3-2013

Universal Design for Instruction and Teaching Strategies

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Recommended Citation

Stolarchuk, Lorie; Baker, Nick; and Cobb, Cam. (2013). Universal Design for Instruction and Teaching Strategies.
https://scholar.uwindsor.ca/ctlpres/2

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Universal Design for Instruction and Teaching Strategies

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March, 2013

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http://www.joebower.org/2011/08
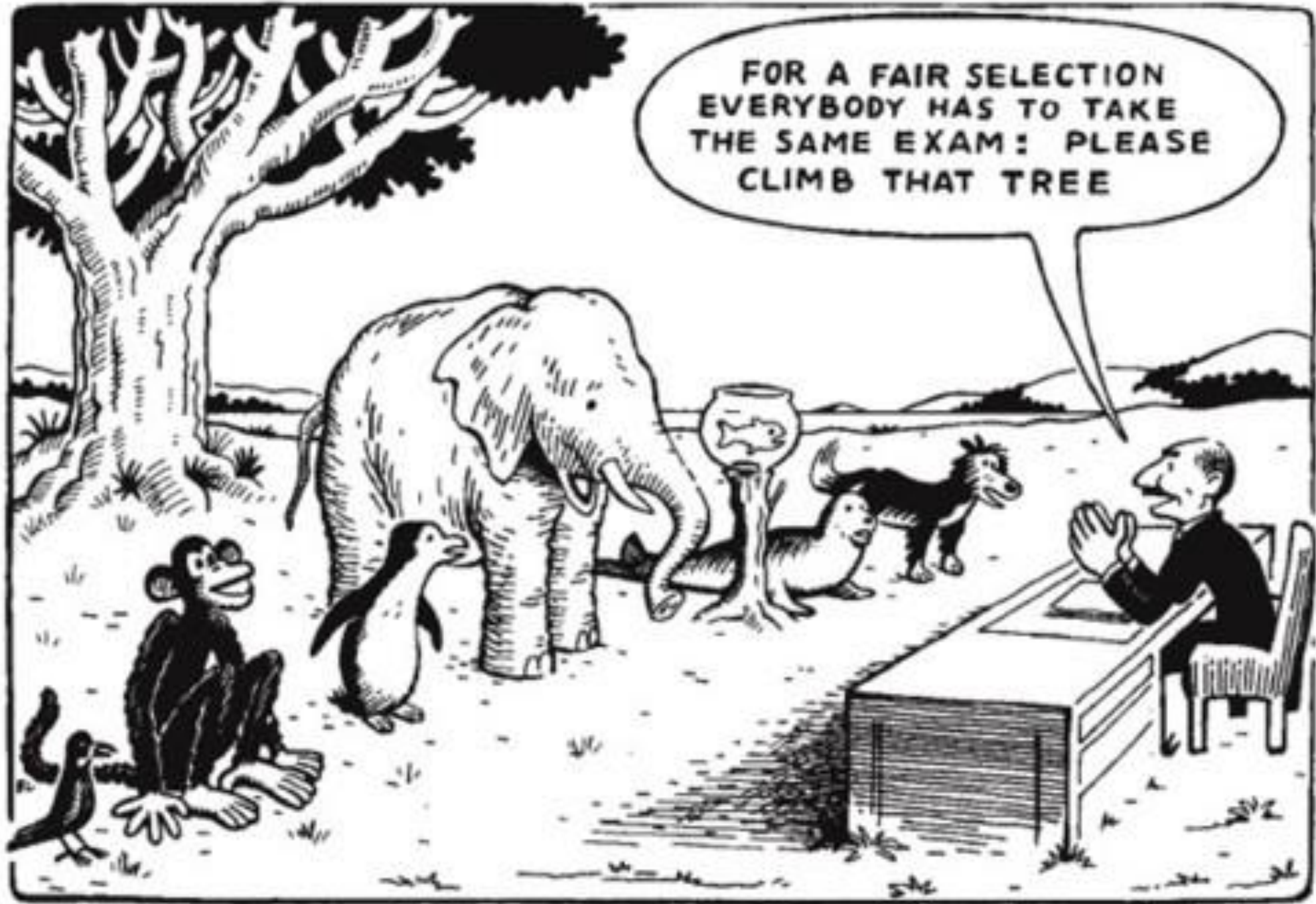
Everybody is a genius. But if you judge a fish by its ability to climb a tree, it will live its whole life believing it is stupid.

