

Chapter 14

TEACHING EVERY STUDENT

Anna Billmyer

Jacob Butlett

Before we begin,
consider this:

What are some
characteristics of
effective teachers?

Characteristics of Effective Teachers

What is stimulated recall?

“Knowledge is the defining characteristic of expertise.”

- ❖ **Stimulated recall**: reviewing what was taught and what influenced his/her decisions while teaching.
- ❖ Design experiment: finding out what teaching methods work.
- ❖ Some of the earliest research on effective teaching focused on the personal qualities of teachers themselves. Results revealed three main teacher characteristics that are the best qualities teachers can have, which include,
 - ✓ **Clarity**
 - ✓ **Warmth**
 - ✓ **Knowledge**

Characteristics of Effective Teachers

Clarity and organization; warmth and enthusiasm

- ❖ Clarity and organization
 - ▶ most promising teacher behavior for future research of effective teaching.
- ❖ Warmth and Enthusiasm
 - ▶ teachers who are more enthused about their job and subjects they are teaching ,are more likely to have students like them and create a positive learning environment.
- ❑ Effective teachers know how to transform their knowledge into examples, explanations, illustrations and activities.

Characteristics of Effective Teachers

Knowledge for teaching

- ▶ **Expert teachers:** experienced effective teachers who understand that students may not always understand class material, and have a well-organized method to try and reteach the material that was not understood.
 - ✓ By using knowledge into examples, explanations, illustrations and activities.
- ▶ **Pedagogical content knowledge:** knowing how to teach the content and how to match instruction to student differences.
- ▶ **Reflective:** teachers reflect to themselves on how they can improve as a teacher for his/her students.

Characteristics of Effective Teachers

Lee Shulman's 7 expert teacher knowledges

1. The subjects teachers teach are knowledgeable and all come together.
2. Know general teaching strategies' that apply in all subjects.
3. The curriculum and materials and programs are appropriate for the grade level.
4. Know how to teach different students.
5. Know a little bit about a students background, but not being too nosy.
6. Know settings in which students learn better.
7. Know the goal and soul purpose of being a teacher.

Characteristics of Effective Teachers

Recent research on teaching

- When looking at teachers knowledge of facts and concepts in other subjects, as measured by test scores and grades, the relationship to student learning is unclear and may be indirect. That is why it is necessary for effective teaching because **being more knowledgeable helps teachers be more clear, organized, and more responsive to students questions.**
- **The affective dimension** in Pianta's model is teacher emotional support, similar to the teacher's warmth and enthusiasm.
- **The cognitive dimension** is instructional support, which includes concept development.
- Concept development and quality feedback may be easier for teachers with greater knowledge for teaching.
- Pianta's organization method helps out with behavioral concerns and classroom management.

The First Step: Planning

Principles of teacher planning

- ▶ Planning influences what students will learn, because planning transforms the available time and curriculum materials into activities, assignments, and tasks for students. **Time is of the essence in planning.**
- ▶ Planning at the beginning of the year is crucial. **A little planning goes a long way!** In terms of what will be taught and what will be learned.
- ▶ **Teachers need to engage in several levels of planning** (by year, term, unit, week and by day.)
- ▶ **Planning will become easier with more experience.**
- ▶ **Be flexible!!!!**
- ▶ **Have enough information but not too little;** also it is okay to break away from plans.
- ▶ **Best way to plan is through collaboration.**

Objectives for Learning Technology Standards

- ▶ The International Society for Technology in Education (ISTE) lists standards:
 - 1) **Facilitate and Inspire Student Learning and Creativity**
 - 2) **Design and Develop Digital-Age Learning Experiences and Assessments**
 - 3) **Model Digital-Age Work and Learning**
 - 4) **Promote and Model Digital Citizenship and Responsibility**
 - 5) **Engage in Professional Growth and Leadership**

Objectives for Learning

What are instructional objectives?

- ▶ **Instructional objectives:** intended learning outcomes
- ▶ Objectives based on the behavioral perspective: intended learning outcomes that can be observed and measured; SPECIFIC
 - (Refer to *Chapter Seven: Behavioral Views of Learning*)
 - ▶ *Define the term “instructional objectives.”*
 - ▶ *Calculate the sum of the following prime numbers: 3, 5, and 9.*
- ▶ Cognitive objectives: outcomes based on thinking/comprehension; GENERAL
 - ▶ *Create a new ending for the book, To Kill a Mockingbird.*
 - ▶ *Understand the historical significance of the American Civil War.*

Using Taxonomies

What is a **taxonomy**? How does it apply to learning objectives?

