

UDL 3.0: Design Options for <u>Building Knowledge (guideline 3)</u>: Maximize transfer and generalization (consideration 3.4)

What is the transfer of learning?

Transfer of learning, or learning transfer, is the application of knowledge, skills, or strategies acquired in one context to a different context or situation (Perkins & Salomon, 1992). Learning transfer is multidimensional (e.g., knowledge, skill, performance, content, physical and social contexts) and has several forms (Barnett & Ceci, 2002).

Transferring what is learned to a similar situation is called **near transfer** (e.g., adding two numbers, then adding three numbers). Applying the same information to a novel context or real-world problem is called **far transfer** (e.g., learning to drive on one side of the road and then having to drive on the other). **Positive transfer** is when previous learning supports new learning. **Negative transfer** occurs when prior learning undermines present learning.

Distinguishing between near and far transfer and being explicit about the goal of a learning experience (e.g., recall vs. apply) can help us focus instruction and better assess students' learning. Understanding positive and negative transfer can help us identify areas where previous learning interferes with new learning, allowing us to address them.

Why is the transfer of learning important?

We want students to use what they learn in our courses and beyond. After all, the fundamental goal of education is learning transfer. Designing and implementing curriculum and instruction that support the learning transfer will:

- Help students understand relationships among concepts
- Build students' ability to apply what they have learned in real-world situations.
- Promote higher-order thinking skills and a deeper understanding of concepts
- Develop students' adaptability and problem-solving skills.
- Prepare students for the workforce

How can you support the transfer of learning?

Effective course designs contextualize learning and include ongoing opportunities that promote near and far transfer, ensuring students can flexibly apply their knowledge across various situations (Lovett et al., 2023). To this end, here are strategies for facilitating the transfer of learning.

- Contextualize learning: Provide real-world examples and case studies that relate to students' experiences and career fields.
- Encourage reflection: Implement activities that prompt students to consider how they might apply course concepts in their work or personal lives.
- Use problem-based learning: Design assignments that require students to apply course concepts to solve authentic problems.
- Promote metacognition: Teach students to think about their own learning processes and how to apply strategies across different contexts.
- Create interdisciplinary connections: Help students see links between different subjects and how knowledge from one field can inform another.
- Incorporate experiential learning: Use simulations, role-playing, or project-based assignments that mimic real-world scenarios.
- Provide diverse practice opportunities: Offer varied examples and practice exercises to help students generalize their learning.
- Encourage peer learning: Facilitate discussions where students can share how they have applied course concepts in their own lives or work.

References

Barnett, S. M., & Ceci, S. J. (2002). When and where do we apply what we learn? A taxonomy for far transfer. *Psychological Bulletin*, *128*(4), 612-637.

- Lovett, M. C., Bridges, M. W., DiPietro, M., Ambrose, S. A., & Norman, M. K. (2023). *How learning works: Eight research-based principles for smart teaching*. John Wiley & Sons.
- Perkins, D. N., & Salomon, G. (1992). Transfer of learning. *International Encyclopedia of Education*, *2*, 6452-6457.