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Introduction

As of January 2013, the Government of Ontario requires Universities and Colleges in the province to provide accessibility training\(^1\) to all educators\(^2\).

This requirement is perceived as a great opportunity to discuss best practices in teaching and learning. This introductory document invites educators to reflect on their beliefs and practices, while being considerate of students' experiences. As well, by combining student engagement and active learning principles, educators can create learning environments which are truly exciting for students from all walks of life. In particular, students with disabilities benefit from the use of a wide variety of teaching and learning methods. And because no learners have identical needs, abilities and ways for learning, the use of inclusive teaching in one's classroom will serve well all students in your class. It expands their learning experience, allows for a greater likelihood of success while achieving full potential, and enhances participation to academic life.

This document introduces tools illustrating strategies from which to articulate and guide course design and delivery. They should positively influence the professor-student interaction, the syllabus, the teaching/learning dynamic and the evaluation process. Also, covered in the next few pages is an overview of what are inclusive teaching practices, and of barriers to learning and their consequences.
What are Inclusive Teaching Practices (ITP)?

Over the last decade, Inclusive Teaching has been an emerging concept/field. It is also known, among other things, as Differentiated Learning (mainly K-12 education), Universal Instructional Design or Universal Design of Instruction, and Universal Design for Learning (UDL, www.cast.org). Each label as a concept has its specifics, but overall addresses similar concerns: the variability of learners’ needs, barriers to learning and strategies to overcome impacts. Currently, in higher education, UDL has a strong voice, with its strengths and weaknesses (Vukovic, 2012). Nonetheless, the overarching concept is ITP, rather than UDL, one of the models under Inclusive Teaching.

Inclusive Teaching embraces diversity in order to meet the varying learning needs and styles of students. It encompasses a broad range of best teaching practices that, used properly, changes the perspective on teaching students from a more reactive approach (often teacher-centered), to a more proactive approach (more student-centered). Also, ITP supports the current change in roles for educators, from information provider (e.g. lecturing) to guide and facilitator to learning (e.g. active learning). (Shaw, 2011; Barkley, 2010; Bowman, 2010; Cameron 2010/1999; Edyburn, 2010; Shaw, 2010, 2011; Gross-Davis, 2009; McGuire&all, 2006; Moses&Chang, 2006; Hatfield, 2003).

Diversity refers to individuals with specific characteristics like “communication skills, culture, marital status, ability to attend, learning abilities, intelligence, interests, (cognitive abilities), values, culture, social skills, family support, learning styles, age, socioeconomic status, religious beliefs, sexual orientation, ethnicity, physical abilities, sensory abilities, race, gender.” (Burgstahler & Cory, 2008, p.4).

Accessibility relates to the removal of one or many barriers, whether systemic, environmental, behavioral, personal, etc., that allows for an individual to reach its full potential while participating in significant occupations, in his/her life; and contributing to society.

Dr. Todd Rose from Harvard’s Graduate School of Education and Project Variability (video at www.youtube.com/watch?v=8WClnVjCEVM, 2012), when speaking about the concept of variability, states that the fields of neurosciences and education recognize that all brains are not alike and therefore students don’t all learn the same way. Dr. Rose continues his debunking of the myth of “the average learner” by stating that “variability is the rule, not the exception”. Accordingly, varying methods of instruction are essential in reaching as many people as possible and in fostering optimal learning.

For students with disabilities, inclusive teaching practices aim at minimizing the consequences of functional limitations and at removing barriers to learning. For them, inclusion is really about creating accessible learning environment by planning ahead for a variety of learning needs instead of reacting to a few expressed needs. By using inclusive teaching practices (social model of disability) when updating or developing a course, educators significantly decrease the number of accommodations required (medical model of disability), and because not all students declare their disability or qualify for Student Access Services, they help all students in their class: A better designed course leads to more understanding, better performance and more satisfied students (COU, 2012; Vukovic, 2012; uOttawa-SASS, 2010; Burgstahler & Cory, 2008).
Small changes can make a huge difference: “A key realization (is) that small changes could have an important impact. Faculty who initially (feel) overwhelmed by the prospect of redesigning their whole course structure (become) enthusiastic about making small revisions based on (inclusive teaching) principles within the context of their own course content and teaching styles.” (Burgstahler & Cory, 2008, p.150). Educators may start from their current practices and strategies and add a few changes at a time, respecting their own pace, with the resources at their disposal. Organizing their teaching to vary the ways that the material is conveyed optimize student learning.

