

Creating Wicked Students

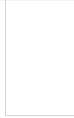
WHY WE SHOULD; HOW WE CAN

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A man walks into a
bar . . .



Louise is going home . . .



Meanwhile, in a
not-so-quiet
neighborhood in
Charlottesville, Virginia . . .

What do all of these have in common?

- ▶ The obvious logics don't make sense
- ▶ They require lateral thinking, indirect approaches, creativity

What DON'T they have in common?

- ▶ The first two are riddles
- ▶ The third is real life

What's my point?

As often as not, these are the kinds of problems our students will face in their jobs and lives.

Because . . .

- ▶ Students don't always go into the fields they study
- ▶ Or get the jobs they want
- ▶ Or stay in the fields they start in
- ▶ Or stay in the positions they start in

Because . . .

The workplace is changing

- ▶ New technologies
- ▶ New markets/new clientele
- ▶ New regulations
- ▶ New challenges

And most importantly . . .

- ▶ Engaged citizens are barraged by data/information/opinions/complex problems daily . . .
- ▶ . . . and must find ways to sift through this information to find solutions that extend beyond any single lesson they've encountered in any single class.

Wicked Problems

- ▶ Dynamics/parameters are constantly changing
- ▶ Causality is difficult to determine
- ▶ Resist easy resolution
- ▶ Data is incomplete
- ▶ Data is contradictory
- ▶ The problems themselves are difficult to recognize

Wicked Problems

- ▶ Zika virus
- ▶ Crime
- ▶ Education
- ▶ ISIS
- ▶ Fake News

Question:

What does it take to live in a wicked world?

Poor Ignatius . . .

- ▶ Mind
- ▶ Body
- ▶ Spirit
- ▶ Emotions
- ▶ Creativity
- ▶ ????

Perhaps instead:

- ▶ Not the line workers . . .
- ▶ Not the line managers . . .
- ▶ But . . .

Wicked Students

- ▶ Open to new challenges
- ▶ Deliberate and thoughtful
- ▶ Able to draw from multiple areas
- ▶ Able to adapt ideas/technologies to new settings
- ▶ Able to ask the right questions
- ▶ Not afraid to fail/able to try again

What does it take to create
wicked students?

The traditional answer:

Content knowledge

+

Skills

What does it take to create
wicked students?

My answer:

Content knowledge

+

Skills

+

A sense of our ability to engage
in the meaningful questions of
the day

What does it take to create wicked students?

My answer:

Content knowledge

+

Skills

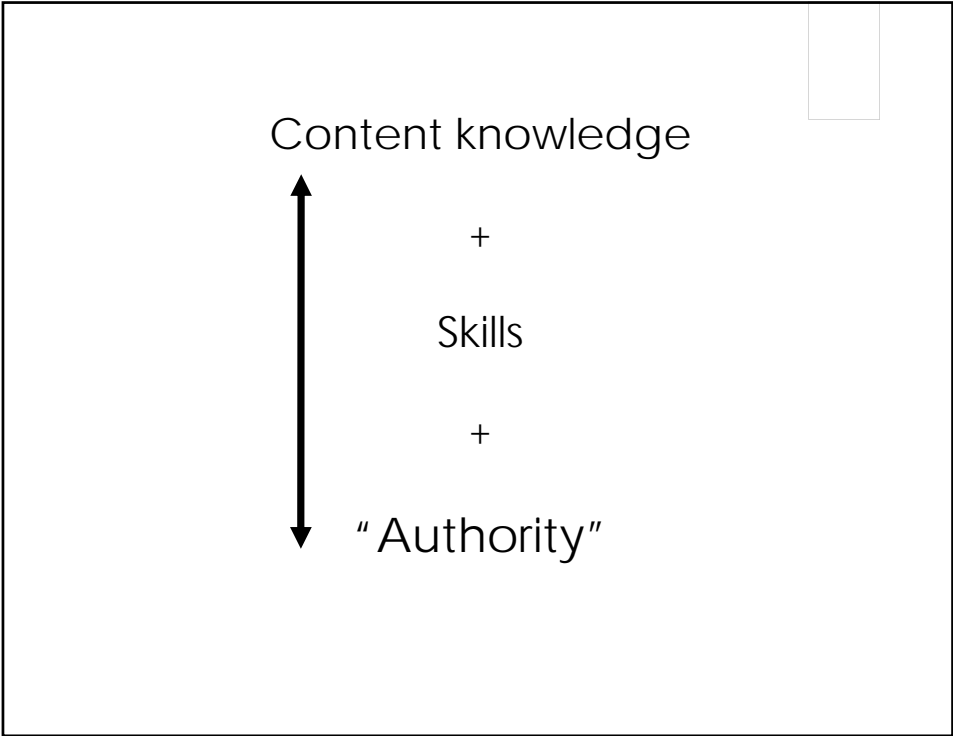
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“Authority”

