

Towards Inclusive and Successful Learning for all: Universal Design and the College Classroom

**Symposium de l'Association québécoise de pédagogie
collégiale**



CRISPESH

Centre de recherche pour l'inclusion scolaire
et professionnelle des étudiants
en situation de handicap

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Goals for the presentation

- **Gain an understanding of UD & UDL principles**
- **Gain an understanding of UDL implications for students in post-secondary education**
- **Look at examples of UDL practices and applications**
- **Model UDL principles**





Changing Demographics

Cégeps	Total
2007 (trad) (émérgent) TOTAL	726 577 1303
2008 (trad) (émérgent) Total	1036 1143 2179
2009 (Trad) (émérgent) Total	975 2092 3067
2010 (trad) Émérgent Total	1203 2977 4180
2011 (trad) Émérgent Total	1628 4080 5708
2012 (trad) Émérgent TOTAL	1994 5593 7587



What is Universal Design?

- Not one size fits all – but *alternatives for everyone*.
- Not added on later – but *designed from the beginning*.
- Not access for some – but *access for everyone*.

What is Universal Design?

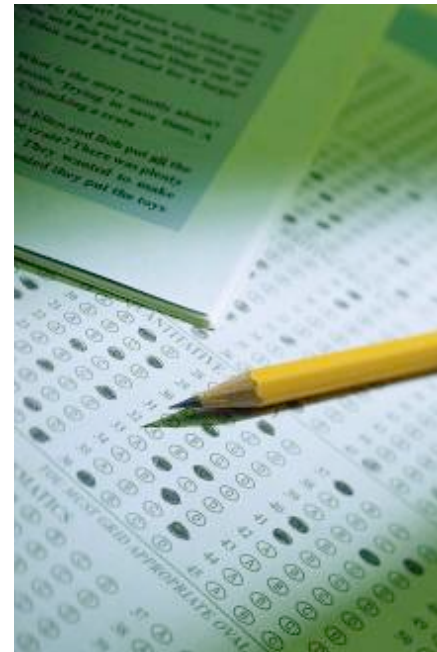
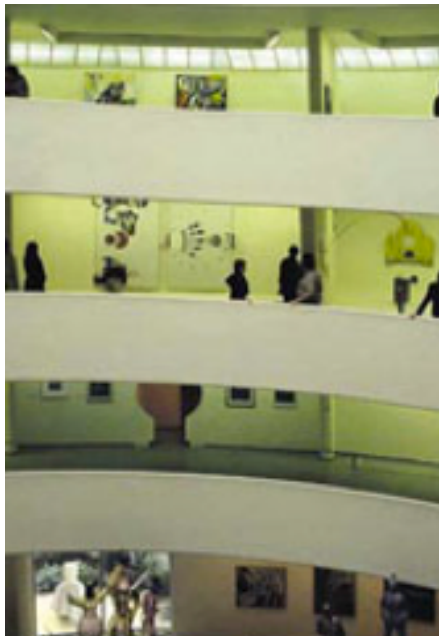
- **Ramps**
- **Curb Cuts**
- **Electric Doors**
- **Captions on Television**
- **Easy Grip Tools...**



Universal Design...



What is the link between architecture and curriculum?

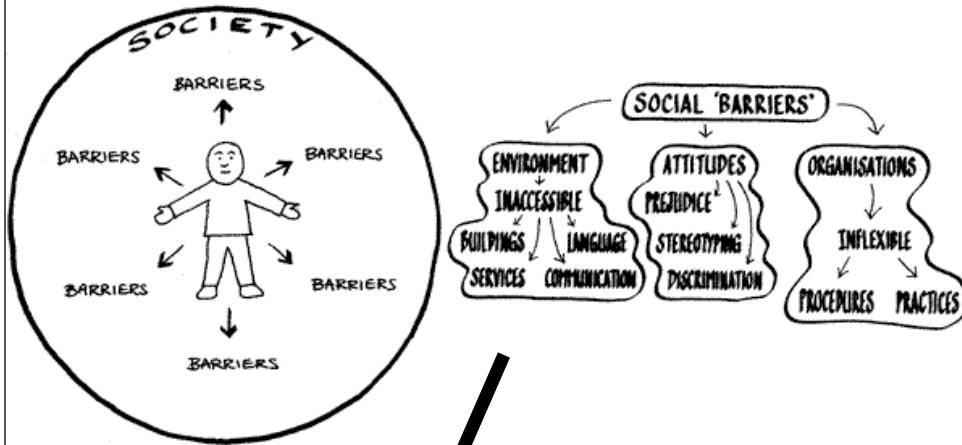


“Consider the needs of the broadest possible range of users from the beginning”

