Chapter 12: Connecting to Epistemology

BIG IDEAS

- Going back to Plato's "Allegory of the Cave" (fifth century BCE), the concept of "liberal education" has meant different things, often excluding people on the basis of class or gender, but also offering a form of emancipation through inclusion in stimulating but "disinterested" conversations we carry on for the sake of learning itself. (SE pp. 294-296)

- Conceivably, knowledge could be subdivided into different *knowledges*, with different epistemological rules operating in some forms of indigenous, gender-based, or racially distinct ways of knowing (which does raise the danger of relativism). (SE pp. 298-299)

- Epistemology is not just concerned with propositional knowledge (knowing *that*), such as the facts that make up our sciences, but also with expert judgment and personal forms of knowledge (knowing *how*), including the knowledge that makes someone a good counsellor to others. The degrees of certainty in these different kinds of truth claims varies, making some more or less dependable than others. (SE pp. 300-304)

- Divine revelation is another way of knowing, according to scholars from several religions. Corroborating these kinds of truth claims is problematic, but they remain, like faith itself, an enduring part of the human quest for knowledge, meaning, and order in life. (SE pp. 308-309; cf. SE p. 154)

Background

The question of whether men and women know differently, and whether there are distinct racial or indigenous ways of knowing, reopens the inquiry into epistemological relativity explored at the end of Chapter 11. We also refresh the topic of nominalism versus realism in addressing the use of classification schemes used to sort students into different, supposedly better-aligned programs (applied, gifted, etc.). Foucault's ancient Chinese taxonomy from Chapter 11 (SE p. 285) sets the stage for considering these modern classification schemes or learning-style inventories. From Foucault's perspective, *dividing practices* such as these are invented at a place and period in history and then we fill these with specimens, creating a feedback loop. Are the eight or nine kinds of learning identified by Howard Gardner real, out there in the world (demonstrating the correspondence theory of truth), or are they socially constructed and projected onto the student population (exemplifying a game of truth)?

About Chapter 12

Building on the idea that our knowledge is based on shallow *bedrock (*Wittgenstein), this chapter looks at how we have come to regard or picture education throughout the ages, including contemporary ways of dividing students using multiple intelligences theory, applied and academic learning styles, and gender differentiated instruction. Expert judgment and personal knowledge also serve as a backdrop for different ways of knowing, including how we diagnose honesty and pretence in someone's testimony, or offer good counsel to people with knowledge that can redirect their course in life.

Features

In this chapter, the following features are included to help students make personal connections and/or deepen their understanding of epistemology. You may use all or some of these features as explained in the table that follows.

Feature	Student Textbook Page(s)	Opportunity for Assessment	Strategies for Classroom Use
Philosophy in Everyday Life	305-307	Use to expand the debate on multiple intelligences theory, in section question 1, SE p. 297.	Do academic and applied students exist as distinct types in the world, or are these classifications socially constructed? (gifted, learning disabled, ADHD, etc.)
Youth Voices	308	Writing activity on Truth-Telling (see BLM 12.3).	Link this feature to discussion of truth-saying on SE p. 304, which is described as a form of knowing and of giving good counsel.
Making Connections	298-299	Consider assigning this as a journal topic, using BLM J to address questions 1-3 on SE p. 299.	Use the issues in this feature to widen the debate on gender outlined in question 1.b) on SE p. 297.
Philosophical Reasoning in Context	311	Undertake the self-test of comprehension by answering questions 1-3 on SE p. 311.	Connect *false dichotomy* with Scheman's quote on SE p. 285 to avoid being forced into choosing between the two extremes of objectivism and relativism (what she describes elsewhere as being gored on the horns of ancient dichotomies).

Teaching Plan 1   (SE pp. 292-299 and 305-307)

Activity Description

The focal point of the first section of Chapter 12 is education (grouping in the feature on SE pp. 305-307). Inquiry centres around or sets up the classroom debate on SE p. 297, section question 1. a) and b), which we deepen by extending it through consideration of indigenous, knowledge(s), and an Afrocentric/feminist viewpoint (SE pp. 298-299).

Learning Goal

Students reflect on the origins of their education system and consider recent alternatives to how we group students according to learning styles, gender, and race.

Assessment Opportunities for Chapter Questions

The table below summarizes assessment opportunities for selected chapter questions, which are relevant to this teaching plan.