What I **don't** mean by “Authority”:

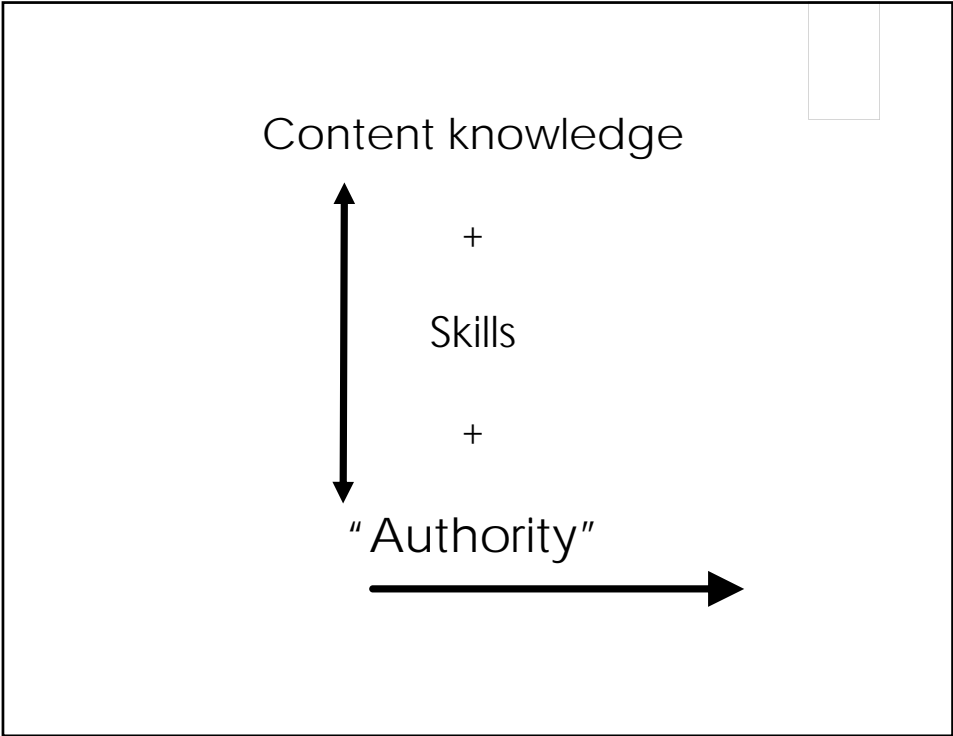
- ▶ Bossiness
- ▶ Confidence
- ▶ Arrogance
- ▶ Efficacy

“Authority” in this context draws from experience and learning—it must be earned.



Further:

Authority relates to " authorship":
the construction of new realities
and understandings of how the
world works/could work.



A brief pause . . .

- ▶ Questions?
- ▶ Clarifications?
- ▶ Ideas?

Now . . .

How do we create
wicked
students?

High Impact Practices

George Kuh

- ▶ First-Year Seminars
- ▶ Study Abroad
- ▶ Undergraduate Research
- ▶ Collaborative Assignments
- ▶ Internships
- ▶ Capstones
- ▶ Community-Based Learning

But what about in
"ordinary" classes?

