



Ways of Knowing and Making Meaning¹

UDL 3.0 Consideration 3.4: Cultivate multiple ways of knowing and making meaning — Honor multiple and diverse ways of developing an understanding of the world.

What is it?

Honoring "ways of knowing" and "making meaning" refers to the different methods humans use to understand the world and create knowledge. Rather than assuming there's only one "correct" way to know something, this concept recognizes that people from different cultures, disciplines, and backgrounds have developed distinct approaches to understanding reality. When we cultivate and value diverse methods of understanding and interpreting the world, we facilitate richer, deeper, and more inclusive learning experiences.

Think of it this way: A writer who understands the human body might focus on metaphor and emotional resonance — how grief resides in the chest, how joy radiates through the limbs. A historian approaches the same body by examining changing cultural attitudes toward health, medicine, and anatomy across time. A parent knows the body through immediate, practical experience — recognizing a fever by touch, understanding growth patterns, responding to needs. Each approach reveals different aspects of the truth about what it means to be human.

Common Ways of Knowing

While there are many ways to categorize how humans understand the world, the following six fundamental approaches are common across cultures and disciplines.

- **Empirical/scientific knowledge:** Learning through observation, measurement, and experimentation.
- **Experiential knowledge:** Learning through personal and community experience over time.
- **Indigenous knowledge systems:** Learning through relationships, stories, and connections to place.
- **Intuitive/creative knowledge:** Learning through insight, imagination, and artistic expression.
- **Rational/logical knowledge:** Learning through reasoning, logic, and systematic analysis.
- **Cultural/traditional knowledge:** Learning through shared practices, beliefs, and customs passed down through communities.

¹ Content developed with AI, based on [the CAST UDL Guidelines™](#), scholarly sources, and web resources. Icons courtesy of [Flaticon.com](#) contributors and other contributors.

Why do it?

Education has traditionally privileged one way of knowing — the analytical, research-focused approach that emphasizes written evidence, peer review, and objective analysis. Increasingly, however, we recognize that:

- **Students engage with content in different ways:** Some benefit from independent reading, while others benefit from listening to stories, watching videos, or hands-on activities. Using multiple approaches strengthens learning for everyone.
- **Multiple perspectives improve comprehension:** Incorporating diverse ways of thinking enhances learning and results in deeper understanding.
- **Preparation for diverse workplaces:** Graduates enter careers where they'll work with people who approach problems in various ways.
- **Real-world problems require multiple approaches:** Today's organizations need employees who can collaborate on diverse teams that incorporate academic research, community expertise, professional practice, and lived experience to solve complex problems.
- **Expands rather than abandons academic standards:** Cultivating ways of knowing and making meaning recognizes that human understanding is richer and more complex than any single approach can capture, leading to more robust learning and teaching.

How to do it

Recognizing and respecting different ways of knowing transforms how we teach and how students learn. The following strategies provide concrete ways to incorporate multiple approaches into your instruction across three key areas: learning assessments and assignments, teaching methods, and learning materials.

Learning Assessments and assignments

Learning assessments (formative and summative) and assignments are outcome-aligned and gather information about student learning. Recognizing different ways of knowing means designing multiple pathways for students to show what they understand.

- **Design authentic assessments:** Create assignments that mirror how knowledge is actually used in professional or community settings (e.g., having human services students conduct actual intake interviews and develop care plans for simulated clients rather than essays about case management theory, or having nursing students create patient education materials they could use in clinical settings).
- **Offer multiple ways to demonstrate learning:** Not all students excel at traditional essays. Consider presentations, projects, portfolios, or creative works (e.g., students studying climate change might write a research paper, create an infographic for community education, develop a policy proposal, or design a public awareness campaign).

- **Value different forms of evidence:** Students might demonstrate understanding through analysis, storytelling, problem-solving, or creative expression (e.g., a student might show understanding of conflict resolution through a case study analysis, a role-play demonstration, a reflective narrative about personal experience, or a visual flowchart of mediation steps).
- **Encourage perspective-taking:** Ask students to examine issues from multiple viewpoints or apply different disciplinary lenses (e.g., when studying patient care, ask medical assisting students to examine a treatment plan from the perspectives of the patient, the physician, the insurance provider, and the family members).

Teaching methods

Methods encompass a wide range of strategies, activities, processes, and learning experiences. Recognizing different ways of knowing means diversifying how we facilitate learning.

