

Creating Active and Engaging Learning Environments

Universal Design for Learning as a Foundational Space Design Strategy





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Goals and Learning Outcomes

Participants will be able to explain how UDL connects to space design, and how it can lead to opportunities to design for activity and flexibility.

Participants will be able to facilitate a conversation about how active learning connects to space design in ways that impact educational outcomes.

Participants will be able to identify more variabilities (in learners and space users generally) and the resulting variability in space impacts on student health, well-being, and academic achievement.

Participants will be able to connect the need for active and flexible design to current education and design research and its impacts for student physical, social and emotional outcomes, and academic achievement.

Who's in the Room?

Northland Innovation Center SAGE, Gladstone, MO

SAGE (Students in Academically
Gifted Education)

K - 8 Program

Serves over 700 students one day
a week

PEGS (Program for Exceptionally
Gifted Students)

Serves up to 24 students

3rd - 6th grade students full time





Perkins&Will

HOEFER WELKER



Northland Innovation Center Partners

Students need:

Agency
Voice & Choice
Flexibility
Inclusivity
Critical Thinking
Problem Solving
Ownership
Self-regulation Skills





Success is not final;
failure is not fatal. It is
the courage to continue
that counts.

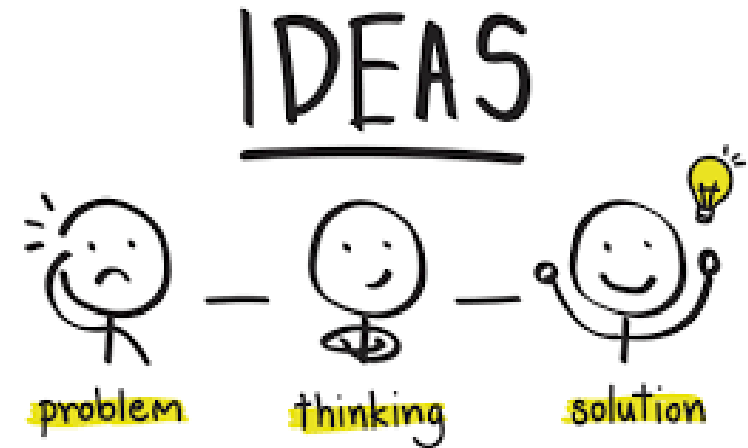
Sir Winston Churchill

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STUDIA





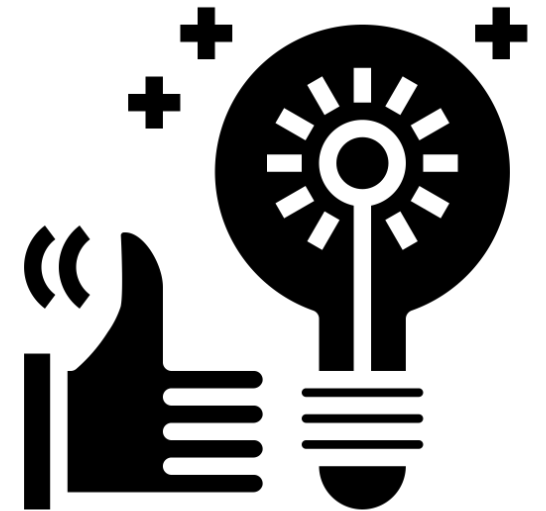
Understanding by Design ® (UbD) is a backwards design approach for thinking decisively and unit lesson planning for student learning.



