

## Universal Design in Student Affairs

Planning for a Diverse Population

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## A Definition for Universal Design

"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"

Ron Mace, Founder  
Center for Universal Design  
North Carolina State University



Read more about Ron Mace online at:

[http://www.adaptenv.org/adp/profiles/1\\_mace.php](http://www.adaptenv.org/adp/profiles/1_mace.php)

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## The Evolution of Universal Design

### Architecture

Physical spaces that are not designed with access in mind need costly retrofit



### Objects for daily living

Ergonomic kitchen tools, touch lamps, big button phones, etc - designed to be easier for more people to use



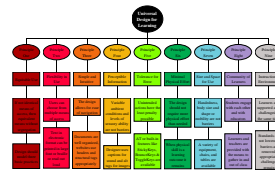
### Education

Reduce barriers to learning and encourage full participation by diverse population from pre-K to postsecondary



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## Frameworks for Understanding



2 frameworks  
3 practices  
9 principles

Full Size  
Graphics are  
included in  
handouts



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## Prin. 1 Equitable Use

The design should allow for the same means of use for all users whenever possible, or equivalent means without segregation when identical means are not possible.

Facilities – automatic door openers, clear paths

Information – website design minimizes barriers

Programming – clubs, organizations, and activities are inviting for a wide range of students and accommodation is provided in a seamless manner



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## Prin. 2 Flexibility in Use

The design should provide choice in method of use. As an example consider electronic text which can be printed in a variety of font sizes, viewed on screen, read out loud by a screenreader or filereader, or converted to Braille, all without the need for special accommodation, assuming learners have the appropriate technology.

Facilities – curb cuts

Information – electronic versions of forms, handouts

Programming – walk-in and evening hours



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### Prin. 3 Simple and Intuitive Use

The design should allow for ease of use regardless of the user's experience, knowledge, language skills, or current concentration level. Websites, handouts, publications, and other sources of information should have clear organization, and appropriate structural tags.



Facilities – consistent Braille door

Information – well organized policies and procedures

Programming – clear mission for dept, agenda for activities

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### Prin. 4 Perceptible Information

The design should allow for effective communication of ideas regardless of conditions in the surroundings or the user's ability to sense through given modalities.



Facilities – flashing strobe fire alarms

Information – during presentations, restating questions and facing out when speaking, describing what's written

Programming – transcripts or captions for videos

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### Prin. 5 Tolerance for Error

The design minimizes hazards and the adverse consequences of accidental or unintended actions.



Facilities – handrails and ballustrades

Information – process for exceptions to policies

Programming – scheduled start and end times published and updated, appointment cards with date and time

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### Prin. 6 Low Physical Effort

The design eliminates nonessential physical effort so the focus can stay on essential aspects of the learning environment. It is important to note that the reference here is to nonessential physical effort. If the learning outcomes include mastery of certain physical skills then it is not appropriate to remove those challenges.

Facilities – elevators and door resistance settings

Information – ability to complete forms online

Programming – alternatives to waiting in lines



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### Prin. 7 Size and Shape

The design should allow for a clear line of sight to important elements, the ability to reach, manipulate, and use important components regardless of body size or mobility.

Facilities – ergonomic furniture

Information – appropriate height for literature racks, kiosks, and counter heights

Programming – sitting in a circle for eye contact



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### Prin. 8 Community of Learners

The instructional environment promotes interaction and communication among students and between students and faculty.

Facilities – physical space to gather comfortably

Information – encouragement to create study groups

Programming – residential communities



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## Prin. 9 Instructional Environment

By removing barriers at the design stage, qualified learners can focus on accessing content, engaging with it effectively, and demonstrating mastery. Students with unique needs can focus on learning through the same basic design as their peers instead of focusing on issues of access that arise from a poor design.

Facilities – “Smart Classrooms”



Information – appropriate qualifications

Programming – use of accessibility notices for events

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## Multiple means of Representation

The way that ideas are represented, the way that content is delivered, is extremely important. When ideas are represented in only one modality, learners who experience difficulty sensing information through that modality are at a loss. When ideas are represented in many modalities, learners can choose the method that is most effective for them as an individual.

- Handouts describe information in narrative format
- Flow Charts or Concept Maps give a visual synopsis
- Workshops/Lectures for auditory or hands-on

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## Multiple means of Engagement

Even after ideas have been represented in a variety of ways, it is critical that learners are offered multiple means for engaging with the material. Differences in communication style, interpersonal skill set, speed of processing, etc all must be taken into account.

- Web based information can be perused at one’s leisure
- Workshops allow individuals to learn from each other
- Individual meetings can provide one-on-one attention

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## Multiple means of Expression

Ideas should be represented in multiple ways with a variety of methods to engage with material but learners also need to be given more than one way to show their understanding of that content.