And finally, inclusion is also about embracing a reflective practice and a welcoming attitude, in addition to varying teaching methods, to provide all students with engaging, challenging and relevant learning activities (active learning) in a cognitively, emotionally and physically safe and barrier free environment (Vukovic, 2012; Lombardi & Murray, 2011; Milligan, 2010).
Barriers to Learning

Students in their diverse background in general, and more specifically with disabilities, may encounter barriers to learning.

In 2012-2013, 1,262 students out of more than 40,000 where registered to the University of Ottawa Access Service. This is less than 3% of the student population. From that number, 72% of those registered have a non-visible disability. In the years to come, those numbers are expected to increase for a number of reasons: there is an increase in the prevalence of mental health; and conditions are diagnosed better and earlier. However more optimal treatments and support services result in better student success in high school and in higher education.

According to US and Canadian Sources, such as Statistics Canada, between 9 and 11% of students enrolled in University have a disability. Among those students, two-thirds have a non-visible disability and are more likely to face less favourable attitudes from their educators, such as stereotyping or questioning the authenticity of their disability, therefore making accommodations required more difficult to obtain (Vukovic, 2012; Denhart, 2008; Hindes & Mather, 2007; Burgstahler & Doe, 2006; Lehmann, Davies, & Laurin, 2000)

Students are generally uncomfortable revealing their disabilities or having their challenges being exposed during class. At the same time, a student should feel welcomed to discuss his/her specific learning needs. This is only possible through a relationship of trust and a positive class climate, which the educator is responsible for.

Students who have non-visible disabilities such as a learning disability, an attention deficit disorder, or a mental health issue can face difficulties such as handling time pressure, maintaining attention to task, interacting with others, being uncomfortable with changes, keeping energy level up, approaching authority figures, processing information, reading, coping with stress, etc. (Vukovic 2012; Belch, 2011,2004; Wolf, Schreiber, & Wasserstein, 2008; Burgstahler & Cory, 2008; Weyandt & DuPaul, 2006).

These barriers have an impact on students trying to understand the course content, structure their learning (e.g. note taking, studying habits), engage and participate in class, perform on exams or term papers, and meet the overall course requirements.
When looking at the different numbers and barriers, it could mean that out of a class of 100 students, 10 students will have a disability, but of those, only 3 students will receive official support. Adding to other students’ needs and styles, there is a serious added value in varying teaching methods and offer flexibility in the learning environment to support and guide students in their studies. Providing them with a fair opportunity for growth and success allows them to reach their full potential, within the limit of their capabilities, without lowering academic standards.

**The Role of Educators in Student Success**

Educators in higher education have a central role to play in providing the right learning experience for students from a broad range of venues, one of those being disabilities and its impact on learning.

“There is evidence that students with disabilities who receive supports achieve graduation rates and academic outcomes comparable to those of the general student population.” (Vukovic, 2012, p.1).

Therefore, the opportunity for educators to reflect on their teaching practices, and to innovate by integrating inclusive strategies and methods into the planning, delivery and evaluation activities within the teaching and learning dynamic, is fundamental to the outcome of students-with-disabilities’ journey in higher education and later.

What can educators do to alleviate barriers to learning? What can be done at the course level? The next section will introduce strategies and tools for inclusive teaching.
Strategies and Tools for Inclusive Teaching

The literature offers a variety of resources and perspectives when it comes to alleviate barriers to learning. A selection had to be made and summarized. Below are four key strategies educators may use to bring about inclusive practices to their teaching. More strategies are available in the four guides introduced and hyperlinked at the end of this section.

**Strategy 1: Educators Ask Themselves Questions about Goals, Learning Needs and Teaching Methods**

There are key questions educators may use to develop a course with inclusion in mind. Ouellett (2004), recommends the following six:

- “What are students expected to know, do, or value at the completion of this course?
- (…) What are the core outcome goals for all students?
- How will the course standards be communicated to students?
- How do I prepare students to meet the assignment expectations?
- How do my strategies for assessment reflect key learning goals?
- How do I factor in individual differences?” (p.144).

Determining essential course components is key to an optimal course design. It allows educators to focus on which knowledge, skills or attitudes students should be able to demonstrate, with or without accommodations, by the end of the course. Clearly stating common expectations for all students is best practice as it is non-discriminatory and effective. Ouellett, 2004, offers a list of elements to consider:

- “What you want students to know (core content, principles, concepts);
- What you want students to be able to do (academic skills);
- What you want students to value and appreciate (values or attitudes); and
- The level of proficiency you will expect students to demonstrate at the completion of this course.” (p.139)

Furthermore, educators may ask this question to students: “What would you like me to know about you as a learner to help make this course a successful experience?” (Ouellett, 2004, p.138). At mid-term and at the end of the term, they may also ask students through an anonymous survey or a one-minute-paper activity how the educator's teaching is affecting their individual learning, and what they suggest to make his/her teaching even better, in terms of active, engaging and inclusive learning.

