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Student engagement and interaction in the economics classroom: Essentials for the novice economic educator

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ABSTRACT

Faculty often report limited student engagement in their economics courses. This deficiency makes it challenging for educators to excite students about our field, a situation that could have ripple effects in terms of the number of students who graduate as economics majors. For students, the lack of classroom engagement makes it unappealing to attend lectures and may hamper their learning outcomes. This article offers essential ideas, tools, activities, and resources that have been carefully filtered, curated, and annotated to lower the startup costs for new economic educators to maximize student engagement and interactions in their economics classrooms. Additionally, the resources presented in this article can be leveraged by more seasoned educators looking for ways to take their teaching to the next level.

KEYWORDS
Economics classroom; student engagement; teaching methods

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> Great orators should continue to lecture, […], the rest of us should consider using a wider variety of teaching methods, and using them more often, to actively engage students.
>
> —Becker and Watts (1996, 452)

Lecturing is often the first and most natural method used by instructors to convey information due to a variety of factors, including the sense of ease and safety associated with the technique. Moreover, it is generally the technique that new economic educators most frequently witnessed in their own experiences as students. In fact, according to the results from the most recent distribution of the national quinquennial survey on teaching and assessment methods, also known as the "Chalk and Talk" survey in economics, very little has changed over the past 25 years in terms of content delivery (Asarta, Chambers, and Harter 2021; Harter and Asarta 2022): traditional lectures were used with a median frequency of 83 percent in introductory economics courses back when the first quinquennial survey was introduced in 1995 (Becker and Watts 1996) and again in 2020. Goffe and Kauper (2014) surveyed academic economists attending the American Economic Association annual meetings to better understand the reasons for this strong and consistent preference for lecturing.[1] The authors found that about one-third of respondents felt that students learn the materials best when they are introduced via a lecture. The other two-thirds of respondents did not find that students learn best from lectures, but about half of those survey participants used lectures because they are cost-effective. Interestingly, those respondents who advocated for alternative methods of instruction often cited student outcomes as a major reason for moving away from lecturing.

While little has changed since 1995, some progress has been made in the use of teaching methods. For example, cooperative learning/small-group assignments, as well as instructor-led and student(s) with student(s) discussions, have seen significant growth over the past 25 years. Focusing on the latter, discussions among students were used with a median frequency of 6 percent in 2000 and 2010, while the

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2020 results show that introductory economics instructors use this teaching technique with a median frequency of 50 percent of the time (Asarta, Chambers, and Harter 2021). While these positive changes are encouraging, there is significant room to expand active engagement and participation in the economics classroom. What does active engagement in the classroom entail? According to Rolheiser, Olmstead, and Gordon (2019, online), students actively engaged in learning should, among other things, "collect and synthesize information, practice critical thinking, and engage in problem solving activities." Active engagement and interaction also require instructors to draw upon examples and scenarios that are relevant and likely to be experienced by their students.

My purpose in this article is to provide economic educators, particularly those who are new to teaching, with simple and essential ideas, tools, activities, and resources that can be leveraged to increase student engagement and interactions in the economics classroom. While the collection of teaching resources presented here is intended to be illustrative rather than comprehensive, their selection process was driven by the work that leading scholars have conducted in economic education, as well as by my own experiences as a seasoned educator and director of a center that specializes in, among other things, teaching economic educators how to engage and interact with their students. Ultimately, my hope is that these resources will help our profession move the needle, improving both the way we teach economics and students' outcomes while promoting a sense of community via classroom engagement and interaction.

The one-minute paper

One of the most impactful tools available to instructors is, perhaps, also one that is widely used in education, relatively simple to implement, and takes only a few minutes to complete at the end of class: the one-minute paper. In fact, "No other Classroom Assessment Technique has been used more often or by more college teachers than the [One] Minute Paper" (Cross and Angelo 1993, 148). At its core, the one-minute paper requires students to answer two questions at the end of class (Chizmar and Ostrosky 1998):

1. What is the most important thing you learned today?
2. What is the muddiest point still remaining at the conclusion of today's class?[2]

