Reflective Writing and Course Stories in Economics Teaching

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Problems

Cognitive challenges of effective teaching* & concerns about belonging & relevance

*I didn't know this was what we could call it at the time

Problem(s)

- 1. Students worried about "not being able to see the connections"
- 2. Students not engaging with metacognitive practices
- 3. Student mindset in the economic classroom
- Student fear and mistrust
- 5. Student misconceptions
- 6. Students' ineffective learning strategies

See Chew and Cerbin 2021, Goffe 2021, McGoldrick and Allgood 2021

13% of non-URM men and 10% of URM students & women say that the "textbook uses examples that are relatable to my life."

40% of non-URM men and 29% of URM students & women say that the "prof. uses examples that are relatable to my life."

41% of non-URM men and 21% of URM students & women say that "People like me can become economists."

44% of non-URM men and 30% of URM students & women say that "While taking the course, I believed I could learn the material."

Source: Bayer, Bhanot, Bronchetti, and O'Connell, 2020

43% of non-URM men and 28% of URM students & women say that "the prof cared about whether I was learning the material."

What could I do to address these problems?

Plus serendipity

- Two colleagues recommended reflective writing
- Both recommended "Course Stories" and finding other ways to include reflective writing
- Course stories give students the opportunity, at the end of a course, to tell *their story* of the course:
 - the connections they constructed
 - the experiences they had
 - the adversity they overcame
 - the meaning they made



Kevin Shea, Chemistry



Floyd Cheung,
Comp lit & creative writing

What could I do to address these problems?

Plus serendipity

- I also encountered work on "exam wrappers" (Lovett, 2013) and after adopting them, I exchanged emails with Bill Goffe & others c. 2015
- I started to teach Behavioral Econ & asked students to write experiment reports, but not just in a "theoretical way" they needed to explain and reflect on their own behavior
- I also began to work with a student partners in teaching and learning to make my classroom more ethical and caring and to improve belonging (Cook-Sather, Bovill and Felten 2014, Halliday 2019).

"[Education] is that reconstruction or reorganization of experience which adds to the meaning of experience."

John Dewey 1944 [1916]

Gap and contribution

Gap and Contribution

- A lot of work in Econ Ed on "writing" or "reflection papers" is about things in the world
- Task: Connect things in the world to economics
 - Think Bob Frank's economic naturalist tasks
- Issue: Not about you as a person or about your own thinking or struggles or meaning making

Gap and Contribution

- •Strong evidence of reflective writing in STEM (medicine in particular) improving "diagnostic reasoning"
 - Mamede et al 2008, Chamberland et al 2011, Chamberland et al 2015
- •Similar to "diagnosing" a problem in economics and helping to "prescribe" the appropriate economic response

Gap and Contribution

Reflective writing

- helps facilitate meaning making for students
- helps students make connections among disparate ideas and feelings
- helps them to situate themselves as economic decision makers
- helps them feel like they belong as they write their own story & see others' shared stories

Recommendation:

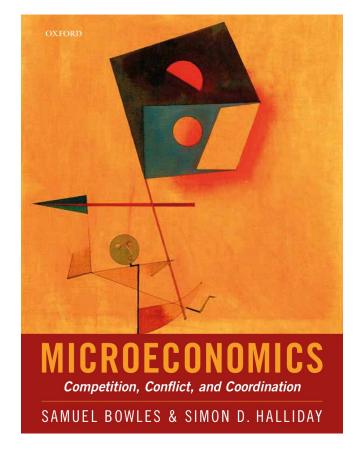
Pair reflective writing with other discipline-specific writing tasks

Setting & methods

Setting

- A liberal arts college
- Different courses:
 - intermediate micro
 - economic development
 - intro micro
 - behavioral economics*
- Classes of 20-55 students





Methods

- •I haven't run experiments
- •I report on the tasks I've adopted based on corresponding literature in other disciplines and transferring it to economics
- Evaluations in other disciplines shows why these tasks work

(my classes were too small for experimental validation anyway)

The tasks

Course stories, experiment reports, and exam wrappers, re-dos, and reflections

Course stories

- Not just a summary
- Personal, memoirish, funny, your own take
- What would you tell an intro student about to take intermediate micro?
- Gain self-knowledge
- Explore your learning
- way to achieve clarity and better understanding