http://goo.gl/4rILh

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Our Perspectives and Background

- Nick

- Lorie

- Cam

Introduction

The broad objectives of this session are to:

- Gain insight into the transition process from the K-12 environment to the post-secondary context for students with accommodations

- Review some student-centred teaching strategies/practices that can enhance student engagement, diversity and success

The K-12 Context

- Before we delve into UDI at the post-secondary level I will briefly introduce the K-12 context.

Learning Outcomes

- In learning exchanges educators foster opportunities for learners to develop skills.

- K-12 educators often draw these skills from the Ontario Curriculum.

Learning Needs

- Skills can be demonstrated in different degrees and in different ways.

- Needs exist in degrees. They are also varied.

IEP

- Individual Education Plans (IEPs) can lead K-12 educators to personalize support.

- But K-12 educators do not *need* IEPs to provide support.

Accommodations/Modifications

- K-12 supports often involve accommodations and/or modifications.

    - Modifications involve a change in grade level expectations.

    - Accommodations link to instructions, program delivery, *and* assessment

Differentiation

- Differentiation strategies can be embedded in daily routines and can also be task-specific.

- Differentiation can also be physical, socio-emotional, responsive to religious believes and practices, …
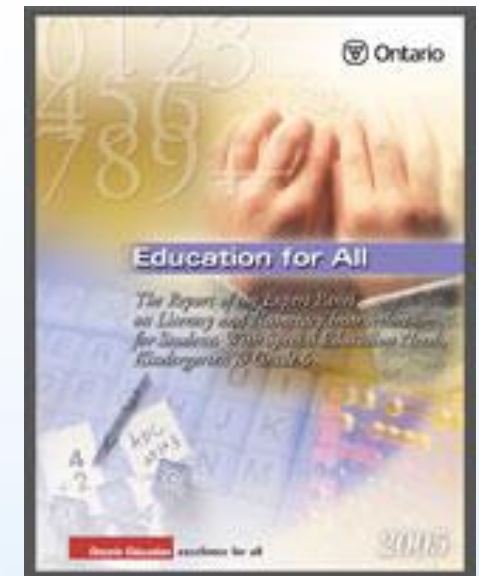
Differentiation

- What is cooperative learning (16)?

- What is a project-based approach (16)?

- What is a problem-based approach (17)?

- What is explicit instruction (17)?
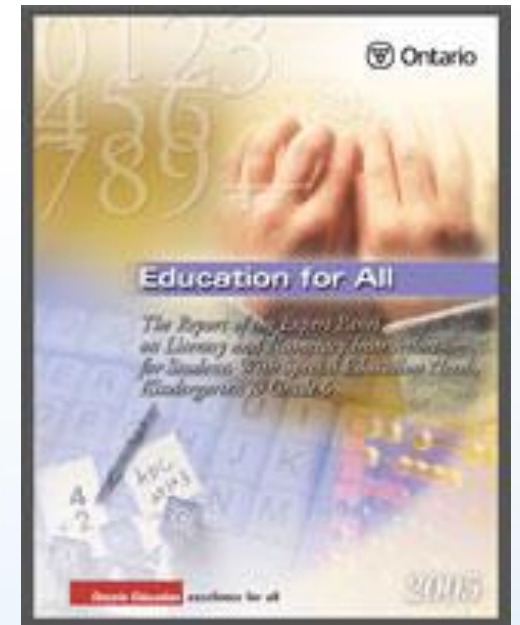
Universal Design

- How can we be flexible (11)?

- How can we design spaces (11)?

- What are the overall and specific objectives/expectations? Are they appropriate (12)?

- What sorts of pedagogical materials are used (13)?

