

## Universal Design: Health Education for ALL Including People with Disabilities

Ann S. Williams, PhD, RN, CDE  
Case Western Reserve University  
ann.s.williams@case.edu

### 1) Universal Design: Why is it needed?

- a) According to the CDC, 20% of working-aged people in the U.S. have known disabilities.
  - In many sub-populations, the percentage is higher (people with diabetes or other chronic disease, elders, most racial and ethnic minorities)
- b) People with disabilities:
  - Are a *normal and expected* part of every defined population
  - Have many of the same risk factors and diseases as the general population (AIDS, cancer, diabetes, heart disease, etc.)
  - Have documented health disparities that are greater than those for major racial and ethnic minorities
  - Need health education as much as the general population, perhaps more so
  - Often have barriers to receiving health education in common formats and locations
  - Can be served efficiently within existing programs if materials and programs are planned to include people with common functional disabilities

### 2) Definitions

- a) **Functional Disability:** a long-term physical or mental condition that limits performance of one or more basic sensory, physical, mental, or emotional activities.  
See U.S. Census criteria:  
[http://www.census.gov/hhes/www/disability/disab\\_defn.html#00census](http://www.census.gov/hhes/www/disability/disab_defn.html#00census)
- b) **Universal Design (UD):** the design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design.  
<http://www.ncsu.edu/project/design-projects/udi/center-for-universal-design/the-principles-of-universal-design/>
- c) **Universal Design for Learning:** a set of principles for curriculum development that give all individuals equal opportunities to learn  
<http://www.cast.org/udl/>

### 3) A brief history of Universal Design

- a) Average person design: WWII airplanes, submarines, and tanks and postwar housing
- b) Disability rights movement
- c) Accessible design

### 4) Universal Design for Learning (UDL)

- a) **What it does:** UDL provides 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.

**b) Concepts and Principles of UDL:**

- Multiple means of Representation
- Multiple means of Action and Expression
- Multiple means of Engagement

**5) What does this mean "on the ground"?**

- a) Consider the common disabilities when planning every phase of your program
  - Hearing impairment and Deafness
  - Visual impairment and blindness
  - Learning disabilities: inability to read, write, do arithmetic, or concentrate
  - Impaired mobility
  - Impaired dexterity
  - While not a disability, include consideration of health literacy and overall literacy
- b) Plan your location and advertising methods for access
  - Consider wheelchair users, non-drivers, and people who cannot see or cannot read posters and fliers
- c) Design your materials for flexible presentation
  - For everyone:
    - ✓ Use Plain Language: <http://www.plainlanguage.gov/>
    - ✓ Communicate your entire message in BOTH words (text) and pictures
    - ✓ Write verbal descriptions of all graphical elements:  
<http://www.dcmp.org/descriptionkey/>
  - For people with visual impairment, blindness, or dyslexia:
    - ✓ Produce audio versions of your printed materials, both CDs and thumb drives
    - ✓ Create large print versions according to national guidelines (18 point font):  
<http://www.aph.org/edresearch/lpguide.htm>
    - ✓ Use APHont for the large print: [http://www.aph.org/products/aphont\\_get.html](http://www.aph.org/products/aphont_get.html) (this is APHont)
    - ✓ Use digital formats easily translated into braille or read by common screen readers. For simple documents, use "Styles" in Word; for more complex documents, follow complete NIMAS standards:  
<http://aim.cast.org/learn/practice/production/creatingnimas>
    - ✓ For videos, use audio-description
  - For people who are hard of hearing or Deaf:
    - ✓ Make sure low literacy text materials are available.
    - ✓ For videos, use closed captioning
    - ✓ For in-person instruction, know where to find an ASL interpreter, have a Pocket Talker available, and sit with appropriate lighting.