

# Authentic Instruction Scoring Manual



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*Scoring Instructions:* To determine scores for the four standards, follow the technical scoring criteria as outlined in this manual. Consider the descriptions for scores 1-5 on each standard to constitute the *minimum* criteria for that score. If you find yourself between scores, make the decision by asking whether the minimum conditions of the higher score have been met. If not, use the lower score. In determining scores for each standard, the observer should consider only the evidence observed during the lesson observation. “Many” students refers to at least  $1/3$  of the students in a class; “most” refers to more than half; “almost all” is not specified numerically, but should be interpreted as “all but a few.”

## Standard 1: Higher Order Thinking

*To what extent do students use lower order thinking processes? To what extent do students use higher order thinking processes?*

LOWER ORDER						HIGHER ORDER
thinking only	1	2	3	4	5	thinking is central

Lower order thinking (LOT) occurs when students are asked to receive or recite factual information or to employ rules and algorithms through repetitive routines. As information receivers, students are given pre-specified knowledge ranging from simple facts and information to more complex concepts. Such knowledge is conveyed to students through a reading, work sheet, lecture, or other direct instructional medium. Students are not required to do much intellectual work since the purpose of the instructional process is to simply transmit knowledge or to practice procedural routines. Students are in a similar role when they are reciting previously acquired knowledge; i.e., responding to test-type questions that require recall of pre-specified knowledge. More complex activities still may involve LOT when students only need to follow pre-specified steps and routines or employ algorithms in a rote fashion.

Higher order thinking (HOT) requires students to manipulate information and ideas in ways that transfer their meaning and implications. This transformation occurs when students combine facts and ideas in order to synthesize, generalize explain, hypothesize, or arrive at some conclusion or interpretation. Manipulating information and ideas through these processes allows students to solve problems and discover new (for them) meanings and understandings. When students engage in HOT, an element of uncertainty is introduced into the instructional process and makes instructional outcomes not always predictable; i.e., the teacher is not certain what will be produced by students. In helping students become producers of knowledge, the teacher's main instructional task is to create activities or environments that allow them opportunities to engage in HOT.

SCORE	DESCRIPTION	NOTES
1	Students are engaged in only LOT operation; i.e., they either receive, or recite, or participate in routine practice and in no activities during the lesson do students go beyond LOT.	
2	Students are primarily engaged in LOT, but at some point they perform HOT as a minor diversion within the lesson.	
3	Students are primarily engaged in routine LOT operations a good share of the lesson. There is at least one significant question or activity in which some students perform some HOT operations.	
4	Students are engaged in at least one major activity during the lesson in which they perform HOT operations, and this activity occupies a substantial portion of the lesson and many students are performing HOT.	
5	Almost all students, almost all of the time, are performing HOT.	

## Standard 2: Depth of Knowledge and Student Understanding

*To what extent is knowledge deep? To what extent is knowledge shallow and superficial?*

knowledge is shallow      1   2   3   4   5      knowledge is deep

Knowledge is shallow, thin, or superficial when it does not deal with significant concepts or central ideas of a topic or discipline. Knowledge is also shallow when important, central ideas have been trivialized by the teacher or students, or when it is presented as non-problematic. Knowledge is thin when students' understanding of important concepts or issues is superficial such as when ideas are covered in a way that gives them only a surface acquaintance with their meaning. This superficiality can be due, in part, to instructional strategies such as when teachers cover large quantities of fragmented ideas and bits of information that are unconnected to other knowledge. Evidence of shallow understanding by students exists when they do not or can not use knowledge to make clear distinctions, arguments, solve problems, and develop more complex understanding of other related phenomena.

Knowledge is deep or thick when it concerns the central ideas of a topic or discipline and because such knowledge is judged to be crucial to a topic or discipline. For students, knowledge is deep when they develop relatively complex understandings of these central concepts. Instead of being able to recite only fragmented pieces of information, students develop relatively systematic, integrated, or holistic understanding. Mastery is demonstrated by their success in producing new knowledge by discovering relationships, solving problems, constructing explanations, and drawing conclusions.

In scoring this item, observers should note that depth of knowledge and understanding refers to the substantive character of the ideas that the teacher presents in the lesson, or to the level of understanding that students demonstrate as they consider these ideas. It is possible to have a lesson which contains substantively important, deep knowledge, but students do not become engaged or they fail to show understanding of the complexity or the significance of the ideas. Observers' ratings can reflect either the depth of the teacher's knowledge and the depth of understanding that students develop of that content.

SCORE	DESCRIPTION	NOTES
1	Knowledge is very thin because it does not deal with significant topics or ideas; teacher and students are involved in the coverage of simple information which they are to remember.	
2	Knowledge remains superficial and fragmented; while some key concepts and ideas are mentioned or covered, only a superficial acquaintance or trivialized understanding of these complex ideas is evident.	
3	Knowledge is treated unevenly during instruction; i.e., deep understanding of something is countered by superficial understanding of other ideas. At least one significant idea may be presented in depth and its significance grasped, but in general the focus is not sustained.	
4	Knowledge is relatively deep because either the teacher or the students provide information, arguments, or reasoning that demonstrate the complexity of an important idea. The teacher structures the lesson so that many students sustain a focus on a significant topic for a period of time and do at least one of the following: demonstrate their understanding of the problematic nature of information and/or ideas; or demonstrate understanding by arriving at a reasoned, supported conclusion; or explain how they solved a relatively complex problem.	
5	Knowledge is very deep because the teacher successfully structures the lesson so that almost all students sustain a focus on a significant topic and do at least one of the following: demonstrate their understanding of the problematic nature of information and/or ideas; or demonstrate complex understanding by arriving at a reasoned, supported conclusion; or explain how they solved a complex problem. In general, students' reasoning, explanations, and arguments demonstrate fullness and complexity of understanding.	