- What sorts of technological tools are used (13)?
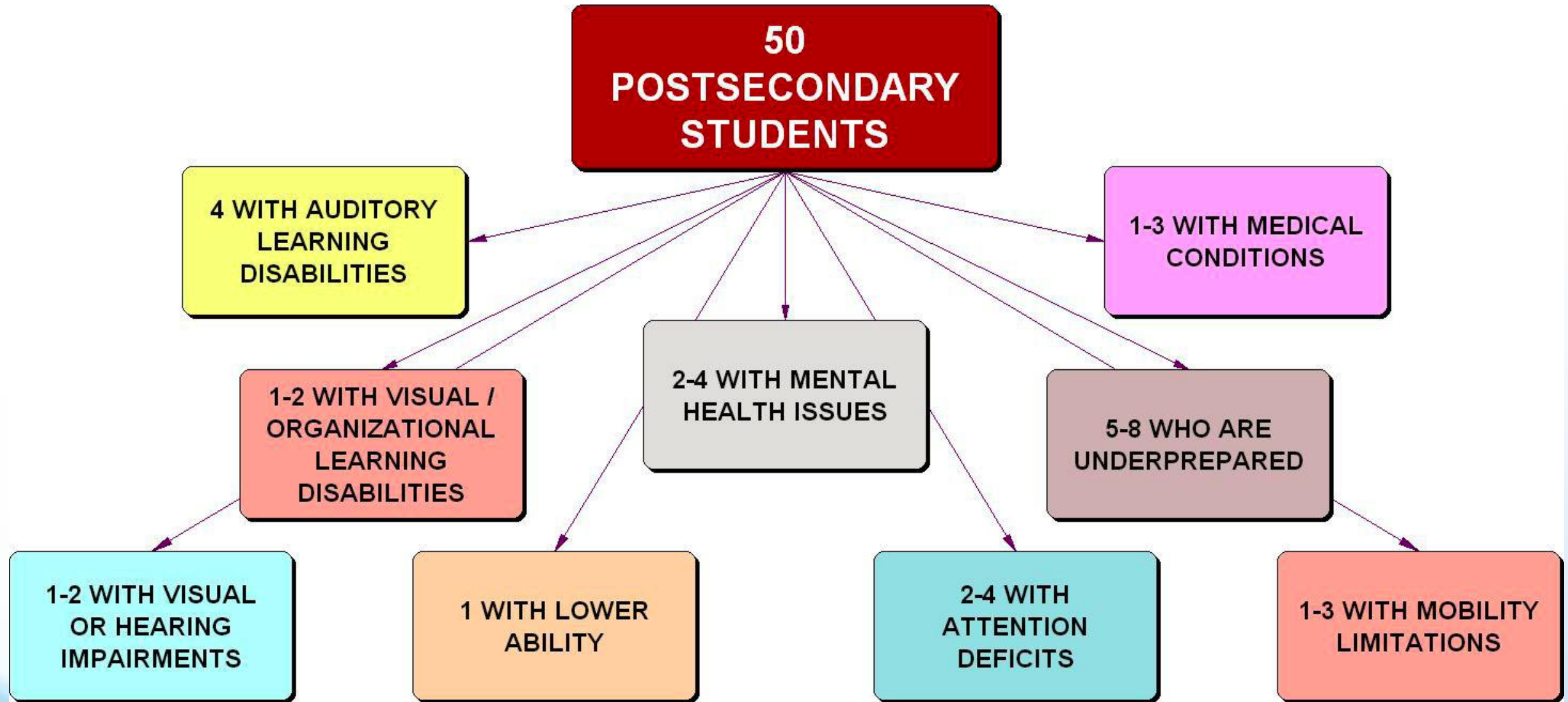
What happens in a post-secondary context with …

- Modifications?

- Accommodations?

- Differentiation?

