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Laura J. Ahlstrom, Carlos J. Asarta & Cynthia Harter

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Factors contributing to the use of references to diversity, inclusion, and gender issues in undergraduate economics courses: Findings from the sixth national "chalk and talk" survey

Laura J. Ahlstrom[a], Carlos J. Asarta[b], and Cynthia Harter[c]

[a]Department of Economics, Oklahoma State University, Stillwater, OK, USA; [b]Department of Economics, University of Delaware, Newark, DE, USA; [c]Department of Economics, Eastern Kentucky University, Richmond, KY, USA

ABSTRACT

This study uses data from the sixth national quinquennial survey on teaching and assessment methods in economics, also known as the "chalk and talk" survey, to examine, for the first time, how instructor, departmental, and institutional characteristics may contribute to the use of references to diversity, inclusion, and gender issues in undergraduate economics courses. Findings suggest that undergraduate students are differently exposed to these issues depending on the characteristics of the instructors, departments, and institutions. Our work provides a baseline for supporting targeted interventions to increase the use of issues related to diversity, inclusion, and gender in the economics classroom.

KEYWORDS

Diversity and inclusion; gender; teaching methods; undergraduate economics

Introduction

In 2020, the Association to Advance Collegiate Schools of Business (AACSB), a worldwide accrediting body for business schools, incorporated diversity and inclusion into its newly revised business accreditation standards (Association to Advance Collegiate Schools of Business (AACSB), 2022). The next year, AACSB published a paper expressing its commitment to promoting equity, diversity, belonging, and inclusion (Association to Advance Collegiate Schools of Business (AACSB), 2021). This document states, "we believe that the unprecedented challenges facing our world today require solutions with the power to connect people and institutions," and that "business education will play a fundamental role in meeting these challenges, but only if business schools engage diverse perspectives, backgrounds, and experiences" (Association to Advance Collegiate Schools of Business (AACSB), 2021, p. 7). In economics, several studies have documented the lack of diversity in the profession (e.g., Avilova & Goldin, 2018; Bayer & Wilcox, 2019). In 2014, the share of women earning a Ph.D. in economics was 31.4%, while the share of doctoral degrees earned by minority students was 8.4%. Bayer and Rouse (2016, p. 221) have suggested that this underrepresentation "likely hampers the discipline, constraining the range of issues addressed and limiting our collective ability to understand familiar issues from new and innovative perspectives."

The lack of diversity in the economics profession begins at the undergraduate level. Women earn about one-third of economics bachelor's degrees, a percentage that has remained stagnant for the last 15 years (Bayer & Rouse, 2016; Siegfried, 2022). Underrepresented minority students earn less than 15% of the undergraduate economics degrees awarded annually (Bayer & Rouse, 2016). A student's choice of major is connected to experiences in the classroom, both positive and negative (Calkins & Welki, 2006; Malgwi et al., 2005). Bayer et al. (2020) found that students who experience belonging, relevance, and growth mindsets in introductory economics courses have higher course performance and a greater likelihood of persistence in the field. However, women and underrepresented minority students are significantly less likely than white male students to report a sense of belonging in their economics course, and many have indicated that in-class examples are not personally relevant. Women and minority students are also more likely to feel that important aspects of certain issues studied in class are overlooked (Bayer et al., 2020).

Evidence from the national quinquennial survey on teaching and assessment methods in economics, also known as the "chalk and talk" survey, suggests

CONTACT Laura J. Ahlstrom laura.ahlstrom@okstate.edu Oklahoma State University, 250 Business Building, Stillwater, OK, 74078, USA.
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teaching methods have changed little over the last 25 years (Asarta et al., 2021). The typical economics class offers few opportunities for students to actively engage with or make meaningful connections to the course material (Harter & Asarta, 2022). Across the curriculum, lecture and the use of a chalkboard or whiteboard (i.e., "chalk and talk") persist as the primary instructional methods in undergraduate economics courses (Asarta et al., 2021; Watts & Schaur, 2011). However, recent initiatives aim to improve economics instruction by promoting the issue of instructional methods and materials designed to engage all students. With these, the profession hopes to attract more women and members of historically underrepresented minority groups, thus improving diversity.

To track the use of inclusive teaching practices in the profession, the "chalk and talk" survey was updated in 2020 to include separate questions asking instructors about the use of references that address diversity and inclusion and gender issues (DIG) in economics classrooms. This study uses the results of the 2020 survey to present an exploratory look at how instructor, departmental, and institutional characteristics contribute to instructor use of these references. This is the first time, since the survey began in 1995, that instructor use of DIG references has been analyzed. Results indicate female instructors may be significantly more likely than male instructors to reference DIG issues. Faculty members for whom English is a second language may be significantly less likely to include diversity and inclusion references in their courses, and more teaching experience is correlated with a lower probability of including these references. Additionally, the use of references to DIG issues varies among faculty teaching at doctoral and non-doctoral institutions in both principles and upper-division field courses. These results provide a baseline for supporting targeted interventions in the field designed to promote inclusive instruction in economics courses.

