Applied economics in the liberal arts: Teaching about food, health, and human welfare

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Abstract

We explore the challenges and opportunities of teaching economic tools to understand food and health-related issues in the context of two small liberal arts colleges. Students in our classes often arrive with a simultaneous interest in social justice and deep skepticism about economics and its ability to solve related issues. We use food and health topics to engage skeptical students and help them realize the power of economic thinking in application to themes they care deeply about and often consider outside the purview of economists. This paper discusses our pedagogical approaches, tailored to attract and retain a diverse student body, as well as some of the classroom challenges and successes we have experienced in this specific academic environment.

1 Introduction

Our goal as teachers is to engage students in the application of economic concepts to exciting topics. An economics professor's role is to highlight the power and relevance of economic concepts and showcase the versatile application of economic models in various contexts. Examples from food, agriculture, and health help to highlight the power of simple economic models and foster student interest in economic theory. When students recognize the relevance and practical application of consumer and producer theory, price theory, and other economic tools to issues they care about, their enthusiasm for engaging with abstract concepts grows.

Anecdotally, we know that many students in our colleges, Macalester College in St. Paul, Minnesota, and Reed College in Portland, Oregon, who have never taken an economics class have negative views of economics. Many students shy away because they are concerned that the classes will be "too hard," "too mathy," not relevant to issues they care about, or push a certain ideology. This leads us to two core questions: how can we reach students hesitant to participate in economics courses and how can we engage them once they enter our classrooms?

In this paper, we discuss how we employ the topics of food, agriculture, and health to attract a wide range of students with diverse interests. We argue that by starting with compelling topics like food and health, students are provided an attractive avenue into economics. We highlight two classes, one taught at Macalester College called "The Economics of Global Food Problems" and another taught at Reed College called "Global Health and Consumer Behavior", as well as our introductory courses. We provide an in-depth description of pedagogical approaches, assignment creation, and other strategies to engage students in economic thinking. We go on to present relevant literature, pedagogical strategies, and some challenges in achieving our goals. We conclude by mapping the strategies we employ in our classrooms to the American Association of Colleges & Universities' (AAC&U's) "high-impact practices" (HIPs).

2 Context

A national quinquennial survey of academic economists, with data collected between 1995 and 2020, shows that the teaching methods used by economists have changed slowly over time (Becker and Watts, 2001; Watts and Becker, 2008; Watts and Schaur, 2011; Asarta, Chambers, and Harter, 2021). The results of the 2020 survey demonstrate that after significant pushes to incorporate more "active learning" techniques (e.g., student discussions and small-group assignments), their use increased only modestly in the preceding decade. "Chalk and talk" is still the primary method of instruction in economics courses and is particularly popular in introductory courses (Asarta, Chambers, and Harter, 2021). Teaching methods and topics that address diversity, inclusion, or gender issues are still rarely used in introductory courses. We argue that this is a missed opportunity, given that our students care about these issues, and we have research findings and methods to contribute to understanding these topics.

Focusing on applied topics is particularly important for diversifying the profession. Avilova and Goldin (2024) found that male economics majors outnumber female majors by approximately two to one, and this gap is greater in the sample of the top 100 liberal arts colleges compared to research universities. Jensen and Owen (2023) suggest that the traditional pedagogy in introductory economics classes may generally support the learning styles of men more than that of women. Specifically, the authors found that women are at a disadvantage when a large portion of their overall grade is determined by exams. Classroom engagement activities at the start of the semester, however, boosted relative grades, especially for women. Avilova and Goldin (2024) further suggest that a primary reason for this gap is a lack of knowledge of how widely economic concepts can be applied. They state that many potential majors did not know that economics is relevant to understanding health, education, and inequality, among other topics. Most had the erroneous impression that economics is primarily the study of financial markets.

Motivated by these facts, Avilova and Goldin (2024) implemented a large-scale randomized control trial with a suite of activities with the goal of improving knowledge about how economics can be applied, as well as improving mentoring, course content,

and pedagogy. Interestingly, this intervention reduced the gender gap in the economics major at liberal arts schools but had no effect in larger research universities.

