

# Module # 7

## Developing Critical & Ethical Thinking Helping Students See the Bigger Picture



### The aim of this module is to help you:

- Understand where your students are in their intellectual and ethical development
- Create a challenging and supportive seminar environment where students can grow and succeed both intellectually and ethically
- Use the seminar to help students think and act ethically in their daily lives

Many places on campus are often buzzing with student conversations. Walking through Thwing atrium, for instance, you might overhear students reflecting on their experience at Case. Take Kyle and Kathy: twenty-two-year-old student leaders discussing their future plans and reminiscing about the past four years:<sup>1</sup>

*Kathy:* Do you remember when we met in the orientation course our first year? I was nervous that I would never make it in college. I registered for that first class we took together because I thought the teacher would tell me what to do to succeed in college.

*Kyle:* That first year I spent a lot of time talking to seniors on my floor about what activities I should get involved in and what courses and instructors to take. I tried to follow their advice, but it was really confusing when they all gave me different suggestions. Then I began to think that no one knew anything.

*Kathy:* I know what you mean. I went through a period during my sophomore year where no one could tell me anything. I figured that my ideas were just as good as everyone else's. I was on the hall government at the time

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<sup>1</sup> Adapted from: Evans, N. J., Forney, D. S., & Guido-DiBrito, F. (1998). *Student development in college: theory, research, and practice* (1st ed.). San Francisco: Jossey-Bass.

and was always fighting with our advisor because she wanted us to justify our budget requests and I had no idea what she meant.

*Kyle:* I started to understand the importance of supporting my position when I was on the judicial board my junior year. We would hear so many cases where the situation and circumstances made a difference in our decision. Listening to all the different perspectives of the other members of the board really made me think about where I stood and why I felt that way.

*Kathy:* Now that I am interviewing for positions with different companies, I really see how important it is to consider all the different aspects of a decision and to weigh my options. Each job situation has its pros and cons, and I can certainly see that there is no perfect situation. I have to do what seems best for me at this point in my life.

*Kyle:* Yes, and I know that the choices I am making now are only tentative. I have decided to attend grad school in California to study microbiology, but once I finish my degree, I'll have a whole new set of choices to make. Life is sure complex, isn't it!

## **SAGES: Development of the Whole Individual**

Kyle and Kathy are typical of the students you will encounter in your seminar. As a SAGES instructor, you enter students' lives at a critical time—when they face the daunting but essential tasks of developing their critical thinking skills and defining who they are in life. As young adults, students often enter college with the assumption that the world is black and white. Over the course of their education, it is part of SAGES' goal to help them learn to appreciate the subtle shades of grey that exist and to exercise their own moral and ethical judgment. You have the opportunity as a seminar instructor to help guide students through this process by:

- Broadening their learning through a wide range of materials
- Encouraging students to integrate their life experiences and challenges with their learning
- Connecting learning materials to personal and ethical issues that the students face

***Education must, then, be not only a transmission of culture but also a provider of alternative views of the world and a strengthener of the will to explore them.***

**~ Jerome S. Bruner**

### **Module 7**

#### **Developing Critical and Ethical Thinking**

## Who are the students walking into our classrooms?

While we spend a great deal of time talking about the qualities we want our students to have when they leave our classrooms, it is no less important to consider who our students are when they first arrive, especially in terms of their intellectual and ethical development. As you craft your syllabus, an awareness of your students' different levels of development will enhance your ability to help them make sense of their experiences, become able to reconcile contradictions, understand why others might hold different views, and take responsibility for their actions. Ultimately, you want your students to ask themselves, **“What kind of person do I want to become?”**

# Four Ways Students View the World

The framework presented here is based on William Perry's seminal study of Harvard and Radcliffe students in the 1950s and 1960s. Perry's work provided a foundation for a provocative scholarly dialogue about the nature of late adolescent and adult development and the role of higher education in fostering intellectual and ethical development in students.<sup>2</sup> Perry suggested that as students move from adolescence into adulthood, they advance from a simplistic, categorical view of knowledge to a more complex, contextual view of the world and themselves.<sup>3</sup>