- Note: Certain details would change for other courses.
- The goal of this question is to offer you a chance to reflect on Intermediate Microeconomics before you take things to an even more advanced level with upper-level electives and your seminar.
- One concept that we have been talking about in faculty discussions on teaching is the idea of developing a **course story**.
- The goal is to come up with a description of the course in the form of a story.
- It should be more engaging and big-picture focused than a traditional course description (such as you'd get in the course catalog).
- Now that you have completed Intermediate Microeconomics, what would your course story for Intermediate Microeconomics look like?
- You should write to a target audience of students with some economics background, e.g., Introduction to Microeconomics.

- Your story should not just be a summary of what you have done in the course.
- It should be more like *your* "advertisement" for or a personal reflection on [COURSE CODE] or your "memoir" about Intermediate Microeconomics.
- Be honest. Be creative. Be funny.
- The course story is your opportunity to share your favorite economics metaphors, analogies, and pop culture references.
- Really, I'm interested in your story about how you have grown, what you
 have learned about yourself, and what economics from [COURSE CODE]
 you will take with you into the rest of your undergraduate career and
 beyond. I (INSTRUCTOR NAME) will be reading your course story.

Some guidelines:

The reflective writing in your course story is:

- your response to experiences, opinions, events, or new information in the course
- your response to thoughts and feelings inspired by the course
- a way of thinking to explore your learning in the course
- an opportunity to gain self-knowledge
- a way to achieve clarity and better understanding of what you are learning
- a chance to develop and reinforce writing skills
- a way of making meaning out of what you study

The reflective writing in your course story is **not**:

- just conveying information, instruction, or argument
- pure description, though there may be descriptive elements
- straightforward decision or judgement (e.g., about whether something is right or wrong, good or bad)
- simple problem-solving
- a summary of course notes
- a standard university essay

I shall put some examples of course stories I have received in previous iterations on [Virtual Learning Environment, (VLE)]. You'll hand your course story in via [VLE]'s assignment submission.

From [Introduction to Microeconomics], I had the general basics, and could connect some things that I experienced or learned outside of class to the economic forces behind it, but now, after [Intermediate Microeconomics], I feel as though I have an increased ability to analyze and predict and speculate, not just to understand some of the general forces behind events in the economy, markets, and world as a whole. My "economic outlook" has gotten more ingrained. For instance, when I watched the commercial for the Windows' tablet, where they have the Apple MacBook Air next to it and are comparing— I thought about the reasons for that idea. Windows' was trying to present their product as a substitute for the MacBook Air, or, as the commercial stated, as a 'better' product than the MacBook Air, or, as the to me was that because of the immense economies of scale that Apple has (in terms of the amount of people who use their laptops currently— because laptops aren't something you can just casually throw away and replace, at least for most people), and because of the brand loyalty that they maintain, in order for Windows to hope to be thought of as a substitute to Apple at all, they would have to present themselves as better, because if they were simply equal, not many at all would even consider leaving Apple, even with its higher pricing— because Apple products are a great deal more inelastic than Windows' products.

"My reverie is shattered by a shrill voice from across the room: "IF HE PUTS LAGRANGIANS ON THIS TEST I WILL WALK OUT. DON'T TALK TO ME ABOUT LAGRANGIANS RIGHT NOW." I silently concur, mentally shake my fist at the gods, breathe in deeply, and open my notes. [...] I consider turning my subwoofer on and blasting the twenty-minute webcast on mutual gains and conflict, but decide against it. Instead, I wander over to [Student residence] to meet with my study group. "Literally what is this? What does this mean?" exclaims my peer, "I don't know how to feel." I listen to my friends and I realize if nothing else, I am not alone. We work and we talk and we agree and we disagree and we get it done. Against all odds and even my better judgment, I develop an interest in econ. I realize that I've come a long way from just being an econ major by default. I start to realize I like econ. I REALLY LIKE ÉCON."

