Making Research Accessible:
Universal Design for Learning (UDL)
Clear Communication and Plain Language

A Guide to Using Universal Design for Learning (UDL) to Enhance Inclusive Health Research

Assembled by the *AIDD2Health* Team: *Access for Intellectually and/or Developmentally Disabled People to Health*-Related Research Projects

Access to the Full Guidebook:

UDL Principles

Universal Design for Learning (UDL) is a framework that promotes inclusivity and accessibility in learning and other environments (e.g., research). Its principles aim to ensure that everyone -- regardless of their abilities, background, or learning style -- has equal opportunity to succeed. UDL increases access and reduces known and unknown barriers, including those that are rooted in biases and systems of exclusion affecting people with and without disabilities.[8]

The goal of UDL is to empower learners (e.g., research participants) by ensuring their voices are truly heard and valued, and by promoting beneficence, justice, and respect through fully informed autonomous participation and agency.[9] The UDL framework and principles guide designers (e.g., health researchers) to provide multiple means of engagement, representation, and action & expression.

UDL across the research process ensures that research is meaningful to the participants, leading to:
- Quality data
    - Includes underrepresented people in health research
    - Encourages clear communication between researchers and participants
- Reduced attrition (fewer participants dropping out from the study)
    - Participants are engaged because the information is accessible, understandable, and relevant

8. CAST (2024). *Universal Design for Learning Guidelines version 3.0. Retrieved from https://udlguidelines.cast.org, Accessed 12/18/24*
9. *Belmont Report (n.d.): https://www.hhs.gov/ohrp/regulations-and-policy/belmont-report/read-the-belmont-report/index.html, Accessed 12/18/24*

- Representation of underrepresented participants in research data (e.g., people with disabilities) leads to:
    - Improved generalizability of research results
    - Customized/specialized studies addressing the unique needs of underserved populations

Universal Design for Learning (UDL) is a conceptual framework that proactively creates equity and meets the needs of diverse learners. This design meets known and unknown needs through flexibility, minimizing barriers, and recognition of people's varied talents, skills, and abilities. [8, 10]

As stated by CAST (n.d.), "The goal of UDL is learner agency that is purposeful and reflective, resourceful and authentic, strategic and action-oriented." [8]
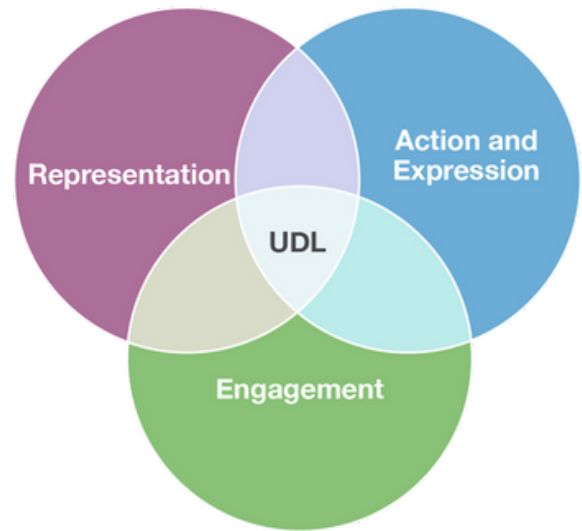
Figure 4 is based on the interpretation of https://udlguidelines.cast.org/

Multiple Means of Engagement: The WHY
Multiple Means of Representation: The WHAT
Multiple Means of Action and Expression: The HOW

Principle of UDL: Engagement

The principle of engagement in UDL helps create environments where individuals feel valued and safe by centering, affirming, and sustaining participants' interests and identities, which promotes inclusivity and authenticity. [8]

All about inclusivity
Researcher should ask: "Does the topic promote participant engagement" by:
- Welcoming interests and identities by optimizing autonomy and addressing biases?
- Sustaining effort and persistence by clarifying the meaning and the purpose?
- Supporting emotional capacity by recognizing expectations, beliefs, and motivations?