**Strategy 2: Active Learning and Use of a Variety of Teaching Methods**

Best practices in teaching and learning encourages educators to facilitate students’ engagement and self-responsibilities toward their own learning. Educators’ approachability and empathy impacts how successful students will be in expressing their needs and motivation toward learning. Inclusive teaching expands on these best practices by formalizing the way educators:

1. design their course by using backward design where course design is starting with learning objectives and goals;
2. prepare material and structure/format each class by including a variety of activities to engage students and being mindful of the diversity of learning styles and needs (e.g. mini-lecture, case study, scenario, question period, debate, etc.);

3. present information in a variety of ways, by bringing flexibility in delivering course content (e.g. verbal, visual, written, videos, audio files, graphs, etc.);

4. support and guide students in their learning by using technology such as a course management system (e.g. Blackboard Learn); by being available for questions (e.g. office hours, e-mail or Skype, etc.); and by referring them to appropriate learning strategy or on-campus services (study aids, mentoring, writing assistance, access services).

**Strategy 3: Offer Choices as to How Students Can Demonstrate their Understanding of the Content (Evaluation)**

![Image](https://via.placeholder.com/150)

Burgstahler & Cory (2008) recommend a series of questions for educators to reflect on the intent of the assessment method to be selected, its congruence with the essential course components and its potential barriers, whether technical, physical or cognitive:

- “Are the instructions on this assessment easy for students to understand?
- Is the layout of the assessment easy to navigate?
- Are items formatted consistently throughout the assessment?
- Is the language I am using in the assessment appropriate for the students in my classroom? Will students understand the vocabulary associated with information not directly related to the coursework?
- Is the print large and legible enough for all students to read? Are diagrams clear and consistent with text?
- Can the assessment be taken in a variety of formats (e.g., paper, computer-based)?
- Can a potential allowable accommodation for a student be used on this assessment without changing the constructs of what I am testing?” (p.76).
The authors further recommend to:

- Clearly articulate the decisions you want to make about students’ skills and knowledge from the test or assignment. (…) 
- Think about how students can best demonstrate their skills and knowledge in a way that will help you make decisions. (…) 
- Identify the access skills needed to successfully interpret and respond to assessment items. (…) 
- Design a task (test or assignment) that will allow you to make the decisions you want to make. (…) 
- Explicitly state the expectations for students and which skills you will and will not be evaluating. (…) 
- Design the scoring guide or rubric with the decisions in mind. Tell students what you are trying to measure. (…)” (pp.77-79).

Depending on your context, it is recommended to vary the assessment strategies at different levels: at the program or department level (e.g. discuss assessment requirements program wide and coordinate per year or semester); at the course level (vary methods throughout the semester - e.g. oral presentation, case study or essay, and multiple choice exam); or within one period, offer choices to students (e.g. at mid-term, student may select either an oral presentation or a video; or either an essay or a blog, etc.).

**Strategy 4: Provide Accessible Written or Online Materials in PDF, MS Word, PowerPoint and Excel**

In order to support learning, documents should be designed with congruence, ease of reading and understanding; and foster accessibility (e.g. readable with a word-to-voice program; include Alternate text and screened via the Accessibility Checker feature from the Microsoft Office Suite). Specific tips related to Strategy 4 are described in the different guides presented hereafter, more so in the Council of Ontario Universities (COU) Educators’ Accessibility Toolkit.
**Tools for Educators: Strategies to support course design and delivery**

As mentioned previously, there are many strategies available in the literature from different authors. When summarized, one realizes that they are mostly congruent, with sometimes their own flavour or perspective. The following four guides were selected:

**COU Educators’ Accessibility Toolkit:** This tool contains useful information on designing a course, writing a course syllabus, creating accessible lectures, creating accessible documents in PowerPoint, Word and PDF, as well as evaluating students and giving feedback.

Consult this document on the COU website at [www.accessiblecampus.ca](http://www.accessiblecampus.ca) or on the uOttawa Accessibility website at [www.uottawa.ca/accessibility/](http://www.uottawa.ca/accessibility/).

**Checklist for Inclusive Teaching Practices:** This tool, adapted from the University of Guelph, offers a comprehensive list of tips to introduce, update or make-over your course(s) in an inclusive manner.

