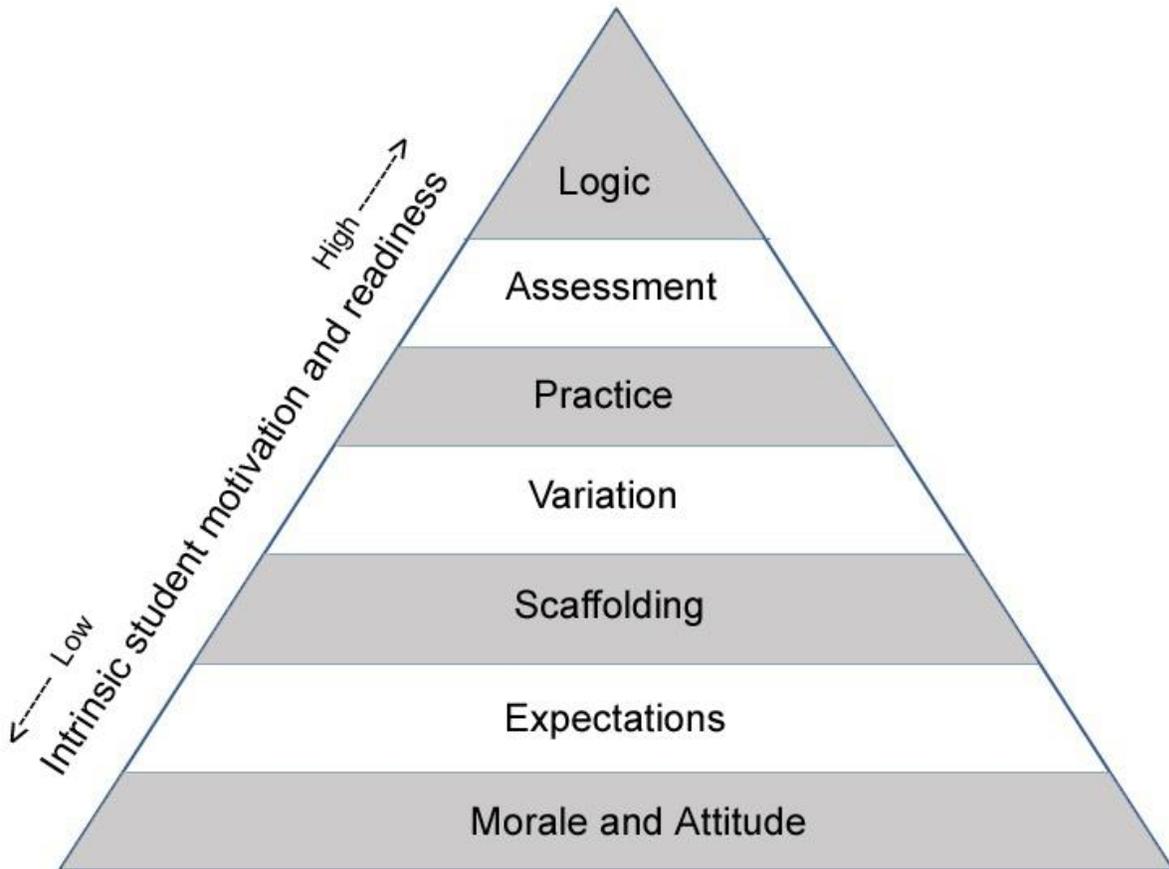


The Teaching Pyramid

Model by Kevin Yee (2012)

On what should a college teacher expend effort, energy, and attention?



Morale and attitude – Instill motivation in your students. Introduce the content in a way that generates excitement. Not always the same as “community”; it’s possible to work individually and still have good morale.

Expectations – Convey the right demeanor in your interactions and classroom management to establish early that you are focused, business-like, have high expectations for their performance, and this is not customer service... but balance it all with friendliness. Provide early, often, authentic assessment.

Scaffolding – Customize introduction and contextualization of the material for THIS audience. In lectures, consider Krashen’s “i+1” input hypothesis (give them just ONE step higher than where they are now). When designing curricula, properly align objectives with the delivery of content, opportunities for practice, and assessment. Work from familiar to new.

Variation – Provide variety in your delivery and in student activities to maintain optimal engagement. Switch between open and closed activities, especially when energy is low.

Practice – Teaching can be said to be content plus practice plus assessment, but leaving the practice up to the student may be insufficient. Spend time designing ways for students to practice the learning.

Assessment – We know we need to hold students accountable so they have extrinsic motivations for learning, so prioritize assessment (as something you focus on and constantly refine) over even content.

Logic – The “content” (argument) portion of your presentation (lectures, readings or videos) may not need to be the major focus of your preparation. If all other elements are in place, content “takes care of itself” since students are properly geared to listen, read, and learn.