- Universal Design?
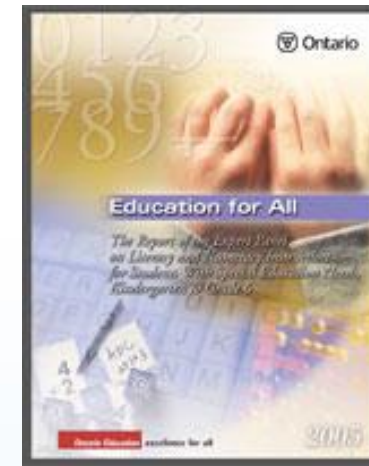
A Post-secondary Classroom

Source: Bryson, J.(2003). Universal Instructional Design in Post-secondary Settings, An Implementation Guide, page 15

Definitions (*UD*, UDE, UID)

Universal Design (UD)

- A concept developed in architecture that aims to design products and environments to be usable by all people, to the greatest degree possible, without the need for adaptation (Hebdon, 2007).

- Example: Creating a universal pair of scissors, rather than 'handed'

Definitions
(UD, _UDE_, UID) cont'd

Universal Design in Education (UDE)

- UDE is the application of Universal Design philosophies to education. Therefore, it seeks to create educational processes, learning environments, teaching strategies, etc. that are useable by the greatest diversity of people possible (Samuels, 2007).

Definitions (UD, _UDE_, UID) cont'd

- This results in course design and delivery that considers the potential needs of all learners and identifies and eliminates unnecessary barriers to teaching and learning, while maintaining academic rigor (Coomber, 2007; Burgstahler, & Cory, 2008).

Definitions (UD, UDE, _UID_) cont'd

Universal Instructional Design (UID)

- UID, also referred to as Universal Design for Instruction (UDI), is Universal Design applied to instructional products and environments. This provides a set of principles that can be used as a framework for developing courses and teaching strategies.

Universal Design (UD)

Products

Environments

Universal Design in Education (UDE, UDHE)

Instruction

Services

Information Technology

Physical Spaces

Universal Design for Instruction (UID, UDI)

9 Principles

Applications

(Burgstahler & Cory, 2008)

Equitable Use:

What does this mean?

- Provide the same means of use for all students: identical if possible, equivalent when not.

- Designed to be useful to and accessible by people with diverse abilities.

Example: Equitable Use - Online

- Make class notes available online in a variety of formats, preferably ahead of time, so students can access information with their preferred software, equipment, and at a convenient time.

Flexibility in Use:

What does this mean?

- Instruction designed to accommodate a wide range of individual abilities
- Provide choice in methods of use
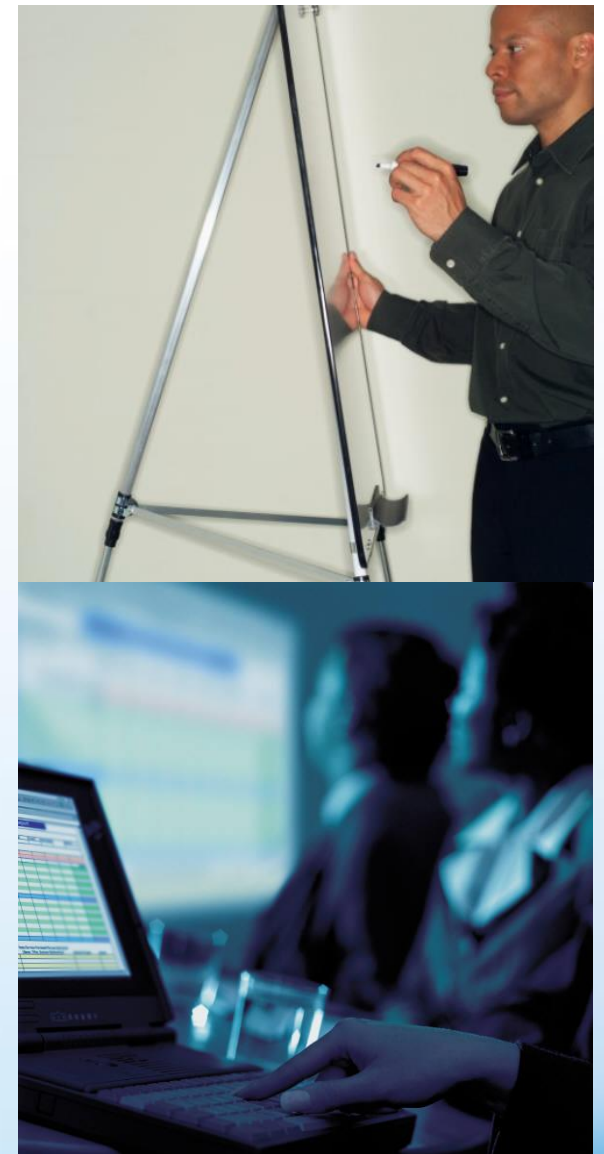
Example: Flexibility in Use – F2F

