

# A Research-Based Design Framework for Equity, Inclusion and Student Success



**UDL-IRN**

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**CAST** | Until learning  
has no limits<sup>®</sup>

# INTRODUCTIONS



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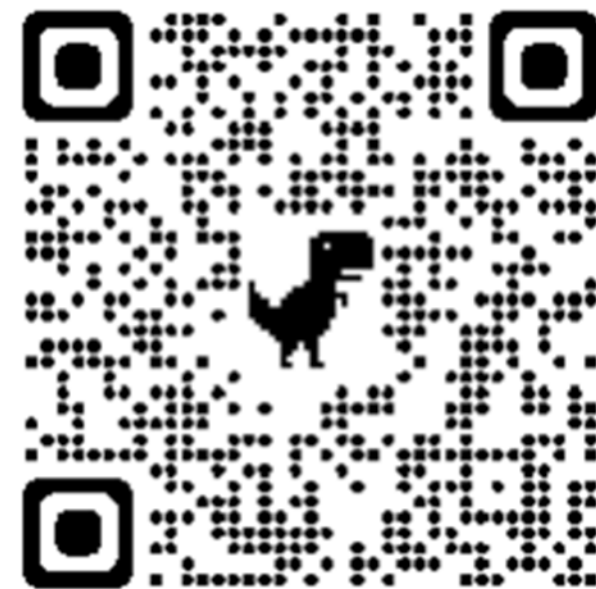
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# Land Acknowledgement

I work and live on the ancestral lands of the Kansa, Kickapoo, and Osage. These peoples continue to work and live here in the Midwest. Our conversations today and my (M. Ralph) work with UDL includes connecting the framework to instructional shifts that make space for Indigenous ways of knowing and being in the classroom. I recently learned from Dr. [Zoe Todd](#)'s helpful thread about 'reconciling' western science & Indigenous legal orders.

*"[A]s long as 'knowledge' in a western paradigm is divorced from being/doing/ethics, when we try to discuss Indigenous sciences/knowing/being and western 'science' we are talking across a gulf" ~ Zoe Todd*



[Dr. Todd's Twitter Thread](#)

**Think About Our Own Positionality**

**"Those with power are least aware -  
or least willing to acknowledge its  
existence."**

Tesha Fitzgerald,  
Author: "Antiracism and Universal Design for Learning"

# Recognizing Our Own Positionality

History / ancestral heritage

Neighborhood I grew up in

Family

Neighborhood I live in now

Religion

Physical dis/abilities

Age

Values

Gender

Language

Education

Sexual orientation

Profession

Ethnicity

Culture / cultural traditions

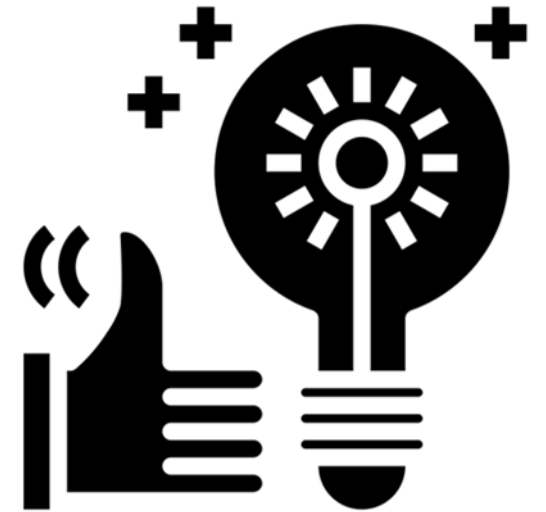
Economic class

Nation / region

**THE UDL FRAMEWORK MEETS SPACE DESIGN APPLICATIONS**

# **A Quick Primer on UDL**

Universal Design for Learning (UDL) is a design framework used to improve teaching and learning for *all*.



[Created by Phonlaphat Thongsriphong](#)





# UDL Core Concepts **Neuroscience**

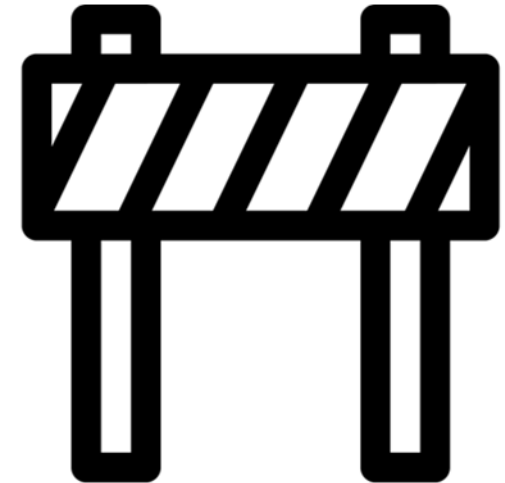
Variability is the norm.  
Human variability exists both  
among individuals and within  
them.