The first question allows students to quickly narrow their learning for the day to the most important concept, idea, or lesson presented during class. This feedback becomes particularly important for novice instructors; with that valuable information, instructors can evaluate whether the findings from the feedback align with the educational goals and priorities of that day's presentation. Often, students also will add information for why they believe their chosen "important thing" is, indeed, so relevant. This feedback allows instructors to have "access" to the thought process followed by students to arrive at their selection, helping them better understand how they learn and what they think about the content presented in class. The second question allows instructors to assess the effectiveness of a particular lesson informally. Typically, a variety of concepts will come up, but, what if a significant number of students shared a similar "muddiest point"? Is that point simply difficult to understand, and does it deserve additional time in class? Was the instructor not clear in the classroom? Is there a better way to present the lesson? These are important questions that will force instructors to reflect and determine if a lesson requires additional class time, a simple clarification, or a complete lesson rewrite. The student feedback can then be used to "break the ice" during the next class session, engage students in the learning process, and show them that the instructor cares about their learning and that their feedback is important.

A third potential question that can be added to a one-minute paper is:

3. Any other questions, concerns, issues, or problems that you would like to share with me?

Rather than waiting until the end of a session for formal student evaluations of teaching, an instructor can be proactive in addressing issues and other concerns during the session. For example, the instructor may always be lecturing to the same side of the classroom. Perhaps the instructor is often standing in front of the projector and moving from one topic to the next too quickly. Or maybe the instructor is

using PowerPoint colors that are not accessible. These and many other issues can be solved immediately by simply asking students for their feedback. Ultimately, the feedback from this third question, if properly addressed by the instructor, becomes a win-win for everyone involved.

While the one-minute paper is relatively simple to implement, it is important to keep a few things in mind. First, the feedback is meant to be anonymous, and students should take only a minute (or two) to provide it at the end of class. In fact, the instructor should free up just a couple of minutes to deploy this tool and remind students that one-minute papers should not be essays. Second, because they require a couple of minutes of class time, instructors should use them strategically, perhaps once a week or after difficult lessons. Third, instructors need to act on the feedback received, prioritizing concerns but making sure that the feedback is acknowledged during the next class period. On that note, sometimes it might be necessary to acknowledge the contradictory nature of the feedback (e.g., some students share that they found the presentation was too fast while others found it too slow) to help students appreciate the communal nature of learning and differing experiences of their peers. Fourth, when dealing with large classes, instructors could use the students' last names as a way to collect a sample of responses. For example, an instructor could direct students whose last names start with the first five letters of the alphabet to complete a one-minute paper today, moving to the next five letters of the alphabet the next time the tool is used. Finally, instructors should keep the feedback received throughout the semester and review it as a whole when preparing a course for the next session. In the end, this low-cost tool has been shown to contribute to improvements in learning outcomes (Chizmar and Ostrosky 1998) while, at the same time, allowing instructors to refine their craft.

Music before class

We have all experienced the poorly used 5 minutes prior to the beginning of a lecture. Typically, students come into the classroom while their instructor is preparing the room. That room tends to be very quiet, almost like an airplane full of passengers who do not know each other, with students looking at their phones or computers while the instructor uploads the PowerPoint or cleans the equations left on the blackboard by the previous instructor. Fortunately, there is a simple teaching technique that could help instructors make those 5 minutes inviting, engaging, and educational: playing music.

Dirk Mateer discusses this teaching technique on his Web site (dirkmateer.com). Mateer suggests that by using music prior to the beginning of a lecture and synchronizing the ending of a song with the beginning of class, the instructor provides a more inviting learning environment while, at the same time, helping students focus their attention sooner. Furthermore, the intentional selection of songs that include economics concepts allows the instructor to reference the lyrics during the lectures, making additional relevant connections to the content (Mateer n.d.). Mateer's Web site provides a very useful music media library where instructors are able to select songs based on particular concepts such as "supply and demand," "opportunity cost," or "the business cycle."

Additionally, the scholarship on using music in the economics classroom has generated a number of helpful references and ideas for student projects (e.g., Tinari and Khandke 2000; Lawson, Hall, and Mateer 2008; Geerling, Mateer, and O'Roark 2020; Mahoney, Mathews, and Thomas 2022). While this technique is simple to implement, instructors will need to spend some time identifying songs, finding their connections to economics, and developing ways in which those connections can be discussed in the classroom. As a side note, instructors should always review the lyrics of the songs prior to playing them in their classrooms; sometimes, songs may use sensitive or controversial language not appropriate for classroom use.