The gender gap, which begins at the introductory level, persists beyond the undergraduate level. Sierminska and Oaxaca (2022) find that between 2009 and 2018, less than 30 percent of newly minted PhD economists were women. Additionally, the field choices of economists differ by gender, with women being drawn to more applied fields, including labor, health, and development. Women were less likely to choose econometrics, microeconomics, macroeconomics, and finance as their primary fields. These findings are consistent with those of Beneito et al. (2021), Chari and Goldsmith-Pinkham (2017), and Beneito et al. (2021) who argue that these gendered subfield differences start at the undergraduate level. These results suggest that using more examples in undergraduate classes from fields in which women have a demonstrated interest could slow the exodus of potential women economics majors.

Research on other dimensions of diversity within economics, including diversity by racial and ethnic background, natal household income, and first-generation college students, is notably more limited. We do know that women and Black, Indigenous, and people of color (BIPOCs) have been underrepresented in undergraduate economics textbooks Stevenson and Zlotnick (2018), and that when women and BIPOC people are represented in textbooks, they are less likely to be economists, policymakers, or business people (Krafft et al., 2023).

There is notably more research on these measures of diversity in STEM fields. Griffith (2010) suggests that a so-called “leaky pipeline" exists for both women and BIPOC students for STEM fields in general (they include economics in this definition). They suggest that sorting away from STEM fields begins at the undergraduate level (Griffith, 2010). Initial enrollment in STEM majors is relatively diverse in terms of race; however, Hispanic and Black students switch majors and drop out of college at a higher rate than White students, making it imperative to focus on retention (Ijoma et al., 2022).

Discrimination and a lack of community might help explain why Black students drop out of STEM majors more than their non-Black peers. A higher ratio of BIPOC graduate students improves the persistence of underrepresented groups in STEM fields

(Griffith, 2010). This hypothesis is strengthened by the fact that initially enrolling at an HBCU (Historically Black College or University) more than doubles a Black student's chance of earning a STEM degree (Smythe and Edwards, 2024).

Finally, students from low socio-economic status (SES) backgrounds are less likely to study STEM fields (Niu, 2017). However, being from a high SES background can counteract other historical disadvantages, such as being from a gender or racial minority—specifically, the gender gap in STEM enrollment is larger for lower SES students (Niu, 2017). Additionally, if a student's parent works in a STEM field, that student is more likely to major in a STEM field (Moakler Jr. and Kim, 2014). Given this uneven persistence in the economics major and profession, examples of how to employ more active learning and HIPs in our classes are essential. We discuss several examples of pedagogical strategies we employ in our classes. The foundation of our approach is to use the topics of agriculture, food, and health to attract a variety of students and then reinforce their engagement using pedagogical strategies designed to address social frictions within the classroom, allow for deep learning and engagement with the material, and spur further curiosity of economics.

3 Overview of our courses

In this section, we provide a detailed description of our classes that are designed to apply economic tools and thinking to food and health-related issues. We also describe pedagogical methods we use in our introductory courses. In describing objectives, assignments, and pedagogical strategies, we aim to detail the specific ways in which we design courses to attract different types of students. All classes are offered at small liberal arts institutions and, as such, require design principles that address some of the contextually specific challenges and opportunities.

Employing Food, Health, and Agriculture in Introductory Courses

Introductory courses are the ideal opportunity to engage students in economic thinking and create excitement about the discipline. At both Macalester College and Reed College, the introductory 'Principles of Economics' course is one semester and includes

both micro and macroeconomic content. These are standard introductory courses covering supply and demand, consumer behavior, producer behavior, GDP, growth, and inflation among other topics. Students complete weekly problem sets and have multiple exams similar to introductory courses at many other types of institutions. At liberal arts colleges, however, we can leverage the small class sizes (a maximum of about 24 students at both institutions) to encourage significant classroom involvement and tailor examples to the interests of our students. Examples using food and health are particularly salient to undergraduate students.

Introductory classes are, arguably, the most important classes in which to introduce food, health, and welfare topics. They allow students to quickly understand and see how economic tools can be powerful in organizing thinking around complicated problems. For example, price elasticities of demand and supply can be conceptually challenging for beginning economics students. Thinking about these concepts using abstract goods does little to clarify these ideas. However, if we think about food production and consumption, we can more easily build conceptual bridges. One effective example is the short-term elasticity of supply for agricultural production within a production season. We may present students with the hypothetical scenario of what happens when the price of an agricultural good changes after it has been planted. Students quickly realize there is relatively little change possible in the quantity supplied, given that the season is underway. Using this type of example often encourages questions about price responsiveness in other industries.