Literature review

Improving diversity has become an important focus in business education. The AACSB emphasizes the need for business schools to provide equitable and fair access to a quality business education for all students. Additionally, one AACSB objective for business education is to cultivate "purpose-driven leaders who seek to understand and appreciate ideas and perspectives that differ from their own," (Association to Advance Collegiate Schools of Business (AACSB), 2021, p. 7). Although there is a high degree of variation of female and minority students in different business subfields, on average, the underrepresentation of female and minority students in undergraduate economics is worse than in business. Between 1995 and 2014, approximately half of the bachelor's degrees awarded in business were earned by women, as opposed to about one-third of the economics degrees (Bayer & Rouse, 2016; Siegfried, 2022). During this same time period, the percentage of underrepresented minority students earning undergraduate economics degrees rose from 12% to 14.7%; an increase, but still lower than the 20% of minority students receiving a degree in business (Bayer & Rouse, 2016). Bayer and Wilcox (2019) developed the Economic Education Inclusion Index (EEII) to compare the rate of underrepresented student groups majoring in economics to the rate of white, male economics majors. The index values range from zero to 100, representing a spectrum of no inclusion to full inclusion, defined as when students from all demographic groups major in economics at the same rate. The average EEII was 54.1, with a range of 47.9 at the top 50 liberal arts colleges to 58.9 at universities with Ph.D. programs in economics not ranked in the top 40 (Bayer & Wilcox, 2019).

A student's interest in the subject and perceptions of coursework affect college major selection (Calkins & Welki, 2006; Malgwi et al., 2005). Research suggests students find economics courses to be uninteresting, irrelevant, and difficult (Bansak & Starr, 2010; Worthington & Higgs, 2004). Bayer et al. (2020) find female and minority students are less likely than white male students to believe they can learn the course material and that someone like themselves can become an economist. The study also finds having a higher sense of relevance, belonging, and a growth mindset is significantly and positively correlated with earning an A– or better letter grade in an introductory economics course. A high letter grade in an initial economics course is an important factor in a student's choice to take additional economics courses and earn a degree in the field, and women may be particularly responsive to the signals they receive from course letter grades when making these decisions (Ahlstrom & Asarta, 2019; Emerson et al., 2012; Rask & Tiefenthaler, 2008).

One reason economics does not attract more female and underrepresented minority students may be because these groups do not see themselves or their interests represented in course textbooks. Robson (2001) found that an average of 30.3% of pages in introductory economics textbooks included references

to race, ethnicity, and gender; this percentage increased considerably from 1987 to 1999. Stevenson and Zlotnick (2018) analyzed the gender representation in eight leading introductory economics textbooks published in 2017. On average, 77% of the individuals discussed in these textbooks were men. In the most gender-representative textbook, men were used in 66% of examples, while 25% and 9% of the examples portrayed women or were gender-neutral, respectively. Women comprised significantly smaller shares of "ordinary" people examples, as well as examples using celebrities, economists, policy makers, and business leaders (Stevenson & Zlotnick, 2018). This work suggests that what we teach students through the hidden curriculum, "the tacit messages and informal learning about norms, values, and habits," likely contributes to the diversity problem in economics (Mousa, 2022, p. 394).

Since economics textbooks do not offer diverse examples and perspectives, instructors may broaden economics content and engage students through the use of inclusive teaching practices and by intentionally incorporating DIG examples into their courses (Al-Bahrani, 2022; Allgood & McGoldrick, 2021; Bayer, 2021; Fernhaber & Hines, 2021). Respondents to a survey of Black, Latinx, and Native American individuals in various stages of the economics career trajectory suggested that accessibility to the field could be increased by including examples relevant to students of all backgrounds. These examples would, as one respondent stated, allow learners "to connect what's happened in the classroom with what a given student's life or question is" (Bayer et al., 2020, p. 210). Students' positive perceptions and interest in economics may be fostered when instructors use examples expressing diversity in ways that are sensitive to students' perceptions and comfort levels (Al-Bahrani, 2022). Female students may be highly responsive to situational cues of gender representation in traditionally male academic fields. Murphy et al. (2007) found that women who viewed a video showing gender balance at a math, science, and engineering conference experienced a reduced fear of stereotype threat (which is the belief that one will be judged according to the negative stereotypes associated with a group to which they belong), compared to women who viewed a gender-imbalanced conference video. Women who saw the gender-balanced video also indicated improved perceptions of belonging and interest in participating in the conference.

To improve the student experience and increase diversity in the field, the economics profession has developed initiatives promoting the use of pedagogical strategies to engage students. The American Economic Association's Committee on the Status of Minority Groups in the Economics Profession (CSMGEP) sponsors an online wiki, founded by Amanda Bayer in 2011, called *Diversifying Economic Quality* or Div.E.Q., at DiversifyingEcon.org. This resource promotes "inclusive, innovative, and evidence-based teaching practices in economics" (Bayer, 2021). However, these efforts have yet to create a large impact on teaching practices in the field, as "chalk and talk" continues to be the teaching method used "frequently" or "almost always" in over 80% of undergraduate economics courses (Asarta et al., 2021; Watts & Schaur, 2011).

Materials and methods

Since 1995, the "chalk and talk" survey has documented the use of teaching methods and materials in undergraduate economics courses across the curriculum. Initially distributed by mail, the survey has been repeated every five years. In 2020, it was distributed via email and administered entirely online for the first time. Each year, survey samples have differed due to changes in list availability, as have response rates. In 2020, 1,664 instructors completed the survey, which yielded a response rate of 14.4%–3.9 percentage points higher than in 2010. The survey asked instructors to answer the same questions for each type of course taught, including principles and survey, intermediate theory, other upper-division field, and statistics and econometrics courses. Faculty were asked to identify the percentage of class time spent using different instructional methods and materials using a 0–4 integer scale.[1] Survey questions and response items have changed little over time, although updates have been made to account for the increased use of educational technology and to provide more granular detail. Previous administrations of the survey asked one question about instructor "references to gender/race/ethnic issues" (Watts & Schaur, 2011). The 2020 survey included separate questions about the use of

[1]The 2020 survey included an expanded 0–6 integer response. We use the prior survey coding of 0–4 in this paper for consistency with earlier studies. In 2020, a response of 0 represented teaching strategies "never" used; 1 indicated strategies used "very rarely" or less than 10% of the time; 2 represented methods used "rarely" or 11–33% of the time; 3 identified activities used "occasionally" or 34–50% of the time; 4 indicated strategies used "frequently" or 51–65% of the time; 5 signified activities used "very frequently" or 66–85% of the time; and 6 denoted methods used by an instructor "usually or always" or more than 85% of the time. On the 0–4 scale, a response of 4 indicated a method was used "almost always" or 66–100% of the time.

references to diversity and inclusion issues and to gender issues (Asarta et al., 2021). Independent variables are defined in Table 1.

