo a second hip replacement.^[39]

Who bears the responsibility for these image-damaging blunders? Two individuals who were at least partially responsible were William Weldon, CEO, and Colleen Goggins, Worldwide Chairman of J&J's Consumer Group. Weldon has been criticized for being largely invisible and publicly absent during the recalls.^[40] Additionally, he admitted that he did not understand the consumer division where many of the quality control problems originated.^[41] Goggins was in charge of the factories that produced many of the recalled products. She was heavily criticized by fellow employees for her excessive cost-cutting measures and her propensity to replace experienced scientists with new hires.^[42] In addition, she was implicated in scheme to avoid publicly disclosing another J&J recall of a defective product.

After learning that J&J had released packets of Motrin that did not dissolve correctly, the company hired contractors to go into convenience stores and secretly buy up every pack of Motrin on the shelves. The instructions given to the contractors were the following: "You should simply 'act' like a regular customer while making these purchases. THERE MUST BE NO MENTION OF THIS BEING A RECALL OF THE PRODUCT!"^[43] In May 2010, when Goggins appeared before a congressional committee investigating the "phantom recall," she testified that she was not aware of the behaviour of the contractors^[44] and that she had "no knowledge of instructions to contractors involved in the phantom recall to not tell store employees what they were doing." In her September 2010 testimony to the House Committee on Oversight and Government Reform, she acknowledged that the company in fact wrote those very instructions.

Refusing to Rationalize

Despite all the good arguments in favour of doing the right thing, why do many reasonable people act unethically (at least at times)? Why do good people make bad choices? According to one study, there are four common rationalizations (excuses) for justifying misconduct:^[45]

1. My behaviour isn't really illegal or immoral. Rationalizers try to convince themselves that an action is OK if it isn't downright illegal or blatantly immoral. They tend to operate in a gray area where there's no clear evidence that the action is wrong.

2. My action is in everyone's best interests. Some rationalizers tell themselves: "I know I lied to make the deal, but it'll bring in a lot of business and pay a lot of bills." They convince themselves that they're expected to act in a certain way.^[46]
3. No one will find out what I've done. Here, the self-questioning comes down to "If I didn't get caught, did I really do it?" The answer is yes. There's a simple way to avoid succumbing to this rationalization: always act as if you're being watched.
4. The company will condone my action and protect me. This justification rests on a fallacy.

Here's another rule of thumb: if you find yourself having to rationalize a decision, it's probably a bad one.

What to Do When the Light Turns Yellow

Like our five questions, some ethical problems are fairly straightforward. Others, unfortunately, are more complicated, but it will help to think of our five-question test as a set of signals that will warn you that you're facing a particularly tough decision— that you should think carefully about it and perhaps consult someone else. The situation is like approaching a traffic light. Red and green lights are easy; you know what they mean and exactly what to do. Yellow lights are trickier. Before you decide which pedal to hit, try posing our five questions. If you get a single yes, you'll almost surely be better off hitting the brake.^[47]

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Key Takeaways

Important terms and concepts

1. Business ethics is the application of ethical behaviour in a business context. Ethical (trustworthy) companies are better able to attract and keep customers, talented employees, and capital.
2. Acting ethically in business means more than just obeying laws and regulations. It also means being honest, doing no harm to

The "Key Takeaways" finish the bookending of the module | content. Together with stating the Learning Objectives at the beginning, the presentation is clean and informative. This is also a gentle nudge to reflect. However, the Reflect | Resolve (final phase) is usually a formative or summative assessment piece and not covered in the course resource material. As these pieces are usually evaluated and tied to grades, they usually are not handled within an

open resource, where there is no login or alignment to grades.

3. others, competing fairly, and declining to put your own interests above those of your employer and coworkers.
3. In the business world, you'll encounter conflicts of interest: situations in which you'll have to choose between taking action that promotes your personal interest and action that favors the interest of others.
4. Business people face two types of ethical challenges: ethical dilemmas and ethical decisions.
5. An ethical dilemma is a morally problematic situation in which you must choose competing and often conflicting options which do not satisfy all stakeholders.
6. An ethical decision is one in which there's a right (ethical) choice and a wrong (unethical or downright illegal) choice.

The Reflect | Resolve or final phase is usually a formative or summative assessment piece and not covered in the course resource material. As they are usually evaluated and tied to grades, they are not handled within an open resource, where there is no login or alignment to grades.

Sample B: Vital Sign Measurement (Nursing)

What is temperature?

Temperature refers to the degree of heat or cold in an object or a human body. In humans, the brain's **hypothalamus** acts as the body's thermostat and is responsible for regulating its temperature (OER #2). See **Figure 2.1** of the hypothalamus.