- ▶ Educational experts Ben Bloom and his colleagues created a **taxonomy** (“classification system”) of educational objectives that they then separated into three domains (“regions” or “layers”):
 - ▶ Cognitive
 - ▶ Affective
 - ▶ Psychomotor

Using Taxonomies

Cognitive domain

Revolves around memory and reasoning objectives (*cognition*)

▶ **Six parts**

- 1) Remembering
- 2) Understanding
- 3) Applying
- 4) Analyzing
- 5) Evaluating
- 6) Creating

▶ **Each part acts upon four kinds of knowledge**

- 1) Factual
- 2) Conceptual
- 3) Procedural
- 4) Metacognition

Using Taxonomies

Affective domain

- ▶ Objectives on attitudes and feelings; finding significance/interest and acting unwaveringly with the idea
- ▶ Five basic objectives:
 - 1) Receiving
 - 2) Responding
 - 3) Valuing
 - 4) Organization
 - 5) Characterization by value

Using Taxonomies

Psychomotor domain

- ▶ Objectives based on physical ability and coordination
 - ▶ **Rigorous ability**, or
 - ▶ After ten minutes, you will have moved 10 fifty-pound boxes to the other side of the room.
 - ▶ **Ability to complete a skill**
 - ▶ Open and Close a Microsoft Word document.
- ▶ Objectives should be
 - 1) Student-oriented
 - 2) Descriptive of an appropriate learning outcome
 - 3) Clear and understandable
 - 4) Observable (behavioral objective)

A Different Perspective

What is the constructivist approach?

- ▶ Constructivist approach
 - ▶ Together, students and teacher make decisions about activities and approaches
 - ▶ Teacher helps guide learning/planning
 - ▶ More responsibility on the students to learn/understand information
 - ▶ Students become self-learners
- ▶ *Students will break into groups of five to collect research on Midwestern fauna. They will compare and contrast notes with the other groups. Then, each group will prepare multiple presentations to share with the class covering the information. Meanwhile, the teacher will assist in the students' self-learning by providing goals and assistance when needed.*

Teaching Approaches

What is direct instruction?

- ▶ **Direct instruction:** mastery of basic skills, facts, and information.
- ▶ **Active teaching:** explanation, demonstration and interaction with students.
- ▶ **Basic skills:** basic common knowledge that is needed and applied for later learning.

Teaching Approaches

Rosenshine's six teaching functions*

- 1.) Review and check previous work
- 2.) Present new material
- 3.) Provide guided practice
- 4.) Give feedback and correctives
- 5.) Provide Independent practice
- 6.) Review weekly and monthly

*These don't have to be in any particular order, but keep in mind the age of your students and how long your explanations should be.

Teaching Approaches

What are advance organizers?

- ❖ **Advance organizers:** statement of inclusive concepts to introduce and sum up material that follows. (Falls into 2 main categories)
 - ✓ **Comparative organizers:** remind you of what you already know.
 - ✓ **Expository organizers:** new knowledge
- ❖ **Scripted cooperation:** learning strategy in which two students take turns summarizing material and criticizing the summaries.

Teaching Approaches

Guidelines teachers should follow to teach effectively

- 1.) Use advance organizers
- 2.) Use a number of examples
- 3.) Organize your lessons carefully
- 4.) Anticipate and plan for difficult parts in the lesson
- 5.) Strive for clear explanations
- 6.) Make clear connections
- 7.) Signal transitions into next topic of discussion
- 8.) Communicate enthusiasm

Teaching Approaches

Seatwork and homework

- ❑ Seatwork: assignments and work done in class.
- ❑ Homework: assignments and work taken home to complete.
- ❑ Both have pros and cons, but **what is important is that whatever a teacher chooses to assign is that it is clear before assigning.**

Questioning and Discussion

Terms of Questions-Responses

- ▶ *Recitation*
 - ▶ Teachers pose questions, students answer
- ▶ *Initiation*
 - ▶ Teacher asks questions
- ▶ *Response*
 - ▶ Student answers
- ▶ *Evaluation/reaction*
 - ▶ Praising, correcting, probing, or expanding

Questioning and Discussion

Benefits of asking questions

- ✓ Effective questioning techniques may be among the most powerful tools that teachers employ during lessons.
- ✓ Some educators have estimated the typical teacher asks between **30 to 120 questions an hour**, or about **1.5 million questions over a teaching career**.
- ▶ Questions can
 - ▶ help students rehearse information,
 - ▶ work to identify holes in students' knowledge base, and
 - ▶ serve as cues, tips, or reminders.

Questions and Discussions

What is the difference between convergent and divergent questions?

