

Building the RBG Bridge: Expanding the Capacity for Research into Diversity and Inclusion in Economics Classrooms

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DRAFT for presentation at the January 2025 ASSA Meetings. Please do not share without permission.

Abstract

Encouraged by the ongoing conversation about increasing the gender and racial diversity of our field and funded by a grant from the National Science Foundation's Build & Broaden program, a team of economists from St. Catherine University and Metropolitan State University undertook a multi-year survey project to investigate relevance, belonging and growth mindset (RBG) in economics classrooms. This paper discusses the project, which is motivated by the idea that change at scale will require learning from identity-focused institutions – including women's colleges and minority serving institutions (MSIs). In addition to data collection and analysis, the grant encouraged capacity building at MSIs. To that end, the team hosted a mini-conference of participating schools to spur shared learning. This event brought together faculty from a variety of schools for a deep dive into the data with the expectation that networking and collaboration yield insights to improve inclusion in economics.

Keywords: Relevance, belonging, growth mindset, economics education, women's colleges, minority serving institutions

JEL codes: A22, I23, J15, J16

Acknowledgments

This material is based upon work supported by the National Science Foundation under Grant No. 2126635. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the authors and do not necessarily reflect the views of the National Science Foundation. The team appreciates the participation of faculty and students in responding to our survey, and particularly the faculty who participated in our "mini-conference."

Introduction

The field of economics suffers from a lack of diversity along a variety of axes, including gender, race/ethnicity, and socio-economic status (Stansbury and Schultz 2023; Committee on the Status of Minority Groups in the Economics Profession (CSMGEP) 2023; Chari 2023). The field has also made notably less progress in including underrepresented students than STEM disciplines (Committee on the Status of Minority Groups in the Economics Profession (CSMGEP) 2023). The lack of diversity in economics affects what topics are studied (Antman et al. 2024b; 2024a) and ultimately economic policy (Bayer and Wilcox 2019; May, McGarvey, and Whaples 2014).

Addressing the economics “leaky pipeline” (Buckles 2019)¹ requires increasing the diversity of the student body that first takes undergraduate courses and then majors in economics. Past research has identified issues of relevance, belonging, and growth mindset (RBG) as a key cleavage between underrepresented and majority identity students and related to their persistence in the field (Bayer et al. 2020). RBG is thus considered a key potential explanation for disparities in the field of economics (Allgood and McGoldrick 2023). A number of interventions working to increase inclusion in the profession have targeted RBG or been designed to act via RBG (e.g., Al-Bahrani 2022; Murray 2024; Horowitz 2023; Wilson 2023; Lopez and Wandschneider 2024).

However, past research on RBG, such as the central study of Bayer et al. (2020), has been from predominantly white, co-educational, elite institutions, often a single site. Likewise interventions to increase inclusion and study RBG across multiple institutions have, to date, generally targeted relatively elite institutions (Avilova and Goldin 2024; The Economic Education Network for Experiments 2024). Yet these types of institutions do not necessarily educate the most diverse students, nor are RBG and its impacts necessarily the same across contexts. For instance, minority students disproportionately attend less-selective universities and community colleges, and especially minority-serving institutions (MSIs) (Georgetown University Center on Education and Workforce 2018; National Academies of Sciences Engineering and Medicine 2019). Likewise, women’s colleges may play a particularly important role in educating women economists (Calkins et al. 2023; Butcher, McEwan, and Weerapana 2023).

This paper describes an economics education research project designed to expand our knowledge of RBG, diversity, and persistence in economics across a wider range of institutions, including specifically community colleges, MSIs, and women’s colleges. The project included intentional networking and capacity-building activities, culminating in a “mini-conference” that engaged faculty in analyzing data on RBG and persistence collected from their institutions, discussing lessons learned, and setting a research agenda for future work on RBG and persistence that includes a much wider set of institutional perspectives.

¹ As an alternative to leaky pipeline models are those that identify a “color line” (Price 2009), lack of progress higher in the profession even when earlier stages expand.

We took away several key lessons from the project. First, casting an unexpectedly wide net for research partners is important, both because response rates aren't always good, even from schools that should be interested in this research, because faculty at two-year schools and smaller programs often feel alone or isolated and greatly appreciate inclusion, and because programs and their students vary greatly and the full breadth of the field needs to be reflected in this research. Second, soliciting and encouraging input and feedback from participants is critical in new directions forward, both for a specific study and for generally increasing diversity in a field. Faculty at different institutions have a wide variety of backgrounds and experience and identify very different limitations on students starting and persisting in economics. Finally, while we are advocates for identity-focused institutions, we found limited evidence for their role in building RBG and persistence among economics students.

