# Explaining and Modeling Content, Practices, and Strategies

## What is it?

Explaining and modeling are practices for making a wide variety of content, academic practices, and strategies explicit to students. Depending on the topic and the instructional purpose, teachers might rely on simple verbal explanations, sometimes with accompanying examples or representations. In teaching more complex academic practices and strategies, such as an algorithm for carrying out a mathematical operation or the use of metacognition to improve reading comprehension, teachers might choose a more elaborate kind of explanation that we are calling “modeling.” Modeling includes verbal explanation, but also thinking aloud and demonstrating. (teachingworks.org)

## What about for struggling students or students with disabilities?

**CEC HLP #16: Teachers make content, skills, and concepts explicit** by showing and telling students what to do or think while solving problems, enacting strategies, completing tasks, and classifying concepts. Teachers use explicit instruction when students are learning new material and complex concepts and skills. They strategically choose examples and nonexamples and language to facilitate student understanding, anticipate common misconceptions, highlight essential content, and remove distracting information. They model and scaffold steps or processes needed to understand content and concepts, apply skills, and complete tasks successfully and independently. (highleveragepractices.org)

**CEC HLP #14: Teachers explicitly teach cognitive and metacognitive processing strategies** to support memory, attention, and self-regulation of learning. Learning involves not only understanding content but also using cognitive processes to solve problems, regulate attention, organize thoughts and materials, and monitor one’s own thinking. Self-regulation and metacognitive strategy instruction is integrated into lessons on academic content through modeling and explicit instruction. Students learn to monitor and evaluate their performance in relation to explicit goals and make necessary adjustments to improve learning.

## Other names or terms?

Explicit instruction, strategy instruction

## Evidence

Connor, C., Jakobsons, L., Crowe, E., & Meadows, J. (2009). Instruction, student engagement, and reading skill growth in Reading First classrooms. *The Elementary School Journal, 109*(3)*,* 221–250. doi:10.1086/592305

Coyne, M. D., Kame’enui, E. J., & Simmons, D. C. (2001). Improving beginning reading instruction and intervention for students with LD: Reconciling “all” with “each.” *Journal of Learning Disabilities, 37*(3)*,* 231–239. doi:10.1177/002221940 40370030801

Harris, K. R., & Graham, S. (1996). *Making the writing process work: Strategies for composition and self-regulation.* Cambridge, MA: Brookline.

Hattie, J. (2012). *Visible learning for teachers: Maximizing impact on learning*. New York, NY: Routledge/Taylor & Francis Group.

Pullen, P. C., Tuckwiller, E. D., Konold, T., Maynard, K., & Coyne, M. (2010). A response to intervention model for vocabulary instruction: The effects of tiered instruction for students at risk for reading disability. *Learning Disabilities Research & Practice, 25*(3), 110–123. doi:10.1111/j.1540-5826.2010.00309

## Content Examples

1. Science: <https://library.teachingworks.org/curriculum-resources/materials/science-explaining-and-modeling-content/>
2. Social Studies: <https://library.teachingworks.org/curriculum-resources/materials/social-studies-explaining-and-modeling-content/>
3. English Language Arts: <https://library.teachingworks.org/curriculum-resources/materials/english-language-arts-explaining-and-modeling-content/>
4. Mathematics
   1. General Instruction: <https://library.teachingworks.org/curriculum-resources/materials/mathematics-explaining-and-modeling-content/>
   2. Intensive Instruction: <https://intensiveintervention.org/intensive-intervention-math-course>
5. Behavior Support for Intensive Intervention (National Center on Intensive Intervention [NCII]): <https://intensiveintervention.org/intensive-intervention-behavior-course>

## Resources for Preparing Preservice and Inservice Educators

* Teaching Works Resource Library: Videos, Content-Specific Resources ([https://library.teachingworks.org/ curriculum-resources/teaching-practices/explaining-and-modeling-content/](https://library.teachingworks.org/%20curriculum-resources/teaching-practices/explaining-and-modeling-content/))
* Video: Council for Exceptional Children (CEC) High-Leverage Practice (HLP) 16: Use Explicit Instruction for Struggling Students and Students with Disabilities (<https://highleveragepractices.org/701-2/>)
* National Center on Intensive Intervention (NCII) Course and Professional Learning Modules: Features of Explicit Instruction (<https://intensiveintervention.org/intensive-intervention-features-explicit-instruction>)
* CEEDAR Center Course Enhancement Module: Evidence-Based Practices for Students with Disabilities (<http://ceedar.education.ufl.edu/cems/severe-disabilities/>)