In an earlier study, Harter et al. (1999) used probit regressions to analyze factors affecting instructor choices of teaching methods and materials. Following the methodology of that study, we investigate factors affecting an instructor's use of references to DIG issues. The dependent variable is equal to one if a respondent uses a reference to a DIG issue in their teaching. Figure 1 shows the percent of instructors using references to diversity and inclusion issues and gender issues across the curriculum. In all course types, less than 50% of economics instructors report referencing DIG issues in the classroom. References to DIG issues are more prevalent in principles and other upper-division field courses than in other types of courses, and these references are used least frequently in intermediate theory courses.

Figure 2 shows the percentage of instructors from each type of institution, across the curriculum. A higher percentage of respondents are from doctoral institutions for all course types. The share of respondents from baccalaureate and master's institutions is similar for principles and intermediate theory courses, while a slightly larger share of respondents teaching upper-division field and statistics and econometrics courses are at baccalaureate institutions.

This finding may possibly reflect institutional differences in economics major curriculum and degree options. Marshall and Underwood (2022) found that more institutions are conferring STEM-eligible economics degrees, and economics departments in more-selective institutions are increasingly requiring courses in probability and statistics and econometrics for graduation.

The summary statistics for the instructor and departmental variables are presented in Table 2. The typical instructor in our sample is predominantly male and tenured or on tenure-track, although tenured or tenure-track faculty comprise the smallest share of principles course instructors. Instructors for whom English is a second language teach 15–17% of principles, intermediate theory, and other upper-division field courses, compared to 22% of statistics and econometrics courses. The average teaching load, or number of classes typically taught by tenured and tenure-track faculty, is largest among principles

Table 1. Independent variable definitions.

Variable	Definition
I. School Carnegie classifications	
Associate	1 if instructor works at an associate school
Baccalaureate	1 if instructor works at a baccalaureate school
Master's	1 if instructor works at a master's school
Doctoral	1 if instructor works at a doctoral or research school
II. Departmental and instructor characteristics	
Female	1 if instructor is a woman*
Tenured or tenure-track	1 if instructor is tenured or tenure-track
English 2 L	1 if instructor does not speak English as first language
Experience	Number of years the instructor taught
Teaching weight	Weight (percentage) for teaching in school decisions on promotion and tenure
Teaching load	Average number of classes taught by tenured and tenure-track faculty in the respondent's department in an academic year
Class size	Average number of students in classes in the respondent's department

*Respondents who identified as non-binary were coded as zero.

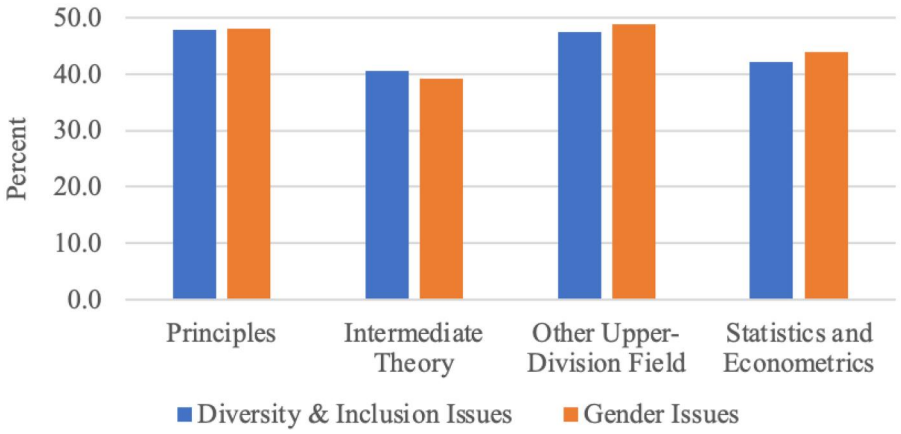


Figure 1. Percent of instructors using references to diversity & inclusion and gender issues.

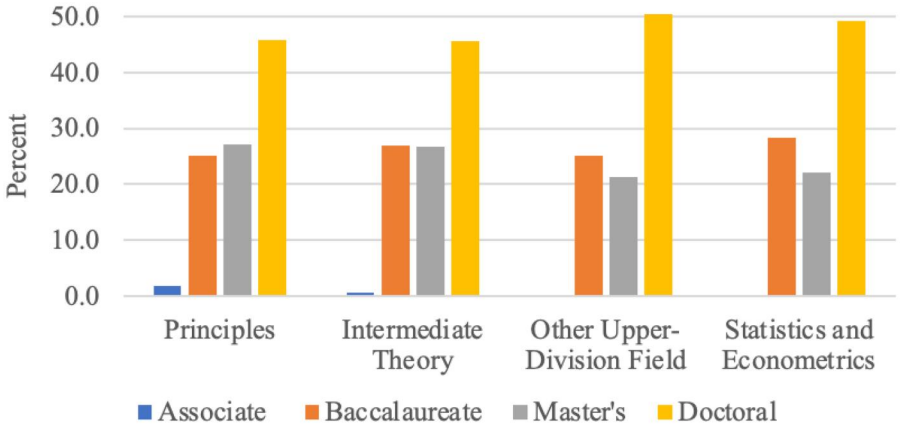


Figure 2. Percent of instructors by school Carnegie classification.