Randy Bass:

HIPs work because, among other things,
they:

- ▶ Offer the opportunity to integrate, synthesize,
and make meaning
- ▶ They ask students to make judgments in the
midst of uncertainty

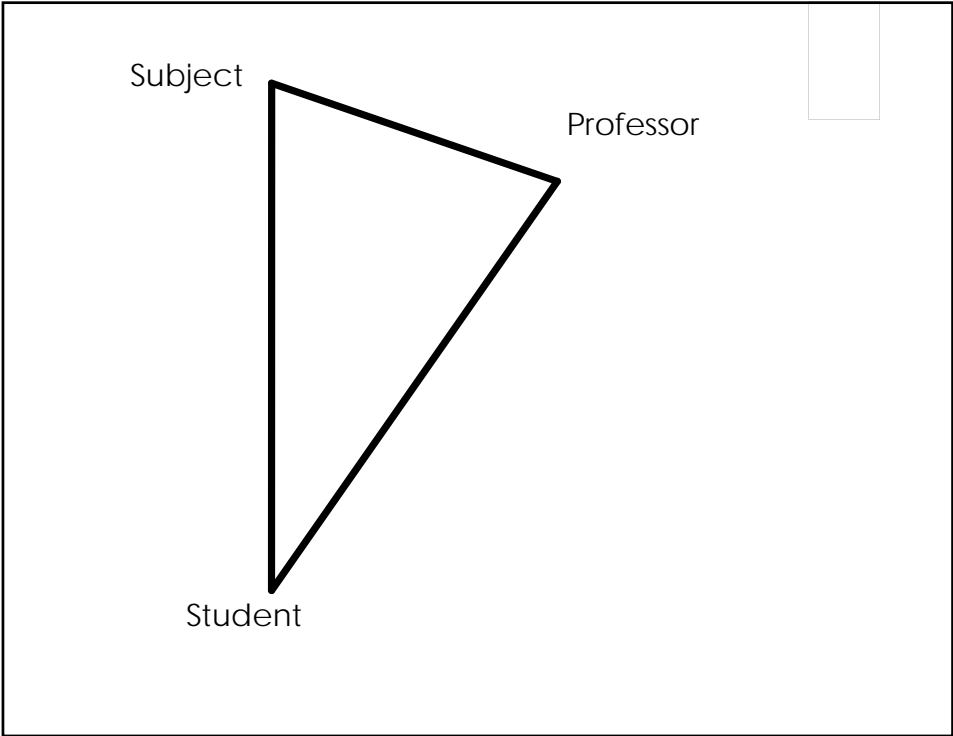
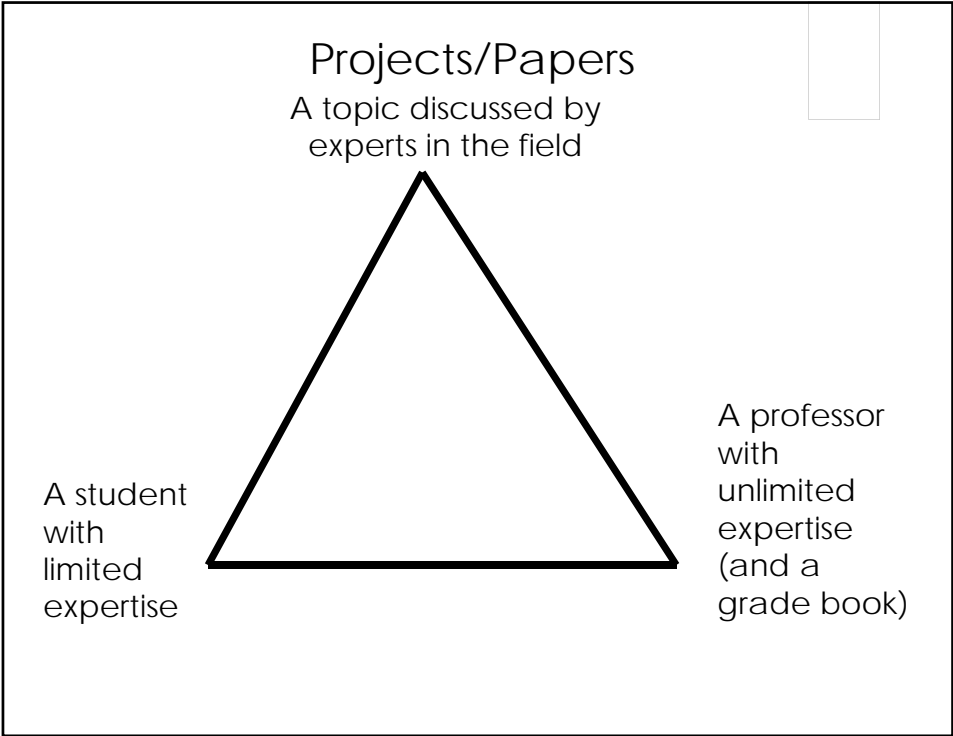
Okay then . . .

