

## Chapter 4

# The Six Facets of Understanding

There are many different ways of understanding, overlapping but not reducible to one another and, correspondingly, many different ways of teaching to understand.

—John Passmore, *The Philosophy of Teaching*, 1982, p. 210

LAUNCE: What a block art thou, that thou canst not! My staff understands me.

SPEED: What thou sayest?

LAUNCE: Ay, and what I do too: look thee, I'll but lean,  
and my staff understands me.

SPEED: It stands under thee, indeed.

LAUNCE: Why, stand-under and under-stand is all one.

—William Shakespeare, *The Two Gentlemen of Verona*, c. 1593

Thus far in our analysis of understanding we have treated it as one notion, distinct from something called “knowledge.” Yet problems arise when we look more closely at our language, as we work to frame understanding-related goals. The word *understanding* has various meanings, and our usage suggests that understanding is not one achievement but several, and it is revealed through different kinds of evidence.

In terms of synonyms for the noun form of the word, we talk about *insight* and *wisdom*—both clearly different from (yet somehow related to) knowledge. Yet our language also suggests that real understanding is something beyond a mere “academic” understanding. The phrases “egghead” and “pointy-headed intellectual” suggest that mere intellectual prowess can be sham understanding, and that too much learning can sometimes *impede* understanding.

The verbs we use are equally instructive. You only understand it, we say, if you can teach it, use it, prove it, connect it, explain it, defend it, read between the lines, and so on. The argument for performance assessment as a necessity, not a luxury, is thus clearly linked to these usages: Students must *perform effectively with knowledge* to convince us that they really understand what quizzes and short-answer tests only suggest they get. In addition, particular understandings can differ. We talk about seeing things from an interesting perspective,

implying that complex ideas generate invariably and legitimately diverse points of view.

But the term has other meanings as well. There is an interpersonal as well as an intellectual meaning—implied in English, but explicit in other languages (the French verbs *savoir* and *connaître*, for example). We try to understand ideas but we also work to understand other people and situations. We talk of “coming to understand” or of “reaching an understanding,” in the context of social relations. Revealingly, we sometimes talk of “changing our mind” and “having a change of heart” after a great effort to understand complex matters.

The *Oxford English Dictionary* tells us that the verb *understand* means “to apprehend the meaning or import” of an idea. At its most basic, the idea is found in the legal system when we determine competency to stand trial, whether in reference to a child or an adult with impeded faculties, by one’s ability to understand the import of one’s actions. When we think of meaning or import in the more sophisticated sense, we are referring to ideas like wisdom, the ability to rise above naïve, ill-considered, or inexperienced points of view. We often call this capacity “perspective,” the ability to escape the passions, inclinations, and dominant opinions of the moment to do what circumspection and reflection reveal to be best.

Sometimes, though, we need the *opposite* of distance to “really understand.” We need to strive for rapport, as in “Boy, do I understand what you’re going through . . .” A failure to understand interpersonally typically involves a failure to consider or imagine there *being* different points of view, never mind “walking in their shoes.” (Piaget wryly noted years ago that egocentric persons have only one point of view—theirs.) It has become a cliché phrase of gender relations that one side or the other says to the other: “You just don’t understand . . .” Deborah Tannen’s (1990) highly successful book on gender differences in conversation, entitled *You Just Don’t Understand*, suggests how interpersonal understanding requires grasping unstated but very real, differing styles and purposes for conversation. Similarly, a lack of empathic understanding is evident in cross-cultural conflict, as revealed in the following quotes from an article a few years back in the *New York Times* about a flare-up of violence in the Middle East:

*Both sides were taken aback by the speed and fury with which the ancient hatreds resurfaced, however, and there were some voices predicting that the conflagration would produce a renewed sense that two peoples cannot live in such close quarters without coming to some form of understanding.*

*“We will come to [the idea of peace] out of fatigue. We will come to this idea out of a very painful understanding that the way to war leads us nowhere.”*  
(MacFarquhar, 1996, p. A1)

Is there a link between an agreement born of mutual respect with wise perspective and “intellectual” insight into the problem? It is certainly plausible to say that the failures in Middle East policy may be more a function of a lack of empathy than any lack of knowledge on everyone’s part. Perhaps the same is true in school studies. To really understand a novel, a scientific theory, or a



period in history you have to have sufficient respect and empathy for the possibility that the author understands something you don't and might profit from understanding. The same is true in class discussions: Many students sometimes do not "hear" the contributions made by students they disrespect.