Table 2. Summary statistics for Independent department and instructor variables.

Variable	Principles Mean (SD)	Intermediate theory Mean (SD)	Other upper-division field Mean (SD)	Statistics and econometrics Mean (SD)
Female	0.372	0.315	0.345	0.329
	(0.484)	(0.465)	(0.476)	(0.471)
Tenured or tenure–track	0.764	0.814	0.832	0.849
	(0.425)	(0.390)	(0.374)	(0.359)
English 2 L	0.153	0.170	0.152	0.218
	(0.360)	(0.377)	(0.359)	(0.414)
Experience (in hundredths)	0.177	0.174	0.186	0.163
	(0.120)	(0.120)	(0.126)	(0.117)
Teaching weight	0.399	0.369	0.355	0.389
	(0.229)	(0.227)	(0.220)	(0.216)
Teaching load	5.280	4.931	4.809	5.049
	(1.764)	(1.651)	(1.613)	(1.573)
Class size	93.494	42.058	30.403	29.413
	(133.503)	(52.230)	(22.911)	(17.894)
N	516	311	585	225

instructors, likely reflecting the larger share of associate institution instructors in the principles course sample. Average class sizes are larger for principles and intermediate theory classes.

As has been indicated in all iterations of the "chalk and talk" survey, we are not able to establish whether respondents are representative of all U.S. undergraduate economics teachers, as it seems plausible that instructors who are more interested in teaching would be more likely to complete the survey. Additionally, the questions asking specifically about references to diversity and inclusion issues and gender issues are new to the 2020 survey and provide an exploratory look at the use of such references and lessons in U.S. economics classrooms.

Results

Table 3 presents the average marginal effects from the probit estimations for references to DIG issues. Female instructors are more likely than male instructors to use references to diversity and inclusion issues in all courses except intermediate theory. This result is consistent with multidisciplinary studies finding that female faculty include more diversity-related content in their courses than male instructors (Hurtado, 2001; Laird, 2011; Mayhew & Grunwald, 2006).

Excepting statistics and econometrics courses, being a non-native English speaker is associated with a reduced likelihood of using diversity and inclusion references across the curriculum. A one-year increase in instructor experience significantly reduces the probability of using diversity and inclusion references by 41% in other upper-division field courses and by 70% in statistics and econometrics courses. A larger teaching weight (the percentage toward tenure and promotion placed on teaching) increases the likelihood an instructor uses diverse and inclusive examples in intermediate theory courses. Heavier teaching loads and larger class sizes decrease the probability of instructors referencing diversity and inclusion issues in intermediate theory courses. Results are similar for the use of references to gender issues. Across the curriculum, female instructors are between 8% to 20%

Table 3. Probit marginal effects for references to diversity & inclusion issues and gender issues by course type.

Variable	Female	Tenured or tenure-track	English 2L	Experience	Teaching weight	Teaching load	Class size	Pseudo R^2	*N*
Diversity & inclusion issues									
P	0.083*	0.041	−0.185***	−0.232	0.048	−0.018	−0.0002	0.026	516
	(0.047)	(0.062)	(0.060)	(0.220)	(0.128)	(0.017)	(0.0003)		
I	0.083	−0.097	−0.145*	−0.471	0.304*	−0.054**	−0.003**	0.061	311
	(0.064)	(0.092)	(0.070)	(0.286)	(0.179)	(0.024)	(0.002)		
O	0.178***	0.004	−0.190***	−0.413**	0.093	−0.013	0.001	0.052	585
	(0.043)	(0.062)	(0.055)	(0.194)	(0.137)	(0.018)	(0.002)		
S	0.170**	0.001	−0.110	−0.703*	−0.206	0.029	0.001	0.080	225
	(0.073)	(0.109)	(0.084)	(0.390)	(0.212)	(0.028)	(0.003)		
Gender issues									
P	0.082*	0.054	−0.069	−0.212	0.040	−0.019	−0.0003	0.014	516
	(0.047)	(0.061)	(0.063)	(0.219)	(0.127)	(0.017)	(0.0003)		
I	0.117*	−0.008	−0.069	−0.348	0.139	−0.049*	−0.003*	0.051	311
	(0.062)	(0.089)	(0.073)	(0.278)	(0.173)	(0.023)	(0.001)		
O	0.140***	0.0005	−0.146***	−0.312	0.073	−0.018	−0.002	0.029	585
	(0.044)	(0.061)	(0.056)	(0.191)	(0.134)	(0.018)	(0.002)		
S	0.198**	0.051	−0.045	−0.324	−0.026	0.016	0.004	0.040	225
	(0.075)	(0.095)	(0.081)	(0.364)	(0.199)	(0.027)	(0.003)		

Notes: Significant at $^{*}p < 0.10$, $^{**}p < 0.05$, and $^{***}p < 0.01$. Robust standard errors are in parentheses.
P: principles; I: intermediate theory; O: other upper-division field; S: statistics and econometrics. Marginal effects were created holding *Female* and *English 2 L* at 0, and *Tenured or Tenure-Track* at 1.

Table 4. Probit marginal effects for references to diversity & inclusion issues and gender issues by institutional type.

