

Using Universal Design in the University Classroom

Universal Design for Learning (UDL) is a set of principles “that give all individuals **equal opportunities to learn**... a blueprint for creating instructional goals, methods, materials, and assessments that work for everyone— “not a single, one-size-fits-all solution but rather flexible approaches that can be customized and adjusted for individual needs” (CAST).

In their policy on accessible education for students with disabilities, the Ontario Human Rights Commission (OHRC) states that “UDL fosters student independence and autonomy, avoids stigmatizing individual students, and creates a more **inclusive and welcoming education setting for everyone**” (2018).

In applying the principles of Universal Design for Learning, we can think about accessibility in the classroom in terms of five levels:

- **Movement** (getting there): How we get to an event or class.
- **Architecture** (orienting): How the space and layout structure our belonging and understanding.
- **Sense** (being there): How we access the material, the conversation.
- **Communication** (joining the conversation): How we engage, understand and are understood
- **Agency** (autonomy): How we can come to have a shaping role in the event or class, the right to define our own identity and involvement (Dolmage, J.T.)

UDL asks us to recognize that people learn in a variety of ways and therefore learning environments should be **flexible** (OHRC). Therefore, recommendations for practice centre around three areas:

- **Representation:** A variety of methods are used to present course content (e.g. lecture, web, text, audio)
- **Engagement:** A variety of teaching methods are used to capture the student’s attention (discussions, reflections, individual projects, etc).
- **Expression:** The instructor allows students to demonstrate their knowledge in a variety of ways and is flexible for students who have barriers in expression (e.g. oral presentations for those with reading disabilities) (*Fast Facts for Faculty*, Ohio State University)

UDL creates “**equitable use**” by recognizing diverse abilities. “There are redundant or repetitive or duplicated ways to take part, but no one way is privileged over the others.” (Dolmage, J.T.)

The following recommendations were developed based on a review of higher education institutions in Canada and the United States, a literature review, and stakeholder surveys.

Syllabus

The course syllabus should be considered a document that students rely on to plan for their upcoming year. A course syllabus should contain course goals, course description, course objectives, learning outcomes, instructor contact information, accommodation statements, assessment strategies, policies on missed classes and late assignments, weights of assessed material, due dates, schedule of class topics, associated readings and activities by date, a list of student resources (e.g. Writing Support, Math Support, Academic Accommodation Support, Centre for Student Development and Counselling, Mental Wellbeing, etc.).

- Review the syllabus in the first class and refer to it often.
- Make the syllabus available in an electronic format, share a copy with the Accessible Format Production Librarian (<http://library.ryerson.ca/services/disabilities/accessibility/>)
- Provide access to the course syllabus via the course web page, well in advance of the first class so that students can begin planning for their year.
- Allow students to express concerns about issues highlighted on the syllabus (due dates, field trips, etc).

Course Delivery

Based on the principles outlined above, faculty should use a variety of teaching methods, use natural supports, and encourage student engagement through face-to-face interaction and technology.

- Identify course objectives and learning outcomes in their individual courses
- Course expectations should be explicit and delivered in multiple formats (e.g. verbally, on the course outline, on the course web page)
- Use multiple means of presenting material in class, including, where appropriate, lecturing, activities (e.g. demonstrations, laboratories, group projects, case studies), video, technology, etc.
- Present single concepts in more than one way (e.g. a demonstration followed by a lecture explaining relevant concepts)
- If using presentation technology, faculty should be sure slides are easy to read (i.e. large font, not too text-heavy).
- Encourage natural supports within their class (e.g. peer-to-peer mentoring, use of office hours, teaching assistants, study groups, opportunities for questions, etc.)
- Encourage faculty-student engagement (e.g. use of office hours, email, web postings, discussion boards, etc.).
- Use technology to enhance learning (e.g. clickers, Google Drive, polling software, etc.).
- Consider posting notes for difficult concepts, or a providing a simplified version of the slides used in class.
- When lecturing, moderate language, replacing terms such as “this or that” with specific descriptions.
- Encourage student participation in multiple ways (e.g. questions, small groups, pairing students, discussions, etc.).
- Consider creating guided notes (notes where some material is left off) that students can use during lecture.
- Update course material annually, keeping the course relevant and current.

- Repeat important concepts and provide additional examples of these concepts.
- Relate important course concepts to real life through the use of news stories, personal stories, research stories, and case studies.
- Assist students, especially junior students, in learning study techniques, writing, and numeracy
- If planning to provide materials to students, do so before the class day so students may print or use them as a guide during lecture.
- Review the previous day's content at the beginning of class and allow students to ask questions, and summarize important points at the end of each class.
- Give students a short break part way through class.
- Allow students to record lectures or use note takers.
- Repeat student questions before answering.
- When lecturing, ensure that all students can hear, as well as see the board or slides.
- Submit videos to the Ryerson Library for captioning services well in advance of needing them for class
- Allow students to ask questions without raising their hand.
- Provide verbal explanations for PowerPoint slides, material on the board, and any graphs or charts used in class.
- If distributing printed materials (e.g. tests), provide printed materials in black and white
- Consider using a textbook that is available electronically as well as in print editions.
- In laboratories, be aware of any student in need of accommodations. Ensure that all chemicals and equipment are clearly labeled.