Discussing the Supplementary Food Assistant Program (SNAP) is another avenue to engage students in otherwise abstract concepts. When introducing consumer behavior, we discuss what a consumer's budget constraint would be with and without SNAP benefits compared to a cash transfer of equal value. We then determine which scenario makes the consumer better off according to the models. Students tend to be surprised by the fact that some consumers would be made better off with a simple cash transfer as opposed to SNAP benefits, which leads to a lively discussion of why most societies provide more in-kind rather than cash transfers. This application of economic modeling to a social program they know and care about is particularly engaging in a model

that students can find opaque or useless.

Another important retention strategy is to use the introductory class as a map to other economics courses. We use discussions of different topic areas to point out other classes in which students can learn more about the topic. For example, when we talk about international trade, we discuss how these concepts are extended in higher-level classes in International Economics in the department. We find that this is particularly important at the beginning of the course and before registration events.

Food and Economics

The Economics of Global Food Problems is an applied economics class offered at Macalester College. This class is offered as a 200-level course, requiring students to have only one semester of Principles of Economics. The class explores topics such as hunger and nutrition, US farm policy, food distribution, food security, food aid, biotechnology and the Green Revolution, and the connection between food production and health outcomes in both United States and the Global South. We use basic economic tools to provide an analytical understanding of these issues.

The learning objectives of this course are to reinforce basic economic principles using the context of food and agriculture. In the course, students build an understanding of global food problems and their relationship to agricultural production, development, and policies, as well as develop basic food policy analysis skills. Food and agriculture is an attractive vehicle given that students have enough familiarity with the topic to be interested, but generally have relatively little experience in production agriculture.

We develop content around these learning objectives with a specific emphasis on using basic market equilibrium, firm decisions, and elasticity concepts, pushing students' understanding of costs of production and profit maximization. These concepts are useful when we talk about agriculture in the United States. In the first half of the course, students are introduced to a Macalester alum who is now a large-scale pork producer. This producer walks students through the costs of her operation, the production decisions she makes, the market environment she faces, and the present challenges and constraints. Understanding, first-hand from an alum, the relevance of the production

model helps students build a conceptual bridge between, for example, fixed and variable costs and their real world implications. This experience also provides a salient application of basic economic concepts and how they are important in decision-making that ultimately leads to food on their plates.

We also reinforce the principles of economics when thinking about agriculture in the Global South. One of the most direct applications is to have students think about the local market in a case study framework. The case study is an in-class exercise that is described in more detail in section 5.

Health and Economics

Global Health & Consumer Behavior is a course offered at Reed College that covers topics of health and human welfare. Similar to the Economics of Global Food Problems, the only prerequisite for this course is Principles of Economics. In this course, we begin by modeling a consumer's demand for health. For example, food can enter directly into the consumer's utility function, but it also enters into the health production function, and health is an argument in the utility function. We then build a model of the demand for health insurance and follow this by discussing health insurance and healthcare systems around the globe.

Healthcare, health insurance, and health outcomes are useful topics for undergraduate students to explore with an economic lens. Students typically have some exposure to healthcare settings, but little exposure to payment schemes for healthcare. The course uses students' experiences to demonstrate why economic tools are pragmatic and powerful for improving human welfare. We explore the relative efficiency of these healthcare systems in producing positive health outcomes for citizens. In addition, we use economic tools to address health issues, including pharmaceutical research and development, the opioid crisis, and the HIV/AIDS epidemic. The assignments include mathematical problem sets, policy briefs, and a final project and presentation. These final projects are a 'choose your own adventure' opportunity for students, and they complete projects on diverse topics, including how income and food prices impact health outcomes, mental healthcare, and the public health effects of decriminalizing drugs.

4 Teaching economics of food, health, and human welfare in the liberal arts

In many liberal arts colleges, a substantial fraction of students come to an economics class with skepticism. They view economics as “pushing capitalism" or “all about money.” Students tend to come to courses caring deeply about issues like inequality, poverty, food security, and healthcare but with little understanding of how economics can help us understand and form solutions to these problems. For this reason, we infuse our courses with discussions about what economists bring to the table on these specific topics. Applying economic concepts to food and health problems is a powerful tool to engage skeptical students.