8. CAST (2024). Universal Design for Learning Guidelines version 3.0. Retrieved from https://udlguidelines.cast.org
10. Thompson, M. & Temple, P. (2023, June). Utilizing the Principles of UDL to Foster Equity and Creativity for Artists with IDD. Poster presentation at the American Association on Intellectual and Developmental Disabilities (AAIDD) 2023 Conference. Pittsburgh, PA.

Principle of UDL: Representation
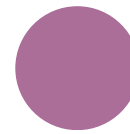
The principle of representation in UDL recognizes the importance of representing a diversity of perspectives, identities, and narratives by presenting and valuing multiple ways of knowing and meaning-making.[8]

All about access

Is information communicated to participants:

- Through multiple ways to increase understanding of information?
- Through language and symbols that are clearly communicated?
- Is new learning connected to prior knowledge?

Illustrations by Jack

Principle of UDL: Action & Expression

The principle of action & expression in UDL honors and values all forms of expression -- equity in communication.

All about voice and agency

Are participants able to communicate and act on their ideas through:

- Optimizing interaction through availability of access to accessible materials and tools?
- Multiple and diverse types of expression and communication?
- Taking action (strategy development) by setting meaningful goals?

For more information, visit:
https://udlguidelines.cast.org

8. CAST (2024). Universal Design for Learning Guidelines version 3.0. Retrieved from https://udlguidelines.cast.org

Clear Communication and Plain Language

What is clear communication?

Clear communication means giving information in a way that is easy to understand and act on right away. In research, it helps participants know what the researcher wants from them and what their rights are. Clear communication can include plain language, pictures, illustrations, graphs, icons, and other ways of sharing information.

Clear communication has been promoted as best practice in medical settings for several decades. Until recently, we did not have a standard for how to use clear communication. Coleman et al. list their top practices to provide clear communication:[11, 12, 13]

- Use qualified medical interpreters.
- Use plain language and avoid unnecessary jargon.
- Avoid information overload and encourage questions.
- Use a teach-back method that asks patients to explain what they understand.

What are the benefits of using clear communication and plain language in research?

Clear communication and plain language help researchers share information in a way that many more people can understand. This makes research more accessible to different groups of people.[14]

Researchers should use clear communication and plain language to make the research process fairer, more equitable, and easier to understand. This helps everyone:

- Understand the purpose and process of the research study.
- Decide if they would like to join a specific research study.
- Know what they need to do as a participant.
- Understand the results and what they mean.
- Apply the research to their lives.
- See how research can improve community health.

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11. Coleman, C. A., Hudson, S., & Maine, L. L. (2013). Health Literacy Practices and Educational Competencies for Health Professionals: A Consensus Study. Journal of Health Communication, 18(sup1), 82–102. https://doi.org/10.1080/10810730.2013.829538.
12. Coleman, C., Hudson, S., & Pederson, B. (2017). Prioritized health literacy and clear communication practices for Health Care Professionals. HLRP: Health Literacy Research and Practice, 1(3). https://doi.org/10.3928/24748307-20170503-01.
13. Coleman, C. (2020). Health literacy and clear communication best practices for telemedicine. HLRP: Health Literacy Research and Practice, 4(4). https://doi.org/10.3928/24748307-20200924-01.
14. Gross, Z. (2024, April 17). AIR-P Presents: Introduction to Plain Language Writing for Academics and Researchers. YouTube. https://youtu.be/5atNQ_kTEx4?si=HordOfRpjBycWozf.

