HLP 14:
Teach Cognitive and Metacognitive Strategies to Support Learning and Independence

High-Leverage Practices
for Students with Disabilities

Cognitive and metacognitive strategies are designed to help students become self-directed and independent learners. While some students may be able to develop their own learning strategies independently, students with disabilities often need explicit instruction to learn specific strategies that support their learning, including when and how to apply them. Teachers have an important role in facilitating this process. These strategies, when taught explicitly with modeling and guided practice (HLP 16), have been proven effective for students with disabilities across content areas. Teachers should purposefully and carefully select the cognitive and metacognitive strategies they teach so that students can be more successful in their learning. The effective special educator works with colleagues (HLP 1) and uses a range of data sources (HLP 4) to select strategies likely to be needed and effective. Students benefit from feedback on how and when they employ strategies to reinforce continued use across time and various settings (HLP 21).

This resource is intended to support school leaders looking to embed the HLPs in professional development, implementation, teacher observation and feedback efforts at their school site.

The major source for content within this resource is the chapter by Shannon Budin, Angela L. Patti, and Lisa A. Rafferty in *High-Leverage Practices in the Inclusive Classroom*; the book *High-Leverage Practices in Special Education: The Final Report of the HLP Writing Team*, and content on **www.highleveragepractices.org**.

Teachers Who Effectively Teach Cognitive and Metacognitive Strategies to Support Learning and Independence

- Recognize learning or behavior difficulties and facilitate students' abilities to become more self-directed and independent learners via cognitive strategy instruction.
- Examine sources of evidence-based practices that already exist to meet specific students' needs.
- Use task analysis to determine the steps students need to take to accomplish goals, create a procedure to help them meet that goal, and explicitly teach this procedure to students.
- Provide explicit instruction to students in using self-regulation procedures (e.g., goal-setting, self-monitoring, self-talk, self-reinforcement) when participating in tasks/activities.
- Use and explicitly teach strategic instruction models (e.g., Self-Regulated Strategy Development, Strategic Instruction Model Learning Strategies) to enhance student memory and recall of information.
- Provide explicit instruction in strategies, incorporating the following instructional components:
  - Pre-teaching necessary pre-requisite skills.
  - Instruction of how, when, and where to use the strategy, including the importance and purpose of each step.
  - Breaking the strategy down into logical and manageable pieces or chunks.
  - Clear, step-by-step strategy demonstrations while scaffolding the level of support from high to low level.
  - Modeling of self-talk and "inner language" using teacher think-alouds, which are important for students to monitor effective strategy use.
  - Numerous opportunities for practice that include monitoring, feedback, and positive reinforcement.
  - Opportunities to use the strategy in different contexts and over time to promote generalization and maintenance.
- Monitor student strategy use to ensure fidelity or to ensure that any modifications students have made to a strategy do not influence its effectiveness.

Tips for School Leaders to Support Teachers

- Provide educators with instruction, professional development and/or coaching in a range of strategies that can be used across various settings.
- Monitor and provide feedback on educators' selection and use of strategies to ensure that they match students' needs within grade-level standards and curricula.
- Keep educators informed of new strategies developed and recommended by researchers, and provide necessary supports for implementing such.

Questions to Prompt Discussion, Self-Reflection, and Observer Feedback

- Why is it so important to explicitly teach strategies to students with disabilities?
- What are some key lesson components to include when teaching a strategy to students?
- How does supporting students in developing cognitive and metacognitive skills support their long-term success with grade-level curricula in inclusive environments?

Online Resources

SRSD: Using Learning Strategies to Enhance Student Learning
> This module from the IRIS Center at Vanderbilt University provides step-by-step instructions on how to implement the Self-Regulated Strategy Development Model.

Cognitive Strategy Instruction
> From the University of Nebraska, strategy instruction is one of the most effective ways of improving academic performance for children with learning difficulties. This site will show you how to do it, will provide examples or strategies, and provide a forum to discuss your experiences and questions.

Strategic Intervention Model (SIM)
> A comprehensive, research-validated approach to adolescent literacy that addresses the needs of students to be able to read and understand large volumes of complex materials as well as their need to be able to express themselves effectively in writing from the University of Kansas.

High-Leverage Practices: A Professional Development Guide for School Leaders
> A downloadable online guide providing school leaders, including administrators, principals, mentors and coaches, with practical tools for engaging staff members in learning about how high-leverage practices can enhance student learning in the school and district.

Journal Articles

Brum, C., Hall, L. J., Reutebuch, C., & Perkins, Y. (2019). Reading comprehension strategies for high school students with autism spectrum disorder. *TEACHING Exceptional Children, 52*(2), 88–97. https://doi.org/10.1177/0040059919878663

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Hovland, J. B. (2020). Inclusive comprehension strategy instruction: Reciprocal teaching and adolescents with intellectual disability. *TEACHING Exceptional Children, 52*(6), 004005992091433. https://doi.org/10.1177/0040059920914334

Morano, S., Randolph, K., Markelz, A. M., & Church, N. (2020). Combining explicit strategy instruction and mastery practice to build arithmetic fact fluency. *TEACHING Exceptional Children, 53*(1), 004005992090645. https://doi.org/10.1177/0040059920906455

Pressley, M., & Woloshyn, V. (2000). *Cognitive strategy instruction that really improves children's academic performance*. Brookline Books.

Rice, M. F., & Dunn, M. (2020). Supporting children's writing in inclusive classrooms with arts-based strategies. *TEACHING Exceptional Children, 52*(3), 147–156. https://doi.org/10.1177/0040059919892833

Sebag, R. (2010). Behavior management through self-advocacy: A strategy for secondary students with learning disabilities. *TEACHING Exceptional Children, 42*(6), 22–29. https://doi.org/10.1177/004005991004200603

Strickland, T. K. (2016). Using the CRA-I strategy to develop conceptual and procedural knowledge of quadratic expressions. *TEACHING Exceptional Children, 49*(2), 115–125. https://doi.org/10.1177/0040059916673353

Van Boxtel, J. M. (2016). REASON: A self-instruction strategy for twice-exceptional learners struggling with common core mathematics. *TEACHING Exceptional Children, 49*(1), 66–73. https://doi.org/10.1177/0040059916662252