The human body is constantly adapting to internal health states and environmental conditions, and the hypothalamus is programmed to tell the body to generate heat if the body temperature is low. For example, the hypothalamus can activate peripheral vasoconstriction and shivering (contraction of skeletal muscles) to prevent a decrease in body temperature. The hypothalamus can also reduce heat if the body temperature is too high. For example, it can activate peripheral vasodilation to increase heat loss and cause a person to perspire, which cools the body.

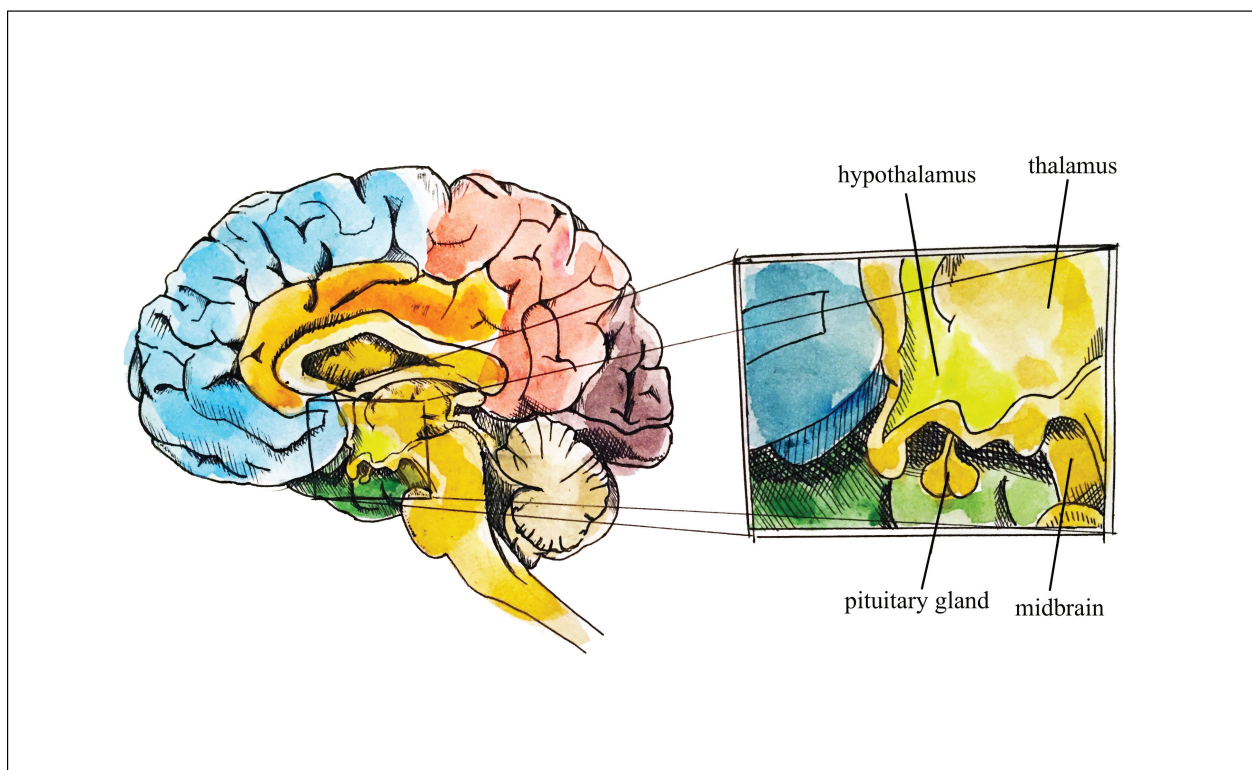


Figure 2.1: Hypothalamus (Illustration credit: Hilary Tang)

Why is temperature measured

Healthcare providers measure a client's temperature because it can give information about their state of health and influence clinical decisions. Accurate measurements and interpretation are vital so that **hyperthermia** and **hypothermia** can be identified and appropriate interventions determined.

Hyperthermia refers to an elevated body temperature. It can be related to an internal or external source. External sources that increase body temperature could include exposure to excessive heat on a hot day or being in a sauna or hot tub. Internal sources that may increase body temperature include fever caused by an infection or tissue breakdown associated with physical trauma (e.g., surgery, myocardial infarction) or some neurological conditions (e.g., cerebral vascular accident, cerebral edema, brain tumour). Hyperthermia that is associated with an infectious agent, such as a bacteria or virus (e.g., the flu) is referred to as **febrile**. Unresolved hyperthermic body states can lead to cell damage.