# UDL Core Concepts **Design**

Barriers exist in the environment and the experience, not in the learner.



## Provide multiple means of Engagement

Affective Networks  
The "WHY" of Learning



## Provide multiple means of Representation

Recognition Networks  
The "WHAT" of Learning



## Provide multiple means of Action & Expression

Strategic Networks  
The "HOW" of Learning



Access

### Provide options for Recruiting Interest <sup>(7)</sup>

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

### Provide options for Perception <sup>(1)</sup>

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

### Provide options for Physical Action <sup>(4)</sup>

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

Build

### Provide options for Sustaining Effort & Persistence <sup>(8)</sup>

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

### Provide options for Language & Symbols <sup>(2)</sup>

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

### Provide options for Expression & Communication <sup>(5)</sup>

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

Internalize

### Provide options for Self Regulation <sup>(9)</sup>

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

### Provide options for Comprehension <sup>(3)</sup>

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

### Provide options for Executive Functions <sup>(6)</sup>

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

# The UDL Deck of Spaces™

A set of 67 idea cards based on the UDL scientific framework about learning, learning access, inclusion, and diversity.



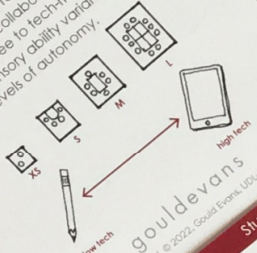
## Trauma-informed learning design

Trauma-informed learning design provides consistency and stability for students affected by trauma. The environment must communicate safety by providing clarity in how it invites the student to participate in their learning. "Layers of learning" help trauma-affected learners retreat, observe, and participate.

Provide protected spaces for more targeted interventions and one-on-one time that still communicate inclusion and belonging (rather than being separated or isolated). (18, 19)

## Design a range of varied spaces for team sizes and learning goals

Design spaces to support varying needs. Spaces can range from independent to collaborative, quiet to loud, tech-free to tech-rich. Provide space for sensory ability variances and different levels of autonomy.



## Transparency enhances belonging

Studies have shown that segregated schooling negatively impacts educational outcomes. (20, 21)

Thoughtful use of transparency allows students to see beyond the peers in their nearby space and grow their connections with peers who may not look like them.

Design space together to reflect who we are and what our community means to us.

Windows – spaces to see each other  
Mirrors – spaces that reflect us  
Glass doors – spaces that transport us  
Technology – space that extends us

## Infuse more real-world learning via "living laboratories"

Living laboratories are shared spaces that can be set up like various career environments to create authentic real-world learning experiences mirror professional settings.

Living laboratories can host visits from regional partners to create in-school "field trips." They can then remain in these setups to extend that learning experience for the duration of the learning unit.

## School as a community resource:

### multi-use spaces

Create spaces in your school that invite student and family engagement and community belonging.

Open access to resources and services for students with disabilities (33)

Open access to resources and services for students, food

## Use space to wake up students' senses

Think about how space can be more stimulating to sight, sound, smell, and touch to engage more of the learning brain. (14)




Using all senses also means keeping all senses in a comfortable zone—indoor air quality, ambient noise levels, light levels without glare or flicker, and lack of noxious odors.

Engaging with all senses is beneficial for students with neurodiversity disorders. (15)

