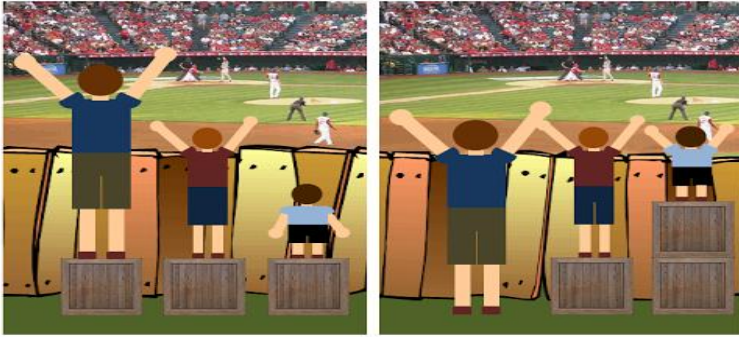


Introduction:

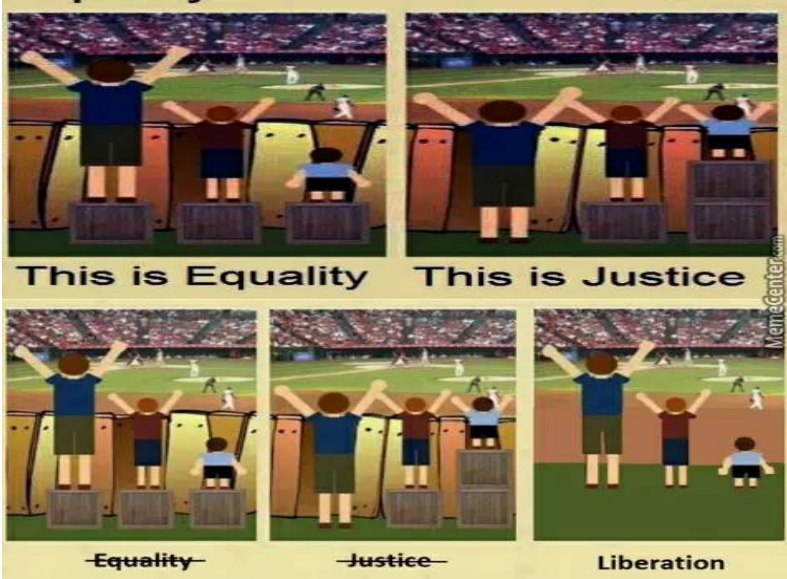
<https://medium.com/@CRAIG/the-evolution-of-an-accidental-meme-ddc4e139e0e4>

The various memes floating around the internet that are variations on the original image (on the right) by Craig Froehle who came up with the graphic to discuss the difference between the concept of equality (usually on the left) and EQUITY (usually on the right). In the images Equality is depicted with 3 people of various heights standing on one box each, however the tallest can easily see the game, the middle height person can adequately see but the shortest person still can't see the game with a box. The image on the right usually depicts a reallocation of resources (3 boxes) so that each person can adequately see the game. The fence represents any barrier rather than barriers experienced strictly by physical differences.



<http://muslimgirl.com/46703/heres-care-equity-equality/>

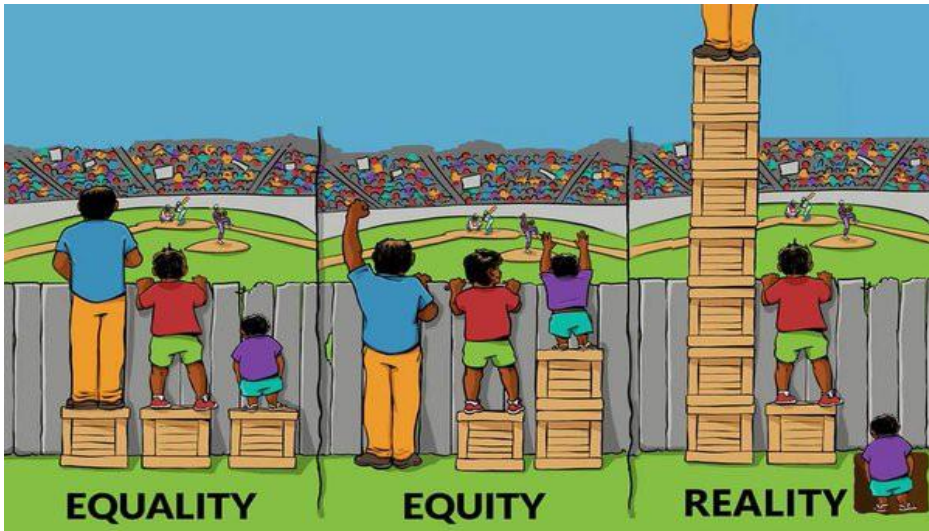
In this second image, we get closer to depicting the barriers experienced by students in education. In the first image, it is still 3 boxes but one of the people is in a wheelchair, they will not be able to even get on to the box by them self. The 'equity' image differs even more in that there is a reallocation of resources but also the addition of a ramp so that access to the baseball game is available to all 3. In this context, the tall person does not need accommodation but may require them in another situation.