# Eliciting and Interpreting Individual Students’ Thinking

## What is it?

Teachers pose questions or tasks that provoke or allow students to share their thinking about specific academic content in order to evaluate student understanding, guide instructional decisions, and elicit ideas that will benefit other students. To do this effectively, a teacher draws out a student’s thinking through carefully chosen questions and tasks, and considers and checks alternative interpretations of the student’s ideas and methods. (teachingworks.org)

## What about for struggling students or students with disabilities?

**CEC HLP #18. Use strategies to promote active student engagement.** Teachers use a variety of instructional strategies that result in active student response. Active student engagement is critical to academic success. Teachers must initially build positive student–teacher relationships to foster engagement and motivate reluctant learners. They promote engagement by connecting learning to students’ lives (e. g., knowing students’ academic and cultural backgrounds) and using a variety of teacher-led (e.g., choral responding and response cards), peer-assisted (e.g., cooperative learning and peer tutoring), student-regulated (e.g., self-management), and technology-supported strategies shown empirically to increase student engagement. They monitor student engagement and provide positive and constructive feedback to sustain performance.

## Evidence

Appleton, J. J., Christenson, S. L., & Furlong, M. J. (2008). Student engagement with school: Critical conceptual and methodological issues of the construct. *Psychology in the Schools. 45*(5), 369–386. doi:10.1002/pits.20303

Hattie, J. (2012). *Visible learning for teachers: Maximizing impact on learning.* New York, NY: Routledge/Taylor & Francis Group.

Klem, A. M., & Connell, J. P. (2009). Relationships matter: Linking teacher support to student engagement and achievement. *Journal of School Health, 74*(7)*,* 262– 273. doi:10.1111/j.1746-1561.2004.tb08283

Marzano, R., & Pickering, D. (2011). *The highly engaged classroom.* Bloomington, IN: Marzano Research Laboratory.

McDonald, M., Kazemi, E., & Kavanagh, S. S. (2013). Core practices and pedagogies of teacher education: A call for a common language and collective activity. *Journal of Teacher Education, 64*(5), 378–386.

Ritchhart, R., Church, M., & Morrison, K. (2011). *Making thinking visible—Chapters 1 & 2*. San Francisco, CA: Jossey-Bass.

## Resources for Preparing Preservice and Inservice Educators

* Teaching Works Video/Page: <https://library.teachingworks.org/curriculum-resources/teaching-practices/eliciting-and-interpreting/>
* CEC HLPs: [www.highleveragepractices.org](http://www.highleveragepractices.org)
* Supporting Practices: Using Effective Methods to Elicit Frequent Responses (Explicit Instruction Course Module 6): <https://intensiveintervention.org/explicit-instruction-frequent-responses>
* HLP #18: Use Strategies to Promote Active Student Engagement Video: <https://highleveragepractices.org/701-2-5/>

# Specifying and Reinforcing Productive Student Behavior

## What is it?

Clear expectations for student behavior and careful work on the teacher’s part to teach productive behavior to students, reward it, and strategically redirect off-task behavior help create classrooms that are productive learning environments for all. This practice includes not only skills for laying out classroom rules and managing truly disruptive behavior, but for recognizing the many ways that children might act when they actually are engaged and for teaching students how to interact with each other and the teacher while in class. (teachingworks.org)

## What about for struggling students or students with disabilities?

**CEC HLP #9: Teach Social Behaviors:** Teachers should explicitly teach appropriate interpersonal skills, including communication and self-management, aligning lessons with classroom and schoolwide expectations for student behavior. Prior to teaching, teachers should determine the nature of the social skill challenge. If students do not know how to perform a targeted social skill, direct social skill instruction should be provided until mastery is achieved. If students display performance problems, the appropriate social skill should initially be taught, then emphasis should shift to prompting the student to use the skill and ensuring that the “appropriate” behavior accesses the same or a similar outcome (i.e., is reinforcing to the student) as the problem behavior. (highleveragepractices.org)

**CEC HLP #8: Provide positive and constructive feedback to guide students’ learning and behavior.** The purpose of feedback is to guide student learning and behavior and increase student motivation, engagement, and independence, leading to improved student learning and behavior. Effective feedback must be strategically delivered and goal directed; feedback is most effective when the learner has a goal and the feedback informs the learner regarding areas needing improvement and ways to improve performance. Feedback may be verbal, nonverbal, or written, and should be timely, contingent, genuine, meaningful, age appropriate, and at rates commensurate with the task and phase of learning (i.e., acquisition, fluency, maintenance). Teachers should provide ongoing feedback until learners reach their established learning goals.