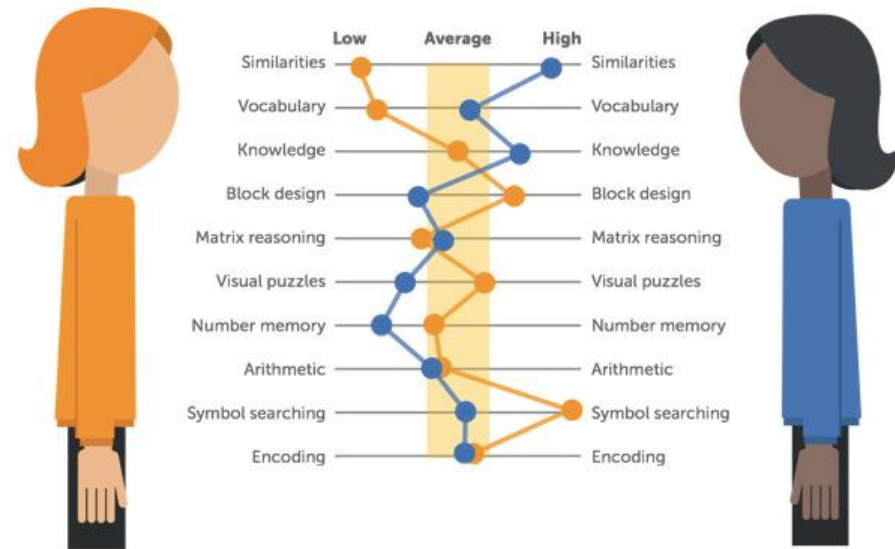
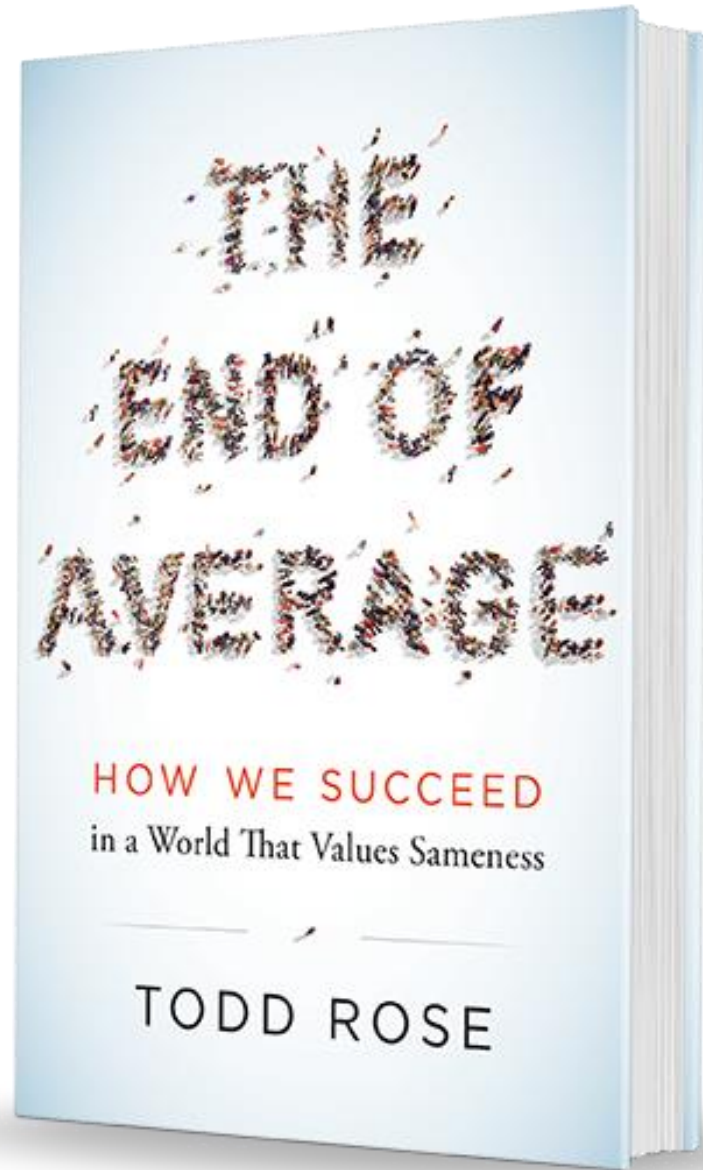
Created by Jay MCTighe & Grant Wiggins

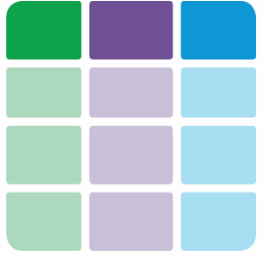
A Primer on Universal Design for Learning

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

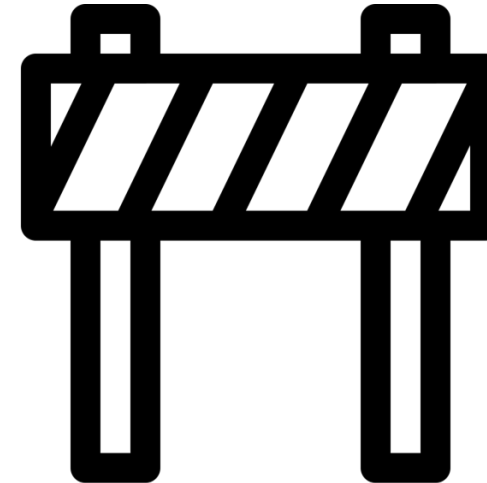
**Variability is the norm.
Human variability exists both
among individuals and within them.**





UDL Core Concepts Design

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



[Created by Muhammad Naufal Subhiansyah](#)

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 ⁽⁷⁾

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

Provide options for Perception ⁽¹⁾

- 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 ⁽⁴⁾

- 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 ⁽⁸⁾

- 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 ⁽²⁾

- 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 ⁽⁵⁾

- 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 ⁽⁹⁾

- 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 ⁽³⁾

- 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 ⁽⁶⁾

- 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)

60 Idea Cards

Based on the UDL Scientific Framework about learning, learning access, inclusion, and diversity



7 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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Let's Play!

“Schools Against Inhumanity”

Start by dealing each player (7) Idea Cards, with the text face down. The player can look at their hand but should keep the text on their cards secret.

Choose (1) player to start as the Challenger. They set their hand aside and do not play Idea Cards this round.