Convergent questions

- ▶ Questions with one answer
- ▶ *Converge*: “to meet together at *one* location”
- ✓ *What is the capital of Iowa?*
- ✓ *Who is the current president of the United States?*

Divergent questions

- ▶ Questions with multiple possible answers
- ▶ *Diverge*: “to separate into *multiple* directions”
- ✓ *Which president had the greatest influence on American history?*
- ✓ *Which historical figure do you relate to the most and why?*

Questions and Discussions

Ideas about asking questions

- ▶ Teachers wait an average of one second for students to answer their questions.
- ▶ Generally, wait at least three to five seconds before calling on students.
 - ▶ Students tend to give longer responses
 - ▶ More students are likely to participate
 - ▶ Student comments involving analysis, synthesis, inference, and speculation tend to increase
 - ▶ Students generally appear more confident in their answers
- ▶ There is some evidence that extending wait times does not affect learning in university classes.

Questions and Discussions

Ideas about asking questions

- ▶ Ask students to record ideas or to discuss the question with another student.
- ▶ Pick random people to answer questions.

Questions and Discussions

Ideas about responding to student answers

- ▶ Most common response, occurring half of the time in most classrooms, is, “OK,” or, “Uh-huh.”
- ✓ Answer is quick, firm, and correct → Simply accept answer
- ✓ Answer is correct but hesitant → Accept answer with explanation
- ✓ Answer is partially or completely wrong but student made a good attempt → Search for more information, give cues, review question, and/or reteach the material
- ✓ Answer is silly or careless → Correct answer and continue with lesson

Questions and Discussions

Guiding students

- ▶ Hattie and Timperley propose questions to guide teachers on giving feedback
 - ▶ “Where am I going?”
 - ▶ Goals and clarity
 - ▶ “How am I going?”
 - ▶ Progress
 - ▶ “Where to next?”
 - ▶ Moving forward to improve understandings when goals are not met yet or to build on attained goals

Questions and Discussions

Guiding students

- ▶ Hattie and Timperley consider the focus of the feedback on four levels
 - ▶ **Task**
 - ▶ “You should collect more research on Harper Lee.”
 - ▶ **Process***
 - ▶ “You may want to refer to yesterday’s lesson notes when revising your essay.”
 - ▶ **Self-regulation***
 - ▶ “You know the structure of a typical essay (intro., body, conclusion). Go back to see if you organized it correctly.”
 - ▶ **Self-feedback (usually praise)**
 - ▶ “You did wonderful work. Great job!”

*The most powerful because they help students move toward deep understanding, mastery, and self-direction in learning

Students Working Together

What is a group discussion?

- ▶ **Group discussion:** conversation in which the teacher does not have the dominant role; students pose and answer their own questions



Students Working Together

Pros and Cons of Group Discussion

Pros

- ▶ Students are directly involved and have the chance to participate
- ▶ Students learn to express themselves clearly, to justify opinions, and to tolerate different views.

Cons

- ▶ Teachers may have to do a good deal of preparation to ensure that participants have enough background knowledge for the discussion.
- ▶ A few students may dominate the discussion while others may daydream.

Differentiated Instruction

What is differentiated instruction?

- ▶ Differentiated instruction: adapting teaching to abilities and needs of the learner.
- ▶ Within class ability grouping: divided into groups based on ability in an attempt to accommodate the student differences.
- ▶ Flexible grouping: grouping and regrouping students based on learning needs.
- ▶ Adaptive teaching: makes sure everyone is challenged

Differentiated Instruction

Differentiated instruction in inclusive classrooms

To accomplish the goal of integrating students with disabilities into day to day life of the classroom, the INCLUDE method/strategy is recommended.

Identify the environmental, curricular and instructional demands of your classroom

Note students learning strengths and needs

Check for potential areas of student success

Look for potential problem areas

Use info gained to brainstorm instructional adaptation's

Decide which adaptation's to try

Evaluate student progress

Differentiated Instruction

Technology and differentiation

- ▶ **IDEA** requires that all student eligible for special education services must be considered for assistive technology.
- ▶ **Assistive technology**: devices, systems, and services that support and improve the capabilities of individuals with disabilities.
 - ▶ **Examples**: word processors for students with learning disabilities whose writing can't be read, and it can help voice what they want to say.
- ▶ **Universal design**: considers the needs of all users in the design of new tools, learning programs, or web sites. (So not just for people with disabilities but for everyone)

