

Universal Design for Learning (UDL)

Session Aims

- To present an overview of the three main principles of Universal Design for Learning

Origins of universal design

- The concept of universal design was popularised by an American architect Ronald L Mace (1947-1998)



- Initially it referred mainly to the design of accessible buildings, but over time it has also been applied to products and services.

What is universal design

Universal design is “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” (North Carolina State University, 1997).

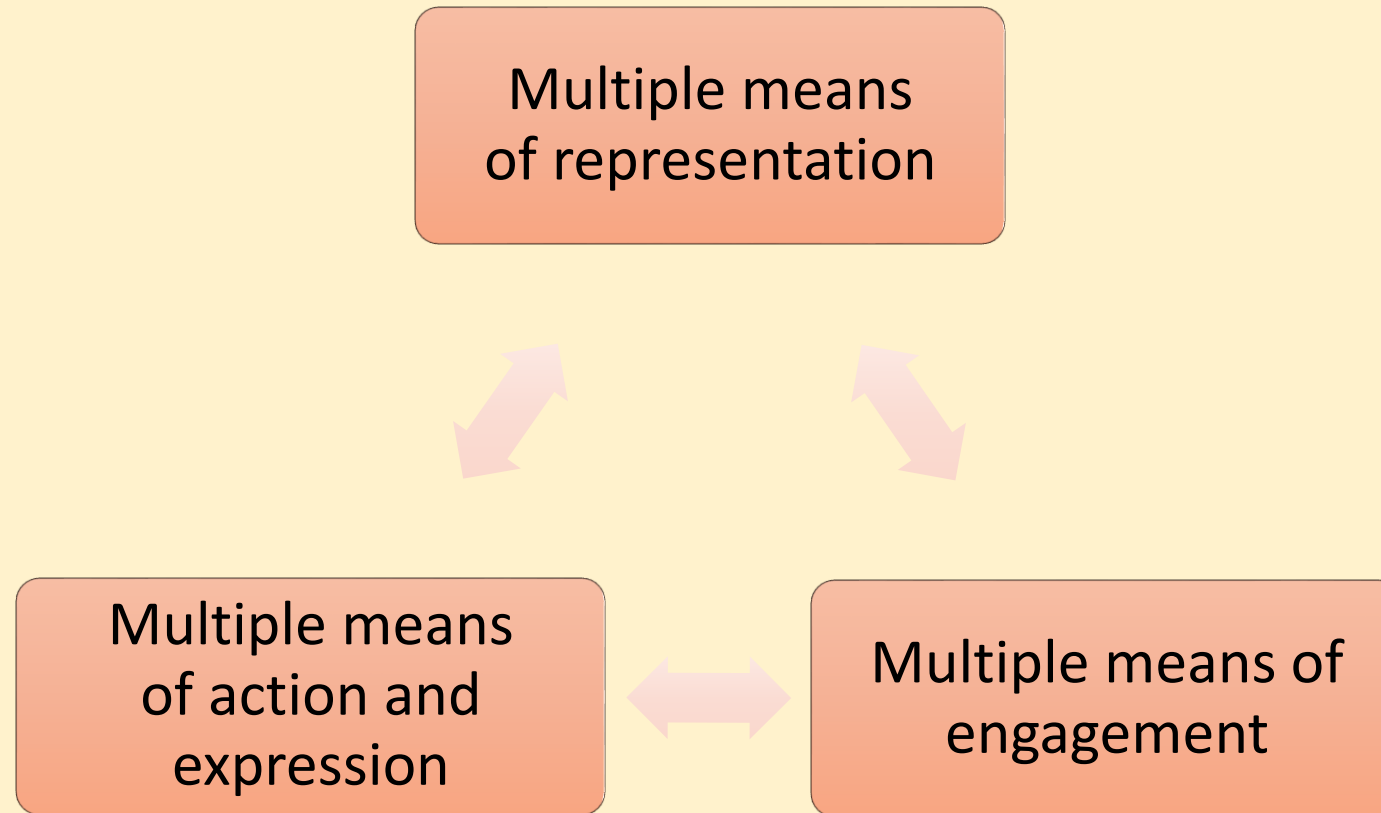


Universal design in education

The following are the three main models of universal design specifically related to learning.

- Universal instructional design (UID)
- Universal design of instruction (UDI)
- Universal design for learning (UDL)

The three principles of UDL



Multiple Means of Representation

The what of learning

Learners are individuals who perceive and comprehend in different ways

Influenced by

Sensory disabilities

Learning disabilities

Language barrier

Cultural issues

Situation

Learning styles

Multiple representations – students find a format of learning material that creates their optimal learning experience

Representation

1. Provide options for perception

Information must be perceptible to a learner – may require different formats to ensure learning occurs

We need to

Provide the same information via different modalities e.g. vision, hearing, touch

Present material in a format that can be adjusted by the learner e.g. text enlarges, sound increased

Result: enhanced learning for all

Representation

2. Provide options for language, mathematical expressions and symbols

Learners can have different interpretations of forms of representation

We need to

Result: increased clarity and comprehension for all.

Be aware that signs and symbols may carry different meanings

Culture and background can influence interpretation of visual material – e.g. pictures

Representation

3. Provide options for comprehension

Aim to assist learners to transform information into knowledge

We need to

Result: all learners are able to access knowledge

Provide scaffolds to support learners

Assist learners develop skills to process new knowledge and connect with prior knowledge

Multiple Means of Action and Expression

The how of learning

Learners progress differently and choose different ways to express learning

Influenced by

Physical limitations of movement

Language barriers

Anxiety issues

Preference for written expression over oral

Multiple action and expression – with strategic planning and organisation can provide alternatives that cater for student differences

Action and expression

4. Provide opportunities for physical action

Provide materials with which students can interact

We need to

Make use of assistive technologies

Prepare materials that students can navigate through

Result: learners are able to express what they know

Action and expression

5. Provide options for expression and communication

Not all learners are competent in using the same media to demonstrate learning

We need to

Look for alternative means by which a learner can demonstrate knowledge, ideas, and concepts

Result: learners have more equality in displaying what they have learnt

Action and expression

6. Provide options for executive functions

Learners need to develop skills that allow them to take advantage of their environment

We need to

Result:
learners can become autonomous

Scaffold lower level skills so they become more automatic

Scaffold higher level skills and strategies so they can be more effectively applied

Multiple Means of Engagement

The why of learning

Learners are motivated to learn by a variety of factors

Influences include

Culture

Relevance

Background knowledge

Preferred working style

Multiple engagement - facilitates students to find a path to their own learning

Engagement

7. Provide options for recruiting interest

Information must be accessible to engage a learner

We need to

Result: we make learning relevant and accessible to learners

Be aware of the differences between learners

Use alternative ways to recruit learner interest

Engagement

8. Provide options for sustaining effort and persistence



Engagement

9. Provide options for self-regulation

Learners need to develop intrinsic abilities to regulate emotions and motivations

We need to

Make self-regulatory skills an explicit rather than implicit part of the curriculum

Model a variety of methods of self-regulation

Result: support students to develop abilities to manage their own engagement effectively