Hypothermia refers to a lowered body temperature. It is usually related to an external source such as being exposed to the cold for an extended period of time. Hypothermia is sometimes purposefully induced during surgery, or for certain medical conditions, to reduce the body's need for oxygen. Unresolved hypothermic body states can slow cellular processes and lead to loss of consciousness.

Methods of measurement

Methods of measuring a client's body temperature vary based on developmental age, cognitive functioning, level of consciousness, state of health, safety, and agency/unit policy. The healthcare provider chooses the best method after considering client safety, accuracy, and least invasiveness, all contingent on the client's health and illness state. The most accurate way to measure core body temperature is an invasive method through a pulmonary artery catheter. This is only performed in a critical care area when constant measurements are required along with other life-saving interventions.

Methods of measurement include **oral**, **axillary**, **tympanic**, **rectal**, **temporal artery**, and **dermal routes**.

Oral temperature can be taken with clients who can follow instructions, so this kind of measurement is common for clients over the age of four, or even younger children if they are cooperative. Another route other than oral (e.g., tympanic or axillary) is preferable when a client is on oxygen delivered via a face mask because this can alter the temperature.

For children younger than four, axillary temperature is commonly measured unless a more accurate reading is required.

Rectal temperature is an accurate way to measure body temperature (Mazerolle, Ganio, Casa, Vingren, & Klau, 2011). The rectal route is recommended by the Canadian Pediatric Society for children under two years of age (Leduc & Woods, 2017). However, this method is not used on infants younger than thirty days or premature infants because of the risk of rectal tearing. If the rectal method is required, the procedure is generally only used by nurses and physicians.

Temporal artery temperature is not a common method of measurement, but may be used in some agencies; this process involves holding the device and sliding it over the skin of the forehead and then, down over the temporal artery in one motion. Dermal strips can be placed on the forehead to measure skin temperature, but are not yet widely used, and the accuracy of this method has not yet been verified.

Points to consider

The accuracy of measurements is most often influenced by the healthcare provider's adherence to the correct technique.

The following pages detail the normal temperature ranges and techniques associated with each of the temperature methods.

What are normal temperature ranges

The human body's core temperature (internal body temperature) is measured in degrees Celsius (°C) or Fahrenheit (°F). In Canada, degrees Celsius is most commonly used.

In adults, the **normal core body temperature** (referred to as normothermia or afebrile) is 36.5–37.5°C or 97.7–99.5°F (OER #2).

A wider temperature range is acceptable in **infants and young children**, and can range from 35.5–37.7°C or 95.9–99.8°F. Infants and children have a wider temperature range because their heat control mechanisms are less effective. They are at risk for heat loss for many reasons including having less subcutaneous fat than adults, a larger body surface area in comparison to weight (and larger head size in proportion to the rest of the body), immature metabolic mechanisms (e.g., they may be unable to shiver), and limited ability to produce heat through activity. They are also at risk of excessive heat

production due to crying and restlessness as well as external factors such as being wrapped in too many blankets.

Older adults tend to have lower body temperatures and are at risk for hypothermic states; reasons for this may include having less subcutaneous tissue acting as insulation, loss of peripheral vasoconstriction capacity, decreased cardiac output with resultant lowered blood flow to the extremities, decreased muscle mass resulting in reduced heat production capacity, and decreased metabolic responses.

Points to consider

It is important to monitor and regulate temperature in newborns and infants because of the temperature fluctuations that place them at higher risk for hypothermia and hyperthermia, whereas temperature changes in older adults are often minimal.

See **Table 2.1** for normal temperature ranges based on method. The normal ranges vary slightly for each of the methods. As a healthcare provider, it is important to determine the significance of the temperature by considering influencing factors and the client’s overall state of health.

Table 2.1: Normal temperature ranges

Method	Range
Oral	35.8–37.3°C
Axillary	34.8–36.3°C
Tympanic	36.1–37.9°C
Rectal	36.8–38.2°C

Other factors that influence temperature include diurnal rhythm, exercise, stress, menstrual cycle, and pregnancy. The diurnal cycle causes a fluctuation of 1°C, with temperatures lowest in the early morning and highest in the late afternoon. During exercise, body temperature rises because the body is using energy to power the muscles. Temperature can rise as a result of stress and anxiety, due to stimulation of the sympathetic nervous system and increased secretion of epinephrine and norepinephrine. Body temperature varies throughout a woman's menstrual cycle due to hormonal fluctuations, rising after ovulation until menstruation by about 0.5–1°C. Body temperature is slightly elevated during pregnancy as a result of increased metabolism and hormone production such as progesterone.