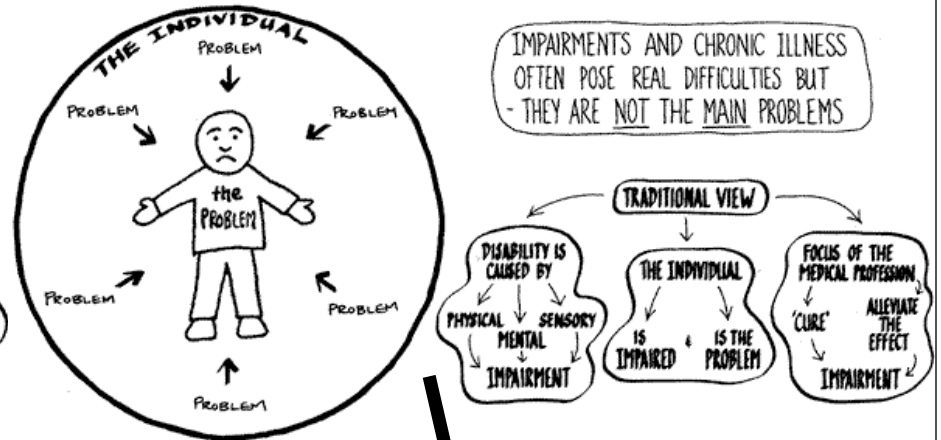
- Architect, Ron Mace

Models of Disability

THE SOCIAL MODEL OF DISABILITY



THE MEDICAL MODEL OF DISABILITY



Integrated Model

- UDL
- Disability Studies and social science research

- Specialized services and rehabilitation
- Basic research

Origins of Universal Design for Learning

“barriers to learning are not, in fact, inherent in the capacities of learners, but instead arise in **learners' interactions** with inflexible educational goals, materials, methods, and assessments.”



Teaching Every Student in the Digital Age, p. vi

Accessibility and UD-UDL

Adapted from AHEAD Universal Design Initiative Team (2004)

Traditional approach based on diagnoses and accommodations

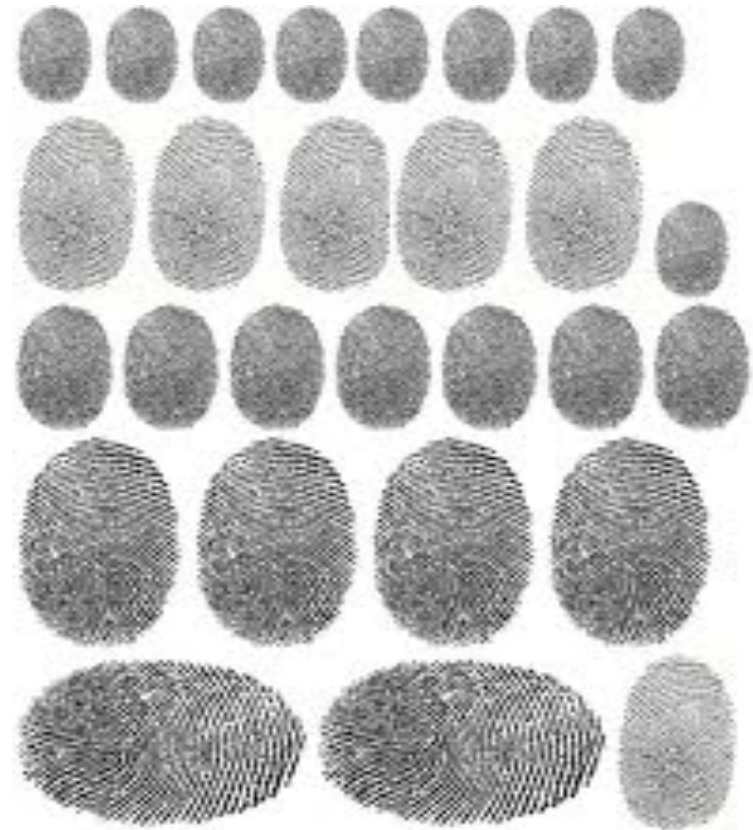
Access is enabled via retro-fitting or accommodations, is retroactive and specialized, and is the responsibility of the individual.