Assessment Type	Assessment Tool	Feature Questions	Section Questions
Assessment as (or *of*, if using the rubric on BLM 12.1) Learning	Debate		1. a) and b), SE p. 297
Assessment for Learning	Reflective writing and discussion	1-3, SE p. 299	
Assessment as Learning	Reflect and discuss	1-3, SE p. 307	

Resources Needed

Make copies of these Blackline Masters:

- BLM 12.1 Conducting the Education Debate
- BLM 12.2 Labelling Students
- BLM A Venn Diagram
- BLM C Comparison Chart
- BLM G Debate Assessment Rubric

Timing

300 minutes
(four 75-minute classes)

Learning Skills Focus

- Self-regulation
- Responsibility (during the debate)

Possible Assessment of Learning Task

Assess students' participation in the education debate using BLM G. As well, you may ask students to use the topics from the debate for journal entries (see BLM J).

Assessment (For/As Learning)

As teachers move through each chapter, opportunities will be highlighted to provide assessment for/as learning in preparation for assessment of learning at the end of each chapter.

Task/Project	Achievement Chart Category	Type of Assessment	Assessment Tool	Peer/Self/ Teacher Assessment	Learning Skill	Student Textbook Page	Blackline Master
MI theory debate	All (see rubric)	For (or Of)	Rubric for debate	Self; teacher	Responsibility; self-regulation	297, questions 1. a) and b)	BLM 12.1
Expository writing	Thinking; Communication	For (or Of)	Journal	Teacher	Independent work	299, questions 1-3	BLM J

Prior Learning Needed

Debating skills: during the debate, ask students to listen for logical fallacies in the opposition's arguments (see SE pp. 47-59).

Teaching/Learning Strategies

1. Before moving too far into Chapter 12, conduct a progress check with student groups to see how they are doing on their films for the culminating activity, and to track their learning skills (see BLM E). Advise students to use the instruction sheet and rubric on BLM 10.2 to target for success.

   `DI` At this point in Unit 4, as students focus more on completing their culminating activity, some students may want to consider an alternative to the film project set out at the beginning of Chapter 10. Maybe the group is not functioning well and a student wants an alternative activity. Give these students an opportunity to move into argumentative or reflective writing, the former as assessment of learning for the unit, and the latter simply as a less involved journal entry (assessment for or of learning) that can be done in addition to the culminating task for the unit.

2. Minds-on/hook activity: See what students make of Raphael's painting (Figure 12-1, SE p. 292), which does not really depict Athenian education at all, as it tries to put every philosopher across a wide span of time into one fresco. Looking at the left side, we have in the foreground from left to right, Anaximander, Pythagoras (with a book), and Heraclitus (leaning on the stone); behind Heraclitus is Parmenides, pointing out something to Hypatia (see SE p. 5), who has Anaxagoras kneeling beside her and Averroes (see SE p. 309) behind. Use the chronology of thinkers on the chapter opening pages (SE pp. 292-293) to see how disparate these thinkers are in time. Here is a recall question (see Chapter 10): Why, in epistemological terms, is Plato pointing upward and Aristotle downward in Raphael's painting?

   To identify other thinkers in the fresco, use this Web site with its point and click application:

   http://www.newbanner.com/AboutPic/athena/raphael/nbi_ath4.html

3. We kick off this chapter with education, going back into its early history to discoverthe original and later meaning of the term *liberal arts*. Oakeshott gives us a picture of the "voice of liberal learning" reaching across civilized history into our prehistory, as the accumulated conversation of generations, always reaching for finer articulations. His definition carried the ancient idea that liberal learning was free of the world of work, as a "disinterested study" instead of one being put to practical use (e.g., vocational or business education). That is the original meaning of the word *school* (SE p. 294). It also carried a sense of liberating the mind, as we saw in Plato's "Allegory of the Cave" and Russell's essay "Why Study Philosophy?" in the Introduction to Philosophy, which begins on SE p. 2. Students should see the value scheme (axiological criteria) that favours scientific studies, viewed as ends in themselves of liberal pursuits, over practical arts and trades (SE p. 295). This value scheme is one of the pictures we find ourselves enthralled with, or trapped in, when we confront questions about education. It easily slips into our thinking when we subconsciously value academic learning over applied. As early as the Roman Empire, we see people trying to re-describe education (much as we did the tree in Chapter 11); Epictetus, a Stoic, was a manumitted slave, hence his statement about education being made available to all, not just "free people" (SE p. 295, margin quote). Dewey is the champion of applied over scholastic education in the late nineteenth and early twentieth centuries, drawing on the precedent laid down by the Stoics (who emphasize use in all things) and by Rousseau (see SE pp. 296 and 305).

   To go further into Dewey, try using an excerpt from his more accessible works, *Experience and Education* or *Democracy and Education*.