Oral temperature

The normal oral temperature is 35.8–37.3°C (OER #1) or 96.4–99.1°F. Oral temperature measurement is common and reliable because it is close to the sublingual artery. An oral thermometer is shown in **Figure 2.2**. The device has **blue colouring**, indicating that it is an oral or axillary thermometer as opposed to a rectal thermometer, which has red colouring.



Figure 2.2: Oral thermometer

Technique

Remove the probe from the device and place a probe cover (from the box) on the oral thermometer without touching the probe cover with your hands. Place the thermometer in the client's mouth under the tongue and instruct client to keep mouth closed and not to bite on the thermometer (OER #1). Ensure the thermometer probe is in the posterior sublingual pocket under the tongue, slightly off-centre. Leave the thermometer in place for as long as is indicated by the device manufacturer (OER #1). The thermometer will beep within a few seconds when the temperature has been taken: most oral thermometers are electronic and provide a digital display of the reading. Discard the probe cover in the garbage (without touching the cover) and place the probe back into the device. See **Figure 2.3** of an oral temperature being taken.



Figure 2.3: Oral temperature being taken

Technique tips

Putting the probe cover on takes practice. You need to ensure that it snaps onto the probe. Sometimes the device will turn off after you take the probe out of the device if you take too long to put the probe cover on or insert it in the client's mouth. If so, discard the probe cover and re-insert the probe into the device to reset it. Then try again.

What should the healthcare provider consider?

Healthcare providers often measure the oral temperature, particularly when the client is conscious and can follow directions. However, certain factors can lead to an inaccurate oral temperature, including recent consumption of hot or cold food or a beverage, chewing gum, and smoking prior to measurement. Healthcare providers should wait up to 15 minutes to take the oral temperature if the client is eating hot or cold food or drinking a hot or cold beverage and about 5 minutes if the client is chewing gum or has just smoked. Alternatively, a different method is used to measure temperature. Measurement of the oral temperature is not recommended for individuals who are unconscious, unresponsive, confused, have an endotracheal tube secured in the mouth, and cannot follow instructions.

Tympanic temperature

The normal tympanic temperature is usually 0.3–0.6°C higher than an oral temperature (OER #1). It is accurate because the tympanic membrane shares the same vascular artery that perfuses the hypothalamus (OER #1). A tympanic thermometer is shown in **Figure 2.4**.



Figure 2.5: Tympanic temperature being taken

Technique tips

The technique of pulling the helix up and back (adult) or the lobe down (child under 3) is used to straighten the ear canal so the light can reflect on the tympanic membrane. If this is not correctly done, the reading may not be accurate. The probe tip is gently inserted into the opening to prevent damage to the ear canal. The ear canal is a sensitive and a highly innervated part of the body, so it is important not to force the tympanic probe into the ear.

What should the healthcare provider consider?

The tympanic temperature method is a quick and minimally invasive way to take temperature. Although research has proven the accuracy of this method, some pediatric institutions prefer the accuracy of the rectal temperature. The Canadian Pediatric Society found equal evidence for and against the use of tympanic temperature route (Leduc & Woods, 2017). It concluded that tympanic temperature is one option for use with children, but suggested using rectal temperature for children younger than two, particularly when accuracy is vital. The tympanic temperature is not measured when a client has a suspected ear infection. It is important to check your agency policy regarding tympanic temperature.

Axillary temperature

The normal axillary temperature may be as much as 1°C lower than the oral temperature (OER #1). An axillary thermometer is the same electronic device as an oral thermometer, and both have a **blue end**.

Technique

Remove the probe from the device and place a probe cover (from the box) on the thermometer without touching the cover with your hands. Ask the client to raise the arm away from his/her body. Place the thermometer in the client's armpit (OER #1), on bare skin, as high up into the axilla as possible, with the point facing behind the client. Ask the client to lower his/her arm and leave the device in place for as long as is indicated by the device manufacturer (OER #1). Usually the device beeps in 10–20 seconds. Discard the probe cover in the garbage (without touching the cover) and place the probe back into the device. See **Figure 2.6** of an axillary temperature being taken.



Figure 2.6: Axillary temperature being taken

What should the healthcare provider consider?

The axillary route is a minimally invasive way to measure temperature. It is commonly used in children. It is important to ensure that the thermometer is as high up in the axilla as possible with full skin contact and that the client's arm is then lowered down.

Rectal temperature

The normal rectal temperature is usually 1°C higher than oral temperature (OER #1). A rectal

thermometer has a **red end** to distinguish it from an oral/axillary thermometer. A rectal thermometer is shown in **Figure 2.7**.