- In courses - Tests, projects, and demonstrations all provide different ways for students to show mastery
- With regard to processes – Workshops for completing the FAFSA or one-one one meetings to complete registration or accessible online forms that can be completed with AT are all examples

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## Tips: Planning for Diverse Population

- Consciously consider end users, recognizing that populations are defined by a range not an average
- Identify the best practices specific to the application (building design, course delivery, service offering, etc)
- Train and support points of contact (including staff and faculty) so they can respond appropriately to needs
- Evaluate and revise practices based on feedback

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## Presenter Contact Information

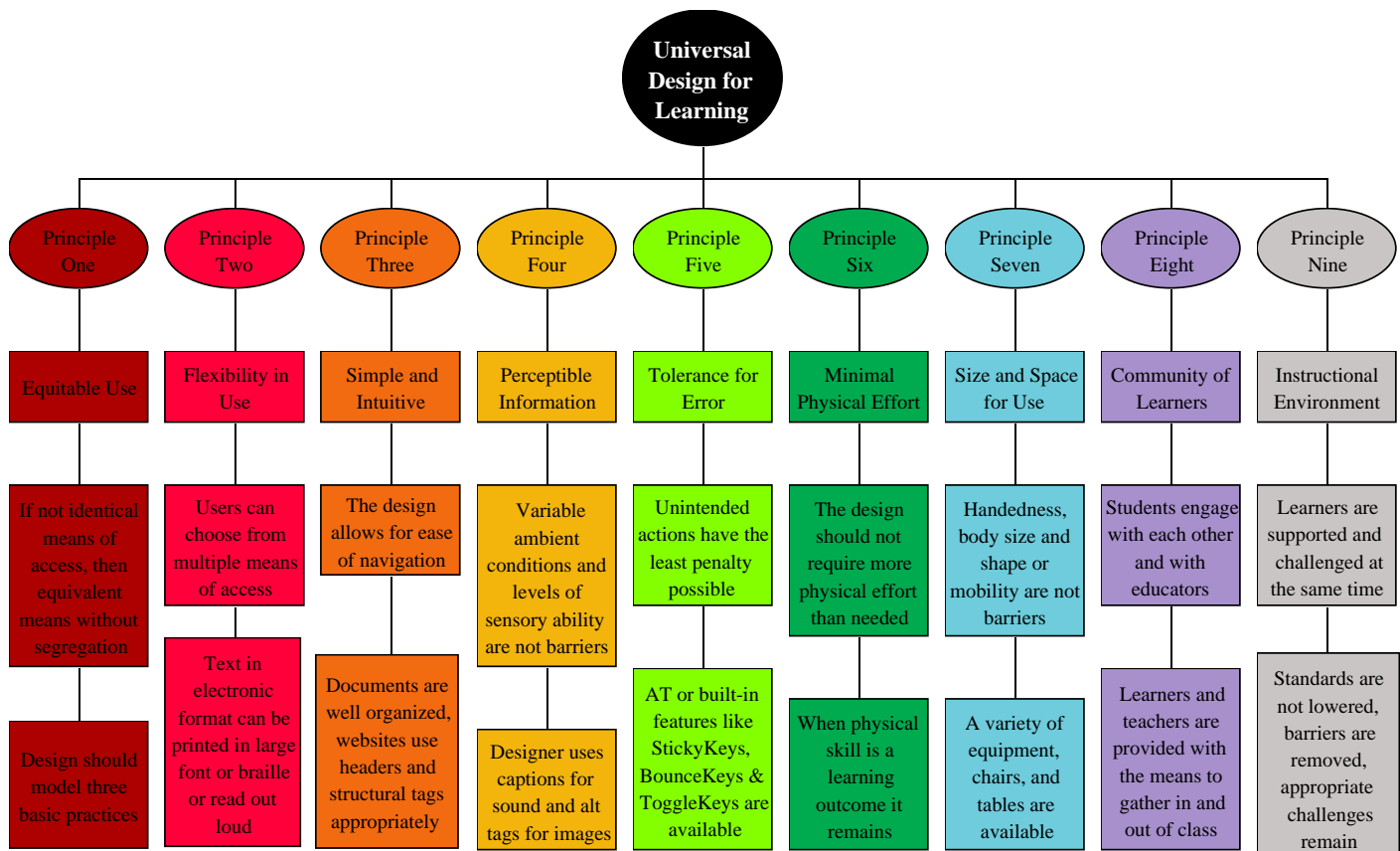
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This Graphic Organizer was created with software called Inspiration. The software is useful because it automatically creates an outline when a user creates a graphic, and automatically creates a graphic when a user creates an outline. By representing ideas in multiple formats, there is a greater likelihood that learners with different needs will find a representation that works for them.