### Standard 3: Substantive Conversation

*To what extent is classroom discourse devoted to creating or negotiating understandings of subject matter?*

no substantive conversation      1   2   3   4   5      high level substantive conversation

This scale measures the extent of talking to learn and to understand in the classroom. There are two dimensions to this construct: one is the substance of subject matter, and the other is the character of dialogue.

In classes where there is little or no substantive conversation, teacher-student interaction typically consists of a lecture with recitation where the teacher deviates very little from delivering a preplanned body of information and set of questions; students typically give very short answers. Because the teacher's questions are motivated principally by a preplanned checklist of questions, facts, and concepts, the discourse is frequently choppy, rather than coherent; there is often little or no follow-up of student responses. Such discourse is the oral equivalent of fill-in-the-blank or short-answer study questions.

In classes characterized by high levels of substantive conversation there is considerable teacher-student and student-student interaction about the ideas of a topic; the interaction is reciprocal, and it promotes coherent shared understanding. (1) The talk is about subject matter in the discipline and includes higher order thinking such as making distinctions, applying ideas, forming generalizations, raising questions; not just reporting of experiences, facts, definitions, or procedures. (2) The conversation involves sharing of ideas and is not completely scripted or controlled by one party (as in teacher-led recitation). Sharing is best illustrated when participants explain themselves or ask questions in complete sentences, and when they respond directly to comments of previous speakers. (3) The dialogue builds coherently on participants' ideas to promote improved collective understanding of a theme or topic (which does not necessarily require an explicit summary statement). In short, substantive conversation resembles the kind of sustained exploration of content characteristic of a good seminar where student contributions lead to shared understandings.

To recognize sustained conversations, we define an interchange as a statement by one person and a response by another. Interchanges can occur between teacher and student or student and student. Sustained conversation is defined as at least three consecutive

interchanges. The interchanges need not be between the same two people, but they must be linked substantively as consecutive responses.

Substantive conversation includes the features below. Each of the features requires interchange between two or more people. None can be illustrated through monologue by one person.

SCORE	DESCRIPTION	NOTES
1	Virtually no features or substantive conversation occur during the lesson.	
To score 2 or above, conversation must focus on subject matter as in feature 1 above.		
2	Features 2 (sharing) and/or 3 (coherent promotion of collective understanding) occur briefly and involve at least one example of two consecutive interchanges.	
3	Features 2 (sharing) and/or 3 (coherent promotion of collective understanding) occur and involve at least one example of <b>sustained</b> conversation (i.e., at least 3 consecutive interchanges).	
4	All features of substantive conversation occur, with at least one example of <b>sustained</b> conversation, and many students participate.	
5	All features of substantive conversation occur, with at least one example of <b>sustained</b> conversation, and almost all students participate.	

## Standard 4: Connectedness to the Real World

*To what extent is the lesson, activity, or task connected to competencies or concerns beyond the classroom?*

no connection      1   2   3   4   5      connected

This scale measures the extent to which the class has value and meaning beyond the instructional context. In a class with little or no value beyond, activities are deemed important for success only in school (now or later), but for no other aspects of life. Student work has no impact on others and serves only to certify their level of competence or compliance with the norms and routines of formal schooling.

A lesson gains in authenticity the more there is a connection to the larger social context within which students live. Two areas in which student work can exhibit some degree of connectedness are: (a) a real world public problem; i.e., students confront an actual contemporary issue or problem, such as applying statistical analysis in preparing a report to the city council on the homeless; (b) students' personal experiences; i.e., the lesson focuses directly or builds upon students' actual experiences or situations. High scores can be achieved when the lesson entails one or both of these.

SCORE	DESCRIPTION	NOTES
1	Lesson topic and activities have no clear connection to anything beyond itself; the teacher offers no justification beyond the need to perform well in class.	
2	Students encounter a topic, problem, or issue that the teacher tries to connect to students' experiences or to contemporary public situations; i.e., the teacher informs students that there is potential value in the knowledge being studied because it relates to the world beyond the classroom. For example, students are told that understanding Middle East history is important for politicians trying to bring peace to the region; however, the connection is weak and there is no evidence that students make the connection.	

SCORE	DESCRIPTION	NOTES
3	<p>Students study a topic, problem, or issue that the teacher succeeds in connecting to students' actual experiences or to contemporary public situations. Students recognize some connection between classroom knowledge and situations outside the classroom, but they do not explore the implications of these connections which remain abstract or hypothetical. There is no effort to actually influence a larger audience.</p>	
4	<p>Students study or work on a topic, problem, or issue that the teacher and students see as connected to their personal experiences or actual contemporary public situations. Students recognize the connection between classroom knowledge and situations outside the classroom. They explore these connections in ways that create personal meaning and significance for the knowledge. However, there is no effort to use the knowledge in ways that go beyond the classroom to actually influence a larger audience.</p>	
5	<p>Students study or work on a topic, problem, or issue that the teacher and students see as connected to their personal experiences or actual contemporary public situations. Students recognize the connection between classroom knowledge and situations outside the classroom. They explore these connections in ways that create personal meaning and significance for the knowledge. This meaning and significance is strong enough to lead students to become involved in an effort to affect or influence a larger audience beyond their classroom in one of the following ways: by communicating knowledge to others (including within the school), advocating solutions to social problems, providing assistance to people, creating performances or products with utilitarian and/or aesthetic value.</p>	

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