Figure 2.7: Rectal thermometer

Technique

First, ensure the client's privacy. Wash your hands and put on gloves. For infants, lie them down in a supine position and raise their legs up toward the chest. You can encourage a parent to hold the infant to decrease movement and provide a sense of safety. With older children and adults, assist them into a side lying position. Remove the probe from the device and place a probe cover (from the box) on the thermometer. Lubricate the cover with a water-based lubricant, and then **gently insert the probe 2–3 cm inside the rectal opening of an adult, or less depending on the size of the client**. The device beeps when it is done.

What should the healthcare provider consider?

Measuring rectal temperature is an invasive method. Some suggest its use only when other methods are not available (OER #1), while others suggest that the rectal route is a gold standard in the infant population because of its accuracy. The Canadian Pediatric Society (Leduc & Woods, 2017) has referred to research indicating that rectal temperatures may remain elevated after a client's core temperature has started to return to normal, but after reviewing all available evidence, still recommends measuring rectal temperature for children under the age of two, particularly when accuracy is vital. Rectal temperature is not measured in infants under one month of age or premature newborns.

Checking in

You have had to digest a fair bit of information in this chapter. Take a few moments to make sure you understand the different ways to take temperature and when to use the different methods.



An interactive or media element has been excluded from this version of the text. You can view it online here:

<https://ecampusontario.pressbooks.pub/openatscale/?p=435>

Try it out: Oral temperature

Next, you have an opportunity to watch film clips on accurate measurement techniques. There are three activities that involve film clips that you can watch, and then try out yourself. Check it out!

Watch this short **film clip 2.1** and see how oral temperature is taken correctly. After watching the clip, try the technique yourself. You can watch the clip and practice as many times as you like.



A YouTube element has been excluded from this version of the text. You can view it online here:
<https://ecampusontario.pressbooks.pub/openatscale/?p=435>

Film clip 2.1: Oral temperature

Try it out: Tympanic temperature

Watch this short **film clip 2.2** and see how tympanic temperature is taken correctly. After watching the clip, try the technique yourself. You can watch the clip and practice as many times as you like.



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<https://ecampusontario.pressbooks.pub/openatscale/?p=435>

Film clip 2.2: Tympanic temperature

Try it out: Axilla temperature

Watch this short **film clip 2.3** and see how axilla temperature is taken correctly. After watching the clip, try the technique yourself. You can watch the clip and practice as many times as you like.



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Film clip 2.3: Axilla temperature

Test yourself

Before you move to the next chapter, make sure you understand fully the content of this chapter. Your goal is to score 100% on each activity. Take as many attempts as you need.



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Chapter summary

Temperature is an important vital sign because it provides current data about the client's health and illness state. Changes in body temperature act as a cue for healthcare providers' diagnostic reasoning.

There are many ways to measure temperature. In determining the best method, the healthcare provider considers agency policy, the client's age and health and illness state, and the reason for taking the temperature. Healthcare providers must **use the correct technique** when measuring temperature, because this can influence client data.

When determining the relevance of the temperature, the healthcare provider considers the client's baseline data and the situation. Diagnostic reasoning about temperature always involves considering additional data including other vital sign measurements and subjective and objective client data.

Part of this content was adapted from OER #2 (as noted in brackets above):

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ACCOMPLISHING THE WORK

Sprinting toward open

This section provides some background and how to move forward with one methodology for OER development.

While commonly associated with software design and development, there is a developing Sprint methodology aligned with project management and more inline with OER development. But at its core, a Sprint, “refers to a set period of time during which a certain activity is completed then then reviewed” (www.sinnaps.com).



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Glossary

axilla

Space below the shoulder through which vessels and nerves enter and leave the upper arm; a person's armpit

diurnal rhythm

Once a day cycle

helix

Prominent rim of the auricle

hyperthermia

Condition where an individual's body temperature is elevated beyond normal due to failed thermoregulation. The person's body produces or absorbs more heat than it dissipates.

hypothalamus

Main output of the limbic system. It is located on lower part of the top end of the brain stem.

hypothermia

Defined as a decrease in the core body temperature to at least 95 degrees F. It occurs when the heat loss is greater than the metabolic and heat production. Hypothermia can be categorized in three stages: mild, moderate and severe, based on core body temperature.

progesterone

Endogenous steroid and progestogen sex hormone involved in the menstrual cycle, pregnancy, and embryogenesis of humans and other species. It belongs to a group of steroid hormones called the progestogens, and is the major progestogen in the body.

short

small in length, distance, or height

too much

Having a small distance from one end or edge to another, either horizontally or vertically.

Comparatively little height of a person.

Having little duration; opposite of long.