Why Don't Students Like School: A Cognitive Scientist Answers Questions About How the Mind Works and What It Means for the Classroom (Hardcover). by [Daniel T. Willingham](#)
 Jossey-Bass (March 16, 2009). 978-0470279304

Ch.	Cognitive Principle	Req. Knowledge about Students	Classroom Implication
1	People are naturally curious, but they are not naturally good thinkers.	What is just beyond what my students know and can do?	Think of to-be-learned material as <i>answers</i> , and take the time necessary to explain to students the questions.
2	Factual knowledge precedes skill.	What do my students know?	It is not possible to think well on a topic in the absence of factual knowledge about the topic.
3	Memory is the residue of thought.	What will students think during this lesson?	The best barometer for every lesson plan is "What will it make the students think of?"
4	We understand new things in the context of things we already know.	What do students already know that will be a toehold on understanding the new material?	Always make deep knowledge your goal, spoken and unspoken, but recognize that shallow knowledge will come first.
5	Proficiency requires practice.	How can I get students to practice without boredom?	Think carefully about which material students need at their fingertips, and practice it over time.
6	Cognition is fundamentally different early and late in training.	What is the difference between my students and an expert?	Strive for deep understanding in your students, not the creation of new knowledge.
7	Children are more alike than different in terms of learning.	Knowledge of students' learning styles is not necessary.	Think of lesson content, not student differences, driving decisions about how to teach.
8	Intelligence can be changed through sustained hard work.	What do my students believe about intelligence?	Always talk about successes and failures in terms of effort, not ability.
9	Teaching, like any complex cognitive skill, must be practiced to be improved.	What aspects of my teaching work well for my students, and what parts need improvement?	Improvement requires more than experience; it also requires conscious effort and feedback.

Ambrose, S., Bridges, M., DiPietro, M., Lovett, M., Norman, M. (2010). *How learning works: 7 research-based principles for smart teaching*. Wiley.

Chapter 3: What Factors Motivate Students to Learn?

Strategies to Establish Value

1. Connect the material to students' interests.
2. Provide authentic, real-world tasks.
3. Show relevance to students' current academic lives.
4. Demonstrate the relevance of higher-level skills to students' future professional lives.
5. Identify and reward what you value.
6. Show your own passion and enthusiasm for the discipline.

Strategies That Help Students Build Positive Expectancies

7. Ensure alignment of objectives, assessments, and instructional strategies.
8. Identify an appropriate level of challenge.
9. Create assignments that provide the appropriate level of challenge.
10. Provide early success opportunities.
11. Articulate your expectations.
12. Provide rubrics.
13. Provide targeted feedback.
14. Be fair.
15. Educate students about the ways we explain success and failure.
16. Describe effective study strategies.

Strategies That Address Value and Expectancies

17. Provide flexibility and control.
18. Give students an opportunity to reflect.

Davis, B. (2001). Tools for Teaching.
Chapters 21 and 23

1. Capitalize on students' existing needs
2. Ask students to analyze what makes their classes more or less motivating (instructor enthusiasm, relevance, organization, difficulty, student involvement, variety, rapport, concrete examples)
3. Hold high but realistic expectations for your students
4. Help students set achievable goals for themselves
5. Tell students what they need to do to succeed in your course
6. Strengthen students' self-motivation
7. Be enthusiastic about your subject
8. Work from students' strengths and interests
9. Increase the difficulty of the material as the semester progresses
10. Vary your teaching methods - use interactive techniques
11. Emphasize mastery and learning rather than grades
12. Design tests that encourage the kind of learning you want students to achieve (ie, if you test on facts, they will only study facts)
13. Give prompt feedback
14. Reward success
15. Introduce students to good work done by their peers
16. Assign study questions
17. Ask exam questions on readings that were not discussed
18. Become familiar with models of intellectual development.
19. Plan activities that will help students to move to higher levels of cognitive development (appreciate, evaluate different points of view, make judgments)
20. Create assignments that entail the development of alternative perspectives
21. Include real-world experiences in your courses
22. Allow for the fact that students learn, think, and process information in different ways
23. Let students know they are expected to learn
24. Present material in ways that are meaningful to students
25. Limit the amount of information you present
26. Stress concepts, not facts
27. Provide opportunities for active learning
28. Present material in class in ways that encourage students to take notes
29. Teach students how to select effective learning strategies

1. Recognize students' needs for self-determination and autonomy; provide opportunities for choice and control
2. Foster intrinsic motivation: arouse curiosity, provide challenge
3. Provide extrinsic rewards that contain feedback and focus on improvement
4. Make the value of your course explicit. Help them see why learning this matters
5. Create conditions that enable students to expect to succeed.
6. Promote a mastery orientation rather than on relative performance to others
7. Help students value the application of effort and learning strategies, and communicate your belief in their capability
8. Provide opportunities for students to meet social goals in ways that are compatible with academic goals – group work or interactive lectures

COGNITIVE DEVELOPMENT OF COLLEGE STUDENTS

I. Dualism (Perry 1981), Received Knowledge (Belenky *et al.* 1986), Absolute Knowing (Baxter Magolda 1992)

A. Perception of Knowledge:

Knowledge is outside the self.