Real (relatable) life examples

Instructors of economics often indicate that their goal is to make sure students "think like an economist" and "see economics everywhere" (Siegfried et al. 1991; Santos and Lavin 2004; Higino Schneider 2021). Indeed, helping students make the connections between lessons learned in the economics classroom, such as opportunity cost and marginal decision-making (Engemann 2020), and their lives should be a

priority for all of us. While the past should certainly be used to inform the future, using outdated examples makes it difficult for students to get excited about economics and to be able to see how our discipline affects their daily lives. The following real and recent Facebook post illustrates this point:

> So, this week while walking through a case study of the 2001 recession with my University of […] students I was trying to remind them of the technological progress and excitement that led up to the tech bubble when one student, with trepidation, raised her hand and said: Professor […] we weren't born yet.

Using real, recent, and relatable examples is simple to implement but requires educators to keep up with the news, in particular with events that are relevant to undergraduate students. It also requires instructors to think of ways in which to connect those examples with the principles we teach in our classrooms. For educators fortunate enough to have teenagers living at home, the search process becomes easier. For example, their children may introduce them to Web sites like StockX (stockx.com), a "trusted global platform for consuming and trading current culture" that allows users to sell and buy authentic sneakers, streetwear, and collectibles, and can be used by instructors to illustrate markets in action (with examples that are relevant to many students). Additionally, as Professor Jennifer Imazeki suggested during the 2022 American Economic Association annual meetings, instructors can always ask their students for suggestions of examples or ideas. It is worth noting that several publishers and other companies offer Web sites and services that provide educators with fresh resources that can be used to illustrate economics. For example, Marginal Revolution University (mru.org) offers a weekly service called "Econ Inbox" that provides educators with media and activities to fit their teaching schedules and sequence. McGraw-Hill also offers "Econ Everyday" (econeveryday.com), a Web site offering current events analysis, videos, podcasts, articles, and interesting topics for students in economics courses that can be searched by topic. Additionally, textbooks typically include teacher guides that provide ideas for relevant examples instructors can use to engage students in the learning process. It is also worth acknowledging that, sometimes, there might be tradeoffs between using outdated examples that provide valuable lessons and using current examples that help students connect with their own experiences. Ultimately, educators need to know and understand their students, as well as their institutional context, to determine which examples might better resonate with students (Imazeki 2024).

Media clips

Regardless of whether it takes 30 seconds, 10 minutes, or even more for students' attention spans to decline during a lecture (Bradbury 2016), the use of media clips may help reinforce economics concepts while, at the same time, "recharging" the students' attention spans and offering opportunities for additional engagement (e.g., classroom discussions).

There is no shortage of sources and academic articles that can be utilized to bring media clips into the classroom. The Economics Media Library (Wooten 2018) is a one-stop site that can be particularly helpful to novice instructors looking for ideas. The Web site categorizes video clips into three groups: micro clips, macro clips, and upper-level clips. Within each group, educators are able to narrow concepts down by subcategories (e.g., externalities and public goods). The *Journal of Economic Education* (*JEE*) is also an excellent source of academic articles that provide lesson and implementation ideas. For example, the journal has published articles that use movies such as *Joy* (Dalton and Logan 2020) or *Titanic* (Asarta, Mixon, and Upadhyaya 2018), and episodes from *The Simpsons* (Luccasen and Thomas 2010) and *Survivor* (Karlan 2017), to teach about innovation, entrepreneurship, game theory, comparative advantage, or price discrimination. Additional examples can be found in The *International Review of Economics Education* and other journals that promote and disseminate economic education scholarship (Asarta and Mixon 2019). Furthermore, recent edited volumes (e.g., Ahlstrom and Mixon 2020) provide numerous media examples to illustrate particular economic concepts or ideas.