	Principles courses				Other upper-division field courses			
	Diversity & inclusion issues		Gender issues		Diversity & inclusion issues		Gender issues	
Variable	Doctoral	Non-doctoral	Doctoral	Non-doctoral	Doctoral	Non-doctoral	Doctoral	Non-doctoral
Female	0.063	0.121*	0.030	0.134**	0.149**	0.211***	0.081	0.195***
	(0.071)	(0.065)	(0.070)	(0.065)	(0.062)	(0.064)	(0.062)	(0.066)
Tenured or tenure–track	0.052	0.050	0.025	0.132	0.007	0.019	−0.034	0.130
	(0.079)	(0.106)	(0.077)	(0.094)	(0.072)	(0.125)	(0.071)	(0.109)
English 2 L	−0.317***	−0.049	−0.065	−0.052	−0.207***	−0.120	−0.118	−0.158*
	(0.082)	(0.089)	(0.093)	(0.085)	(0.068)	(0.089)	(0.074)	(0.085)
Experience	−0.226	−0.079	−0.104	−0.187	−0.634**	−0.073	−0.402	−0.163
	(0.329)	(0.307)	(0.325)	(0.308)	(0.258)	(0.296)	(0.254)	(0.295)
Teaching weight	0.112	−0.129	0.123	−0.220	0.172	−0.200	0.168	−0.229
	(0.213)	(0.179)	(0.208)	(0.180)	(0.212)	(0.205)	(0.203)	(0.200)
Teaching load	−0.027	−0.025	−0.051	−0.024	−0.018	−0.038	−0.050*	−0.034
	(0.034)	(0.020)	(0.033)	(0.0230)	(0.031)	(0.023)	(0.030)	(0.23)
Class size	0.0001	−0.004	0.0001	−0.006**	0.004**	−0.005	0.001	−0.007
	(0.0003)	(0.002)	(0.0003)	(0.002)	(0.002)	(0.005)	(0.002)	(0.004)
Pseudo R^2	0.071	0.027	0.039	0.049	0.082	0.071	0.045	0.070
N	237	279	237	279	314	271	314	271

Notes: Significant at $^{*}p < 0.10$, $^{**}p < 0.05$, and $^{***}p < 0.01$. Robust standard errors are in parentheses. Marginal effects were created holding *Female* and *English 2 L* at 0, and *Tenured or Tenure-Track* at 1.

more likely than male faculty to reference gender issues, which is consistent with Hurtado's (2001) finding that female social science faculty were significantly more likely than their male peers to require readings on gender issues in their courses. By contrast, non-native English speakers are less likely than native speakers to use references to gender issues in other upper-division field courses only. Also, a larger teaching load and class size negatively impact the likelihood of using gender references in intermediate theory courses.

Since we find institutional differences in our instructor sample, Table 4 presents results comparing the use of references to DIG issues in principles and other upper-division field courses at doctoral and non-doctoral institutions. Women are more likely than men to reference diversity and inclusion issues in both course types at non-doctoral institutions. By contrast, at doctoral institutions, female instructors have a higher probability of using diversity and inclusion references only in other upper-division field courses. We also find women at non-doctoral institutions are significantly more likely than men to include gender references in both principles and other upper-division field courses. There are no statistically significant instructor gender effects for the use of gender issues in either course at doctoral schools. Additionally, non-native English speakers may be less likely than native speakers to reference gender issues in other upper-division field courses at non-doctoral institutions. Being a non-native English speaker at a doctoral institution decreases the probability of using

diversity and inclusion references by 32% in principles and 21% in other upper-division field courses, but at non-doctoral institutions, being a non-native English speaker reduces the probability of using diversity and inclusion references by only 5% in principles courses. Moreover, more years of teaching experience at doctoral institutions reduces the probability of using references to diversity and inclusion issues in other upper-division field courses. A higher teaching load is associated with a lower probability of referring to gender issues in other upper-division field courses at doctoral schools. Larger class sizes are correlated with a higher probability of using references to diversity and inclusion issues in other upper-division field courses at doctoral institutions and a lower probability of using references to gender issues in principles courses at non-doctoral institutions. The magnitudes for the class size effects, however, are small.

Students taking economics courses at doctoral schools may generally be exposed to fewer diversity and inclusion references than students at non-doctoral institutions, which may reflect different expectations of faculty across institutions and course types. Relative to faculty teaching principles courses at non-doctoral schools, principles course instructors at doctoral schools may face larger class sizes and more constraints on curriculum and course materials. By contrast, faculty teaching other upper-division field courses may have more freedom with curricula and course materials, since these courses are typically taught by one instructor, even at doctoral schools. Additionally, departmental policies may have implications for the use of DIG references in principles and other upper-division field courses at both types of institutions.

What types of activities and course materials do economics instructors use to refer to DIG issues? Survey respondents reported including DIG references in case studies, news and media sources, team-based learning, primary source readings, and class discussions of political issues. One survey respondent mentioned using "references to news and real-world events that may include reference [sic] to gender, diversity, income inequality, etc." Another respondent reports having discussions about "issues of race and class in the context of the class (urban economics and economics of international migration)." One instructor, who identified as teaching at an institution with a large Hispanic population, introduces monetary theory and the equation of exchange with Marjorie Grice-Hutchinson's (Grice-Hutchinson, 1952) "The School of Salamanca." The book describes how sixteenth-century Spanish conquistadors caused inflation by taking gold from the New World back to Europe, and Spanish theologians studied monetary philosophy from Islamic scholars, defying the "Spanish Inquisition." This instructor also notes the lesson has increased "passing averages with [the] target group. They no longer feel as outsiders." Other instructors reported using the United Nations Sustainable Development Goals and the CORE economics program curricular materials, as well as activities using data from the World Bank, IMF, Federal Reserve, OECD, and other sources.