As you read through the description of the various stages, you may notice that the distinctions between them are subtle and not as clear as one might expect. This is particularly true of the later stages of development, where students are asked to deal with increasingly complex sets of problems and challenges before they make a thoughtful, conscious choice about a subject in a given context. Moreover, our students' progress from one stage to another is anything but orderly or direct. As one seasoned SAGES instructor explained:

*We want the students to move steadily and quickly through the stages; however, students do not develop in a linear fashion. It takes time. In*

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<sup>2</sup> King, P. (2003). Student learning in higher education. In S. R. Komives, D. B. Woodard, Jr., and Associate (Eds.), *Student services: A handbook for the profession* (pp. 234-268). San Francisco, Ca: Jossey-Bass.

<sup>3</sup> Perry Jr., W. G. (1999). *Forms of intellectual and ethical development in the college years*. San Francisco, CA: Jossey-Bass.

*practice, the developmental path is much more convoluted than we might expect. We should celebrate every small incremental improvement that students make in their intellectual and ethical reasoning.*

When we follow this advice and celebrate even small improvements, we provide essential encouragement to students who may find the development process bewildering, and even painful, at times.

Patricia King, a professor at the University of Michigan who has devoted three decades to researching this subject, once wrote: “*Over the years at college, students move from the stage of ignorant certainty to a higher stage of intelligent confusion.*” Since certainty is more gratifying and tranquil than confusion, we have reason to admire young people who are willing to make the transition to that higher (but by no means final) stage of development. Fortunately, the SAGES seminar provides an ideal learning space where students can mature and blossom intellectually and ethically under your guidance and attentive care.

## Dualism

The world is viewed in absolute, right-and-wrong terms. The students believe that right answers exist to all questions and that authorities have these answers. It is the instructor’s job to provide these answers and the students’ job to learn them.

### What it looks like:



- *I’m lost in this class; the professor lacks a clue.*
- *Every lecture course, no matter how bad, has taught me more than any seminar, no matter how good. In a lecture, you get taught by an expert, which means the information is credible. But in a seminar, most of the information is from other students like me, which leads to discussion that is irrelevant & suspect in accuracy. In seminars, profs don’t like to tell students directly that they are “wrong” or “correct,” so one can leave a seminar confused & not knowing any more than when one entered.*
- *When I came here, I didn’t think any question could have more than one answer.*

## What they are telling you:



Students expect the instructor to provide the answer to every question. In their minds, good teachers know the answers; bad ones don't. When you ask questions, especially open-ended ones, they are wondering, **“What is the correct answer? Why should we bother with the wrong ones? Can't you just tell us the answer?”**

## Multiplicity

In some areas, knowledge is certain. In most areas, nobody knows anything for sure. In those areas where the authorities have yet to find the answers, uncertainty is viewed as temporary. In the meantime, everyone's opinions are just as valid as everyone else's.

**! This is the stage most of our students are in when they enter our classrooms.**

## What it looks like:



- *You know, it seems to me that there are two different kinds of things we study—things where there are answers and things where there aren't any!*
- *I like that there are many ways to solve or code a program. Since the material tends to be subjective, it helps to see the reasoning of another person sometimes.*
- *If there are no right answers, I think my ideas are as good as anyone's and I do not see why I got a “C” on my midterm.*

## What they are telling you:



Students begin to realize that the instructor will not provide all the answers to their questions. As they seek to discover the solution on their own, they struggle with the realization that there is generally more than one solution to a complex problem. Since there are many ways to look at an issue, they conclude that their view is as good as anybody else's.

# Relativism

Students come to view knowledge as contextual and relative in nature. Right and wrong answers exist within a specific context and are judged by how well one is able to construct a well-reasoned point of view.

