

DAVE'S ES.033 ANSWERS TO THE 13 QUESTIONS POSED (HERE POORLY PARAPHRASED) IN *WHAT THE BEST COLLEGE TEACHERS DO*

1. What skills, abilities, and qualities will this develop? How will I encourage my students to develop these?

I want my students to be able to solve open-ended, interdisciplinary problems (oeips , which include writing and oral presentation tasks).

I want my students to become intellectuals—rational inhabitants of the world of ideas. Skills: planning, rhetorical, textual, and lexical, skills required to solve oeips and to become an intellectual.

by providing a sandbox—a safe, playful environment in which to experiment
by providing appropriate projects—fun, relevant to the students, permitting first year students to explore engineering, accessible to students' technical ability, hands-on, active, constructive, interactive; the resulting prototypes are tactile, visible embodiments of the students' ideas; the expertise derived from the design projects gives students a unique authority from which to write.

by providing processes & guidance therein

by giving students the opportunity to practice the skills and engage in the processes

by providing guidance

by providing time for reflection and structuring this reflection

2. What reasoning abilities must my students develop for this development to occur?

ends-means analysis—the ability to make progress and achieve a goal by recursively comparing the current state of affairs with the intended state of affairs and what will best move the current state closer to the intended state

quality—the ability to focus an attention to detail across many (fractal) levels of complexity

3. How will the students' world view change and how can I assist them to make this change?

Students will move to a position of empowerment as authors and problem solvers.

Students will be comfortable developing and promoting their ideas through formal and informal writing and oral presentation.

Students will view collaboration as a phenomenon that they understand and control.

Students will view communication as a purposeful, fluid, socially constructed phenomenon rather than a rigid, Kafkaesque, rule-based system.

Students will recognize that the development and communication of ideas requires more drafts and drafting at a coarser level than previously imagined.

Students will find that many problems do not have answers in the back of the book.

These changes are effected as per the answers to question 1

4. What information will students need to make these developments? How should students obtain this info?

an introduction to the processes
assorted content regarding rhetoric & text

this is obtained from interactive lecture, reading, and guidance from peers, instructors, and other interested parties.

5. How will I help students understand and answer questions?

one question at a time, in class, out of class in person, out of class by e-mail.

by answering "I don't know; you tell me."

by creating an environment in which the students answer each other's questions

by creating an environment in which the answers refine themselves over time

6. How will I make students confront their solipsisms?

By not answering the questions that can only be answered by the student ("I don't know; you tell me.")

By posing open-ended, interdisciplinary problems in a legitimate context.

By emphasizing process.

By asking students to collaborate in their construction.

7. How will I address the mismatch between student expectations and reality?

Patience, iteration, revision, movement from less complex to more complex assignments.

By alerting students when expectation and reality may soon part ways and require a temporary suspension of disbelief.

8. How will I help students learn and to assess their own learning?

See 1, 5, 6, & 7.

The pre & post-semester CI Self Evaluation & reflection exercises guide students to identify learning objectives and track progress

9. How will I orchestrate formative and summative assessments?

A range of formative assessments are built into the subject as feedback to written work, oral presentations, and team collaboration—from the subtle response of an audience to progress reviews.

Summative assessment is based primarily on completion of the assignments—based on the premise that these assignments, completed with due diligence, impart the skills, abilities, and qualities listed in question 1.

Time permitting, if student work is not satisfactory, it will be noted as such and revised with guidance.

10. How will I keep students involved?

Collaboration & collegiality.

Design & build of things

These elements build confidence, pride, and expertise—which in turn motivate continued involvement in the (perhaps) less alluring tasks required in the communication tasks.

11. How will I define the professional and intellectual standards by which students are assessed?

These standards are defined in part by the canon of scholarly work and the utilitarian necessities of the workplace. And in part, they are constructed by the students themselves as they become experts in their fields and contribute to academia and industry.

12. How will we understand progress and quality?

Dave once learned that quality is attention to detail (from Buck Tilton, in a wilderness EMT class in the mid 1990s). Dave notes that this detail is fractal; it must be attended to over a spectrum of scales. Dave thinks that progress might be understood in terms of means-ends analysis, but that objectives have an uncanny tendency to change. And Dave suspects that progress and quality are social constructs that students will interpret and internalize via a long term annealing process. Results may vary.

13. How will I create a safe, critical, challenging, & inspiring learning environment?

See answers to questions 1-12.