Introducing media in a classroom presentation is relatively simple to implement, and an instructor could easily augment their initial selections over subsequent semesters. Wooten (2018) provides several recommendations for embedding media files in PowerPoint presentations, the number of videos to use per lecture, the length of those videos, and their potential placement within a lecture. Additionally,

Calhoun and Mateer (2012) explain how to use media and response systems in the economics classroom and also offer a section discussing potential copyright issues. Ultimately, when used properly and lawfully, media clips could be the difference between a dismal presentation and one that provides students with opportunities to recharge and actively engage with the classroom materials.

Real data—Federal Reserve Economic Data (FRED)

It is not unusual for authors of economics textbooks to use examples with made-up data. While this approach can help illustrate the mechanics behind the many principles we discuss in our classrooms, it does little to *provide a realistic and relevant context* for those principles (Mendez-Carbajo and Asarta 2017, 176). A tool that can easily be used to eliminate the disconnect between the data provided in textbook examples and the real world is The Federal Reserve Economic Data (FRED; fred.stlouisfed.org), a repository that tracks over 800,000 U.S. and international time series from 110 different sources. In fact, in a guide for submissions to the Instruction Section of the *Journal of Economic Education* (McGoldrick 2014), a current coeditor of the journal used FRED as an example of a source that can be utilized to support students' quantitative economic literacy, and that is *yet to be extensively documented as an instructional tool* (McGoldrick 2014, 169). Fortunately, since her call to action, a number of FRED articles have been published discussing the history of the repository (Mendez-Carbajo and Podleski 2021), how to use it to visualize data (Mendez-Carbajo 2015), describing several active learning strategies for teaching with FRED (Mendez-Carbajo 2020), and demonstrating how FRED graphing assignments can be integrated into a course (Staveley-O'Carroll 2018; Wolfe 2020).

Figure 1 is an example depicting the U.S. unemployment rate between January 2020 and January 2022.

As can be seen, a picture is really worth a thousand words! With this graph, not only are instructors able to provide a *realistic* and likely *relatable* example to the class, but they also are able to *connect* it to the broader economic situation faced by the United States in 2020 (please see the shaded area, which indicates a U.S. recession). It is worth noting that, while using FRED data is relatively straightforward, it may require some training and practice for both instructors and students. The manuscripts mentioned in the opening paragraph of this section are a good starting point. The Federal Reserve Bank of St. Louis also offers additional supporting materials on its Web site (e.g., The Fred Blog) as well as a number of workshops to train educators on how to use FRED.

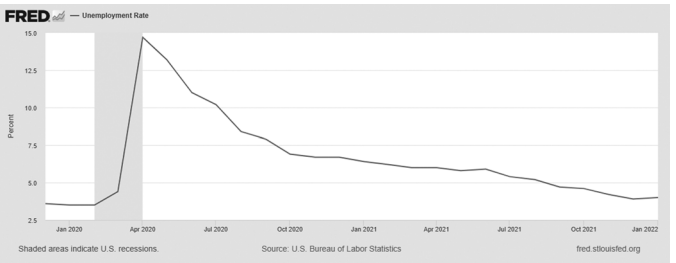


Figure 1. U.S. Unemployment rate, January 2020–January 2022. Source: https://fred.stlouisfed.org/series/UNRATE

Worksheets

As the old adage says, *practice makes perfect*. Yet, we often fail to provide students with enough opportunities to practice before they are required to demonstrate what they have learned in a course via high-stakes assessments (e.g., midterm exams). Worksheets are a simple low- or no-stakes classroom tool that can be used to accomplish the goals of (1) providing students with practice opportunities, (2) learning processes needed to solve a complex problem by breaking the content down into steps that can be effectively scaffolded, (3) allowing students to interact with each other, and (4) engaging students in the learning process. Take, for example, the unemployment topic presented in the previous FRED section.

Critical to calculating the unemployment rate is being able to determine who is (and isn't) included in the labor force. With that in mind, an instructor could create a worksheet where students need to first determine if an individual should be included in the labor force, based on a scenario or story for that individual, prior to calculating the unemployment rate. The worksheet could be distributed to students in class, asking them to work independently or in groups to come up with their answers. To take it further, the instructor also could ask students to determine whether those in the labor force should be counted as "employed" or "unemployed." Students can then be invited to share their answers with the rest of the class, individually or by identifying a spokesperson for each group. Here is an example:

> Carlos is 43 years old. He currently splits his time raising his children at home during the day and teaching economics at night (part-time) at a local community college. Is Carlos counted in the labor force? Is he employed or unemployed?