In short, sometimes understanding requires detachment; at other times it requires heartfelt solidarity with other people or ideas. Sometimes we think of understanding as highly theoretical, at other times as something revealed in effective real-world application. Sometimes we think of it as dispassionate critical analysis, at other times as empathetic response. Sometimes we think of it as dependent upon direct experience, at other times as something gained through detached reflection.

If nothing else, these observations suggest the need for greater circumspection. Understanding is multidimensional and complicated. There are different types of understanding, different methods of understanding, and conceptual overlap with other intellectual targets.

Because of the complexity of the issue, it makes sense to identify different (though overlapping and ideally integrated) aspects of understanding. We have developed a multifaceted view of what makes up a mature understanding, a six-sided view of the concept. When we truly understand, we

- *Can explain*—via generalizations or principles, providing justified and systematic accounts of phenomena, facts, and data; make insightful connections and provide illuminating examples or illustrations.
- *Can interpret*—tell meaningful stories; offer apt translations; provide a revealing historical or personal dimension to ideas and events; make the object of understanding personal or accessible through images, anecdotes, analogies, and models.
- *Can apply*—effectively use and adapt what we know in diverse and real contexts—we can "do" the subject.
- *Have perspective*—see and hear points of view through critical eyes and ears; see the big picture.
- *Can empathize*—find value in what others might find odd, alien, or implausible; perceive sensitively on the basis of prior direct experience.
- *Have self-knowledge*—show metacognitive awareness; perceive the personal style, prejudices, projections, and habits of mind that both shape and impede our own understanding; are aware of what we do not understand; reflect on the meaning of learning and experience.

These facets are manifestations of transfer ability. We use these different but related facets for judging understanding in the same way that we use varied criteria for judging a single, complex performance. For example, we say that "good essay writing" is composed of prose that is persuasive, organized, and clear. All three criteria need to be met, yet each is different from and somewhat independent of the other two. The writing might be clear but unpersuasive; it might be well organized but unclear and only somewhat persuasive.

Similarly, a student may have a sophisticated explanation of a theory but not be able to apply it; a student may see things from a critical distance but lack empathy. The facets reflect the different connotations of understanding we considered in Chapter 3. From an assessment perspective, the six facets offer various indicators of—windows on—understanding. Thus, they can guide the selection and design of assessments to elicit understanding. From a broader educational perspective, the facets suggest a goal: In teaching for transfer, complete and mature understanding ideally involves the full development of all six kinds of understanding.

We'll now examine the facets in more detail by

- Introducing each facet with a brief definition, followed by one or two apt quotes and questions that might be typical of someone wishing to understand.
- Offering two examples for each facet, one from daily public life and one from the classroom, as well as an example of what a lack of understanding looks like.
- Providing an analysis of the facet, offering a brief look at the instructional and assessment implications to be explored later in this book.

## Facet 1: Explanation

*Explanation:* sophisticated and apt theories and illustrations, which provide knowledgeable and justified accounts of events, actions, and ideas.

It was never the flavor of desserts alone that beguiled me. It was also my fascination with the variety of textures derived from so few ingredients. When reading through cookbooks I encountered endless variations of cakes and buttercreams. . . . But nowhere was there an explanation of how they compared to each other. . . . It became increasingly apparent to me that there were certain basic formulas from which all these seemingly endless disparate recipes evolved.

—Rose Levy Berenbaum, *The Cake Bible*, 1988, pp. 15–16

We see something moving, hear a sound unexpectedly, smell an unusual odor, and we ask: What is it? . . . When we have found out what it signifies, a squirrel running, two persons conversing, an explosion of gunpowder, we say that we understand.

—John Dewey, *How We Think*, 1933, pp. 137, 146

*Why is that so? What explains such events? What accounts for such action? How can we prove it? To what is this connected? What is an illustrative example? How does this work? What is implied?*

✓ A cook explains why adding a little mustard to oil and vinegar enables them to mix: The mustard acts as an emulsifier.

✓ A 9th grade physics student provides a well-argued account of why the car on the air track accelerates the way it does when the incline of the roadway is varied.