## Other names or terms?

Explicit instruction, strategy instruction

## Evidence

Alberto, P., & Troutman, A. (2013). *Applied behavior analysis for teachers* (9th ed.). Upper Saddle River, NJ: Pearson Education.

Brophy, J. H. (1981). Teacher praise: A functional analysis. *Review of Educational Research, 51*, 5–32. doi:10.3102/00346543051001005

Lewis, T. J., Jones, S. E. L., Horner, R. H., & Sugai, G. (2010). School-wide positive behavior support and students with emotional/behavioral disorders: Implications for prevention, identification and intervention. *Exceptionality, 18*(2), 82–93. doi:10.1080/09362831003673168

Medland, M. B., & Stachnik, T. J. (1972). Good-Behavior Game: A replication and systematic analysis. *Journal of Applied Behavior Analysis, 5*(1)*,* 45–51. doi:10.1901/ jaba.1972.5-45

Sutherland, K., Wehby, J., & Copeland, S. (2000). Effect on varying rates of behavior specific praise on the on-task behavior of students with EBD*. Journal of Emotional and Behavioral Disorders, 8*(1), 2–8. doi:10.1177/106342660000800101

## Resources for Preparing Preservice and Inservice Educators

* Teaching Works Video/Page: <https://library.teachingworks.org/curriculum-resources/teaching-practices/community-expectations-and-behavior/>
* CEC HLPs: [www.highleveragepractices.org](http://www.highleveragepractices.org)
* Course Enhancement Module: Classroom and Behavior Management: <http://ceedar.education.ufl.edu/cems/classroom-and-behavior-management/>
* IRIS Resources:
  + IRIS Classroom Management Module Part 1: <https://iris.peabody.vanderbilt.edu/module/beh1/>
  + IRIS Classroom Management Module Part 2: <https://iris.peabody.vanderbilt.edu/module/beh2/>
  + IRIS Case Study: Encouraging Appropriate Behavior: <https://iris.peabody.vanderbilt.edu/wp-content/uploads/pdf_case_studies/ics_encappbeh.pdf>
* NCII Behavior Support for Intensive Intervention Module: <https://intensiveintervention.org/intensive-intervention-behavior-course>
* HLPs #8 and #22: Provide Positive and Constructive Feedback to Guide Students’ Learning and Behavior: <https://highleveragepractices.org/701-2-3/>
* Positive Behavioral Interventions and Supports Examples, Materials, Presentations, Publications, and Videos: <https://www.pbis.org/topics/school-wide>

# Setting Long- and Short-Term Learning Goals for Students

## What is it?

Clear goals referenced to external standards help teachers ensure that all students learn expected content. Explicit goals help teachers to maintain coherent, purposeful, and equitable instruction over time. Setting effective goals involves analysis of student knowledge and skills in relation to established standards and careful efforts to establish and sequence interim benchmarks that will help ensure steady progress toward larger goals. (teachingworks.org)

## What about for struggling students or students with disabilities?

**CEC HLP #11: Identify and prioritize long- and short-term learning goals:** Teachers prioritize what is most important for students to learn by providing meaningful access to and success in the general education and other contextually relevant curricula. Teachers use grade-level standards, assessment data and learning progressions, students’ prior knowledge, and individualized education program goals and benchmarks to make decisions about what is most crucial to emphasize, and develop long- and short-term goals accordingly. They understand essential curriculum components, identify essential prerequisites and foundations, and assess student performance in relation to these components.

## Evidence

Browder, D. M., Spooner, F., Ahlgrim-Delzell, L., Flowers, C., Algozzine, B., & Karvonen, M. (2003). A content analysis of the curricular philosophies reflected in states’ alternate assessment performance indicators. *Research and Practice for Persons with Severe Disabilities, 28*(4), 165–181. doi:10.2511/rpsd.28.4.165

Collins, B., Hager, K. L., & Galloway, C. C. (2011). Addition of functional content during core content instruction for students with moderate disabilities. *Education and Training in Autism and Developmental Disabilities, 46*(1), 22–39.

