



The Art and Science of Teaching: A Comprehensive Framework for Effective Instruction

by Robert J. Marzano

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An ASCD Study Guide for The Art and Science of Teaching: A Comprehensive Framework for Effective Instruction

Intro

1. Thinking about your own teaching practices and those of your peers, what habits would you consider characteristic of the "art" of teaching?
2. Can you think of a specific situation where your professional practice drew from both the art of teaching and the research on teaching?
3. Given that there is a significant difference between the achievement of students taught by effective teachers and those taught by less effective teachers, what changes in policy would you recommend?
4. What are the pitfalls of teaching that is all art? What are the pitfalls of teaching that is all science?
5. Give an example of research that affects your classroom practice. Give an example of a teaching practice that is not explicitly tied to research, but that has been effective in the classroom.

Chapter 1

1. How is feedback related to effective goal setting?
2. How can formative assessments help reinforce student effort?
3. Explain the differences between learning goals and learning activities.
4. Can you think of a learning goal that is both declarative and procedural? How would you state this learning goal?
5. What are some of the benefits of having students chart their own knowledge gain or progress toward a learning goal?

Chapter 2

1. The author discusses six major actions for creating effective critical-input experiences. Which, if any, of these actions is most significant to how you design learning experiences? Why?
2. Describe the teacher's role throughout a critical-input experience.

3. Learning activities can be designed for multiple purposes. Give an example of a learning activity designed to introduce students to new content.
4. Discuss a few ways to preview content prior to a critical-input experience. If you've used advance organizers in the classroom, which were most successful, and why do you think that is?
5. Critical-input experiences designed to convey procedural knowledge involve breaking down the procedure into chunks, and giving students the opportunity to try out each part of a procedure. Think of a simple procedure. How would you break it into chunks? How might students interact with every "chunk" of the procedure?
6. This chapter discusses different strategies for actively processing information during comprehensive critical-input experiences. Out of the instructional strategies discussed in this chapter, which do you feel most comfortable using, and which would you like more practice and instruction implementing?
7. What's the teacher's intent in elaborative interrogations?

Chapter 3

1. Give an example of a learning activity designed to help students practice and deepen their understanding of new content.
2. What conditions might make practice ineffective? Why does the author argue in favor of "guided practice"?
3. Why does the author make the distinction between practicing procedural knowledge and reviewing and revising declarative knowledge?
4. How and why is homework assigned in your classroom or school? How does this relate to the author's recommendations on homework policies and practices?
5. When cultivating procedural fluency, why is it important to expose students to a variety of exercises?

Chapter 4

1. Give an example of a learning activity designed to help students generate and test hypotheses about content. Now consider how this activity would support a learning goal of what students will know or be able to do.
2. This chapter covered the four types of hypothesis generation and testing tasks: experimental inquiry, problem solving, decision making, and investigation. Can you think of a time when you used one of these processes to develop your understanding of concept or phenomenon? Now imagine you're planning a lesson. How would you decide which of these tasks is best-suited to a learning goal?
3. How can graphic organizers help students as they generate and test hypotheses?
4. The strategies in this chapter benefit from cooperative learning structures. What are some considerations when assigning groups to tasks that generate and test hypotheses?

Chapter 5

1. Are there any general characteristics that make some interactions more engaging than others?
2. If midway through a lesson you notice students losing focus, how do you revive their interest in the lesson? How does or could this intervention also relate to the content you're teaching?
3. How do you define student engagement? How do you monitor student engagement?

4. Why does the author qualify the use of pressure and competition as engagement tools? How would you suggest ensuring that these sorts of engagement remain "mild"?
5. In what ways do you try to familiarize yourself with a student's "self system"? How could information about a student's self system be used to refine engagement activities?

Chapter 6

1. Research widely supports effective use of rules and procedures in the classroom. Identify a general rule that is central to the smooth operation and healthy environment of your school or classroom. Now consider how specific school or classroom procedures may or may not support this rule.
2. What might help first-year teachers better develop and enforce rules and procedures, especially before and at the beginning of the school year?
3. Does the link between classroom rules and procedures and those established at home have any bearing on how you would create and enforce classroom rules and procedures?
4. Imagine your ultimate synomorphic classroom setting. Are there any immediate adjustments that would make your classroom setting more compatible with your teaching style? What are the advantages and disadvantages to the classroom layouts in figures 7.1 and 7.2?
5. Different classrooms may articulate rules and procedures differently. How might teachers work together to ensure that rules and procedures are used consistently?