Clear Communication and Plain Language Strategies and Tips:

- **Keep sentences and paragraphs short; focus on one subject per sentence and one topic per paragraph** - Longer sentences/paragraphs can distract from the point and be confusing.[15]
- **Use common words or explain any difficult words** - Your message will be understood by more people if you use common words.[15]
- **Say expectations explicitly, instead of using indirect statements** - This causes fewer misunderstandings and helps everyone understand what needs to happen.[15]
- **Avoid figurative language, like metaphors, idioms and other interpretative expressions -** Figurative language often represents abstract concepts that can be more easily misunderstood. Being literal will help a wider audience understand your message.
- **Organize information based on the intended audience** - Some audiences need or use different information.[15]
- **Leave out or move less-important information** - Too much information can be confusing and distract from the important information.[14]
- **Use active voice instead of passive voice (the subject does the action)** - Passive voice can be vague and confusing.[15]
- **Use examples and different formats to give information** - Presenting information in different ways allows people to process what they are hearing or reading in the way that works best for them.[15]

Illustrations by Jack

- **Write out contractions and abbreviations** - Abbreviations are often specific to a field and may not be known to a wider audience. Contractions can slow a reader down.[14]
- **Use illustrations, graphs and images to communicate information visually**.
- **Use talk-back (teach-back) and comprehension checks** - Ask open-ended questions and have participants repeat and rephrase information to check for understanding.[13]
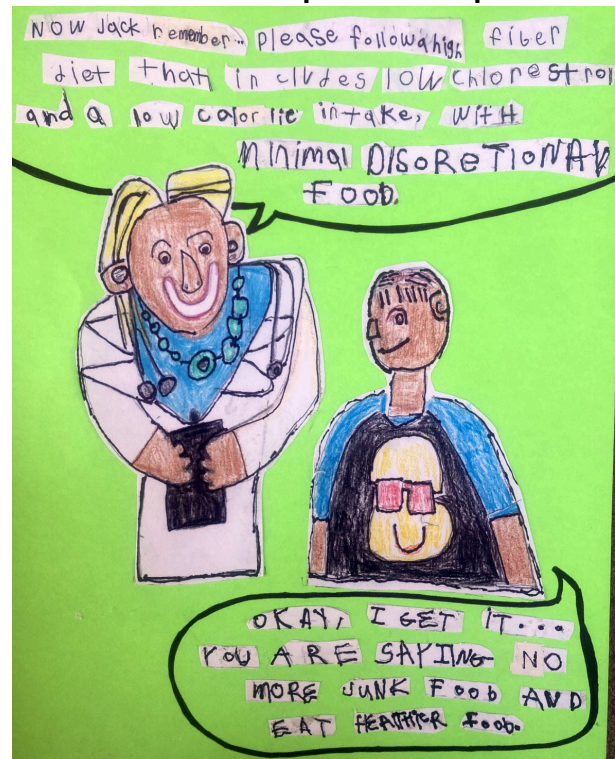
13. Coleman, C. (2020). *Health literacy and clear communication best practices for telemedicine. HLRP: Health Literacy Research and Practice, 4(4). https://doi.org/10.3928/24748307-20200924-01.*

14. Gross, Z. (2024, April 17). *AIR-P Presents: Introduction to Plain Language Writing for Academics and Researchers. YouTube. https://youtu.be/5atNQ_kTEx4?si=HordOfRpjBycWozf.*

PlainLanguage.gov, Federal Plain Language guidelines (2011). United States.

15. *PlainLanguage.Gov. Plain Language Makes It Easier for the Public to Read, Understand, and Use Government Communications. https://www.plainlanguage.gov/, Accessed 12/18/24*

Communication Considerations for Working with Marginalized Groups

More than one-third of all Americans have low health literacy and many more are at risk for low health literacy.[13] Some people:

- Need definitions or explanations of specific medical words and advice.
- Understand better with shorter sentences.
- Benefit from picture examples.

We should always ask people how they like to get information (e.g., audio, verbal instruction, text, visuals). When people join research, they might need different ways to understand things, so it is good to use different types of clear communication. This is the best way to help everyone. Using plain language along with tools like videos and screen readers can make research easier for everyone to understand (see the UDL section).

Comics by Jamelle

13. Coleman, C. (2020). Health literacy and clear communication best practices for telemedicine. HLRP: Health Literacy Research and Practice, 4(4). https://doi.org/10.3928/24748307-20200924-01.