UD-UDL approach

Barriers are situated in the environment (not the problem of the individual) and access is designed proactively, inclusively and sustainably

Variability

- **Learners vary in the ways they take in information**
- **Learners vary in their abilities and approaches**
- **Learning changes by situation and context**
- **Learners vary across their development**



There is no such thing
as a typical learner!

Variability



UDL: U.S. Definition

- ❖ Section 103(24) **UNIVERSAL DESIGN FOR LEARNING**.--
The term `universal design for learning' means a scientifically valid framework for guiding educational practice that—
 - `(A) provides flexibility in the ways information is presented, in the ways students respond or demonstrate knowledge and skills, and in the ways students are engaged; and
 - `(B) reduces barriers in instruction, provides appropriate accommodations, supports, and challenges, and maintains high achievement expectations for all students, including students with disabilities and students who are limited English proficient."

Universal Design for Learning

- Curricula and tools designed to meet the needs of all learners
- Supports for diverse learners built in from the start
- Frequently more effective for all learners, even “typically developing”

Conceptual Shift



- Diversity is the norm
- Technology is flexible and accessible (when planned)
- First focus on the curriculum – goals, assessments method, materials; then on individual students
- Instead of advocating any single best practice, UDL challenges instructors to reach and engage a diverse audience through a combination of instructional formats, technologies, and learning modalities.

	Traditional	UDL
Goals	<ul style="list-style-type: none"> • Learning goals may get skewed by the inflexible ways and means of achieving them. 	<ul style="list-style-type: none"> • Learning goals are attained in many individualized ways by many customized means.
Materials	<ul style="list-style-type: none"> • Mostly print and everyone gets the same materials. • Few options 	<ul style="list-style-type: none"> • Variety of materials, media, and formats to reach learners with diverse abilities, styles, and needs equally well.
Methods	<ul style="list-style-type: none"> • Teacher-centered (lecture) • Homogeneous grouping • Burden in student to adapt 'to get it'. 	<ul style="list-style-type: none"> • Interactivity • Heterogeneous grouping • Rich supports for understanding, independent learning
Assessments	<ul style="list-style-type: none"> • Confuse goals with means • Summative- when it's too late to adjust instruction! 	<ul style="list-style-type: none"> • Many possible means as long they measure learning! • Supports instructional improvement

A Sustainable Framework

increased...	decreased...
student autonomy	specialized services
self-determination	costs
empowered learners and educators	barriers
over-all student success	stigma
equitable and flexible	individual accommodations

How do we do it?

- **Multiple Means of Representation**
 - - provides flexibility in the ways information is presented,
- **Multiple Means of Action & Expression**
 - - in the ways students respond or demonstrate knowledge and skills, and...
- **Multiple Means of Engagement**
 - - in the ways students are engaged...

The Neurological Foundation

Recognition Networks

The "what" of learning



How we gather facts and categorize what we see, hear, and read. Identifying letters, words, or an author's style are recognition tasks.



Present information and content in different ways

More ways to provide
Multiple Means of Representation

Strategic Networks

The "how" of learning



Planning and performing tasks. How we organize and express our ideas. Writing an essay or solving a math problem are strategic tasks.



Differentiate the ways that students can express what they know

More ways to provide
Multiple Means of Action and Expression

Affective Networks

The "why" of learning



How learners get engaged and stay motivated. How they are challenged, excited, or interested. These are affective dimensions.