You may also wish to look up the following video titles on the Internet (available on YouTube):

Rise of 20th-Century Philosophy—Pragmatism.

John Dewey Analysis Part 1

Mary Wollstonecraft was one of the first to fight for the equal education of girls, against Locke, Rousseau, and Kant on this score (see SE pp. 262 and 408). Use some of this historical background to get students thinking about how education has been structured, and how this background influences the way we now think about education. Try to turn this into an application of the discussion at the end of Chapter 11, but addressing the taxonomies we use to divide and judge students. To foster deeper thought on the issue of gender and segregated classrooms, consider using Leonard Saxe's work. Of great interest to students is the chapter on the Teen Girl Brain and Teen Boy Brain in Louann Brizendine's books, *The Female Brain* and *The Male Brain*. Show a portion of her lecture to help stimulate discussion on the old nature-versus-nurture debate:

http://www.youtube.com/watch?v=Lu_uGr1ZOn4

For a critical rebuttal, see Lise Eliot's *Pink Brain/Blue Brain*.

Acc The historical material on education may detract from the debate for some learners, depending on their learning style (assuming that learning styles exist) and language abilities (ELL, etc.). To give this historical material a type or location on Bloom's Taxonomy of learning, it is rather scholastic or academic, instead of applied, authentic (real-life applications), or affective (emotionally charged). Giving readings on MI theory that are suitable for these learners, such as might be available through the Special Education Department or that are targeted at a lower grade level, may help these students enter into the discussion. Also, for some students it might work better to discuss EQ, Daniel Goleman's idea of an emotional quotient, as the counterpoint to IQ. (If students are interested in the idea of EQ, consider asking them this question: Is there really such a thing as an EQ, or is this just a metaphor that shifts the language of measurement to inter- and intrapersonal intelligences or aptitudes?)

4. Students will need some additional information on multiple intelligences theory, perhaps in the form of readings or YouTube clips. Create sets of folders with arguments for and against to help students get the debate going by setting out arguments they can use. Students can use BLMs A and C (Venn Diagram and Comparison Chart) to help them distinguish arguments for and against the idea of multiple intelligences, or discern overlap in positions.

   It is also helpful to go back and look at what IQ means, and how it has been applied as a singular measure of intelligence. Defenders of a unified concept of IQ will argue that intelligence (singular in kind) can be applied to many areas or fields, such as math or music. To prompt this line of inquiry, look at a couple of the vignettes on child prodigies with IQs above 120 (the level required for "giftedness") and in some cases exceeding the chart by going above 170 at the top of the scale. Look up the following video titles to see these vignettes (available on YouTube):

   Child Genius

   Child Genius P1-3

5. Use the guidelines in BLM 12.1 to set up and run the education debate, modifying it as you and the class deem appropriate in your circumstances. Having a student(s) moderate the debate frees up the teacher to track who is speaking, and perhaps encourage others to get into the debate by asking those who have already spoken to take a back seat for a while.

Alternatively, you could have students follow the rules of debate used by the Ontario Student Debating Union (OSDU):

http://osdu.on.ca/

See also: Information for Pro/Con Debate Moderators and Speakers at this link:

http://annualmeeting.aaaai.org/pdf/pro_con_info.pdf

DI Another way of setting this up is to use an inner and outer circle, sometimes called the bear pit. Have three students from each team go into the pit with the two moderators there to keep order. After those students have had a chance to speak, students from the outer circle can replace students on the inside by tapping them on the shoulder. Make sure students don't return too often, shut out others, or tap out those who didn't get to speak yet. The added physical activity can be intense but fun!

DI Although closing speeches are traditional in debates, another way of closing is to have students say one thing as you go around the circle, giving everyone a voice if they wish to use it. Vary the format from unit to unit to keep the debates lively.

6. As a follow-up to the debate about multiple and gendered intelligences, have students write either a short essay based on their debate stance or a journal entry (see BLM J) based upon reflection gained from participating in the debate. To help students demonstrate the expectations at the beginning of the chapter, further instructions could be given, including the following:

> Use terminology and theories from the epistemology unit to defend your position. As well, you may make connections to other branches of philosophy and to various ways and areas of knowledge. When you have completed a neat, working draft, create criteria to evaluate your work. Trade drafts with a partner, and evaluate each other's work. Revisit the questions, posed earlier on SE p. 307, about the usefulness of criteria for making judgments (about things such as the sickness of a child or something students are good at such as dancing or singing). Be sure to edit your essay for spelling and grammar.

