



Improving Student Knowledge Retention Takeaways

At the conclusion of this presentation, participants will be able to understand and apply the following key concepts:

- Recognize how technology-driven changes in the educational environment can affect students' ability to retain and apply information.
- Explain the importance of designing learning environments that maximize student learning potential and promote meaningful knowledge retention.
- Identify evidence-based strategies from learning psychology research that can be used to improve students' long-term retention of information.
- Locate and utilize high-quality, accessible resources that support effective teaching, learning, and educational practice.
 - a. Brown, P. C., Roediger, H. L. III, & McDaniel, M. A. (2014). *Make it stick: The science of successful learning*. The Belknap Press of Harvard University Press.
 - b. Oakley, B., Rogowsky, B., Sejnowski, T. (2021) *Uncommon Sense Teaching: Practical Insights in Brain Science to Help Students Learn*. Penguin Random House LLC.
 - c. *Teaching and learning toolkit* | EEF (2026) *Education Endowment Foundation* | EEF. Available at: <https://educationendowmentfoundation.org.uk/education-evidence/teaching-learning-toolkit> (Accessed: 13 May 2026).
 - d. Flanigan, A.E., Wheeler, J., Colliot, T. et al. Typed Versus Handwritten Lecture Notes and College Student Achievement: A Meta-Analysis. *Educ Psychol Rev* 36, 78 (2024). <https://doi.org/10.1007/s10648-024-09914-w>
 - e. Fawcett, J. M. The production effect benefits performance in between-subject designs: A meta-analysis. *Acta Psychologica* 142, 1 (2013). <https://doi.org/10.1016/j.actpsy.2012.10.001>
 - f. De Pillis, E. & Johnson, G. First, Do No Harm: Effective, Ineffective and Counterproductive Teaching Methods. *Journal of Higher Education Theory and Practice* 15, 1 (2015). Available at: http://www.na-businesspress.com/JHETP/dePillisE_Web15_1_.pdf

Key Takeaway

Effective learning requires intentional instructional design. By understanding how students learn, applying research-based retention strategies, and leveraging high-quality educational resources, educators can create environments that support deeper learning and long-term success.