# LINKING THE FRAMEOWRK TO THE CARDS

Provide options for **Recruiting Interest (7)** ➔

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

	<p>Provide multiple means of <b>Engagement</b> ➔</p> <p>Affective Networks The "WHY" of learning</p> 	<p>Provide multiple means of <b>Representation</b> ➔</p> <p>Recognition Networks The "WHAT" of learning</p> 	<p>Provide multiple means of <b>Action &amp; Expression</b> ➔</p> <p>Strategic Networks The "HOW" of learning</p> 
Access	<p>Provide options for <b>Recruiting Interest (7)</b> ➔</p> <ul style="list-style-type: none"> <li>● Optimize individual choice and autonomy (7.1) ➔</li> <li>● Optimize relevance, value, and authenticity (7.2) ➔</li> <li>● Minimize threats and distractions (7.3) ➔</li> </ul>	<p>Provide options for <b>Perception (1)</b> ➔</p> <ul style="list-style-type: none"> <li>● Offer ways of customizing the display of information (1.1) ➔</li> <li>● Offer alternatives for auditory information (1.2) ➔</li> <li>● Offer alternatives for visual information (1.3) ➔</li> </ul>	<p>Provide options for <b>Physical Action (4)</b> ➔</p> <ul style="list-style-type: none"> <li>● Vary the methods for response and navigation (4.1) ➔</li> <li>● Optimize access to tools and assistive technologies (4.2) ➔</li> </ul>
Build	<p>Provide options for <b>Sustaining Effort &amp; Persistence (8)</b> ➔</p> <ul style="list-style-type: none"> <li>● Heighten salience of goals and objectives (8.1) ➔</li> <li>● Vary demands and resources to optimize challenge (8.2) ➔</li> <li>● Foster collaboration and community (8.3) ➔</li> <li>● Increase mastery-oriented feedback (8.4) ➔</li> </ul>	<p>Provide options for <b>Language &amp; Symbols (2)</b> ➔</p> <ul style="list-style-type: none"> <li>● Clarify vocabulary and symbols (2.1) ➔</li> <li>● Clarify syntax and structure (2.2) ➔</li> <li>● Support decoding of text, mathematical notation, and symbols (2.3) ➔</li> <li>● Promote understanding across languages (2.4) ➔</li> <li>● Illustrate through multiple media (2.5) ➔</li> </ul>	<p>Provide options for <b>Expression &amp; Communication (5)</b> ➔</p> <ul style="list-style-type: none"> <li>● Use multiple media for communication (5.1) ➔</li> <li>● Use multiple tools for construction and composition (5.2) ➔</li> <li>● Build fluencies with graduated levels of support for practice and performance (5.3) ➔</li> </ul>
Internalize	<p>Provide options for <b>Self-Regulation (9)</b> ➔</p> <ul style="list-style-type: none"> <li>● Promote expectations and beliefs that optimize motivation (9.1) ➔</li> <li>● Facilitate personal coping skills and strategies (9.2) ➔</li> <li>● Develop self-assessment and reflection (9.3) ➔</li> </ul>	<p>Provide options for <b>Comprehension (3)</b> ➔</p> <ul style="list-style-type: none"> <li>● Activate or supply background knowledge (3.1) ➔</li> <li>● Highlight patterns, critical features, big ideas, and relationships (3.2) ➔</li> <li>● Guide information processing and visualization (3.3) ➔</li> <li>● Maximize transfer and generalization (3.4) ➔</li> </ul>	<p>Provide options for <b>Executive Functions (6)</b> ➔</p> <ul style="list-style-type: none"> <li>● Guide appropriate goal-setting (6.1) ➔</li> <li>● Support planning and strategy development (6.2) ➔</li> <li>● Facilitate managing information and resources (6.3) ➔</li> <li>● Enhance capacity for monitoring progress (6.4) ➔</li> </ul>
Goal	<p>Expert Learners who are...</p> <p><b>Purposeful &amp; Motivated</b>      <b>Resourceful &amp; Knowledgeable</b>      <b>Strategic &amp; Goal-Directed</b></p>		

# DIVERSITY, EQUITY, INCLUSION & BELONGING (DEIB) OVERLAY WITH UDL FRAMEWORK

## 1. Dis/Ability

- Physical ability variance
- Cognitive ability variance
- Neurological variance
- Sensory ability variances

## 2. Trauma Informed Practices

- Physical safety
- Psychological safety

## 3. Social, Emotional & Behavioral Development

- Interpersonal awareness
- Emotional regulation
- Open-mindedness

## 4. Ethnic and Racial Identity

- BIPOC racism
- Indigenous erasure
- Colonial oppression

## 5. Gender & Sexuality

- Gender identity & expression
- Sexual orientation
- Transgender identity

## 6. Other identity representations

- Linguistic identities
- Religion identities
- Nationality identities
- Socio-economic background