The Challenger reads the Challenge to the group.

Each player selects one of their Idea Cards that best responds to the Challenge and places it in the middle of the table text down.

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.

The player whose Idea Card remains wins the Challenge.

All players draw back to 7 Idea Cards.

The role of Challenger rotates, and a new round restarts.



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?



How can we reconsider facility design to provide more **equity and inclusion of under-represented students?**

Is conformity being driven by space design? Are all students recognized and honored by the space design? Are there opportunities to welcome students into the school as their whole, authentic selves?



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How can we consider space design to support ***the mental health and wellness of students and teachers?***

What type of space could help users find a place to retreat when needed? Reduce stress? Improve emotional safety? Promote a sense of student agency?

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How can we consider space design to support **gender non-binary students ?**

Do all students feel welcome, accommodated, and safe?



How can we think about space creatively to support **teaching through project-based learning?**

What kind of space design barriers are teachers running into with new practices? Where is students' authentic learning being impeded due to facility misalignment?



How can we design classroom spaces to better support **students on the spectrum?**

How might spaces be over-stimulating for students? How might the spaces create opportunities for self-regulation and emotional safety? What can we do to remove or reduce sensory “triggers” in the spaces?



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How can we design spaces to ***honor and support students from different cultures and ethnic backgrounds?***

Is cultural expression being erased or minimized for certain identity groups based on space design? Do the spaces include things that conflict with certain cultural norms?

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How can we consider space design to support **the healthy and safe transition of 5th grade students to middle school?**

Consider the socio-emotional wellness of 5th grade students and their families.

- Think about students' physical differences.
- Think about differences in maturity level.
- Think about differences in cognitive level.



How can we think about space to support **real world learning experiences, especially in the CTE programs?**

What kind of space design barriers are teachers running into with new practices? Where is authentic learning being impeded due to facility misalignment?

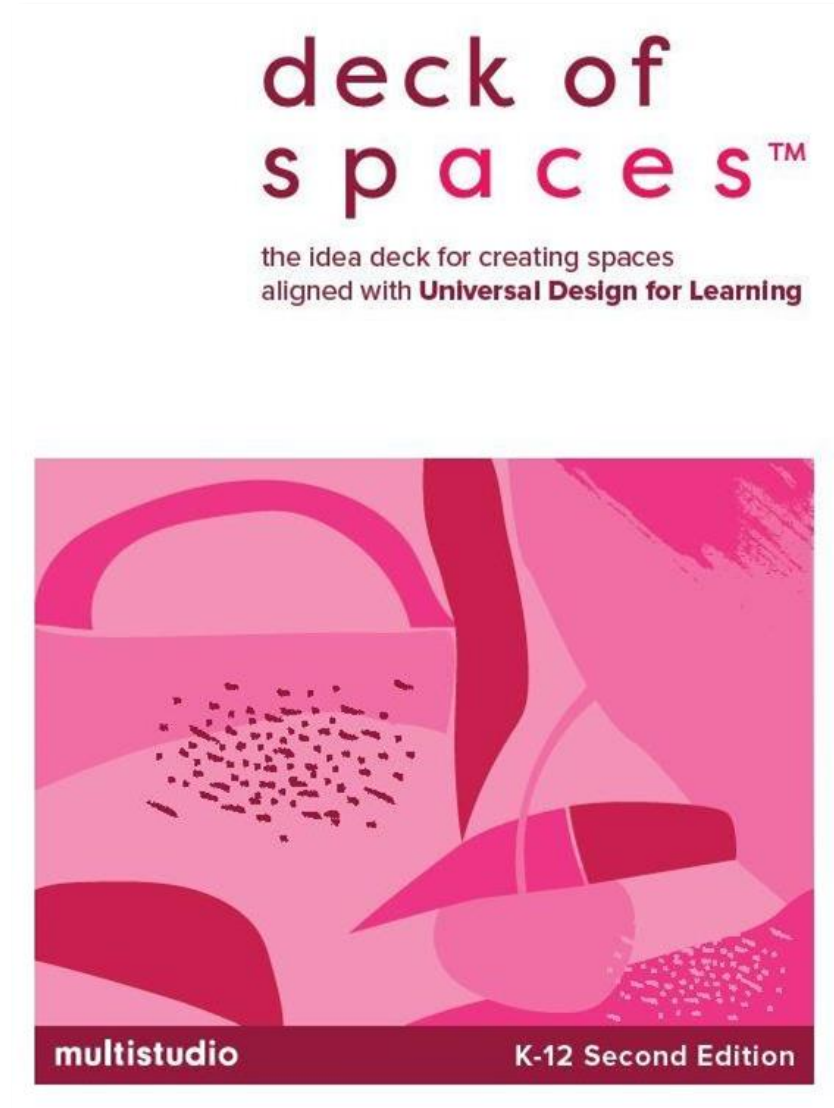


Prompt *create your own prompts based on your own scenarios*.

Discussion

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