7. The "Making Connections" feature (SE pp. 298-299) moves us into territory that brings us into confrontation with relativism. In the interest of hearing the arguments instead of rebutting them offhand, recommend that students keep an open mind and use sensitivity. Ask them to read the feature in the spirit of charity, seeking sense and purpose when interpreting what these authors mean, and, just as important, consider what social contexts motivate these authors' alternative epistemologies. The image of the Cyclops in Figure 12-3 (SE p. 295) is a reminder that, for many centuries, the Greeks, and later the Romans, spoke of other peoples as being less rational, or lacking in foresight for the arts and sciences that form their encyclopaedia or curriculum (i.e., their circuit or "round" of studies). See also the "Viewpoints" feature at the end of Chapter 13, on philosopher Kwame Anthony Appiah and the Asante witch doctors (SE pp. 334-335), which links well with the topics in this "Making Connections" feature. There is also a strong connection between this "Making Connections" feature and the discussion of traditional medicine in Chapter 15, SE pp. 370-371. As further background, look up the following video titles on the Internet (available on YouTube):

> traditional knowledge today (part 1)

> What is the Traditional Knowledge World Bank?

> Traditional Knowledge Revival Pathways

To go further into feminist epistemology, look up the following videos relating to Judith Butler on the Internet (available on YouTube):

Judith Butler. Primo Levi for the Present. 2006 1/10

Judith Butler: Part 4/6

Examined Life - Judith Butler & Sunaura Taylor 720p.avi

8. Although risky topics, you could discuss the merits and drawbacks of focus schools or identity schools, such as schools designed specifically for Aboriginal peoples or students of African descent, as well as religious schools of all varieties. According to the UN Universal Declaration of Human Rights, Ontario is in violation by providing religious education only to Catholic students. After conducting further research, ask students to discuss possible solutions to this situation.

Text Answers

Page 297: Section questions

1. a) See BLM 12.1 for how to set up, conduct, and assess the debate. BLM G can also assist you in assessing students' debate performances.

b) Extend the debate using the features on SE pp. 298-299 and 305-307.

2. The goal of this exercise is to get students thinking about whether they tacitly or actively use criteria when making judgments. See if anyone has refereed a game or adjudicated a contest or tryouts for a team or club, and draw on their personal experience. Using a scene from *So You Think You Can Dance Canada* or *Canada's Got Talent* would be fun!

Page 299: Making Connections

1. Another way of interpreting this question is to ask whether "our" modern (even globalized) knowledge and values, including our ways of discerning truth, take precedent over those of other people, and if so, on what basis does ours trump theirs? Show excerpts from anthropological videos to help illustrate the role of herbal medicines in tribal cultures. See also the discussion of traditional medicine on SE pp. 370-371.

2. Refer to the Toronto District School Board's document on its First Nations School:

http://www.tdsb.on.ca/profiles/5360.pdf

See also excerpts from a thesis on Wandering Spirit Survival School in Toronto:

http://www.sharon-berg.com/Wandering-Spirit/index_files/Page1337.htm

"Founded in 1976, WSSS was adopted as an Alternative School by the Toronto Board of Education in 1977. Pauline Shirt, a Cree visionary and founder of the school, played a critical role in designing and reviewing the research for this thesis. It develops her narrative within the collective testimony of former students and teacher-volunteers, unfolding as a unique, collaborative methodology-in-process that blends two cultural approaches to research."

"In this text, the Medicine Wheel at the heart of Aboriginal culture is given definition as a responsive healing pedagogy that integrates mind, body and spirit. Also known as the Teaching Wheel, it guides a regionally responsive articulation of the Four Seasons Curriculum developed at WSSS. The story of WSSS is the story of a community and a model for emancipatory education which remains relevant in contemporary time."

3. It may be asking a lot of students to critically consider whether it is possible for there to be a different logic. The Western tradition assumes that its model of knowledge is the only model available, and that all rational persons would follow its rules and procedures. The very idea could lead one into an *isles of language* and logic (relativist) thesis that ultimately isolates everyone who is an outsider to a particular community, raising the question of why translation across cultural boundaries isn't possible. For further inquiry: Did people in southern Asia or Southeast Asia develop their own forms of logic (and mathematics), and if so, how did logicians dialogue across the differences in these systems?