## Universal Design for Learning

### I. Principle One

#### A. Equitable Use

1. If not identical means of access, then equivalent means without segregation
  - a. Design should model three basic practices

### II. Principle Two

#### A. Flexibility in Use

1. Users can choose from multiple means of access
  - a. Text in electronic format can be printed in large font or braille or read out loud

### III. Principle Three

#### A. Simple and Intuitive

1. The design allows for ease of navigation
  - a. Documents are well organized, websites use headers and structural tags appropriately

### IV. Principle Four

#### A. Perceptible Information

**1. Variable ambient conditions and levels of sensory ability are not barriers**

**a. Designer uses captions for sound and alt tags for images**

**V. Principle Five**

**A. Tolerance for Error**

**1. Unintended actions have the least penalty possible**

**a. AT or built-in features like StickyKeys, BounceKeys & ToggleKeys are available**

**VI. Principle Six**

**A. Minimal Physical Effort**

**1. The design should not require more physical effort than needed**

**a. When physical skill is a learning outcome it remains**

**VII. Principle Seven**

**A. Size and Space for Use**

**1. Handedness, body size and shape or mobility are not barriers**

**a. A variety of equipment, chairs, and tables are available**

**VIII. Principle Eight**

**A. Community of Learners**

**1. Students engage with each other and with educators**

**a. Learners and teachers are provided with the means to gather in and out of class**

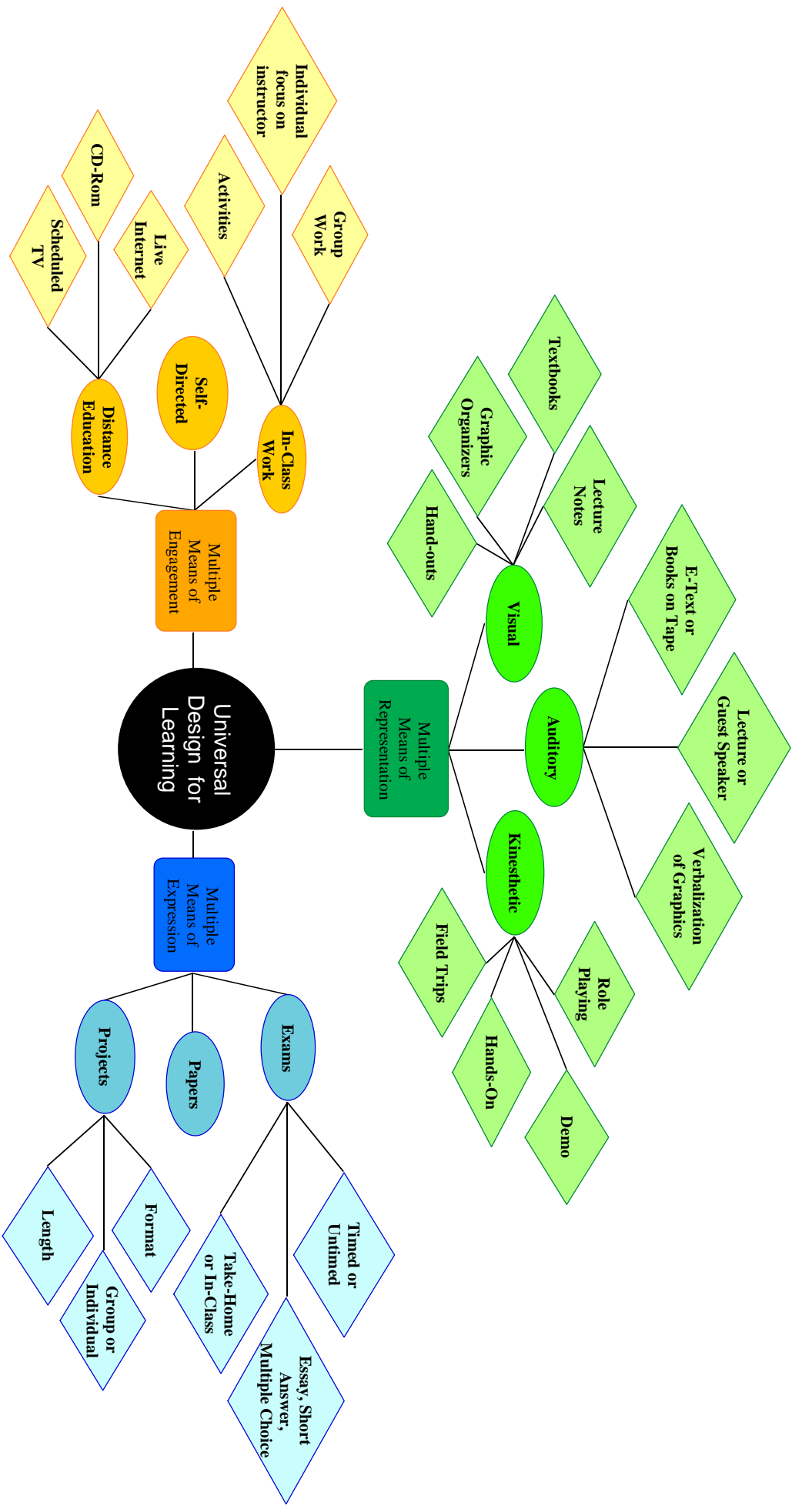
**IX. Principle Nine**

**A. Instructional Environment**

**1. Learners are supported and challenged at the same time**

**a. Standards are not lowered, barriers are removed, appropriate challenges remain**

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**Key ethical considerations for educators designing learning experiences**

Are ideas represented in more than modality?  
 Are learners offered a variety of activities to engage with material?  
 Is the learner able to effectively demonstrate mastery in different ways?