Stimulate interest and motivation for learning

More ways to provide
Multiple Means of Engagement

Universal Design for Learning Guidelines

I. Provide Multiple Means of Representation

1: Provide options for perception

- 1.1 Offer ways of customizing the display of information
- 1.2 Offer alternatives for auditory information
- 1.3 Offer alternatives for visual information

2: Provide options for language, mathematical expressions, and symbols

- 2.1 Clarify vocabulary and symbols
- 2.2 Clarify syntax and structure
- 2.3 Support decoding of text, mathematical notation, and symbols
- 2.4 Promote understanding across languages
- 2.5 Illustrate through multiple media

3: Provide options for comprehension

- 3.1 Activate or supply background knowledge
- 3.2 Highlight patterns, critical features, big ideas, and relationships
- 3.3 Guide information processing, visualization, and manipulation
- 3.4 Maximize transfer and generalization

II. Provide Multiple Means of Action and Expression

4: Provide options for physical action

- 4.1 Vary the methods for response and navigation
- 4.2 Optimize access to tools and assistive technologies

5: Provide options for expression and communication

- 5.1 Use multiple media for communication
- 5.2 Use multiple tools for construction and composition
- 5.3 Build fluencies with graduated levels of support for practice and performance

6: Provide options for executive functions

- 6.1 Guide appropriate goal-setting
- 6.2 Support planning and strategy development
- 6.3 Facilitate managing information and resources
- 6.4 Enhance capacity for monitoring progress

III. Provide Multiple Means of Engagement

7: Provide options for recruiting interest

- 7.1 Optimize individual choice and autonomy
- 7.2 Optimize relevance, value, and authenticity
- 7.3 Minimize threats and distractions

8: Provide options for sustaining effort and persistence

- 8.1 Heighten salience of goals and objectives
- 8.2 Vary demands and resources to optimize challenge
- 8.3 Foster collaboration and community
- 8.4 Increase mastery-oriented feedback

9: Provide options for self-regulation

- 9.1 Promote expectations and beliefs that optimize motivation
- 9.2 Facilitate personal coping skills and strategies
- 9.3 Develop self-assessment and reflection

Multiple Means of Representation (Provide options for perception)

1.1 Offer ways of customizing the display of information

- The size and font of text, images, graphs, tables
- The contrast between the background and the text or image
- The volume or rate of speech or sound

1.2 Offer alternatives for auditory information

- Provide visual diagrams, charts, notations of music or sound
- Provide written transcripts for videos or auditory clips
- Use text equivalents in the form of captions or automated speech-to-text for spoken language

1.3 Offer alternatives for visual information

- Provide physical objects and spatial models to convey perspectives
- Provide descriptions (text or spoken) for all images, graphics or video

Multiple Means of Expression

6.1 Guide appropriate goal-setting

- Provide guides and checklists for scaffolding goal-setting
- Post goals, objectives, and schedules in an obvious place

6.2 Support planning and strategy development

- Embed prompts to 'stop & think' before acting
- Embed coaches that model think-alouds of the process

6.3 Facilitate managing information and resources

- Provide graphic organizers and templates for data collection and organizing information

6.4 Enhance capacity for monitoring progress

- Ask questions to guide self-monitoring and reflection
- Show representation of progress (before & after photos, graphs etc)

Multiple Means of Engagement (Provide options for recruiting interest)

7.1 Optimize individual choice and autonomy

- Allow learners to participate in the design of the classroom activities and academic task
- Provide choices (type of reward, level of perceived challenge, tools used for information gathering or production)

7.2 Optimize relevance, value, and authenticity

- Provide tasks that allow for active participation, exploration and experimentation
- Invite personal response, evaluation and self-reflection to content and activities

7.3 Minimize threats and distractions

- Vary the level of novelty or risk
- Vary the level of sensory stimulation

How was this talk UDL... some examples?

- multiple formats (documents *.txt)
- multi-modal (video)
- goals were clearly stated and a summary provided
- visual supports were provided (charts, tables, images)
- connections to
- relevant information was highlighted etc.
- text contrast, size, and colours were optimized
- dense information was presented in chunks
- examples were provided
- modelled self-regulation
- information was scaffolded and released progressively

UDL and learner outcomes

I. Provide Multiple Means of Representation

Perception

Language and symbols

Comprehension

II. Provide Multiple Means of Action and Expression

Physical action

Expressive skills and fluency

Executive function

III. Provide Multiple Means of Engagement

Recruiting interest

Sustaining effort and persistence

Self-regulation

Resourceful, knowledgeable learners

Strategic, goal-directed learners

Purposeful, motivated learners



Thank You!

For more resources, please
visit WWW.CRISPESH.COM