As you can see, this particular example will give students an opportunity to think critically about Carlos' stay-at-home work and part-time employment. It is likely that some students will believe that part-time employment disqualifies Carlos from being included in the labor force. Others will think that working at home during the day is enough to count him in the labor measure. In the end, this example will allow students to practice while simultaneously providing them with an opportunity to engage in the learning process and with each other.

Worksheets are not particularly difficult to create, but they take time to craft. Fortunately, there are significant economies of scale that result from their creation because instructors are able to reuse them during their teaching careers. Thus, creating worksheets is a worthwhile investment! Additionally, a number of publishers have begun the process of crafting worksheets to support instructors and their students.

Next level considerations

As mentioned in the introduction, my purpose in this article is to provide novice economic educators with *simple* and essential ideas, tools, activities, and resources that can be leveraged to increase student engagement and interactions in the economics classroom. Yet, as novice educators transition into experienced educators, they will want to explore more advanced active learning and student engagement teaching techniques. With that in mind, *The International Handbook on Teaching and Learning Economics* (Hoyt and McGoldrick 2012) offers chapters on topics such as classroom discussions (Hansen and Salemi 2012), cooperative learning exercises (McGoldrick 2012), experiential education (McGoldrick and Ziegert 2012), or classroom experiments (Emerson and Hazlett 2012). In fact, the *Handbook*, with its 76 chapters, is strongly recommended for those who are looking for ways to actively engage their students in the learning process. Other sources for helpful materials and ideas include the economics instructor's toolbox (Picault 2019), The Foundation for Teaching Economics' teacher resources (fte.org), and the resources for teachers and students in economics provided, free of charge, by the Federal Reserve Bank of St. Louis (www.stlouisfed.org/education).

Flipping (Wozny, Balser, and Ives 2018), blending (Parsad, Lewis, and Tice 2008), or flip-flexing (Asarta and Schmidt 2015) the classroom are all potential ways in which instructors can free up in-class time to actively engage with their students. In doing so, instructors will need to evaluate the benefits and costs associated with their chosen method of instruction, as well as to identify ways in which they may be able to provide additional assistance to students who learn best via lectures (Broadbent and Poon 2015; Zacharis 2015; Bower et al. 2015). How much "blending" should be implemented? What materials should be provided in the "flipped" online environment? What activities could be done in the "flex" classroom mode? The references included in this paragraph provide an excellent starting point for instructors wanting to carefully examine these and several other questions prior to embracing nontraditional teaching methods.

Conclusion

In this article, I present a substantial set of ideas, tools, activities, and resources that have been carefully filtered, curated, and annotated so that new economic educators can maximize student engagement and

interactions in their economics classrooms while keeping their own startup costs manageable. Implementing some of the techniques described in this article may require instructors to evaluate how they spend class time, likely encouraging them to move away from the staple "lecture" method of instruction that is so prevalent in economics. The article also references sources that can be accessed by more experienced instructors to take their teaching to the "next level." Active learning teaching methods, which, among other things, *ask students to practice skills, solve problems, struggle with complex questions, make decisions, propose solutions, and explain ideas in their own words through writing and discussion* (Cornell CTI 2022), have been shown to not only affect student outcomes (see, for example, Deslauriers, Schelew, and Wieman 2011) but also to be one key to attracting more students to a major and retaining students from diverse backgrounds (Haak et al. 2011). Thus, promoting student engagement and interactions in the economics classroom is critically important for our profession.

Notes

1. The quinquennial survey offers two major categories of questions: "Teaching Methods" and "Assessment and Grading." Within the teaching methods category, respondents are asked to use a scale to indicate how often they use a particular method. The term "Chalk" relates to the question asking about the use of "Chalkboard or Whiteboard" in the economics classroom, while the term "Talk" relates to the question asking about the use of "Traditional Lectures."
2. While the more common way of implementing the one-minute paper is asking feedback questions at the end of a class period, some instructors prefer to ask those questions at the beginning of the next class period. This latter approach requires students to identify what is the most important thing they learned and what is the muddiest point still remaining from the previous class period.

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