Students in our courses with relatively limited experience with poverty, food security, agriculture, and the healthcare system, particularly in the Global South, but they come with strong priors. We build on the students’ interests by making these topics salient as well as challenging some of their existing views. We use our courses to show students that there are considerable benefits from better understanding how individuals and communities make decisions under constraints. We detail some of these strategies in section 5 under ‘Goal 1.’

Further, employing food and health topics allows for a rich discussion about how economics is relevant to a diverse set of communities. These topics allow us to explore nutrition, land, health disparities, and other relevant topics across gender, racial, and income differences. Our classes are also often filled with students who are still ‘shopping’ for their majors. This allows us an opportunity to employ some of the strategies that have been proven to increase entrance into and persistence in the major. We discuss some of these strategies in-depth in section 5 under ‘Goal 2.’

An additional challenge, particularly in liberal arts colleges, is the hesitance to challenge the spoken views of classmates. Liberal arts colleges are small communities where most students know each other. This creates concerns about disagreeing with a classmate or saying something that is not socially acceptable and experiencing social sanctions. It is imperative for us to engender an environment in which students are

comfortable disagreeing with each other and fruitful debates can occur. In section 5 under 'Goal 3,' we detail some strategies we use to address this challenge.

5 Pedagogical goals and strategies

The post-COVID teaching world, even for veteran teachers, felt like a discrete break. Students' expectations around content, grading, classroom dynamics, and assignments changed. Many of us learned that we ignore these changing expectations at our peril. At the same time, maintaining high standards is important. Navigating the balance between changing student demands and course-learning objectives is a challenge. In this section, we outline three teaching goals related to this challenge and discuss how we employ real-world food and health problems to achieve these goals.

The discerning reader will notice that many of these strategies span multiple goals. We have organized the goals and strategies in this way to present a logical narrative but readily admit that any given strategy can serve more than a single goal.

Goal 1: Deep understanding of basic economic principles

Building a nuanced understanding of economic principles includes the ability to recognize how concepts interconnect and function within real-world economic systems and apply these principles to evaluate decisions and outcomes. A deep understanding emphasizes practical application, where theoretical knowledge is translated into addressing real-world challenges, like food insecurity, inequality, or adverse health outcomes. This applied approach enables learners to think flexibly, consider diverse perspectives, and apply economic reasoning effectively. In this section, we outline several pedagogical approaches we use to build this type of economic understanding.

Field Trips

One of the most impactful learning experiences in the Economics of Global Food Problems is a day-long field trip we take to visit two farms in western Wisconsin. The first farm is a small-scale dairy farm run by four farmers spanning two generations. They

grow their own feed, raise their replacement stock, and sell their milk to a local dairy cooperative. During this visit, students tour the barns and feed storage units and see the animals. They also hear a short presentation by one of the farmers and ask many questions.

The second stop on our field trip is a vegetable producer who markets produce through a community-supported agriculture (CSA) model. At this farm, students tour the fields, see the packing shed, learn about the history of the farm, the various investments made throughout the years, and how these investments were financed. They also learn about how this model shares risk between producers and consumers.

These two experiences continue to offer value throughout the semester. Giving students a visual idea of what a production operation looks and feels like is a powerful tool for them to understand cost structures, decisions that these farmers make, and challenges they face in everything from buying health insurance to passing the farm between generations.

Examining our economic models with these examples in mind forces students to think in 3-D about the trade-offs, marginal costs and benefits, farm size and economies of scale, and other concepts we either want to introduce or reinforce from Principles of Economics.

Case Study: Food Aid and Local Markets

Since visiting producers in the Global South is not a possibility in the context of our class, we use case studies to engage students in important food security issues. One such case study is described in this section. We set up a short background and problem and then direct students toward the concepts they should employ in addressing the problems laid out in the case study.

The case study is setup using the following framing:

> *You have been hired by the Gates Foundation to help with aid to the World Food Program (WFP). Currently, the WFP is buying corn from the US and Europe and using it as food aid to help food-insecure people in Burkina Faso. The WFP and Gates Foundation want to buy commodities (corn especially) more "locally" or regionally*

(*within West Africa*). *Gates will pay for the WFP to buy food locally. Is this a good idea? What are the main points you would put in the report?*

The instructions then continue:

Using the basic tools of supply and demand analysis, discuss the effects of this policy on local food markets. Specifically, consider the following analytical components: supply and demand elasticities, net consumers, net producers, and alternative crops.