- Use varied instructional methods, such as, student presentations, mind/concept maps, guest lecturers, active learning techniques, outlines and group activities in class (and online).

- Lecture with a visual outline, group activities, use of stories to provide different ways of learning and expressing knowledge.

Adapted from: Burgstahler, 2006 and http://www.facultyware.uconn.edu/UDI_examples.htm

Simple and Intuitive

What does this mean?

- Instruction is designed in a clear, predictable and straightforward manner, consistent with user expectations, knowledge, language skills or current concentration level.
- Unnecessary complexity or distractions are reduced or eliminated.
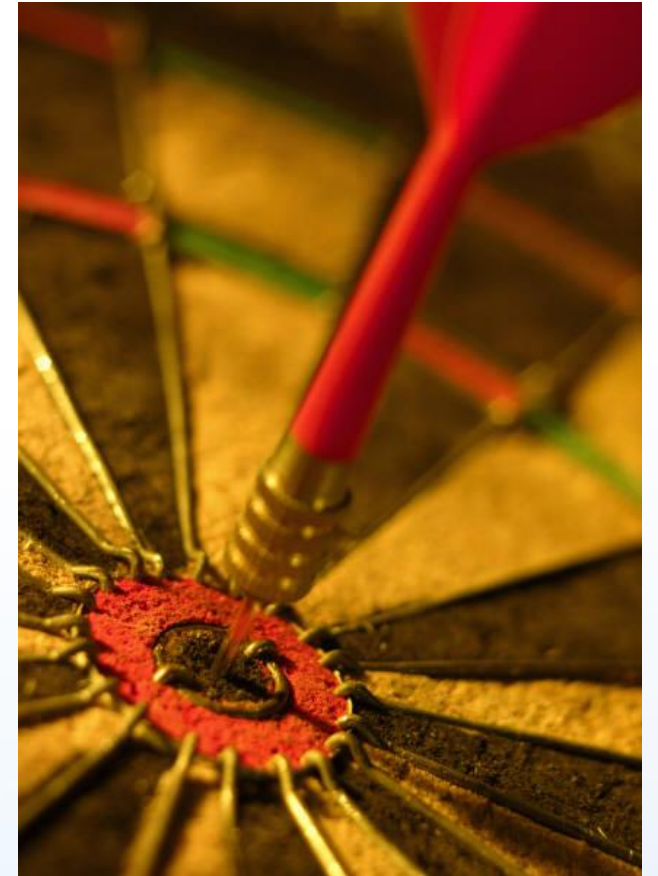
Example: Simple and Intuitive – F2F

- Providing grading rubrics that clearly lay out expectations for exam performance, papers, or projects

Adapted from: UDI Online Project. (2009). *Examples of UDI in Online and Blended Courses*. Center on Postsecondary Education and Disability, University of Connecticut, Storrs.

Perceptible Information:

What does this mean?

- Necessary information communicated effectively regardless of ambient conditions or student's sensory abilities

Example: Perceptible Information-F2F

- Instructors speak directly and clearly to students, consider using a microphone, and make eye contact with students

- Avoid turning back on audience while continuing to talk

- Supplement in-person contact with online communication

Tolerance For Error

What does this mean?

- Anticipate variations in learning pace and skills
- Anticipates mistakes that students make and helps to overcome and make a learning experience from them

Photo from: http://www.gettyimages.ca/

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Example: Tolerance For Error - Online

- Capturing logs of online threaded discussions for students to reference over the course of the semester

- Consistent navigation or announce when structure of course site changes in advance of change

Minimize Unnecessary Physical Effort or Requirements

What does this mean?