Differentiated Instruction

Mentoring students as a way of differentiating teaching

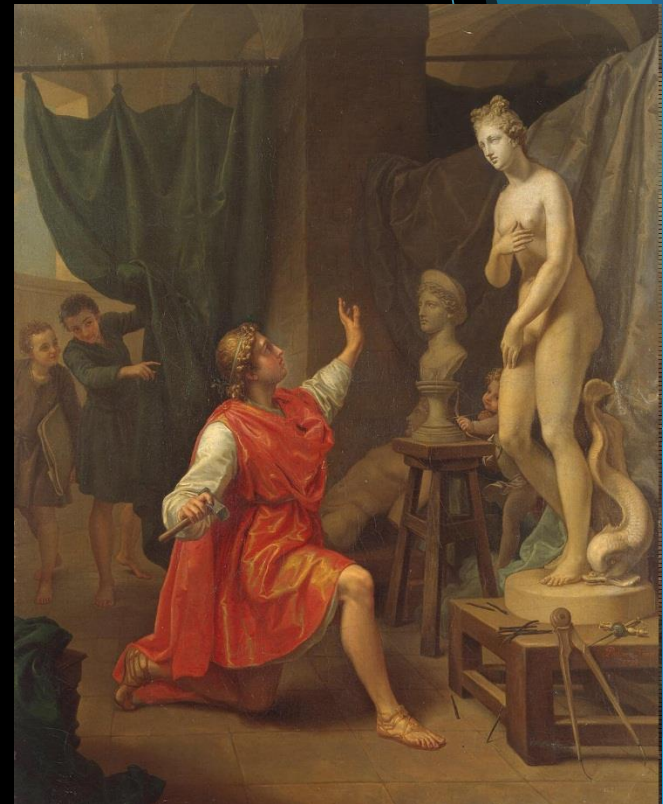
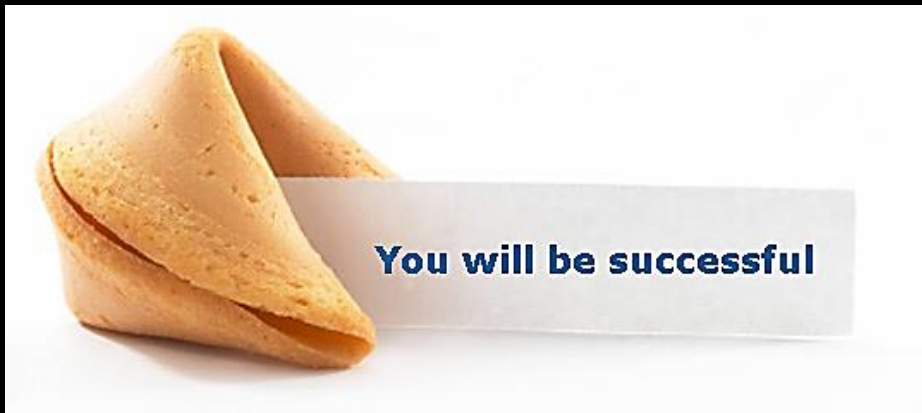
Guidelines for teachers as mentors:

- 1.) Beware of stereotypes in your thinking and teaching.
- 2.) Take advantage of technology
- 3.) Let students know you believe in them
- 4.) Take the time to establish and maintain relationship
- 5.) If you set up a more formal mentoring system be sure participants are trained and monitored.

Teacher Expectations

Story time!

What do two researchers from the 1960s and a mythological king have in common?



Teacher Expectations

What is the self-fulfilling prophecy?

- ▶ Pygmalion effect
 - ▶ exceptional progress by a student as a result of high teacher expectations for that student
 - ▶ term coined by researchers Rosenthal and Jacobson
- ▶ Self-fulfilling prophecy
 - ▶ a groundless expectation (a false belief) that is confirmed because it has been expected
 - ▶ its effects seem to be stronger in early grades

Teacher Expectations

Questions raised

- ▶ Why might teachers *treat students differently*?
- ▶ Why might teachers hold certain students to *higher* standards than others?
- ▶ Similarly, why might teacher hold certain students to *lower* standards than others?

Teacher Expectations

Sources of Expectations

- ▶ Intelligence test scores
- ▶ Gender
- ▶ Notes from previous teachers
- ▶ Medical or psychological reports in students' files
- ▶ Prior knowledge about older siblings
- ▶ Appearance
- ▶ Previous achievement
- ▶ SES
- ▶ Race & ethnicity
- ▶ Actual behaviors of students
- ▶ Student's after-school activities

Teacher Expectations

Expectations affect students' achievement?

- ▶ Research shows that teachers do indeed form beliefs about students' capabilities.
- ▶ If teachers decide that some students are less able, and if the teachers lack effective strategies for working with lower-achieving students, then students may experience a double threat—low expectations and inadequate teaching.
- ▶ Even though it is clear that teacher expectations can affect student achievement, the effects are modest on average and tend to dissipate somewhat over the years.

Teacher Expectations

Instructional Strategies

- ▶ Different grouping processes may well have a marked effect on students because different groups get different instruction.
- ▶ **Sustaining expectation effect:** student performance is maintained at a certain level because teachers don't recognize improvements; its effects are more likely to be stronger in the later years

Teacher Expectations

Teacher-Student Interactions

- ▶ Positive interaction can lead to positive attitudes in students
 - ▶ Students who are expected to achieve tend to be asked more and harder questions, to be given more chances and longer time to respond, and to be interrupted less often than students who are expected to do poorly.
- ▶ Low-achieving students receive less praise than high-achieving students for similar correct answers