Page 307: Philosophy in Everyday Life

1. Rousseau's vision of educating young Emile by having him see the stars first-hand and grow his beans in a field offers an early model of applied learning, taken up later by Dewey in his progressive movement of education (late nineteenth and early twentieth century). Rousseau's notion of the noble savage, however, is a rather romantic construction by an eighteenth century European thinker, instead of the results of genuine understanding of indigenous peoples and their approaches to education. If there is an affinity between these two, it is mostly by appearance. Indigenous peoples generally are very community oriented, remaining in tightly knit social groupings where elders are valued teachers, as well as kindred spirits with animals in the world that we all share. Rousseau's idea was to protect Emile from the negative effects of socialization, catering to the development of one's own authentic self (*amour de soi*) instead of being tainted by social graces and norms (*amour-propre*). Only the vision quest in indigenous societies approaches this idea, in its unique way of shedding cultural provisions to bare oneself before nature and allow for reception of the vision.

2. Use this self-reflective exercise on learning styles as a way of priming the debate, referenced on BLM 12.1.

3. (mislabelled 2 in the student textbook)

a) This question gets at the idea of tacit criteria instead of elicit criteria, using the example in Figure 12-7, SE p. 304. Story is an important consideration here, as we may forget that much of what we know comes through anecdotes and stories, and in some cultures people rely almost exclusively on the oral transmission of knowledge.

b) The author, Andrea Kern, uses the example of judging the sickness of one's child to illustrate Wittgenstein's idea of judging as a way of seeing, an instantaneous way of knowing instead of the more active case of interpreting or the rational application of criteria.

This example of judging does not mean, however, that we cannot develop criteria after the fact and then use them in future cases. Importantly, running through a checklist of symptoms helps the parent determine if the essential criteria for a particular illness are met, culminating in the empirical test of body temperature as the better predictor of fever than redness of the face, lack of energy, or moaning. If you call a health hotline or visit a triage nurse at the hospital, they use such criteria to determine the severity of the illness and urgency of care. Equally important, however, is the original holistic assessment of the parent, on which judgment and further inquiry was warranted as a valid use of time and resources to either protect the well-being of the child or show up the ruse and thwart the attempt to stay home from school.

Teaching Plan 2   (SE pp. 300-304 and 308-313)

Activity Description

Recalling that in Chapter 11 we conducted a forensic investigation into the supposed death of epistemology, here we consider our reliance on expert judgment and testimony as a form of knowledge.

Assessment Opportunities for Chapter Questions

The table below summarizes assessment opportunities for selected chapter questions, including questions in the Chapter Review, which are relevant to this teaching plan.

Assessment Type	Assessment Tool	Feature Questions	Section Questions	Chapter Review Questions
Assessment as Learning	Group discussion; self-reflection	1 and 2, SE p. 308		
Assessment as Learning	Group discussion; self-reflection		1 and 3, SE p. 310	
Assessment for Learning	Interconnecting concepts and thinkers		2, SE p. 310	
Assessment for (or *of*) Learning	Solving word problems; checking answers	1-3, SE p. 311		
Assessment as Learning	Chart; reflective writing			1, 5, and 6, SE pp. 312-313
Assessment for Learning	Definitions; sorting terms			2 and 3, SE p. 312
Assessment as Learning	Discuss			7 and 8, SE p. 312

Resources Needed

Make copies of these Blackline Masters:
- BLM 12.3 Truth-Telling
- BLM 12.4 Selfhood and Subjectivity
- BLM J Journal Writing Guide

Possible Assessment of Learning Task

The film festival on issues in epistemology culminates the unit at the end of this chapter. Use the evaluation criteria on BLM 10.2 to evaluate student learning (individually, even if working in a group). You can also mark journal reflections based on questions 1-3 on SE p. 310 as assessment of learning (see BLM J).

Assessment (For/As Learning)

As teachers move through each chapter, opportunities will be highlighted to provide assessment for/as learning in preparation for assessment of learning at the end of each chapter. (See the table that follows on the next page.)

Learning Goal

Students will be able to differentiate *propositional knowledge*, such as what we learn in science when we say "I know that the Sun is 150 million kilometres away," from *personal knowledge* we may rely upon without even being able to articulate it, such as how to ride a bike home or pick out a suitable friend.

Timing

150 minutes
(two 75-minute classes)

Learning Skills Focus

- Collaboration
- Independent work

Task/Project	Achievement Chart Category	Type of Assessment	Assessment Tool	Peer/Self/ Teacher Assessment	Learning Skill	Student Textbook Page(s)	Blackline Master
Truth-Telling	Communication; Application	For	Persuasive writing	Self; teacher	Initiative	304 and 308	BLM 12.3
Reflection and discussion	Thinking	For	Journal and/or small group discussion	Peer	Collaboration	310, questions 1-3	BLM J
Is there a false dichotomy in the two-worlds discourse of Battiste and Collins, or in applied versus academic learning?	Application	As	Discussion: a form of *problematization* (see Foucault, SE p. 288, last paragraph)	Self; teacher	Collaboration	298-299, 305, 311	

Prior Learning Needed

The section on Foucault in Chapter 11 (SE pp. 285-288) that discusses *games of truth* and *power relations* will help students make the connection to truth-telling as an aspect of his philosophy.