Discussion and conclusion

The lack of diversity in the economics discipline is a conundrum. As compared to other social science disciplines, there are fewer female and historically underrepresented minority instructors and less diversity in economics classrooms (Chari & Levenstein, 2023; Hoover & Washington, 2022). The conundrum is that women and students from historically underrepresented minorities are less likely than white men to stay in economics (Bayer & Rouse, 2016; Emerson et al., 2012), generating a domino effect that continues throughout the professoriate. In essence, economics students are not learning from a faculty that is reflective of society. This lack of diversity likely restricts innovation in approaches to studying economic problems and can limit the range of issues studied (Bayer & Rouse, 2016). Even in private enterprise, research has shown work groups with more diverse opinions exhibit better problem-solving effectiveness (Mannix & Neale, 2005), and that increasing the percentage of women in a firm is associated with improved firm performance and profitability (Kravitz, 2003). Diversity also promotes business success by allowing companies "to 'think outside the box'… enhance[ing] an organization's creativity, problem-solving, and performance" (Herring, 2009, p. 220).

Our study provides useful evidence that using references to DIG issues in undergraduate economics courses may be a way of addressing the lack of diversity in the economics profession. We find that students' exposures to DIG issues differ as they progress through the undergraduate economics curriculum, and institutional differences may affect economics instructors' references to DIG issues in the classroom. Specifically, we observe an increase in the probability of instructors referencing DIG issues in principles and other upper-division field courses and a decrease in intermediate theory courses. We find higher

probabilities of referencing these issues at non-doctoral schools as compared to doctoral schools and also a higher probability of using DIG references for female instructors. Although there is little use of DIG references overall, this evidence suggests where we might find the pioneers who are using inclusive learning practices in economics classrooms and, moving forward, identify what, why, and how they are accomplishing these goals. For example, instructors can dig deeper into what is happening in principles and other upper-division field courses and find ways to weave more inclusive practices throughout the economics major.

The infrequent use of these references in economics classes may reflect economics instructors' prior educational experiences. Few economics Ph.D. programs require a student to take a for-credit course about teaching prior to serving as a course instructor (Walstad & Becker, 2010). Although more experienced instructors are less likely to use DIG references, change may be slow because new instructors often tend to teach predominantly the way economics instruction was modeled to them. Instructors also tend to use course materials reflecting the world they experienced, which may not feel relevant for students or prepare them for the world they will encounter (Stevenson & Zlotnick, 2018). Despite efforts to improve the use of active learning and engaging teaching practices and materials, economics instruction has changed little since 1995 (Asarta et al., 2021). Even when instructors are interested in using innovative teaching practices, they may still feel reluctant to address DIG issues in the classroom. Faculty members may directly avoid referencing DIG issues for fear of being uncomfortable, feeling ill-equipped to manage such discussions, or having had a negative experience when attempting to include DIG references in the past (Soisson, 2016). We also do not know if instructors received training on the use of DIG issues in their classes. Although this information was not requested on the 2020 survey, it will be added to the 2025 survey and can provide more evidence of how to promote inclusivity in the classroom.

Instructor characteristics may also affect the use of references to DIG issues in economics courses. Our finding that women are more likely to include DIG references than men could reflect gender differences in the profession. A study surveying members of the American Economic Association (AEA) who earned doctoral degrees from U.S. institutions found that female economists were more likely than male economists to view gender inequality as a problem in the economics profession and in U.S. labor markets, and favor government-backed income redistribution policies (May et al., 2014). If female economists are more likely than male economists to support public policies promoting diversity and reducing inequality, then it is not surprising that they might be more likely to discuss DIG issues in their courses. Additionally, our results are consistent with prior multidisciplinary studies of college faculty finding that women are more likely than men to include diversity-related content in their courses (Hurtado, 2001; Laird, 2011; Mayhew & Grunwald, 2006). Our results further suggest faculty for whom English is a second language may be less likely to incorporate references to diversity and inclusion compared to native-speaking instructors. International faculty may face challenges in the classroom due to cultural differences, including differing worldviews, religious and political beliefs, and expectations of social norms and conventions (Collins, 2008). Foreign-born instructors may be shy away from addressing DIG issues due to perceived conflicts and misunderstandings. Overall, the evidence of the impact of instructor characteristics on the probability of using DIG references in economics teaching helps identify where we might find those who could share their experiences and lead to more diversity in the classroom.

Students miss important opportunities to develop a greater understanding of economics concepts and connect them with the real world when instructors do not include references to DIG issues in their courses. Research indicates that exposure to diversity experiences and inclusive learning practices are positively correlated with undergraduate students' intellectual engagement, motivation, and cognitive growth as well as their development of critical and analytical thinking skills (Gurin et al., 2002; Pascarella et al., 2014). Walker (2007) suggests that exposing students to "diversity experiences" within business courses improves their openness to diversity and attitudes toward working with people from different cultural backgrounds. Moreover, Zhang et al. (2016) argue that one limitation to the way many business schools currently approach diversity education is their focus on developing students' diversity knowledge and awareness, noting that diversity awareness "is not much help, unless students can skillfully put diversity knowledge to practice in cross-cultural interaction" (p. 371).

In economics, Bayer et al. (2020) found that women and underrepresented minorities taking introductory economics courses have lower perceptions of relevance, senses of belonging, and growth mindsets

(RBG) than white men. Their work also shows a high level of RBG is associated with a greater likelihood of earning an A– or better letter grade in an introductory economics course as well as greater persistence in the field, fueling the diversity conundrum. Bayer et al. (2020) concluded that economics instructors can improve "diverse students' interest and performance in economics by explicitly pursuing the goal of creating a learning environment that offers RBG for all students" (p. 298). Their work suggests that ignoring DIG issues in introductory courses transmits implicit messages about norms, values, expectations, and belonging in the profession (Mousa, 2022). Thus, increasing the use of references to DIG issues in economics courses may be a way for faculty to foster more inclusive learning environments, improve students' economics course performance, help students develop the skills necessary for working in a diverse labor force, and advance diversity in the economics profession.