This short, and admittedly simplified, case study is surprisingly effective. Students are broken into groups and asked for one class period to analyze the situation from the various stakeholders' positions. The next class period, students are asked to present their findings and recommendations. Would they recommend the local purchase of food aid or not? Using this case study, students gain a deeper and more nuanced understanding of elasticities and the factors that determine both supply and demand elasticities. In addition, they are asked to question and respond to the other groups in the class. This allows them to compare their analysis, further reinforcing their understanding of basic market concepts. This case study could be expanded by introducing the possibility of a local quota of food dedicated to food aid or a price ceiling on basic grains and then asking various groups to evaluate these policies using basic principles of economic welfare analysis.

Choose a Healthcare Plan for a Fictitious Family

In Global Health & Consumer Behavior, after detailing the theory of demand for health insurance, students spend time choosing a real healthcare plan for a fictitious family. Groups of students are given a list of family members, their health profiles, and household income. They are then given the details of three different health insurance plans that a specific college offers and asked to work with their group members to select the best healthcare plan for this family.

The goal of this exercise is for students to understand in what ways real life deviates from our models. This allows students to better determine which model assumptions reflect reality and which don't. We are then able to discuss how relaxing those assumptions would change our models and the conclusions we draw from models. This is a

key skill for any economics student and is useful for demonstrating to students that we can learn a lot from imperfect models, but we must be careful in doing so.

An additional benefit of this exercise is that students gain practical life skills. Students must understand the basics of insurance, how to interpret a given insurance plan, and how to calculate the insurance premiums and potential out-of-pocket expenses of differing health insurance plans. They must do so while operating under much uncertainty about the health issues family members might face in a given year and a lack of information about the prices of possible procedures.

Choose-Your-Own-Adventure Projects

Another way in which we encourage students to apply economic concepts to issues they care about is in their final projects. Undergraduate research opportunities increase the likelihood that a historically disadvantaged student will continue their pursuit of a degree and graduate (Li et al., 2024).

Because our courses are taught without a statistics prerequisite, no data analysis is required. Students are required, however, to engage with data analysis conducted by others and interpret it responsibly, paying close attention to causal versus correlational claims. These projects are an opportunity for students to 'choose their own adventure' and select a topic that they care deeply about and want to learn more.

Allowing this amount of latitude can require additional time on the part of faculty members. Faculty at liberal arts colleges are well-suited to providing this freedom because we have fewer students with an expectation of more one-on-one conversations with students.

Multimedia Assignments

In the Economics of Global Food Problems, students are offered a menu of alternatives to complete their semester project. These include a policy analysis paper, a commodity market analysis or supply chain analysis, an empirical analysis using agricultural data, a long-form news article, or a podcast. Regardless of the format, students are instructed to pick an important food or agriculture topic and apply the format to their topic. They

are invited to work in groups of no more than two.

Using a podcast format is a recent addition to this menu, and was chosen by three different student groups. The instructions for this assignment are to develop the background, data, and general context for a podcast on a food topic of your choice. They are then asked to include an interview with an expert (a farmer or someone working in agriculture) on their topic. [1]

The use of a podcast was a surprising success. The groups that chose this option researched their topic of interest and presented thoughtful questions to the guests who were interviewed. Other students in the class also were instructed to listen to the podcasts. The student feedback from this assignment was quite positive.

Goal 2: Increasing Diversity in the Major

As we discussed above, increasing diversity in economics is an important goal and one that faculty at liberal arts colleges are well-suited to address given the close student mentoring we provide, small class sizes, and a nuanced understanding of class dynamics and challenges. This section outlines strategies we employ that are aimed at encouraging a more diverse set of economics majors.

Grading for learning

Grades differentially push students toward or away from the economics major. Women are more responsive than men to lower course grades when selecting into the economics major (Halim, Powers, and Thornton, 2022; Griffith, 2010), and women are less successful in courses for which a large share of a course grade is determined by exams (Jensen and Owen, 2023). This is particularly important in the first two years of college, when students tend to be taking introductory courses since students typically select a major by the end of sophomore year.