Consult this document on the uOttawa Accessibility website at [www.uottawa.ca/accessibility/](http://www.uottawa.ca/accessibility/), under “Tool Kit”, under “Accessibility resource kit for professors and educators”.

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Inclusive Teaching Practices | © Centre for University Teaching
Teaching & Learning Support Service, University of Ottawa | v10-2013
CAST’s Universal Design for Learning Guidelines Model: These guidelines offer an overview of elements to take into consideration when updating or developing a course. On the CAST website (see web resources), you will find examples and a full text describing each component under the main three principles (Varying means of representation, expression and engagement).

Consult this document on the CAST website at www.udlcenter.org/sites/udlcenter.org/files/updateguidelines2_0.pdf.

Minimizing the Impact of Learning Obstacles: A guide for Professors, SASS uOttawa: This tool contains valuable information on the Access Service, on disabilities and on accommodation strategies.

Conclusion

As of 2005, diversity and inclusion are professional obligations in the field of teaching and learning. More specifically, accessible learning environments are at the forefront.

To become student-centered, and respect variability in learning, educators must first reflect upon their teaching practices to acknowledge their own values and expectations, in order to create and maintain a positive and welcoming learning environment. Using a variety of methods to be as inclusive as possible, interacting with students, delivering content and assessing learning are all important factors.

There are many strategies and tools available to support educators in this endeavour. It is a question of reframing them and applying them at the right moment, for the right goals, keeping congruence and purpose in mind.

Should you need more information or support in integrating inclusive practices to your teaching, please contact the Center for University Teaching at your convenience at cpu-cut@uOttawa.ca or at 613-562-5333. Also, you can register to the workshop on Inclusive Teaching Practices. To register, go to www.tlss.uOttawa.ca/cpu.
References


**Web Resources**

- **Educators Accessibility Tool Kit - Council of Ontario Universities (COU):**
  - [www.accessiblecampus.ca](http://www.accessiblecampus.ca)

- **Minimizing the Impact of Learning Obstacles: A Guide for Professors – SASS, University of Ottawa:**

- **Online tutorials for accessible documents and websites - University of Ottawa**
  - [www.uottawa.ca/accessibility/](http://www.uottawa.ca/accessibility/)

- **The University of Ottawa Centre for Organization Development and Learning (CODL) and Center for Continuing Education (CCE) offer accessibility training workshops. For more information, please visit the following websites:**
  - CODL: [www.hr.uottawa.ca/training/](http://www.hr.uottawa.ca/training/)
  - CCE: [www.continue.uottawa.ca/index.cfm](http://www.continue.uottawa.ca/index.cfm)

- **UDL Guidelines, accessibility tools and products – Centre for Applied Special Technology (CAST):**
  - [www.cast.org/](http://www.cast.org/)
  - [www.udlcenter.org/sites/udlcenter.org/files/updateguidelines2_0.pdf](http://www.udlcenter.org/sites/udlcenter.org/files/updateguidelines2_0.pdf)

- **UID Check List – adapted from University of Guelph:**
  - [www.uottawa.ca/accessibility/](http://www.uottawa.ca/accessibility/), under “Tool Kit”, under “Accessibility resource kit for professors and educators”.
Endnotes

i According to the Accessibility for Ontarian with Disabilities Act – 2005 (AODA), Universities in Ontario must provide accessible learning resources and material to students; as well as training to all educators. To learn more about the AODA, please consult the uOttawa online module on Accessible Customer Services at: [www.hr.uottawa.ca/accessibility/](http://www.hr.uottawa.ca/accessibility/).

ii According to the AODA, the term "educators" includes: full-time professors, part-time professors, lecturers, trainers, instructors, and any other employee who provides continuing education and professional development within a university setting.

iii Refer to Cameron (1999/2010) to learn more about active learning. There is a general agreement that: "to learn, students must do more than just listen: they must read, write, discuss, or be engaged in solving problems. In particular, students must engage in such higher-order thinking tasks as analysis, synthesis, and evaluation." (Wikipedia, retrieved on July 9th, 2013, at [http://en.wikipedia.org/wiki/Active_learning](http://en.wikipedia.org/wiki/Active_learning))

iv One-minute-paper: "In this strategy, the educator pauses and asks students to write a response to a question (...). The strategy (is) particularly useful at the end (of a segment or class) as a way of encouraging students to summarize the day's content. The minute paper forces students to put information in their own words, helping them internalize it and identify gaps in their understanding. When collected at the end of the period, the minute paper can serve as a classroom assessment technique to help instructors gauge how well students are learning the material, what they understand, and what the instructor needs to spend more time on" (CUT, 2013).