Consortium for Policy Research in Education. (2011, January). *Learning trajectories in mathematics: A foundation for standards, curriculum, assessment and instruction* (CPRE Research Report # RR-68). Philadelphia, PA: Author. Retrieved from [http://www.cpre.org/sites/default/files/researchreport/1220\_ learningtrajectoriesinmathcciireport.pdf](http://www.cpre.org/sites/default/files/researchreport/1220_%20learningtrajectoriesinmathcciireport.pdf)

Hess, K. K. (2011, December). *Learning progressions frameworks designed for use with the Common Core State Standards in English Language Arts & Literacy K–12.* Retrieved from <http://www.naacpartners.org/publications/ELA_LPF_12.2011_final.pdf>

## Resources for Preparing Preservice and Inservice Educators

* Teaching Works Video/Page: <https://library.teachingworks.org/curriculum-resources/high-leverage-practices/>
* CEC HLPs: [www.highleveragepractices.org](http://www.highleveragepractices.org/)
* IRIS Content Standards: Connecting Standards-Based Curriculum to Instructional Planning: <https://iris.peabody.vanderbilt.edu/module/cnm/>
* NCII: Strategies for Setting High-Quality Academic Individualized Education Program Goals: <https://intensiveintervention.org/resource/high-quality-academic-IEP-goals>

# Providing Oral and Written Feedback to Students

## What is it?

Effective feedback helps focus students’ attention on specific qualities of their work; it highlights areas needing improvement and delineates ways to improve. Good feedback is specific, not overwhelming in scope, focused on the academic task, and supports students’ perceptions of their own capability. Giving skillful feedback requires the teacher to make strategic choices about the frequency, method, and content of feedback and to communicate in ways that are understandable by students. (teachingworks.org)

## What about for struggling students or students with disabilities?

**CEC HLP #8 and #22: Provide positive and constructive feedback to guide students’ learning and behavior:** The purpose of feedback is to guide student learning and behavior and increase student motivation, engagement, and independence, leading to improved student learning and behavior. Effective feedback must be strategically delivered and goal directed; feedback is most effective when the learner has a goal and the feedback informs the learner regarding areas needing improvement and ways to improve performance. Feedback may be verbal, nonverbal, or written, and should be timely, contingent, genuine, meaningful, age appropriate, and at rates commensurate with the task and phase of learning (i.e., acquisition, fluency, maintenance). Teachers should provide ongoing feedback until learners reach their established learning goals. (highleveragepractices.org)

## Evidence

Alberto, P. A., & Troutman, A. C. (2013). *Applied behavior analysis for teachers* (9th ed.). Upper Saddle River, NJ: Pearson Education.

Coalition for Psychology in Schools and Education. (2015). *Top 20 principles from psychology for preK–12 teaching and learning.* Washington, DC: American Psychological Association. Retrieved from <https://www.apa.org/ed/schools/teaching-learning/top-twenty-principles.pdf>

Hattie, J. (2008). *Visible learning: A synthesis of over 800 meta-analyses relating to achievement.* London, England: Routledge.

Hattie, J., & Timperley, H. (2007). The power of feedback. *Review of Educational Research, 77*(1)*,* 81–112.

Medland, M. B., & Stachnik, T. J. (1972). Good-Behavior Game: A replication and systematic analysis. *Journal of Applied Behavior Analysis, 5*(1), 45–51. doi:10.1901/ jaba.1972.5-45

Sutherland, K., Alder, V., & Gunter, P. (2003). The effect of varying rates of opportunities to respond to academic requests on the classroom behavior of students with EBD. *Journal of Emotional and Behavioral Disorders, 11*(4), 239–248. doi:10.117 7/10634266030110040501

Sutherland, K., Wehby, J., & Copeland, S. (2000). Effect on varying rates of behavior—Specific praise on the on-task behavior of students with EBD. *Journal of Emotional and Behavioral Disorders, 8*(1)*,* 2–8. doi:10.1177/106342660000800101

What Works Clearinghouse. (2009a, February). *Assisting students struggling in reading: Response to intervention (RtI) and multi-tier intervention in the primary grades* (NCEE 2009-4045). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance. Retrieved from <https://ies.ed.gov/ncee/wwc/Docs/PracticeGuide/rti_reading_pg_021809.pdf>

What Works Clearinghouse. (2009b, April). *Assisting students struggling with mathematics: Response to Intervention (RtI) for elementary and middle schools* (NCEE 2009-4060). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance. Retrieved from <https://ies.ed.gov/ncee/wwc/Docs/PracticeGuide/rti_math_pg_042109.pdf>