Finally, our results provide a baseline for targeted interventions aimed at increasing student and faculty diversity in the discipline, which have been found to affect students positively (e.g., Bayer et al., 2020; Buckles, 2019). The American Economic Association is currently conducting Expanding Diversity in Undergraduate Classes with Advancements in the Teaching of Economics (EDUCATE) workshops that provide instructors of undergraduate courses an opportunity to take part in course design activities and experience pedagogical strategies that will engage all of the students they teach (American Economic Association (AEA), 2022). It is our sincere hope that the results from the "chalk and talk" survey will support the intentional design of programs such as EDUCATE and other professional initiatives aimed at increasing diversity in economics.

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References

Ahlstrom, L. J., & Asarta, C. J. (2019). The gender gap in undergraduate economics course persistence and degree selection. *AEA Papers and Proceedings*, *109*, 255–260. https://doi.org/10.1257/pandp.20191103

Al-Bahrani, A. (2022). Classroom management and student interaction interventions: Fostering diversity, inclusion, and belonging in the undergraduate economics classroom. *The Journal of Economic Education*, *53*(3), 259–272. https://doi.org/10.1080/00220485.2022.2075507

Allgood, S., & McGoldrick, K. (2021). Using readings beyond the textbook: A survey. *The Journal of Economic Education*, *52*(4), 269–273. https://doi.org/10.1080/00220485.2021.1963375

American Economic Association (AEA). (2022). *EDUCATE workshop: Details*. https://www.aeaweb.org/about-aea/committees/economic-education/educate-workshop-details.

Asarta, C. J., Chambers, R. G., & Harter, C. (2021). Teaching methods in undergraduate introductory economics courses: Results from a sixth national quinquennial survey. *The American Economist*, *66*(1), 18–28. https://doi.org/10.1177/0569434520974658

Association to Advance Collegiate Schools of Business (AACSB). (2021). Our commitment to diversity, equity, inclusion, and belonging. https://www.aacsb.edu/-/media/publications/research-reports/deib_positioning_paper.pdf?rev=1876431c9287467f9395358b2810dfbf.

Association to Advance Collegiate Schools of Business (AACSB). (2022). 2020 Guiding principles and standards for business education. https://www.aacsb.edu/-/media/documents/accreditation/2020-aacsb-business-accreditation-standards-jul-1-2022.pdf?rev=b40ee40b26a14d4185c504d00bade58f&hash=9B649E9B8413DFD660C6C2AFAAD10429.

Avilova, T., & Goldin, C. (2018). What can UWE do for economics? *AEA Papers and Proceedings*, *108*, 186–190. https://doi.org/10.1257/pandp.20181103

Bansak, C., & Starr, M. (2010). Gender differences in predispositions towards economics. *Eastern Economic Journal*, *36*(1), 33–57. https://doi.org/10.1057/eej.2008.50

Bayer, A. (2021). Diversifying *economic quality*. American Economic Association Committee on the Status of Minority Groups in the Economics Profession. http://diversifyingecon.org.

Bayer, A., Bhanot, S. P., Bronchetti, E. T., & O'Connell, S. A. (2020). Diagnosing the learning environment for diverse students in introductory economics: An analysis of relevance, belonging, and growth mindsets. *AEA Papers and Proceedings*, *110*, 294–298. https://doi.org/10.1257/pandp.20201051

Bayer, A., Hoover, G. A., & Washington, E. (2020). How you can work to increase the presence and improve the experience of Black, Latinx, and Native American people in the economics profession. *Journal of Economic Perspectives*, *34*(3), 193–219. https://doi.org/10.1257/jep.34.3.193

Bayer, A., & Rouse, C. E. (2016). Diversity in the economics profession: A new attack on an old problem. *Journal of Economic Perspectives*, *30*(4), 221–242. https://doi.org/10.1257/jep.30.4.221

Bayer, A., & Wilcox, D. W. (2019). The unequal distribution of economic education: A report on the race, ethnicity, and gender of economics majors at U.S. colleges and universities. *The Journal of Economic Education*, *50*(3), 299–320. https://doi.org/10.1080/00220485.2019.1618766

Buckles, K. (2019). Fixing the leaky pipeline: Strategies for making economics work for women at every stage. *Journal of Economic Perspectives*, *33*(1), 43–60. https://doi.org/10.1257/jep.33.1.43

Calkins, L. N., & Welki, A. (2006). Factors explaining the choice of an economics major: Why some students never consider economics. *International Journal of Social Economics*, *31*(5), 593–613.

Chari, A., & Levenstein, M. (2023). The 2022 report on the status of women in the economics profession. *Newsletter of the Committee on the Status of Women in the Economics Profession*, *1*, 10–35.

Collins, J. M. (2008). Coming to America: Challenges for faculty coming to United States' universities. *Journal of Geography in Higher Education*, *32*(2), 179–188. https://doi.org/10.1080/03098260701731215

Emerson, T. L. N., McGoldrick, K., & Mumford, K. J. (2012). Women and the choice to study economics. *The Journal of Economic Education*, *43*(4), 349–362. https://doi.org/10.1080/00220485.2012.714306

Fernhaber, S. A., & Hines, L. (2021). Integrating social justice and diversity discourse into existing classes within the business school. *Journal of Education for Business*, *96*(4), 260–268. https://doi.org/10.1080/08832323.2020.1805397

Grice-Hutchinson, M. (1952). The School of Salamanca. Oxford: Clarendon Press. https://cdn.mises.org/The%20School%20of%20Salamanca_3.pdf.