Student Resources

Student resources include Academic Accommodation and those provided by Student Learning Support (<http://www.ryerson.ca/studentlearningsupport/index.html>).

- Work with the Academic Accommodation Support to determine, identify, and implement resources that can assist students with accommodations inside and outside of class.
- Highlight on-campus student services that would assist all students in learning (e.g. English Language Support, Library, Writing Support, Math Support, Health Centre, etc.).
- Encourage (where appropriate) students to bring copies of assignments when using supports (e.g. Writing Support, Math Support, Library research skills workshops).
- The instructional services division of the Library (<http://library.ryerson.ca/services/instruction/>) offers drop-in workshops on research and citation (<http://library.ryerson.ca/guides/workshops/>). Ryerson's subject librarians have also produced over a hundred research guides (<http://learn.library.ryerson.ca/>) on topics relevant to programs at Ryerson.
- Recognize and support student self-advocacy.

Student Assessment

The gold standard for Universal Design and student assessments is diversity, choice and flexibility. Professors should note that while it is important that assessments be "fair," this does not mean that assessments must be "the same." Assessments should be designed according to these principles. With these principles in mind, here are some recommendations for instructing professors about including Universal Design in their assessments.

1. **Learning assessments should reflect the course goals and should be designed in a backwards manner:** Backward design begins by developing course objectives and then outlining appropriate means of assessing whether these objectives have been met by students in a way that reflects the course goals.
2. **Assessment should be flexible:** Assessment should use a combination of modes of expression (e.g. writing, speaking, drawing, making, presenting) to demonstrate the learning of course content. Choice and variety in demonstrating mastery of necessary course skills and content is key. For example, some students might not do as well at timed tests and would do better if offered take-home tests. In contrast, other students might have difficulties with take-home tests (e.g. due to family responsibilities) and would do better with timed tests. Allowing students a choice of assessment method can help meet their individual requirements. In addition, consider that there might be a number of ways to demonstrate mastery of the course material. Offering multiple methods of assessment (even if students are not given a choice of assessment) will assist students in demonstrating knowledge.
3. **Deadlines should be flexible:** Some students with disabilities will experience good weeks and bad weeks, and these cannot always be predicted in advance. Avoid deadlines that are too harsh (e.g. if not handed in on time the student gets a zero). Instead allow for negotiation.
4. **Assignments should give opportunities for feedback:** It is helpful to give students feedback throughout the process of completing longer assignments. Consider having parts of these assignments due at different stages and provide feedback along the way.
5. **Academic Accommodation Support can be an invaluable resource:** If professors are unsure about whether their assessment methods are fair and accessible, Academic Accommodation Support can help ensure that tests are accessible to diverse student needs (e.g. online tests can be read by electronic readers, graphs can be translated by readers for visually impaired students, etc.). In addition, faculty should consult with Academic Accommodation Support (<http://www.ryerson.ca/studentlearningsupport/academic-accommodation-support/index.html>) if concerned about individual accommodations.

Online Delivery

To implement the principles of universal design in online learning, it is recommended that faculty and instructors plan for the diverse range of students that enroll in online courses. The planning should include tools and strategies to enhance the accessibility and usability of the course for students with and without disabilities (<https://www.ryerson.ca/accessibility/guides-resources/teaching/>)

All the UDL principles applied in the face-to-face classroom may be applied online with particular emphasis on the following:

1. Communication should be based on inclusive language, with clear expectations (e.g. model and teach good discussion board etiquette).
2. At the beginning of any online course, welcome all students and provide basic navigational and course management information and advice
3. Ensure that your course page has consistent navigation and simple design. Student should be able to locate materials and content easily through the learning management

system. In addition, students should find standard course structure across various courses.

4. Use accessible technology within the learning management system or when asking students to use social media or external web tools (wikis, blogs, etc.).
5. Follow best practices for accessible web pages, documents, and multimedia components (<https://www.ryerson.ca/accessibility/guides-resources/accessible-documents/>):
 - o Ensure that captions and transcripts are available for audio-visual material, convert PowerPoint presentations to accessible HTML content.
 - o Make auditory materials visual and the visual materials auditory.
 - o Provide students with accessible downloads for necessary plugins, example: Adobe Flash or Adobe Reader.
 - o Use clear formatting: backgrounds, color, links, fonts.
6. Utilize accessible technologies and provide guidance on how to obtain specific accessibility related accommodations.
7. Online courses should be designed to facilitate readability and minimize distractions.
8. Online courses should be designed to accommodate the use of assistive technologies such as screen readers, magnifiers, etc.

Work Cited

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