Teaching/Learning Strategies

1. Ask students to discuss their beliefs about the reliability of forensic evidence, and the accuracy of testimony by forensic scientists. How has our impression of the field been affected by television programs like *CSI*?

   Chapter 11 opened at a graveside and commenced a forensic investigation into Charles Taylor's claim that epistemology was dying or was already dead. As we learned in Ontario with the public inquiry into paediatric forensic pathologist Dr. Charles Smith, forensic science is a questionable domain of knowledge. We have been led to think it is an exact and reliable science from watching popular TV shows such as *CSI* that glamorize the world of crime scene investigation. According to the National Academy of Sciences in the United States, we should be more skeptical of expert testimony based on forensic techniques: "With the exception of nuclear DNA analysis, no forensic method has been rigorously shown to have the capacity to consistently, and with a high degree of certainty, demonstrate a connection between evidence and a specific individual source" (cited in *The Globe and Mail*, February 20th, 2009).

   Additional resource: see the following CBC news report on pathology and criminal science, specifically regarding Dr. Charles Smith:

   http://www.cbc.ca/news/canada/story/2009/12/07/f-charles-smith-goudge-inquiry.html

   As unfortunate as such legal-abuse cases are, we do not abandon the use of forensic science and resort to something even less reliable, such as divination—drawing lots or mortal combat—to decide the guilt of an accused. We trust in the ability of our society's scientists and technicians to develop better methods in the future. Until improvements are made, we proceed with a degree of healthy skepticism or reserve. For instance, in Canada, we do not condone the death penalty. In the cases of Donald Marshall and Guy Paul Morin, later DNA evidence exonerated them of murder. In both cases, financial compensation was sought to rectify the injustice, and the court was found to have been biased or prejudicial in its prosecution of suspects.

In terms of pragmatist philosophy, in both social and natural sciences, we tend to rely on fallibilism (SE p. 297). In other words, we know from history that often our facts or truths are overturned by subsequent discoveries. To call them "true facts" would be redundant, but we do look back and see how some things considered fact are now debunked as errors. As American pragmatist philosopher Charles Peirce might have put it, instrumentally speaking, perhaps this is the best answer we can work with for now, given our current state of technical apparatus and assuming we have prosecuted our investigation within an open community of inquiry—not stifling testimony or withholding evidence in the tribunal, or in any process of rational inquiry.

2. Ask students: Is there a hierarchy of subjects based on degrees of certainty or utility in knowledge? Should some subjects be promoted over others, or do they balance and supplement each other? One of the major realizations of this chapter is that different fields or areas of knowledge have different degrees of certainty. We saw this in Aristotle's discussion of the practical as opposed to the more theoretical sciences, contrasting certainty in ethics with that in physics (SE p. 295). It appears again with Wittgenstein's remark on agreement in math being easier to obtain than in court decisions (SE p. 300), and in Ryle's contrast between the maps of the geographer and country postman (SE p. 301). As students get into the Chapter Review questions and they consider what they know or want to know (question 1, SE p. 312), they have to assess degrees of certainty as well. Use the background above to set up the distinction between propositional and personal knowledge (SE p. 301), and to move into the question of whether we can learn how to make expert judgements (SE p. 302). Aristotle suggests that we learn by imitating wise people in the community, or through positive exemplars.

Have students consider Wittgenstein's answer, perhaps going back into Chapter 11 to fathom how this might relate to his other ideas about the shallowness or groundlessness of knowing, and how we judge against a vast background we cannot articulate (SE p. 304). The discussion here (SE p. 303) turns to how we judge whether a child is pretending to be sick. Pretence is something we learn, or a language-game we are trained into from childhood. Knowing how to read pretence in someone's facial expressions or gestures is one of those almost animal judgments we can make, as members of a common form of life (and we can also see it in the faces of our near cousins in the primate world).

3. Neo-pragmatist philosopher Hilary Putnam uses the same Wittgenstein quote (SE pp. 302-303) to leverage his point that the long-honoured dichotomy between facts and values, one of the so-called *dogmas of empiricism* that goes back to Hume, does not stand up when we look at practice (see SE p. 303). For example, Stephen Toulmin, in *Return to Reason*, reminds us that although rationality may appear to be singular or be judged by one standard, we can shift away from that picture to consider the reasonableness of alternative forms. Roman camps were the same everywhere, following a routine geometric system (like graph paper, the axis laid down by the *cardo decumanus*). The Greeks, however, varied their camps with the terrain. Both were reasonable ways of organizing, but many people are inclined to recognize only the geometric system as being rational. Acknowledging the Roman system to be rational is a value-laden judgment.