**! This is the stage of ethical and intellectual development we would like most students to move towards during the course of their education.**

## What it looks like:



- *I love our class discussions because they help me figure out what I think about things.*
- *I always thought I knew what I thought about politics, but after hearing others and thinking more, I realize that there are so many ways of looking at the same thing!*

## What they are telling you:



Students realize that there is more than one solution to a dilemma and that the solutions must be examined based on evidence and sound thought processes. Students also become aware of the strengths and weaknesses in their lines of reasoning. They expect instructors to help them see alternatives more clearly. When exploring multiple theories or answers to a problem, they begin thinking, **“What principles underlie each of them? Which is the most efficient?”**

*The search for truth is more precious than possession.*

~ Albert Einstein

# Commitment

Students are able to test out and evaluate various alternatives and commit to the most well-reasoned theory, solution, or interpretation. The commitment leads to the development of a personalized set of values, lifestyle, and identity.

## What it looks like:



- *As the president of student council I have chosen to embrace and promote the value of diversity. As a leader I have the extraordinary opportunity and responsibility to maintain a climate that affirms diversity of persons and diversity of views.*
- *For purposes of my dissertation I have chosen to pursue the topic of peace in the Middle East and the use of dialogue as a means to promote peace. I believe that the creation of a peaceful environment in which to function is vital to survival. The creation of a means to create that peace through dialogue has applications beyond the Middle East and perhaps will help create more peaceful social structures and organizations in which people can flourish.*

## What they are telling you:



Students are capable of integrating personal experience with the complex set of skills and knowledge they have mastered. Students commit to a choice or viewpoint and become aware of the consequences of that commitment. They also realize that commitment is an ongoing, unfolding, evolving activity. They may seek instructors' guidance to evaluate different choices they are about to make and the implications of their decision to adhere to a particular viewpoint.

***One of the big misapprehensions about math that we perpetrate in our classrooms is that the teacher always seems to know the answer to any problem that is discussed. This gives students the idea that there is a book somewhere with all the right answers to all of the interesting questions, and that teachers know those answers, and if one could get hold of the book, one would have everything settled. That's so unlike the true nature of math.***

**~ Leon Henkin, Professor of Mathematics at UC Berkeley**

**! The journey through these stages is not necessarily linear, and sometimes students move back and forth between stages.**

## **Supporting students' intellectual and ethical reasoning**

Part of our role as instructors is not only to provide students with the accumulated knowledge in a given field, but also to introduce them to the frontiers of research, showing them that there exist conflicting opinions and theories—and, sometimes, no theories at all, but merely questions that have yet to be answered. As you work to help students develop their powers of intellectual and ethical reasoning, remember to:

- **Create a supportive yet challenging learning environment**
- **Listen to the kinds of questions your students are asking; this will help you identify where they are in terms of their reasoning**
- **Develop assignments and experiences that cause the students to stretch their current level of thinking, but that do not go too far above their heads**
- **Stay flexible and open to your students**

At each stage of development, students have particular instructional needs. Those in the early stages require considerable structure, along with opportunities for experiential learning. Those in the later stages also value experiential learning, but they do not need as much structure in order to make full use of new concepts presented in the course. As you create an environment to help move students forward in their reasoning, the following suggestions from veteran seminar instructors may be useful.

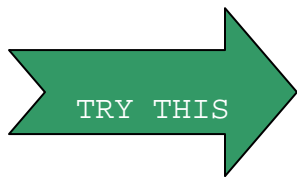
### **Helping Students Move from Dualism → Multiplicity**



- Draw out students' own views and experiences; reinforce their legitimate arguments.
- Use structured, small-group discussions to create space for students to explore their own ideas and the ideas of others'.
- Include your own ideas and responses as feedback on their assignments.
- Consider role plays or debates to help students "try on" different points of view.
- Focus on helping students develop strategies to pick out major concepts or the most relevant information in a section of text. This will aid them in learning *how* to learn, as opposed to merely learning answers.