- Eliminate any unnecessary or irrelevant physical effort (unless tied to essential requirements)
- Learning should be about the material not about obtaining the material

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Example: Minimize Unnecessary Physical Effort or Requirements – F2F

- Providing access to supplementary and required reading (where possible) through links to reference material vs. requiring to physically going to library to access

- Allow students to use word processor for writing and editing papers or exams

Size and Space for Approach and Use

What does this mean?

- Consideration for appropriate size and space for approach, reach manipulations and regardless of student's body size, posture, mobility and communication needs

http://www.allextensions.com.au/images/portfolio/img2.jpg

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Example: Learning Spaces – F2F

- Arrange seating to encourage participation, giving each student a clear line of sight to the instructor and visual aids and allow room for wheelchairs, personal assistants, sign language interpreters, captionists, and assistive or appropriate technology.

- Minimize distractions for students with a range of attention abilities (e.g., put small groups in quiet work areas). Work within constraints to make the environment as inclusive as possible.

http://www.washington.edu/doit/Brochures/Academics/equal_access_udi.html

Create A Community Of Learners

What does this mean?

- Promotes interaction and communication between students and faculty
- Communication can take place in or out of the classroom.

Examples: Community Of Learners - Online

- Fostering communication online with discussion groups, project groups, chat rooms

- Making a personal connection with students through video or phone (Skype, Blackboard Collaborate).

http://udi.uconn.edu/index.php?q=content/examples-udi-online-and-blended-courses

Instructional Climate

What does this mean?

- Inclusive approach, welcoming and encouraging students with diverse backgrounds, experiences, and abilities.
- Create an environment that encourages positive risk-taking and sets high expectations.

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Example: Inclusive Climate – F2F

- Including a statement in the syllabus affirming the need to respect diversity in order to establish the expectation of tolerance, as well as encourage discussion of any special learning needs

- Highlight diverse thinkers who have made significant contributions to the field

- Provided direct feedback on, and share innovative approaches developed by students in the class.

http://www.facultyware.uconn.edu/UDI_examples.htm

Working in Diverse Groups

1. Form groups based on same number
2. Work as a team to put the terms/concepts in order
3. Use pens, tape etc to show connections between pieces on chart paper
4. What is the theory about?

BUT!

= can only communicate and be communicated with **via text** (notes)

= can **hear** and be **heard** but **cannot see**

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Follow Up

- When designing a group activity where your participants have different levels of access, how would you set up an activity or task that would account for these differences?

- What types of support would you provide for them?

Summary

- UDI not about accommodation, but may help those who need one
- UDI is an approach that improves outcomes for *everyone*
- Students with disabilities entering PSE used to a very different approach – transition challenges
- Plan for alternative learning and assessment tools
- UDI often requires more work up front in designing instructional pathways, but can save time in the long run

Questions??

Supplementary UDI Examples

Example: Equitable Use – F2F

- Providing students with multiple options to demonstrate mastery of the subject (web design, oral presentations, research papers); using alternate sources to explain complex concepts (easier reading levels).

Adapted from: UDI Online Project. (2009). *Examples of UDI in Online and Blended Courses*. Center on Postsecondary Education and Disability, University of Connecticut, Storrs.

Example: Flexibility in Use - Online

- Provide different ways of learning and experiencing knowledge.
- When possible, allow students to choose from multiple options for learning and expressing mastery of their work (e.g. online forums that support text and multi-media, graphics or creating videos or narrated presentations)

Example: Simple and Intuitive - Online

- Create a syllabus with links to reading materials or other campus policies; adding consistent icons to the course website for common tools, or use a calendar function to remind students of deadlines.

- Provide consistent navigation within course sites.