4. A down-to-earth application of personal knowledge is the giving and receiving of sound advice (SE p. 304). Returning to Foucault, in *Fearless Speech* he traces two main branches of knowing in Socrates' philosophy: the path that leads to scientific knowledge, as in the prisoner leaving the cave to see the real Sun outdoors in the "Allegory of the Cave"; and the kind of knowing one needs to be a good advisor to

someone, or speak truth to power. "Know thyself" and "care for yourself" are equally important as knowing the higher realities of nature and mathematics. Adolescents can relate to this topic as they are often in a position of giving and taking advice. Truth now becomes a matter of whom you can trust as giving sound direction. Use BLM 12.3 to get students involved in truth-saying, something that Foucault insists must involve risk (therefore, it is not anonymous) as a control against possible misuse. The example of Han Han (see "Youth Voices" feature, SE p. 308) relates to this discussion, as he is one who takes enormous risks in defying the school and police authorities to get out his version of the truth. Here we can see from another angle the links between epistemology and politics.

5. Another path to knowledge we haven't considered much—not since we opened the unit in Chapter 10 (SE pp. 244-245) with reflections on Pythagoras, who used asceticism (breathing and meditation exercises, and strict diet) as an avenue to the truth—is revelation. Make connections here between the idea of revelation and the notion of Agent Intellect (SE p. 113), or truth as correspondence with the mind of God. The whirling dervishes shown in Figure 12-2 (SE p. 293) offer food for thought: is there a non-rational approach to knowledge, as al-Ghazali thought, that is higher than the verbal or conceptual path usually offered or taken?

6. It is now time to run the culminating activity film festival. Use the rubric on BLM 10.3 to evaluate students. Allow time for and encourage active participation in discussion after presentations.

   Acc If corrections to a student's or group's presentation are needed to avoid confusion (avert mis-education, where things are presented improperly), use constructive feedback and redirect students to sections of their textbook where there is a more reliable account of the concepts. Possibly offer a chance to correct mistakes through a second submission.

   DI Collect and assess the alternative culminating activity projects from students who did not participate in the film festival. BLMs F, H, or I may help in assessing these students' work.

7. Perception played a large role in this unit, so consider looking up and showing students an inspirational YouTube video clip—Ben Underwood Surfs—on how a boy learned to use echolocation to overcome his blindness. Also look up the following video titles on YouTube:

   Extraordinary People - The boy who sees without eyes [2/5]

   The Real Superhumans - Part 1

Text Answers

Page 308: Youth Voices

1. These are very personal questions that ask us to explain why we trust certain people and not others. Use the ideas described on BLM 12.3 to further this discussion and take it into a powerful truth-telling writing activity suggested on BLM 12.3.

2. Use the ideas discussed on BLM 12.4 to consider whether we have our own mind to make up (some kind of core or nucleus of a self), or whether we are socialized and normalized from the outside in. Allan Bloom wrote the book *The Closing of the American Mind*, in which he complained that undergraduate students were dogmatic in their devotion to postmodern relativism; they weren't thinking, but following a herd mentality, he argued. Atheism can likewise be as dogmatic as religious fundamentalism, in that the mind is made up and new evidence is not considered in the discussion.

Page 310: Section questions

1. John Searle wrote the book *The Construction of Social Reality* to make the point that institutions such as money and marriage are socially constructed (see SE p. 274 for background information). Institutions operate like software running on complex hardware, the neuro-processors in our brain (also part of Searle's deeper background for meaning), that are very real. Searl's book title was a counterpoint to the Berger and Luckmann title *The Social Construction of Reality*, which more boldly makes reality our construct. See also the discussion of Nelson Goodman's book *Ways of Worldmaking* (SE p. 358).

2. Putnam gives the example of ethically thick concepts like "teacher cruelty," where one can say without contradiction that his or her piano teacher was good but severe in enforcing a regime of disciplined practice. The fact of severity is coupled with a value that makes this more positive than one might otherwise think, as in also crediting one's coach for hard workouts. In ethics, the so-called *natural fallacy* is trying to derive an *ought* from an *is*, or basing normative rules on empirical facts. It can lead to relativism, where any *is* that happens to be in the world (e.g., cannibalism) could be used to leverage a moral stance (e.g., the rightfulness of eating other people).