I think the greatest lesson I learned from this class is that by working together, you can succeed. The students that were better at math would explain step by step each production function, each best response function, each profit function, etc. Those of us who were better at conceptually grasping the ideas behind the theories we were learning would explain them in plain language – sometimes using public figures like Kanye West, Warren Buffet, and nuns to describe Homo reciprocans, Homo aequus, and Homo generosus, respectively. We also drilled into our brains that best response functions are found through FOC, by yelling FOC at each other when working on the problem sets. We learned our risk aversion by seeing who in our study group acted more risky by partying on the weekend before the exam, and those who stayed in and studied the whole time. And no one will ever forget that when Aram and Bina go fishing, their Nash equilibrium doesn't necessarily mean it is Pareto efficient.

Other course stories

- A theatrical dialogue (by a double major in econ & theater)
- A science fiction story where they encountered the alien "Homo economicus" on their space trip
- A fantasy quest to conquer the course
- And many others peculiar, idiosyncratic, and a joy to read

Exam Wrappers, Re-dos and Reflections

- After I grade midterm exams, ALL students should complete the exam wrapper
- Done for completion points
- Helps me to calibrate their expectations about appropriate learning methods
- Take pic of response with camera & hand back to me



Part 1. Fill out the form below.

After studying for this exam, how many points (out of 100) did you expect to			
After completing the exam, how many points (out of 100) did you think you earned?	had		
How many points did you receive?			
Approximately, how many hours did you spend studying for this exam?			
Did you study enough?	yes yes	no no	
Could you have studied "smarter"?	yes yes	no no	
What percentage of your test-preparation time was spent in each of these a 100%)	activities? (T	otal shoul	d be
Reading textbook sections for the first time]	%
Re-reading textbook sections]	%
Answering end-of-section questions]	%
Reviewing knowledge survey questions]	%
Reviewing your own notes]	%
Reviewing handouts			%
Discussing course materials and questions with classmates]	%
Studying the relations among concepts and ideas			%

Carefully look over your exam and estimate the percentage of points you lost to each of the following. (Total should be 100%.) From careless mistakes From not being familiar with terms From not knowing facts From not understanding concepts From not being able to apply concepts in new contexts From not seeing connections between concepts or facts From other reasons (please specify): Based on your responses to the questions above, describe at least three (3) things that you plan to do differently in preparing for the next exam. For instance, will you spend more time studying, change a specific study habit, or try a new one? Please describe. Note: If you are *very happy* with your grade, then feel free not to answer these questions. However, it could be that you still think there are areas you could have answered more clearly, more quickly, and so on. Answer the questions in that spirit.

Re-dos and reflections

- Students don't learn at the same pace, but the semester passes at a merciless rate
- So, students who obtained a grade lower than the median had a chance to *re-do portions* of the exam to improve their grade to the median
- Also had to write a reflection on each question that went poorlyneeded to show genuine engagement with the process and ideally come and talk to me during office hours

Re-dos and reflections

Why the median?

- Students viewed the median as fair
- Any cutoff would be arbitrary
- For re-grading: those *far* from the median tend to re-do
- Could only get *up* to the median (incentive compatible)

Re-dos and reflections

Benefits: Mindset & Cognitive Challenges

- Allowed students to overcome failure and not become attached to one failure as character-defining (growth mindset—acting on feedback is crucial)
- Allays fears
- Improve their study methods
- Address misconceptions about what's required to succeed

Benefits

(Accidental) Benefits

- Introducing course stories early (and providing warning far in advance) meant I normalized *adversity*
- If students didn't believe the course stories, they'd get it by PS1
- Consistent with recent work on belonging, mindset, and identifying as a "science person" (Binning et al 2020, Chen et al 2021)
- Anecdotally, students perceived my grading as fairer and appreciated my transparency with them
- Retrospect: helping them overcome cognitive challenges

Shortcomings & reflecting on failure

Shortcomings and reflecting on failure

- Course stories are writing-intensive and therefore can be grading/time intensive (typically 1 to 1 ½ pages long, if not more)
- But I *love* reading them, it really is a lot more fun than other "grading"
- Exam wrappers: can be done at scale if they are only for a "check" grade
- Exam re-dos are labor intensive: need to grade both the re-do and the reflection (and calibrate the grade to the reflection—I had to tell some students who re-did questions and didn't do the reflection that they wouldn't get full points)

Thank you!