Chapter 7

1. What criteria do you consider when determining positive and negative consequences associated with rules and procedures? Is it always possible to apply both negative and positive consequences to a rule or procedure? Why or why not?
2. Stage and Quiroz cite their work as evidence that interventions widely used in schools do, in fact, reduce disruptive behavior. What's your reaction to this statement?
3. In your experience, how often does "withitness" come into play regarding classroom management? Do you think "withitness" can be applied and cultivated as a strategy, or do you feel it's more of a general quality a teacher either does or does not have?

Chapter 8

1. In this chapter's Mr. Hutchins vignette, the author talks about reciprocity between Mr. Hutchins positive overtures and students' responses. Do you find this to be true in your classroom as well? If so, how?
2. Researchers Brophy and Evertson found no relation between more affectionate teachers and student learning gains. With this in mind, think about favorite teachers you've had—How did they convey a balance of dominance and cooperation in their teacher-student relationships?
3. Bettencourt, Gillet, Gall, and Hull found that training teachers in behaviors that communicate enthusiasm had positive effects on student engagement and achievement. How have you been trained in this area? How would you suggest training teachers to communicate enthusiasm?
4. What are some of the challenges to establishing effective teacher-student relationships, when these groups come from very different cultural backgrounds? How can teacher behaviors bridge these differences?

Chapter 9

1. Think about a student that struggles in one of your classes, and ask yourself, "If I believed this student was completely capable of learning this content, what would I be doing right now?" With this perspective, how might your interactions with this student change?
2. How might elaborative interrogations improve the quality of interactions with low-expectancy students?

Chapter 10

1. The author notes that the focus of a unit has strong implications for the flow of activity. When designing a unit, what might lead you to choose one area of focus (knowledge, issues, or student exploration) over the others?
2. This final chapter looks at all the previous chapters and design questions, and iterates how they apply to effective lesson planning and cohesive unit organization. Figure 10.3 synthesizes this work into a list of daily reflection questions. How might this list be helpful to a novice teacher? How might it be helpful to a veteran teacher?
3. How might school leaders use the information in this book to support effective teaching behaviors in their schools or districts?

The Art and Science of Teaching: A Comprehensive Framework for Effective Instruction was written by Robert J. Marzano. This 220-page, 7" x 9" book (Stock # 107001; ISBN-13: 978-1-4166-0571-3) is available from ASCD for \$20.95 (ASCD member) or \$26.95 (nonmember). Copyright © 2007 by ASCD. To order a copy, call ASCD at 1-800-933-2723 (in Virginia 1-703-578-9600) and press 2 for the Service Center. Or buy the book from ASCD's Online Store.

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In *The Art and Science of Teaching: A Comprehensive Framework for Effective Instruction*, author Robert J. Marzano presents a model for ensuring quality teaching that balances the necessity of research-based data with the equally vital need to understand the strengths and weaknesses of individual students. He articulates his framework in the form of 10 questions that represent a logical planning sequence for successful instructional design: What will I do to establish and communicate learning goals, track student progress, and celebrate success? What will I do to help students effectively inter Start by marking "The Art And Science Of Teaching: A Comprehensive Framework For Effective Instruction" as Want to Read: Want to Read savingâ€¦; Want to Read.Â Though classroom instructional strategies should clearly be based on sound science and research, knowing when to use them and with whom is more of an art. In *The Art and Science of Teaching: A Comprehensive Framework for Effective Instruction*, author Robert J. Marzano presents a model for ensuring quality teaching that balances the necessity of research-based data with the Though classroom instructional strategies should clearly be based on sound science and research, knowing when to use them and with whom is more of an art. The comprehensive framework was developed in the Effective School Improvement Project. The initial framework was based on an analysis of a range of theories and an additional analysis of case studies in the field of school improvement. A revision took place after an analytic confrontation of the initial framework with successful improvement projects. Also, country conferences for groups of researchers, practitioners, and policy-makers contributed to the revised version of the framework. The framework builds on earlier work in the field of school effectiveness and school improvement. Do you wan