## Resources for Preparing Preservice and Inservice Educators

* Teaching Works Video/Page: <https://library.teachingworks.org/curriculum-resources/teaching-practices/providing-feedback-to-students/>
* CEC HLPs: [www.highleveragepractices.org](https://highleveragepractices.org/)
* Supporting Practices: Providing Immediate Specific Feedback and Maintaining a Brisk Pace (Explicit Instruction Course Module 7): <https://intensiveintervention.org/explicit-instruction-supporting-practices-feedback-pace>
* HLPs #8 and #22: Provide Positive and Constructive Feedback to Guide Students’ Learning and Behavior: <https://highleveragepractices.org/701-2-3/>
* IRIS Case Study: Fostering Student Accountability for Classroom Work: Elementary: <https://iris.peabody.vanderbilt.edu/wp-content/uploads/pdf_case_studies/ics_foster_ele.pdf>

# Analyzing Instruction for the Purpose of Improving It

## What is it?

Learning to teach is an ongoing process that requires regular analysis of instruction and its effectiveness. Teachers study their own teaching and that of their colleagues in order to improve their understanding of the complex interactions between teachers, students, and content and of the impact of particular instructional approaches. Analyzing instruction may take place individually or collectively and involves identifying salient features of the instruction and making reasoned hypotheses for how to improve. (teachingworks.org)

## What about for struggling students or students with disabilities?

**CEC HLP #6: Use student assessment data, analyze instructional practices, and make necessary adjustments that improve student outcomes:** After special education teachers develop instructional goals, they evaluate and make ongoing adjustments to students’ instructional programs. Once instruction and other supports are designed and implemented, special education teachers have the skill to manage and engage in ongoing data collection using curriculum-based measures, informal classroom assessments, observations of student academic performance and behavior, self-assessment of classroom instruction, and discussions with key stakeholders (i.e., students, families, other professionals). Teachers study their practice to improve student learning, validate reasoned hypotheses about salient instructional features, and enhance instructional decision making. Effective teachers retain, reuse, and extend practices that improve student learning and adjust or discard those that do not. (highleveragepractices.org)

## Evidence

Coburn, C., & Turner, E. (2012). The practice of data use: An introduction. *American Journal of Education,* *118*(2), 99–111. doi:10.1086/663272

Hattie, J. (2008). *Visible learning:* *A synthesis of over 800 meta-analyses relating to achievement.* New York, NY: Routledge.

Lembke, E., & Stecker, P. (2007). *Curriculum-based measurement in mathematics*. Portsmouth, NH: RCM Research Corporation, Center on Instruction.

McLeskey, J., Waldron, N., & Redd, L. (2014). A case study of a highly effective, inclusive elementary school. *The Journal of Special Education, 48*(1), 59–70. doi:10.1177/0022466912440455

Shapiro, E., Zigmond, N., Wallace, T., & Marston, D. (Eds.) (2011). *Models for implementing response to intervention: Tools, outcomes, and implications.* New York, NY: Guilford.

Waldron, N., Parker, J., & McLeskey, J. (2014). How are data systems used in inclusive schools? In J. McLeskey, N. Waldron, F. Spooner, & B. Algozzine (Eds.), *Handbook of effective inclusive schools: Research and practice* (pp. 155–166). New York, NY: Routledge.

What Works Clearinghouse. (2009, September). *Using student achievement data to support instructional decision making* (NCEE 2009-4067). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance. Retrieved from <http://ies.ed.gov/ncee/wwc/Docs/PracticeGuide/dddm_pg_092909.pdf>

## Resources for Preparing Preservice and Inservice Educators

* Teaching Works Video/Page: <https://library.teachingworks.org/curriculum-resources/teaching-practices/analyzing-instruction/>
* CEC HLPs: [www.highleveragepractices.org](https://highleveragepractices.org/)
* Evaluating Use of Explicit Instruction to Support Students’ Academic Needs (Explicit Instruction Course Module 8): <https://intensiveintervention.org/explicit-instruction-evaluating>
* IRIS Module Classroom Assessment (Part 1): An Introduction to Monitoring Academic Achievement in the Classroom: <https://iris.peabody.vanderbilt.edu/module/gpm/>
* IRIS Module Classroom Assessment (Part 2): Evaluating Reading Progress: <https://iris.peabody.vanderbilt.edu/module/rpm/>
* IRIS Module Intensive Intervention (Part 1): Using Data-Based Individualization to Intensify Instruction: <https://iris.peabody.vanderbilt.edu/module/dbi1/>
* IRIS Module Intensive Intervention (Part 2): Collecting and Analyzing Data for Data-Based Individualization: <https://iris.peabody.vanderbilt.edu/module/dbi2/>