

Teacher Quality Standard I

Teachers demonstrate mastery of and pedagogical expertise in the content they teach. The elementary teacher is an expert in literacy and mathematics and is knowledgeable in all other content that he or she teaches (e.g., science, social studies, arts, physical education, or world languages). The secondary teacher has knowledge of literacy and mathematics and is an expert in his or her content endorsement area(s).

The key to distinguishing the knowledge base of teaching rests at the intersection of content and pedagogy.

—L. S. Shulman

To teach all students according to today's standards, teachers need to understand subject matter deeply and flexibly so they can help students create useful cognitive maps, relate one idea to another, and address misconceptions. Teachers need to see how ideas connect across fields and to everyday life. This kind of understanding provides a foundation for pedagogical content knowledge that enables teachers to make ideas accessible to others. (Shulman, 1987)

Although Shulman's work dates back to the late 1980s, the importance of teacher content knowledge and pedagogical expertise has never been more important than it is now as teachers ensure students are college and career ready for the demands of the 21st century.

Element D

Teachers demonstrate knowledge of the content, central concepts, tools of inquiry, appropriate evidence-based instructional practices and specialized character of the disciplines being taught.

A teacher must believe in the value and interest of his subject as a doctor believes in health.

—Gilbert Higher

Professional practices referenced under each element of the Rubric for Evaluating Colorado Teachers are cumulative. Therefore, for teachers to be proficient in demonstrating knowledge of the content they teach, they must break down concepts into manageable parts and provide explanations that are accurate, clear, concise, and comprehensible for students. This is done by using instructional materials that are accurate and appropriate for the learning objective along with a variety of strategies, explanations, and representations of the content to address student needs and to allow students to explore new ideas and theories.



[Click here to go back to the table of contents and view the resource guide in its entirety.](#)

BASIC RATING LEVEL

PROFESSIONAL PRACTICES: THE TEACHER:

- ***Breaks down concepts into instructional parts and teaches each part using appropriate, effective strategies and/or tools.***

... the most effective teachers in these studies taught new material in “small steps.” That is, they only presented small parts of new material at a single time. The importance of teaching in small steps fits well with the findings from cognitive psychology on the limitations of our working memory. Our working memory, the place where we process information, is small. It can only handle a few bits of information at once — too much information swamps our working memory. (Marzano, 2007)

Because the brain has a threshold for how much information it can process at one time, learning is more efficient if information is received in small chunks. Planning strategic stopping points and providing specific learning strategies in a lesson allows students the time and tools to effectively learn the content. As students build their knowledge base, larger chunks of content can be presented. (Marzano, 2007)

Importantly, in the most effective lessons is the conscientious effort, throughout the lesson, to ensure that all students are learning each segment of the lesson before moving on to the next (Schmoker, 2011).

Teaching content that is broken down into manageable parts allows students to build success with each part in order to develop mastery of the concept or skill. By teaching each part and assessing along the way, the teacher is better equipped to identify misconceptions and adjust instruction during the learning process.

- ***Uses instructional materials that are accurate and appropriate for the lesson being taught.***

Aligning instructional materials with individual student needs, interest surveys, and teacher observations can dramatically increase the levels of student engagement. The purposeful incorporation of materials such as visuals, games, technology, music, humor, and role play can lead to an increased level of student learning.

Deciding on materials can be overwhelming, due to the variety of visual, digital, and audio resources available. The most appropriate materials are those that support student success with the learning objective, align with students’ age and cognitive ability, support students’ learning needs, and promote student independence and transference of learning.

- ***Employs a variety of instructional strategies to address student needs.***

The teacher needs to know where each student begins and how he is progressing towards meeting the learning objectives of a lesson in order to employ **instructional strategies** that address student needs. Depending on a



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student's progress towards the objective, her understanding of procedural skills and conceptual understandings, her level of motivation, and her learning preferences, the teacher will need to provide different ways for the student to access the content and skills being taught.

Instructional strategies employed in a lesson should have the following:

- Alignment to the learning objective.
- Support of the academic needs of students.
- A variety of strategies that address the students' learning preferences, including visual, kinesthetic, and auditory preferences.
- Opportunities for student-to-student interaction.
- Connections to student interests, experiences, and prior learning.

Refer to these internal resources for use in identifying student needs:

- Determining Your Learning Preference
Document can be used by students to determine their learning preference.
- Characteristics of Learning Styles Preferences
Document provides characteristics of the learning preferences: auditory, visual, and kinesthetic, with suggestions for instructional strategies.
- Interest Inventory for Students
Survey references twenty different areas of a student's life that can be used to support the student and teacher in identifying their interests.
- Multiple Intelligence Survey for Secondary Students
Survey supports secondary students in identifying their preferred type of intelligence, based on the work of Howard Gardner.
- Multiple Intelligence Survey for Elementary Students
Survey supports elementary students in identifying their preferred type of intelligence, based on the work of Howard Gardner.



[Click here to go back to the table of contents and view the resource guide in its entirety.](#)