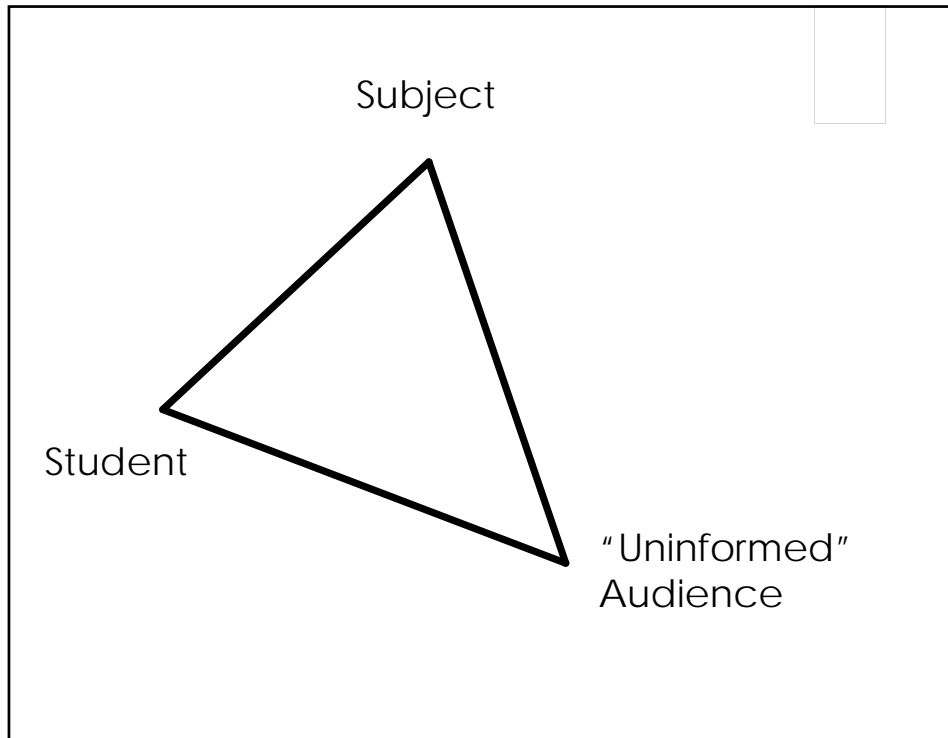
Whatever we develop in our classes should ask students to:

- ▶ Integrate
- ▶ Synthesize
- ▶ Make meaning
- ▶ Make judgements/draw conclusions
- ▶ Particularly in contexts of uncertainty

Three Areas

- ▶ Projects/Papers
- ▶ Exams
- ▶ Day-to-day pedagogies





Biology : "Emerging Infectious Diseases" (K. Curran)

Create an informational pamphlet on an emerging infectious disease, pitched to PTO parents. Include causative agent and vector, threat to local population, and possible measures to reduce risk.