Example: Perceptible Information-Online

- Selecting reading material and other instructional supports, including websites that are accessible for students with diverse needs (e.g. students can access through traditional hard copy or using technological supports such as screen readers, text formatting, zoom text, translators, online dictionaries, etc.)

http://www.facultyware.uconn.edu/UDI_examples.htm

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Example: Tolerance For Error – F2F

Providing the option of turning in multiple drafts of an assignment in order for the student to demonstrate his/her learning progress; provisioning of "practice" exercises or tests.

http://www.facultyware.uconn.edu/UDI_examples.htm

Example: Size and Space for Approach and Use- Online

- Being aware of diverse communication needs in deciding to incorporate examples and graphics (moderately combine visuals with text).

- Provide text alternatives to multi-media files

http://udi.uconn.edu/index.php?q=content/examples-udi-online-and-blended-courses

Example: Community Of Learners – F2F

- Use student names in face to face communications.

- Provide opportunities for study groups, discussion groups or e-mail lists

- *(students volunteer their personal information, you don't share without their permission)*

http://www.facultyware.uconn.edu/UDI_examples.htm

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Example: Instructional Climate - Online

- Establish positive and welcoming online discussion forum guidelines and ensure students also follow respectful discussion protocols

- Provide opportunities for students to share personal experiences, avatars, pictures to create a positive climate

- Engage students in creating a "code of conduct" for online course communications

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References

Bennett, S., Dworet, D., & Weber, K. (2008). *Special education in Ontario schools* (6th ed.). St. Davids, ON: Highland Press.

Bryson, J. (2003). Universal Instructional Design in Post-secondary Settings, An Implementation Guide, p. 15.

Blizzard, D., & Foster, S. (2007). Feminist Pedagogy and Universal Design in a Deaf and Hearing World: Linking Cultures Through Artifacts and Understanding. *Feminist Teacher, 17*(3), 225-236.

Burgstahler, S. E. & Cory, R. C. (Eds.). (2008). Universal design in higher education: From principles to practice. Cambridge. MA: Harvard Education Press.

Coomber, S. A. (2007). Students with disabilities: Post-secondary voices and universal design for learning. *Dissertation Abstracts International Section A: Humanities and Social Sciences 68*(3-A), 951.

Embry. P.B., Parker, D.R., McGuire, J.M., & Scott, S.S. (2005). Postsecondary disability service providers' perceptions about implementing Universal Design for Instruction (UDI). Journal of Postsecondary Education and Disability (18)1, 34-44.

(n.a., 2002). Examples of UDI, retrieved from http://www.facultyware.uconn.edu/UDI_examples.htm Feb. 22, 2013

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References Cont'd

Finkel, G. & Gold, Y. (1999). Actualizing Universal Design. Journal of Leisurability (26)1

Hebdon, H.M. (2007). Universal design: Making education accessible to all students. *The Exceptional Parent 37(5*), 70.

Mino, J. J. (2004). Planning for inclusion: Using universal instructional design to create a learner-centered community college classroom. *Equity & Excellence in Education, 37*(2) 154-160.

Samuels, C.A. (2007). 'Universal Design' concept pushed for education. *Education Week* 27(10), 1-12.

Shaw, S., Scott, S., & McGuire, J. (2001). Teaching college students with learning disabilities. ERIC Digest #e618 . Arlington , VA : Council for Exceptional Children . Available at: http://www.ericec.org/digests/e618.html

The Expert Panel on Literacy and Numeracy Instruction for Students with Special Education Needs. (2005). *Education for all: The Expert Panel on Literacy and Numeracy Instruction for Students with Special Education Needs, kindergarten to grade 6*. Toronto, ON: Queen's Printer for Ontario.

References Cont'd

Thousand, J. S. Villa, R. A., & Nevin, A. I. (2002). Creativity and collaborative learning: The practical guide to empowering students, teachers, and families (2nd ed.). Baltimore, MD, US: Paul H Brookes Publishing.

UDI Online Project. (2009). *Examples of UDI in Online and Blended Courses*. Center on Postsecondary Education and Disability, University of Connecticut, Storrs retrieved from http://www.udi.uconn.edu/index.php?q=content/examples-udi-online-and-blended-courses

Yuval, L. & Korabik, K. (2003). Measured outcomes of the universal instructional design project. University of Guelph: Department of psychology. Retrieved April 2009 from http://www.tss.uoguelph.ca/uid/

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