- Create situations where students can experience 2–3 conflicting views.
- When students reject a viewpoint, encourage them to be **concrete** about their **basis for rejection**.
- If students appeal to authority or overgeneralize, ask them about instances when the authority’s opinion might be challenged or the generalization might not hold.
- Reinforce the notion that authorities can and do disagree.
- Invite students to identify and evaluate their own assumptions.
- After evidence and rational arguments are presented, reinforce the possibility of changing one’s mind.

**You might try saying things like:**



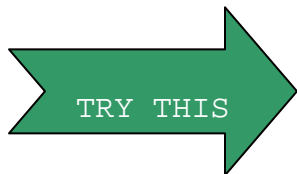
- *Are there other ways to explain that?*
- *What view does the author take? What other position could s/he have taken?*
- *Who has a different perspective?*
- *Changing your mind is not a sign of weakness.*

## Helping Students Move from Multiplicity → Relativism



- Let students take responsibility for structuring their own learning. This may involve some negotiation on syllabus, course content, and due dates; the creation of individual contracts; and use of the teacher as a resource rather than as an authority figure.
- Create assignments or discussions that invite students to evaluate the relative merits of an argument via non-absolute or imaginative criteria.
- Use readings, guest speakers, and field trips to introduce paradoxes or conflicting themes and ideas.
- Explicitly identify bases for disagreements among authorities and their different viewpoints.
- Invite students to continually identify and evaluate their own assumptions.

**You might try saying things like:**



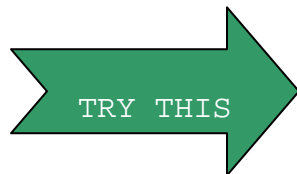
- *Under what circumstances would you change your mind?*
- *What have other people thought about this topic throughout history?*
- *When have you changed your mind about something and why?*
- *How have your life experiences influenced your views?*

## Helping Students Move from Relativism → Commitment



- Encourage students to take responsibility for structuring their own learning experiences.
- Design situations that invite students to give alternative new ways of looking at complex problems.
- Have students encounter several views and take a reasoned stand.
- Reinforce that commitments can be—and usually are—reassessed and changed.

You might try saying things like:



- *If you choose that career path, what will your life look like?*
- *How can you link that theory with the others we have discussed?*
- *What do you want to research and why?*



### **SPECIAL TOOLBOX:** **Using Yourself as a Model**

Students are very interested in how instructors create meaning in their own lives, whether professionally or personally. The seminar presents an opportunity for you to model how you approach meaning-making for yourself. Of course, instructors have different comfort levels, and it will be up to you to decide what is and is not appropriate to divulge to students. Here are some possibilities:

- **Share personal experiences from your life, including the choices you made and the consequences of those choices.**
- **Discuss topics such as choosing a career or balancing family and work life where you have had to make difficult decisions.**
- **Use real-life examples from other individuals you personally know.**

## ! TIP TO SEMINAR LEADERS<sup>4</sup>

While it is your role to guide the students to think and reason at an increasingly higher level of complexity, it is helpful to keep in mind that the path that leads to a higher level of intellectual and ethical development in science and mathematics-based seminars may differ from that in humanities-based seminars. For example, in an English seminar, students may experience little restriction as to how they arrive at the true meaning of a Shakespeare play and commit to their viewpoints. In a science-based seminar, however, things might be slightly different. In mathematics, one proceeds from a set of axioms to facts that are proved beyond dispute. As a science instructor, you need to help your students understand that in the scientific arena there are some governing laws so well verified by experiment over the centuries that it is not fruitful to question them. One might say that these areas are “*non-negotiable*.” Two plus two will always equal four, and the Earth is not flat. The “*negotiable*” areas, on the other hand, are open-ended questions subject to multiple interpretations. The amount of energy in a barrel of oil is fixed by the laws of thermodynamics, but the social consequences of burning that oil are debatable. While students need to be reminded that scientific laws are constantly put to the test as new groundbreaking scientific discoveries emerge, it is important, nonetheless, that during the seminar discussions they understand the inherent differences between these two domains. In any seminar, be it in sciences or humanities, students need to learn how to distinguish the matter of opinion from the matter of fact if a true intellectual and ethical development is to occur.