Gurin, P., Dey, E. L., Hurtado, S., & Gurin, G. (2002). Diversity and higher education: Theory and impact on educational outcomes. *Harvard Educational Review*, *72*(3), 330–367. https://doi.org/10.17763/haer.72.3.0115178 6u13 4n051

Harter, C., & Asarta, C. J. (2022). Teaching methods in undergraduate intermediate theory, statistics and econometrics, and other upper-division economics courses: Results from a sixth national quinquennial survey. *The American Economist*, *67*(1), 132–146. https://doi.org/10.1177/05694345211037904

Harter, C., Becker, W., & Watts, M. (1999). Who teaches with more than chalk and talk? *Eastern Economic Journal*, *25*(3), 343–356.

Herring, C. (2009). Does diversity pay? Race, gender, and the business case for diversity. *American Sociological Review*, *74*(2), 208–224. https://doi.org/10.1177/000312240907 400203

Hoover, G. A., & Washington, E. (2022). Report: Committee on the status of minority groups in the economics profession (CSMGEP). *AEA Papers and Proceedings*, *112*, 768–785.

Hurtado, S. (2001). Linking diversity and educational purpose: How diversity affects the classroom environment and student development. In G. Orfield (Ed.), *Diversity challenged: Evidence on the impact of affirmative action* (pp. 187–203). Harvard Education Publishing Group.

Kravitz, D. A. (2003). More women in the workplace: Is there a payoff in firm performance? *Academy of Management Perspectives*, *17*(3), 148–149. https://doi.org/10.5465/ame.2003.19198794

Laird, T. F. N. (2011). Managing the diversity inclusivity of college courses. *Research in Higher Education*, *52*, 572–588.

Malgwi, C. A., Howe, M. A., & Burnaby, P. A. (2005). Influences on students' choice of college major. *Journal of Education for Business*, *80*(5), 275–282. https://doi.org/10.3200/JOEB.80.5.275-282

Mannix, E., & Neale, M. A. (2005). What differences make a difference? The promise and reality of diverse teams in organizations. *Psychological Science in the Public Interest*, *6*(2), 31–55. https://doi.org/10.1111/j.1529-1006.2005.00022.x

Marshall, E. C., & Underwood, A. (2022). Is economics STEM? Process of (re)classification, requirements, and quantitative rigor. *The Journal of Economic Education*, *53*(3), 250–258. https://doi.org/10.1080/00220485.2022.2075508

May, A. M., McGarvey, M. G., & Whaples, R. (2014). Are disagreements among male and female economists marginal at best?: A survey of AEA members and their views on economics and economic policy. *Contemporary Economic Policy*, *32*(1), 111–132. https://doi.org/10.1111/coep.12004

Mayhew, M. J., & Grunwald, H. E. (2006). Factors contributing to faculty incorporation of diversity-related course content. *The Journal of Higher Education*, *77*(1), 148–168. https://doi.org/10.1353/jhe.2006.0005

Mousa, M. (2022). The hidden curriculum in business schools: Does it initiate the implementation of responsible management education in fragile states? A conceptual analytical study. *Journal of Education for Business*, *97*(6), 393–400. https://doi.org/10.1080/08832323.2021.1973944

Murphy, M. C., Steele, C. M., & Gross, J. J. (2007). Signaling threat: How situational cues affect women in math, science, and engineering settings. *Psychological Science*, *18*(10), 879–885. https://doi.org/10.1111/j.1467-9280.2007.01995.x

Pascarella, E. T., Martin, G. L., Hanson, J. M., Trolian, T. L., Gillig, B., & Blaich, C. (2014). Effects of diversity experiences on critical thinking skills over 4 years of college. *Journal of College Student Development*, *55*(1), 86–92. https://doi.org/10.1353/csd.2014.0009

Rask, K., & Tiefenthaler, J. (2008). The role of grade sensitivity in explaining the gender imbalance in undergraduate economics. *Economics of Education Review*, *27*(6), 676–687. https://doi.org/10.1016/j.econedurev.2007.09.010

Robson, D. (2001). Women and minorities in economics textbooks: Are they being represented? *The Journal of Economic Education*, *32*(2), 186–191. https://doi.org/10.2307/1183494

Siegfried, J. J. (2022). Trends in undergraduate economics degrees, 2001-2021. *The Journal of Economic Education*, *53*(3), 273–276. https://doi.org/10.1080/00220485.2022.2075511

Soisson, A. (2016). Seven bricks to lay the foundation for productive difficult dialogues. In M. Bart (Eds.), *Faculty focus special report: Diversity and inclusion in the classroom* (pp. 6–7). Magna Publications, Inc.

Stevenson, B., & Zlotnick, H. (2018). Representation of men and women in introductory economics textbooks. *AEA Papers and Proceedings*, *108*, 180–185. https://doi.org/10.1257/pandp.20181102

Walker, M. R. (2007). *The impact of business students' diversity experiences within the business curriculum and co-curriculum on their openness to diversity* [Dissertations]. The University of North Dakota ProQuest Dissertations Publishing, 329 4623.

Walstad, W., & Becker, B. (2010). Preparing graduate students in economics for teaching: Survey findings and recommendations. *The Journal of Economic Education*, *41*(2), 202–210. https://doi.org/10.1080/00220481003613888

Watts, M., & Schaur, G. (2011). Teaching and assessment methods in undergraduate economics. *The Journal of Economic Education*, *42*(3), 294–309. https://doi.org/10.1080/00220485.2011.581956

Worthington, A., & Higgs, H. (2004). Factors explaining the choice of an economics major: The role of student characteristics, personality and perceptions of the profession. *International Journal of Social Economics*, *31*(5/6), 593–613. https://doi.org/10.1108/03068290410529416

Zhang, M. M., Xia, J., Fan, D., & Zhu, J. C. (2016). Managing student diversity in business education: Incorporating campus diversity into the curriculum to foster inclusion and academic success of international students. *Academy of Management Learning & Education*, *15*(2), 366–380. https://doi.org/10.5465/amle.2014.0023