- **Diversify instructional approaches:** Combine lectures with storytelling, case studies, hands-on activities, and images (e.g., introduce photosynthesis through a scientific diagram, a time-lapse video, a hands-on lab with plants, and Indigenous stories about plant relationships).
- **Include multiple perspectives:** Ask yourself, "How might someone from a different background or discipline understand this concept?" (e.g., when teaching about the 1960s, include academic historical analysis, oral histories from people who lived through the era, music and art from the period, and international perspectives on American events).
- **Use experiential learning:** Connect abstract concepts to real-world applications and student experiences (e.g., connect abstract concepts about exponential growth to students' experiences with viral social media posts or compound interest on student loans, or apply geometric principles to their observations of architecture on campus).
- **Embed collaborative meaning construction:** Create structured opportunities for students to work together in building understanding, encouraging them to share diverse interpretations and co-construct knowledge through dialogue and shared problem-solving (e.g., when studying ventilator management, have small groups analyze the same patient case from different perspectives — respiratory physiology, equipment mechanics, patient comfort, and care coordination — then come together to synthesize their findings into a comprehensive care plan that incorporates multiple ways of knowing).
- **Create space for different approaches to learning:** Provide opportunities for discussion, reflection, and hands-on activities to engage all students (e.g., when teaching statistical concepts, include group discussions about data interpretation, individual reflection on personal experiences with statistics in daily life, and hands-on activities like conducting surveys or analyzing real datasets).

Learning materials

Materials are the tools and resources we use to present content and support learning, as well as what students use to demonstrate their understanding. Recognizing different ways of knowing means providing learning resource options beyond traditional academic materials.

- **Expand beyond traditional texts:** Include documentaries, podcasts, community voices, and multimedia resources (e.g., supplement a chapter on immigration with a documentary featuring immigrant voices, a podcast interview with policy experts, and data visualizations showing migration patterns).
- **Incorporate diverse sources:** Supplement academic materials with practitioner knowledge and cultural perspectives (e.g., when teaching about mental health, include academic research, practitioner guidelines from therapists, first-person accounts from people with lived experience, and cultural approaches to wellness).
- **Include contemporary examples:** Connect historical or theoretical concepts to current events and student experiences (e.g., connect historical lessons about propaganda to current examples of misinformation on social media, or relate economic theories to recent news about inflation).
- **Use varied formats:** Combine visual elements like infographics and diagrams with audio components like recordings and discussions to reinforce learning for all students. (e.g., when teaching about the cardiovascular system, provide an anatomical diagram, a recorded lecture explaining blood flow, and a class discussion connecting the concepts to students' experiences with exercise and heart rate).

Summary

Honoring multiple ways of knowing enhances learning by recognizing that different approaches reveal different understandings of the world. Rather than replacing traditional academic methods, this approach expands our teaching toolkit to create more inclusive, effective, and authentic learning experiences for all students.

The goal isn't to choose between different ways of knowing, but to understand when and how each contributes to more diverse pathways for building knowledge.

Resources

Anthropic. (2025). Claude Opus 4.5 [Large language model]. <https://claude.ai/>

CAST. (2024). Cultivate multiple ways of knowing and making meaning. *Universal Design for Learning Guidelines* version 3.0. <https://udlguidelines.cast.org/representation/building-knowledge/making-meaning/>

Knowles Teacher Initiative. (2025, May 27). *Different ways of knowing: In support of a broadened life science classroom*. <https://start.knowlesteachers.org/resource/different-ways-of-knowing-in-support-of-a-broadened-life-science-classroom>

Walsh, R., & Danto, D. (2024). Ways of knowing and higher education. In M. E. Norris & S. M. Smith (Eds.), *Leading the way: Envisioning the future of higher education*. Canadian Digital Scholarly Publishing. <https://ecampusontario.pressbooks.pub/futureofhighereducation/>

Gurm, B. (2013). Multiple ways of knowing in teaching and learning. *International Journal for the Scholarship of Teaching and Learning*, 7(1), Article 4. <https://doi.org/10.20429/ijstl.2013.070104>

Knowles, M., Holton, E. F., III, Robinson, P. A., & Caraccioli, C. (2025). *The adult learner: The definitive classic in adult education and human resource development* (10th ed.). Routledge.