<http://www.memecenter.com/fun/3258757/tearing-down-the-fence-is-equality>

We can even go one step further though by removing the barrier (the tall fence) completely as you will see in this third image. UDL provides equitable access for all students relying on consistent variability of students' ability from task to task and day to day. Ultimately each student will have access to appropriate materials, mediums, and expression that are designed with the goal in mind. In this baseball metaphor, viewing the baseball game is the goal but the metaphor for UDL extends beyond the constraints of these images through the varied ways people view and experience the game in ways we cannot see to also include use of technology and the motivation of all people. The people are viewing the game in the seats can afford a ticket but may have had to travel to the game on a bike or via public transit. People who could not afford the game or are not able to access the transportation are watching at home on a screen. Those who cannot see the game can listen to the audio broadcast and those who cannot hear the game can watch it on a screen with closed captioning. We can also consider the players and coaching staff who are experiencing the game at their appropriate level of motivation and ability. Many viewers will also track stats or place bets to increase motivation and engagement.

Unfortunately, this image is a metaphor of the situation in most classrooms, where the boxes, or lack of, represent a learning environment that leads to an inequitable experience for students.



<https://twitter.com/urbandata/status/695261718344290304>

I may have stretched the capacity of this meme to explain the concept of UDL, however, UDL, using assistive technology, can provide equitable access for students when we consider their engagement level, how materials and information are represented and how students can express their knowledge and understanding from context to context, task to task and from goal to goal. Ultimately no barriers exist by providing access to learning through technology for all students which will account for their consistent variability.

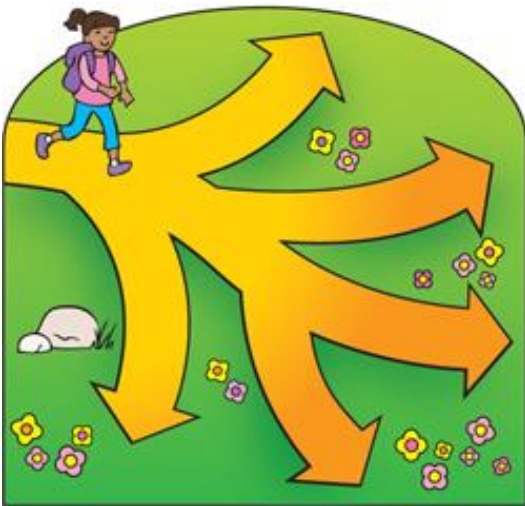


Image: Every learner will take their own path based the interaction between environmental demands and their abilities - taken from - Meyer, A., Rose, D.H., & Gordon, D. (2014) *Universal design for learning: Theory and practice*, Wakefield MA: CAST



Photo by [Nicole Honeywill](#) on [Unsplash](#)

Photo description: children raising hands in the classroom

1. Engaging with Learning Goals, Learning Tasks and Learning Materials (The 'why')

Engagement relies on motivation and interest which are high when there are appropriate perceived challenges, type and amount of choice leading to a level of emotional safety conducive to learning. Tasks that are too far outside a student's ability can be perceived as a threat eliciting a stress response leading to disengagement at one end of the spectrum and externalized behaviours at the other end.



Used under CC: by [Paul Hamilton](#)

Photo description: students working independently and together with paper and pencil, laptops and audio aids.

How do we use UDL through technology to create a safe environment?

- Flexibility & Choice - multiple means of representation and options for expression should be built into every task
- Interest – create learning goals, plan tasks and use materials learners engage with through their personal interests when appropriate
- Challenge – learner goals and tasks should be created that challenge students at their appropriate level

What might this look like with technology?

- Consider students activation level, what kind of environment do they need to be activated? Providing a sensation area with ear muffs or iPads with a white noise app or letting students listen to music to fulfill a higher activation threshold
- “Bypass strategies” Meyer, Rose & Gordon discuss the importance of using these strategies that offload unnecessary demands so that the learning goal is the focus rather than the processes or medium
 - e.g. A student with a non-verbal LD would be unnecessarily taxed by trying to read through a text but if they had a text-to-speech after running the text through a text compactor accompanied with verbal descriptions of images and instructions they could focus on the learning goal.

Ultimately a teacher must know their students well to engage them. Kathy Howery, in her webinar ‘Making Connections: UDL and DI Part 1’ explains that the key is to design goals that represent the true purpose of a learning activity; clear goals enable us to determine which alternative pathways and scaffolds can be used to meet diverse learning needs while keeping the learning challenge where it begins.

2. Representing Learning Materials and Information to Learners (The ‘what’)

“Students differ in the ways that they perceive and comprehend information that is presented to them.” (ie language, culture, learning disabilities...) – Kathy Howery, ‘Making Connections: UDL and DI, *webcast Part 1*’

With this in mind, especially when interacting with new strategies, concepts, materials and tasks, students should see it, hear it, do it, and teach it.

“it is important to ensure that key information is equally perceptible to all learners” – CAST

In the case of this assignment I wanted to fulfill this principle by including the link to the text compactor with the ‘script’ of my assignment while also using as much visual information through the Sway software captured with my voice using Kaltura CaptureSpace software.

“There is no universal medium of instruction.” – Kathy Howery, ‘Making Connections: UDL & DI, *webcast Part 1*’

3. Showing and Demonstrating what has been Learned (The ‘how’)



Photo by [Billetto Editorial](#) on [Unsplash](#)

Description: A person is painting using a Virtual Reality headset and wearing headphones.

“With access to variability in action and expression, more students are able to serve as models for one another on how to achieve a goal. The more difficult the task, the more we must learn it through interactions with others rather than on our own through trial and error.” - CAST

The product, what students produce to communicate their understanding, should be a direct reflection of the goal.

For example, if the goal is to demonstrate the comprehension of themes in a short story, then this should not be limited to pen and paper in a paragraph or essay format.

If the difficulty or barrier is composing a passage then the ‘bypass strategy’ for expressing comprehension of themes could be done in several ways

Video

Cartoon

Audio recording

Poster