3. Dewey fought against archaic, scholastic education where rote learning was used to make students memorize decontextualized facts; he advocated instead progressive forms of applied and authentic learning, where making the learning useful gave it meaning in life. Dewey nevertheless recognized that every culture has to transmit its knowledge to the next, or else it would not grow and progress. Paulo Freire, the Brazilian educator who wrote *Pedagogy of the Oppressed*, and bell hooks, the Black American feminist philosopher, both railed against the "banking concept" of education where facts are deposited in the heads of pupils, arguing instead for forms of liberating education that give meaning to people's struggles for recognition and equality.

Page 311: Philosophical Reasoning in Context

1. Really, they're all false dichotomies, but not everyone may agree.
   a) I can fall out with my best friend.
   b) Humans could be created and then subsequently evolve.
   c) There are several possibilities, such as hermaphrodites, and some people identify themselves as both.
   d) People have freedoms within constraints. Does it assume we have absolute free will?
   e) I can be undecided, and abstain as I wait to find out where I stand.

2. Using Keynesian economics, we can also spend our way out of a recession, as in Obama's and Harper's stimulus packages.

3. The law of the excluded middle makes sense in most situations (who's going to challenge Aristotle?), but there are ambiguous wordings of propositions, or contradictions, that may allow for both possibilities.

   "This is a picture of a duck, not a rabbit." (See Jastrow's duck-rabbit drawing.)

   "There is no absolute truth."

Pages 312-313: Chapter Review

1. a) Students fill in this table and compare their responses with classmates. The first row of the table is completed as an example.

Want to Know	Will Never Know or Cannot Know	Probably Will Never Know	May Know Someday*	Will Definitely Know Someday	Possible Method of Acquisition
What happens after death	How everything got started	How it feels to be the opposite sex	What it's like to be married	What happens after school	Experience

*Note that this column does not appear in the student textbook, but you may wish to ask students to include it when they complete this activity.

b) What should you not know? Why? Is there dangerous knowledge? Think of Hogwarts' Slytherin House in the Harry Potter series, where dark secrets may lead one down the wrong path in life. In the Bible, Eve is portrayed as being misled by a snake into eating from the Tree of Knowledge, losing her innocence.

2. Sample answer:
<u>Knowledge</u> is different from <u>opinion</u> in that it must be <u>true</u>, whereas opinions may or may not be true. The <u>information</u> we convey as <u>knowledge</u> should be <u>factual</u>. The highest form of <u>understanding</u> is <u>wisdom</u>, which usually refers to <u>knowing</u> the ultimate reality or purpose in life, or finding contentment within our limitations.

3. a) Note: There is no single solution to these puzzles!

[sense perception logic (reason, mathematics)]

[memory self-awareness]

[value judgment common knowledge]

[authority instinct faith revelation intuition]

b) empirical and rational approaches to knowing

personal approaches to knowing

shared, everyday approaches to knowing

inward or divine approaches to knowing

4. a) Kurt Vonnegut appears to be saying that we are self-conscious creatures and so it is human nature to hunt for knowledge, just as a tiger hunts its prey. It is our form of life, as Wittgenstein might say.

b) and c) Prompt students to discuss (think/pair/share) these questions:
- What is your feeling about epistemology as a branch of philosophy that addresses how we understand and know, given what you have learned in the last three chapters?
- Is it fulfilling our nature or *form of life* to ask questions about knowing, or was Quine right to suggest that we move on by sidestepping the topic or relegating it to psychology?
- Does belief or faith in God change your epistemology?

5. We can perhaps use other avenues to knowledge than direct exploration, such as contemplation, meditation, prayer, reflection, revelation, vision, inspiration, dream, insight, clairvoyance, prescience, etc.

6. After students reflect for themselves, use this question as a jumping off point into Unit 5: The Philosophy of Science, specifically regarding the scientific method and its empirical and deductive (hypothetico-deductive) forms of reasoning (see SE Chapter 13, p. 326).

7. Connect Collingwood's quote, which likens the artist to a prophet and healer, to the mystic way of knowing (SE p. 313). Nietzsche celebrated artists, poets, and saints, as did Heidegger. Ask students to consider this question: Could artists in our community and society be thought of as prophets or healers? Explain why or why not.

8. Use this question as an opportunity to jump into Unit 7: Aesthetics, and you see that the same question of truth appears, but it is couched as one of Beauty or The Good (SE pp. 480-481). The same division also appears between empiricists and rationalists (SE p. 482). Not so surprising, as we see some of the same cast of philosophers: Plato and Aristotle, Hume and Kant, etc.