Given the size of our classes at small liberal arts colleges, one of the advantages is that we have some flexibility in assignment design (discussed above) and grading approaches. In a conventional grading scheme, students complete an assignment, it is

[1] We sometimes help students make contact with farmers or other experts who are willing to talk to them.

graded out of 100 points, and is weighted at the end of the semester. There are advantages to this type of system; for instance, clarity of performance for the student and instructor, as well as streamlined organization.

There are, however, some drawbacks to the system that students have become increasingly vocal about. First, this system presents work as a “one-and-done" approach. There was little room for reflection and feedback. A hybrid approach that incorporates the traditional exams graded on a points scale and at the same time encourages revision, reflection and mastery of a topic is a specifications grading approach (Nilson, 2014).

In a specifications grading system, the final grade is determined by whether students meet the specifications for all assignments in a grade bundle. Each assignment receives credit if it meets all of the specifications, and individual assignments do not receive letter or numeric grades, only exams receive numerical scores.

Tokens

In addition to a hybrid grading approach, flexibility tokens are another small move to improve transparency and equity in the classroom. Is it common for students to ask for extensions or other “special” accommodations. These requests were largely being granted. However, this system of ad-hoc extensions can be unfair. It advantages students who come and ask for these accommodations, and as we have learned, some students never considered this to even be a possibility.

Students are granted three tokens at the beginning of the semester (this is an arbitrary number). They can spend their tokens for a 48-hour deadline extension or a revision on an assignment that they did not pass. The design of the tokens in conjunction with the hybrid grading approach is important since it means that students do not have unlimited flexibility or revision possibilities, but that they do exist when needed.

Nudges

Women, on average, have less confidence in their ability to be successful in the economics major (Li, 2018). Women and men are equally likely to state that they can succeed in the economics major and be successful in an economics profession, but women

are less confident than men in their own ability to succeed in the major (Li, 2018). With this evidence in mind, Li (2018) found that sending an email to successful female students (i.e., those with a grade at or above the median grade in the course) that reports their success and encourages them to consider the economics major increased the number of women selecting into the major.

For this reason, we send emails at the end of the semester to all students who performed well in the course, encouraging them to consider majoring or minoring in Economics.

Guest lectures and alumni

Female role models have a substantial impact on increasing the number of women economics majors (Porter and Serra, 2020; Halim, Powers, and Thornton, 2022). Inviting accomplished women economics graduates to give a talk at their alma mater about how majoring in economics contributed to their career success led to a nearly 100 percent increase in the share of female economics majors and an increase in female students taking additional economics classes (Porter and Serra, 2020).

As briefly discussed above, in the Economics of Global Food Problems, we often have a female pork producer, come in to talk to the students about her operation. She is an alum of the College and the department. This allows us to have a baseline of trust and enables her to talk openly with the students about her financial decisions on the farm, the details of workflow, how this farm fits with her family dynamics, and further how they interact with the national and international pork markets. She also brings a political economy perspective, discussing how certain policies affect her farm specifically. Her candid nature and the way that she explains her decisions allows students to step into her shoes and understand why she makes the kinds of scale decisions that she does. She talks about these decisions in personal and not merely financial terms, as a way to support her and her two small children.

Goal 3: Encouraging Viewpoint Diversity

One of the most challenging issues in many of our classrooms is the adherence to some sort of orthodoxy of perspective. Students fear real or perceived social sanctions for deviating from this orthodoxy. This makes deeper exploration of various topics sometimes challenging. Here we discuss several strategies we have employed, with varying success, to get students to constructively take different sides of issues and think critically about the issues at hand.

Formal Debates

Debates are an effective way to learn through disagreement. To maximize learning through a debate, the instructor makes a proposition. For example, the proposition for the Economics of Global Food Problems was: "Local, small scale, environmentally friendly food production is the best way to both feed the world and save the planet."

Students are then assigned a pro or con position based on the first letter of their last names. Based on their position, they are asked to develop a position paper to support their argument.

