UDL in a Nutshell- Episode 6: Show Notes
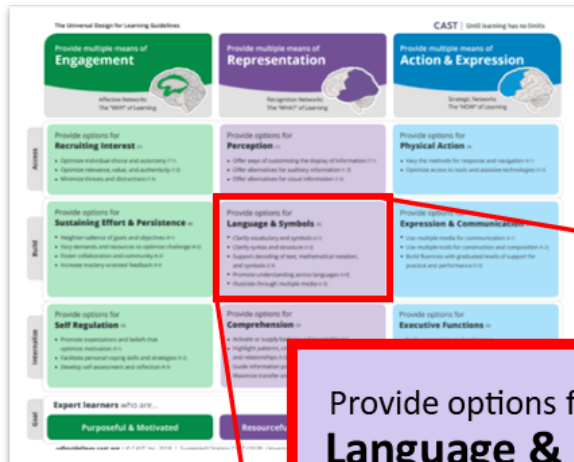
Episode 6: Language & Symbols

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)

Episode 6 Transcript:

Link to Episode 6 Transcript

Resources Mentioned in Episode 6

- **Press Release:** The State of LD: Understanding the 1 in 5

Additional UDL Resources:

**PDF of the UDL Guidelines:** PDF of the CAST UDL Guidelines Framework Grid

(Click the Download button (⤓) in the top right to download your own copy)

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Interactive UDL Guidelines Website: [The CAST UDL Guidelines website](#) is accessible and interactive. When you arrive at the main page, scroll down to the bottom to find a clickable version of the UDL guidelines framework.

UDL & Research: To see the research behind each part of the UDL guidelines:

1. Follow the directions to the clickable version of the [UDL guidelines framework](#) listed above (remember to scroll down to the bottom of the page).
2. Locate a checkpoint (bullet point) for which you would like to see the research and click on that checkpoint in the clickable version of the guidelines.
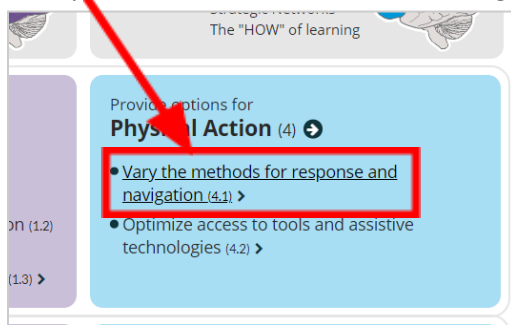
3. When you get to the page with information about that checkpoint, you will find a brief description of that checkpoint and some suggestions for ways to use this checkpoint in the classroom.
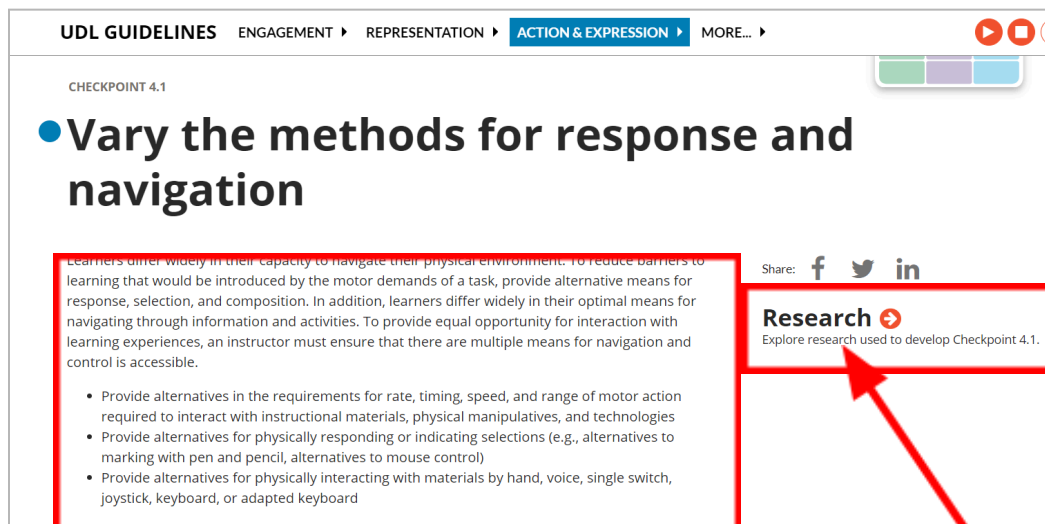
4. To find the numerous research studies on which this checkpoint is based, click on *Research* on the right side.
5. This link will take you to a long list of studies that encompass the body of research on which this checkpoint is based.

UDL in a Nutshell- Episode 6: Show Notes

UDL GUIDELINES   ENGAGEMENT ▸   REPRESENTATION ▸   **ACTION & EXPRESSION** ▸   MOR

Vary the methods for response and navigation

Research for Checkpoint 4.1

Most of the experimental studies on providing options in the mode of physical response are concentrated on the improvements to learning made possible by providing keyboarding and voice recognition options for several types of students: typically achieving students, students who have high incidence learning disabilities (e.g. dyslexia) or students who have specific writing disabilities (e.g. dysgraphia). In contrast, there are no experimental research studies that show evidence of improved learning for students with severe motor disabilities. This is remarkable since the advantages of physical and motor options (e.g. expanded keyboards, single switch devices, or other assistive technologies, etc.) for students with physical disabilities are typically considered the most enabling of options. These advantages are undoubtedly considered so self-evident that adequate experimental studies – on learning - have not been conducted. Scholarly reviews and opinion pieces are primarily limited to reports on comparative techniques and technical advances for mobility and dexterity rather than improvements in learning.

Experimental & Quantitative Evidence

Bangert-Drowns, R. L. (1993). The word processor as an instructional tool: A meta-analysis of word processing in writing instruction. *Review of Educational Research, 63*(1), 69-93.

Crealock, C., & Sitko, M. (1990). Comparison between computer and handwriting technologies in writing training with learning disabled students. *International Journal of Special Education, 5*(2), 173-183.

Dalton, D. W., & Hannafin, M. J. (1987). The effects of word processing on written composition. *Journal of Educational Research, 80*(6), 338-342.

Dalton, B. D., Herbert, M., & Deysher, S. (2003). Scaffolding students' response to digital literature with embedded strategy supports: The role of audio-recording vs. writing student response options. *53rd Annual Meeting of the National Reading Conference.*