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<sup>4</sup> Courtesy of Professor Philip Taylor, Physics Department, Case Western Reserve University.

## In Summary<sup>5</sup>...

	<b>DUALISM</b>	<b>MULTIPLICITY</b>	<b>RELATIVISM</b>	<b>COMMITMENT</b>
<b>View of KNOWLEDGE</b>	All knowledge is known. There are clear right and wrong answers for everything.	Most knowledge is known. Some knowledge domains are “fuzzy.”	All knowledge is “contextual.” Right and wrong answers exist within a specific context and can be judged by sound thought processes.	Knowledge is an on-going, creative process. It requires courage and acceptance of human limits, including the limits of reason.
<b>View of the role of INSTRUCTOR</b>	Source of knowledge. Good instructor equals absolute authority and knower of truth.	Source of right way to find knowledge, of how to learn. Modeling the “way they want us to think.”	Source of expertise. Role of expert within the framework or “rules of adequacy” and within context. Authority equals expertise.	Resource for clarification of thinking process and creation of well-reasoned arguments.
<b>View of the role of the STUDENT</b>	To receive information and to demonstrate having learned right answers.	To learn how to learn, work hard, and learn to think independently.	To exercise judgment, to be able to shift from one context to another, and to apply “rules of adequacy” to concepts and perspectives.	To commit to a solution or argument and understand the implications of and be responsible for that choice.
<b>View of PEERS in the learning process</b>	Peers are not a legitimate source of knowledge.	Peers may be seen as a legitimate source of knowledge but may not be listened to, as everyone’s opinion is just as good as everyone else’s.	Peers are a legitimate source of knowledge if they use the rule of good thinking and contextual understanding of different perspectives.	Peers are a legitimate source of knowledge.
<b>View of EVALUATION</b>	Directly related to sense of self. Wrong answers = bad person. Evaluation should be clear-cut, because questions and answers should be clear-cut.	Seek fairness in grades, assignment, and amount of work. Value independent thinking. Can also play evaluation game of “give them what they want.”	View evaluation of work as separate from evaluation of the self. Ability to accept evaluation as opportunity for improvement and new learning.	Evaluation is a natural part of any learning process. Openness to self-examination.
<b>Sources of SUPPORT</b>	High degree of structure and experiential learning. Safe learning environment where people are treated with respect and care.	Still need structure as they gradually begin to deal with higher level of diversity and ambiguity. Peers are valuable source of support. Toward the end of this stage, they tend to balk at structure and seek independence.	Enjoy the freedom and all the options available to them. Feel comfortable in moving across contexts and have acquired skills to do so. Comfortable seeking help of authority or expert.	Enjoy greater emotional and intellectual autonomy. Creation of a personal atmosphere to help them continue to develop and pursue the path they have committed to.
<b>Sources of CHALLENGE</b>	Ambiguity, uncertainty, and multiple perspectives.	View that uncertainty is not a temporary matter. Evaluation is a source of concern. Difficulty in using evidence to support opinion.	How to choose between equally good alternatives. Feel challenged by good modeling of scholarship that is still beyond their reach.	Balancing internal and external tensions in life situations. Narrowness vs. breadth, self-centered vs. other-centered, action vs. contemplation.

<sup>5</sup> Adapted from: Cornfeld, J. L and Knefelkamp, L. L. Copyright © 1979 by L. Lee Knefelkamp.

# ?? Questions for Reflection

## ?? Questions for Reflection

### ***Questions for personal reflection:***

- In my own experiences, what has helped me appreciate other points of view?
- How do I react to ideas that are counter to my own belief system?
- How can I bring my opinions and values into the classroom? How can I make space for others to disagree with me?

### ***Questions for reflection with colleagues:***

- How have you helped your students disagree constructively in class?
- What exercises have helped your students appreciate other points of view?