The instructions to the students include:

> *In preparation for this debate, write a 2-3 page, double-spaced, position paper in which you gather and present evidence for your position. A position paper presents an arguable opinion about an issue. The goal of a position paper is to convince the audience that your opinion is valid and worth listening to. Ideas that you are considering need to be carefully examined when developing your argument, and organizing your paper. It is very important to ensure that you are addressing all sides of the issue and presenting it in a manner that is easy for your audience to understand. Your job is to take one side of the argument and persuade your audience that you have well-founded knowledge of the topic being presented. It is important to support your argument with evidence to ensure the validity of your claims, as well as to address the counterclaims to show that you are well-informed about both sides.*

Supporting evidence includes factual knowledge, information that is verifiable and

agreed upon by almost everyone, as well as statistical inferences. On the day of the debate, students are asked to get into their groups and decide on their main arguments as well as roles in the debate. Using a well-timed debate is an excellent way for students to aggregate their learning on a certain topic. Typically these debates are a culminating activity at the end of a unit.

In class tickets

During heavy class discussion days, class tickets are a mechanism to have students engage with perspectives they may be shy to otherwise put forth. The idea of class tickets is that the instructor announces at the beginning of the class that there are 5 people with tickets. Nobody will know who has the tickets, but having these tickets means that you are encouraged to take a position that is different than what you might otherwise say. Students with tickets should take oppositional views.

These tickets serve two purposes. First, they induce some debate in the classroom. Second they allow students plausible deniability about their positions. Nobody in the classroom can attribute someone's view to them personally because nobody knows who is holding the tickets.

6 Discussion and concluding comments

In this paper, we provide a discussion of strategies to engage students in economic thinking by using relatable topics in food, agriculture, and health as entry points into the discipline. We address common misconceptions and hesitations among students unfamiliar with economics, such as concerns about its difficulty, perceived lack of relevance, or ideological bias. By incorporating familiar and meaningful issues, we demonstrate how economic models and concepts, such as consumer and producer theory and price theory, can be applied to real-world problems, fostering greater interest and understanding. We focus our discussion on *how* we do this using the context of our introductory courses and two topics courses: the Economics of Global Food Problems at Macalester College and Global Health and Consumer Behavior at Reed College.

We identify various pedagogical strategies that we employ to achieve our three

goals: (1) providing a deep understanding of economic principles, (2) increasing diversity in the major, and (3) encouraging viewpoint diversity. Many of the techniques we discuss fall under the designation of what the American Association of Colleges and Universities (AAC&U) identifies as High-Impact Practices (HIPs).[2] These pedagogical practices significantly enhance student learning and engagement (of American Colleges & Universities, n.d.). The strategies we discuss in this paper relate to three HIPs.

The first HIP we discuss is collaborative projects, specifically creating a podcast, exploring a case study, and choosing a health insurance plan. These collaborative projects are aimed at enhancing student learning and engagement by fostering teamwork and collective problem-solving. This pedagogical practice emphasizes active learning and helps students develop critical skills, including communication, leadership, and conflict resolution, while promoting a deeper understanding of course material. This HIP aims to prepare students for real-world environments where collaboration and cooperation are essential for success.

Second, the courses we discuss allow students to engage in the HIP of global learning. Introducing forms of diversity and global learning fosters an understanding of and respect for the varied cultural, social, economic, and political perspectives that exist (of American Colleges & Universities, n.d.) in food and health systems. We critically engage with this type of diversity within the context of health and agriculture, helping students critically examine the complexities of global interdependence using these very real-world challenges.

Lastly, community engagement through field trips and guest speakers touches on a third HIP. Community engagement connects students with communities to apply academic learning in real-world contexts (AAC&U, 2024). Field trips and guest speakers are two practical ways to foster this engagement, making academic discussions about agriculture and health both relevant and meaningful.

Inviting economics students to apply theoretical concepts to familiar domains us-

[2]These practices include experiences such as first-year seminars, learning communities, writing-intensive courses, undergraduate research, collaborative projects, internships, global learning, service learning, and capstone projects. HIPs foster deep learning by promoting active student engagement, critical thinking, and the application of knowledge to real-world challenges.

ing high-impact pedagogical strategies can yield a deep and meaningful learning experience. With careful course design, using applied frameworks in the undergraduate classroom can help students see the applicability of otherwise esoteric material. In this paper, we discussed strategies that we employ at two small liberal arts colleges in using health, food, and agriculture to engage students in basic economic principles.

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