Knowledge is quantitative, a collection of facts to be acquired from Authorities.

Knowledge is absolute—there are Right Answers, there is Truth.

True Authorities have the Right Answers and they are all-knowing.

Some Authorities are Wrong; they are frauds.

Some things aren't known yet, but Authorities are working on them to get the Truth.

B. Student Attitudes:

I must listen and learn from Authorities: teachers, textbooks, experts.

If I put in honest effort, read everything, and do the work, I'll be okay.

Grades should be based on amount of "rightness" and amount of effort.

Authorities should just tell us what they want, what is important amongst the welter of information.

Writers should say what they mean.

Something that is partly wrong is worthless.

Facts are true; opinions don't count.

C. Patterns Related To, But Not Dictated By, Gender (Baxter Magolda 1992):

1. Receiving knowledge: Focus on listening and receiving knowledge. Students may respond to Authorities with silence if previous authorities in their lives have demanded silence and obedience. Words are weapons, Authorities are unpredictable. (Authorities = They)

2. Mastering knowledge: Focus on talking, assertion of unquestioned beliefs, mastery of material. Tendency to identify with Authority (Authority = we)

II. Multiplicity (Perry 1981), Subjective Knowing (Belenky *et al.* 1986), Transitional Knowing (Baxter Magolda 1992)

A. Perception of Knowledge:

Knowledge is the property of everyone, not just Authorities.

No one can know anything for certain.

Authorities don't know everything and when that happens, everyone has a right to their own opinion.

There's no pattern or system to knowledge.

B. Student Attitudes:

Rejection of Authorities.

I have my opinion and you have your opinion. They're equally valid. There's no way to judge between them.

They have no right to grade us on our opinions.

C. Patterns Related To, But Not Dictated By, Gender (Baxter Magolda 1992):

1. Interpersonal approach: Collects ideas from others (peers, teachers); resolves knowledge conflicts by personal judgment. Knowledge is personal and private: "It's just my opinion."

"I just know" without knowing how they know.

Many women have been abused by Authorities in their lives and this experience can cloud their abilities to deal with authority openly.

Women may distrust logic, abstraction, and analysis as domains of men.

2. Impersonal approach: Exchanges views through debate; resolves knowledge by logic, research.

Men more vocal, with implied assumption that they will someday become Authorities.

"I have a right to my opinion."

Men may be more belligerent towards Authorities and dismissive of the opinions of others.

III. Relativism (Perry 1981), Procedural Knowledge (Belenky *et al.* 1986), Independent Knowing (Baxter Magolda 1992)

A. Perception of Knowledge:

Knowledge comes from within.

Knowledge is not "what" (facts, right answers) but "how" (ways of thinking, supporting positions with data and reasoning).

All thinking is relative, but some ways of thinking are more valid due to the quality of the thinking.

Knowledge is a process.

Some truths are truer than others; some intuition is faulty.

B. Student Attitudes:

I can't completely escape uncertainty.

People have legitimate reasons for their differences; they're not just being perverse when they disagree.

I have to be aware of people's (including my own) assumptions and biases.

Authorities have more experience and have thought about these things before; they don't have the Truth, but they are likely to have more valid reasoning than non-experts.

I know that if I don't know the answer instantly or instinctively, I can think out the problem and come up with a reasonable solution.

C. Patterns Related To, But Not Dictated By, Gender (Baxter Magolda 1992):

1. Interindividual approach: Women are more likely to employ "connected knowing" (Belenky *et al.*'s term): learning how to understand other's positions and how they arrived at their arguments.

Relationship-oriented thinking that emphasizes sharing of thinking.

2. Individual approach: Men are more likely to employ "separate knowing"(Belenky *et al.*'s term): learning how to construct arguments that meet Authorities' criteria for good arguments. Rules-oriented thinking that emphasizes independent thinking.

IV. Commitment (Perry 1981), Constructed Knowledge (Belenky *et al.* 1986), Contextual Knowing (Baxter Magolda 1992)

Realization that in all facets of life—jobs, school, personal attachments, life decisions— we must make decisions in the face of uncertainty. Doubts and questions are normal.

Willingness to make choices and commitments through a process of reasoning based on judgment and values

Life is a continual process of re-examining values, recommitting to decisions, and finding the courage to act on our knowledge.

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