Marine Biology:

You are on an environmental policy board looking at the issue of land reclamation in Victoria Harbor. You are the sole marine biologist on the board. Your job is to make a recommendation with regard to the impact on marine life. What potential hazards do you see? How might you explain those hazards in a carefully researched way?

Poetry (Literature)

Your major faculty is revising its curriculum. Provide a rationale for the inclusion of a literature course in this curriculum, citing and carefully analyzing three particular poems.

And what about. . . ?

- ▶ Posters
 - ▶ Possible audiences?
 - ▶ Possible purposes?
- ▶ Oral Presentations
 - ▶ Possible audiences?
 - ▶ Possible purposes?
- ▶ Quantitative Projects
 - ▶ Possible audiences?
 - ▶ Possible purposes?
- ▶ Websites
 - ▶ Possible audiences?
 - ▶ Possible purposes?

Or Blended assignments . . .

First Year Seminar on Travel Literature:

- ▶ In groups, develop a 3-7 minute YouTube video for students about to study abroad, providing tips for a successful year.
 - ▶ The film must demonstrate complexity of thought about international and intercultural experiences and their relation to learning and personal development
 - ▶ Must include list of sources

Blended assignments (prt. 2)

- ▶ Individually, write a carefully researched rationale.
This should include:
 - ▶ A clear thesis that unifies all of the tips you include in your film
 - ▶ An argument for EACH of the tips you included.
What research and/or class reading caused you to design this tip?
 - ▶ A close and careful analysis of both your in-class and your researched sources
 - ▶ A bibliography

Exams

- ▶ Certainly it's essential that our exams test both content knowledge and skill levels . . .
- ▶ But isn't there also room to test integration, synthesis, and meaning making, in contexts of uncertainty?
- ▶ . . . particularly as these more challenging tasks carry within them basic knowledge and skills?

Exams:

Humanities course in literature:

- ▶ Here's a poem you've never seen before; analyzing both style and content, make an argument for which poet most likely authored this work.

- ▶ Ezra Pound and William Wordsworth are in a bar getting drunk and talking about poetry. By the end of the night would they: a) end up arguing with each other to the point of physical violence? Or b) end up in an eternal bro-mance? Base your answer on a careful analysis of both their stated views on poetry *and* the poetry itself.

Exams:

Biology course on physiology:

- ▶ Argue for or against the feasibility of a Pegasus, drawing on our work this semester.

Exams:

Course in evolutionary psychology:

- ▶ ?????? Something related to . . . digital natives?

Day-to-Day Pedagogies

Consider:

- ▶ The kinds of authoritative thinking/tasks we're asking students to do are complex, challenging, and counter to many of their educational experiences thus far . . .
- ▶ Further, it's problematic to engage high-stakes grading without first allowing students to practice the kinds of skills and ways of thinking we value.

That in mind, students need to practice authoritative tasks *throughout* a course . . .

- ▶ In increasingly complex ways
- ▶ In ungraded, minimally graded, or proportionally graded contexts

- ▶ Early data analyses: minimal noise, one (or two) clear conclusions
- ▶ Middle data sets: moderate noise, two or three possible conclusions
- ▶ Final data sets: heavy noise, multiple possible conclusions that must be constructed by students
- ▶ Proportionally Graded

Example:
Geo-
Science

- ▶ Four "mini-essays" written in groups
- ▶ Answer a question about the day's reading posed by a group member
- ▶ Each mini-essay worth 5% of the final grade
- ▶ End of semester essay worth 25% of final grade
- ▶ Minimally Graded

Example:
Literature

- ▶ 10 lab reports throughout the semester
- ▶ The science is graded; the writing is responded to in a limited way, but remains ungraded
- ▶ At midterm and end of semester, students revise and turn in two lab reports, along with a rationale
- ▶ "Ungraded"

Example: Writing- intensive Physics

Final thoughts?
Questions?

Thank you for your patience!

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