# Universal Design Beyond the Classroom

The Universal Design for Learning Guidelines

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	Provide multiple means of Engagement	Provide multiple means of Representation	Provide multiple means of Action & Expression
	Affective Networks The "WHY" of Learning	Recognition Networks The "WHAT" of Learning	Strategic Networks The "HOW" of Learning
Access	<b>Provide options for Recruiting Interest</b> (1) <ul style="list-style-type: none"> <li>Optimize individual choice and autonomy (1.1)</li> <li>Optimize relevance, value, and authenticity (1.2)</li> <li>Minimize threats and distractions (1.3)</li> </ul>	<b>Provide options for Perception</b> (1) <ul style="list-style-type: none"> <li>Offer ways of customizing the display of information (1.1)</li> <li>Offer alternatives for auditory information (1.2)</li> <li>Offer alternatives for visual information (1.3)</li> </ul>	<b>Provide options for Physical Action</b> (1) <ul style="list-style-type: none"> <li>Vary the methods for response and navigation (1.1)</li> <li>Optimize access to tools and assistive technologies (1.2)</li> </ul>
Build	<b>Provide options for Sustaining Effort &amp; Persistence</b> (1) <ul style="list-style-type: none"> <li>Heighten salience of goals and objectives (1.1)</li> <li>Vary demands and resources to optimize challenge (1.2)</li> <li>Foster collaboration and community (1.3)</li> <li>Increase mastery-oriented feedback (1.4)</li> </ul>	<b>Provide options for Language &amp; Symbols</b> (1) <ul style="list-style-type: none"> <li>Clarify vocabulary and symbols (1.1)</li> <li>Clarify syntax and structure (1.2)</li> <li>Support decoding of text, mathematical notation, and symbols (1.3)</li> <li>Promote understanding across languages (1.4)</li> <li>Illustrate through multiple media (1.5)</li> </ul>	<b>Provide options for Expression &amp; Communication</b> (1) <ul style="list-style-type: none"> <li>Use multiple media for communication (1.1)</li> <li>Use multiple tools for construction and composition (1.2)</li> <li>Build fluencies with graduated levels of support for practice and performance (1.3)</li> </ul>
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Goal	<b>Expert learners who are...</b> Purposeful & Motivated	Resourceful & Knowledgeable	Strategic & Goal-Directed

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## Universal Design for Learning Guidelines



## UDL School Implementation and Certification Criteria



@CAST\_UDL | #CASTPL

# Addresses The School As a System



**School Culture  
and Environment**



**Teaching and  
Learning**



**Leadership and  
Management**



**Professional  
Learning**



# The UDL-SICC Provides:



- A roadmap for systemic and systematic schoolwide UDL implementation.
- A shared language and understanding of how a UDL school functions to promote equity, inclusion and expert learning.
- School teams with the **tools to assess, plan, design, and develop** successful inclusive, equitable learning environments.

# UDL School Implementation and Certification Criteria



## School Culture and Environment

**Element 1:** The school community designs a culture that supports inclusion and equity.

**Element 2:** The school community designs a culture that supports expert learning.

**Element 3:** The school community communicates in ways that reflect a commitment to UDL.

**Element 4:** The school community **designs school spaces to support variability.**

## EXERCISE #1

1. Organize into groups of 2-3.
2. Select a vignette card to establish your UDL challenge.
3. Review the idea cards & select your **top 8 ideas** to help address Mr. Bello's challenge.
4. Prepare to share out your top 2 space design strategies.

V.8 Vignettes

**MR. BELLO**  
(ELEMENTARY STEAM)



deck of spaces™

**Vignette #8**

Mr. Bello teaches in an elementary STEAM classroom. He encourages his students to think like a scientist, which his district's standards promote. He wants to do more hands-on problem-solving and engage authentic audiences, such as community experts.

How might he design a learning environment to engage in hands-on activities with community experts in his classroom?

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## EXERCISE #2

**Organize into groups of 4-6 players**

# Challenge Cards

C.1

Challenge Card



How can we rethink school spaces to better support increasing numbers of **students affected by poverty** ?

Many districts are seeing changing student demographics. What aspects of your facilities could do a better job to help these students feel like they belong? To help them feel safe? To ensure their learning needs are met?

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# Play the Game: “Schools Against Inhumanity”

1. Deal each player 6 cards, text face down. Each player keeps the text side of their card hidden.
2. Choose 1 player to start as the Challenger. They set their hand aside and do not play cards this round.
3. The Challenger looks through the Challenge Prompts and selects one to read to the group.
4. Each player selects one of their Idea Cards that best responds to the Challenge and places it in the middle of the table text face down.
5. The Challenger collects, mixes up, and reads aloud the heading of each played card. They then choose the one they think best addresses the challenge and explains why.
6. The player whose Idea Card remains wins the Challenge Prompt.
7. Each player draws one card to maintain a hand of 6 Idea Cards.
8. The role of Challenger rotates, and a new round starts.

## **Call to Action!**

**Who are you going to talk to?**

**When are you going to see them?**

**Write down the question you're going to ask them.**

**How will you enter this conversation?**

# Resources:

Sue Hardin - [Sue.Hardin@UDL-IRN.org](mailto:Sue.Hardin@UDL-IRN.org)

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Purchase the Deck of Spaces:  
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<https://www.learningdesigned.org/udl-sicc-introduction>