The overall project research agenda on RBG and persistence

The overall research project on RBG and persistence across institution types was envisioned in response to the focus in past RBG and persistence research on elite, predominantly white institutions (PWIs) and co-educational settings. The fact that persistence in economics was quite different at women's colleges (Calkins et al. 2023; Butcher, McEwan, and Weerapana 2023) and historically black colleges and universities (HBCUs) showed different mindset in areas such as stereotype threat (Alston et al. 2022) suggested these institutions might have important impacts on RBG and persistence.

The National Science Foundation (NSF) "Build and Broaden 2.0: Enhancing Social, Behavioral and Economic Science Research and Capacity at Minority-Serving Institutions (B2 2.0)" grant program provided an opportunity for us to explore these themes and while building research capacity and networks among a wider array of institutions (U.S. National Science Foundation, n.d.). B2.0 solicited research collaborations between MSIs and other institutions, with the goal of growing the STEM workforce while increasing the role of MSIs in research. Two of the authors of this research were faculty in the Department of Economics and Political Science at St. Catherine University (St. Kate's), a MSI and women's liberal arts college. The department also houses the Minnesota Center for Diversity in Economics (MCDE) which seeks to increase the number of underrepresented students at all stages of the educational and career pipeline. The B2.0 program thus was closely aligned with the principal investigators' (PIs) institutional and research goals.

The grant encouraged collaboration with other MSIs so St. Kate's faculty reached out to area schools with this classification while developing the grant proposal. Colleagues from Metropolitan State University (Metro State) responded with enthusiasm. The team had not worked together previously despite being geographically close. Together, we developed a proposal to research the impact of institution type (MSIs vs. PWIs, women's colleges vs. co-ed) on RBG and persistence. We planned to collect data from and collaborate with a minimum of 18

institutions with economics majors, or for two-year schools, economics courses. We targeted 3 institutions from each of the following six strata: combinations of two vs. four year, women vs. co-educational, and MSI vs. PWI composition, since there are not any two- year women-only institutions. Initially, the proposal focused on recruiting other colleges and universities in Minnesota and Wisconsin to encourage more regional collaboration. However, during implementation we realized that to achieve the sampling needed for broad institutional representation we needed to expand the project to encompass other states with more women's colleges and more MSIs.

We ultimately selected four states with a sufficient number of MSIs and women's colleges to sample from, undertaking bootstrapped random stratified sampling that was designed to balance characteristics of institutions as much as possible across types. We reached out to all the faculty with available emails at the selected institutions to ask if they were interested in participating.² Recognizing both the importance of incentives and the disproportionate service burdens that tend to be placed on underrepresented faculty (O'Meara, Kuvaeva, and Nyunt 2017; Guillaume and Apodaca 2022), we offered a \$1,000 honorarium for facilitating data collection (faculty survey, class surveys, and student surveys).³

Data were collected at baseline, in the fall of 2022, from faculty and students at 24 institutions. Students were then followed up in fall of 2023 for an endline survey, in order to explore change in RBG, another previously under-researched topic, and its relationship with institution type and persistence. A first research paper (Krafft, West, Bellas, Lo, Mendosa, Agbenyiga, Dombroski, and Her 2023) and corresponding policy brief (Krafft, West, Bellas, Lo, Mendosa, Agbenyiga, Dombroski, Her, et al. 2023) explored RBG by institution type and identity at baseline, highlighting that while minority students did have lower RBG, women students did not - potentially due to the role of women's colleges in promoting RBG, particularly relevance. A second research paper (Krafft, West, Bellas, Lo, Moua, et al. 2024) and corresponding policy brief (Krafft, West, Bellas, Lo, Dombroski, et al. 2024) examined identity, institution type, RBG, and persistence at endline, highlighting that counter to previous research, RBG did not necessarily mediate persistence, nor did women or minority students in our sample show particular drops in persistence. The papers were presented at the Conference on Teaching and Research in Economic Education (CTREE) variously in 2023 and 2024.

Networking and “mini-conference” activities

As part of the overall project, we had originally conceived a regional networking and learning event at St. Kate's, for those faculty particularly from MSIs and women's colleges who

² If no faculty were interested in participating, the school was replaced with random re-sampling, see Krafft et al. (2023) for details.

³ The grant, importantly, provided financial support for faculty, program coordinator, and undergraduate research assistant time to facilitate all the project activities, as well as the honoraria and incentives and mini-conference.

participated in the data collection. Given previous networking at CTREE 2023 and convergent timelines, we pivoted to a day long “mini-conference” the day prior to CTREE 2024. Faculty who were part of the data collection process were invited to the mini-conference and were provided travel stipends to support attendance. Many also stayed for the CTREE meetings. We prioritized funding for faculty from MSIs in keeping with the grant objectives but were able to include faculty from other institutions as budget permitted. In all 26 faculty from 18 institutions spent the day focused on RBG in economics.

At the mini-conference we described the research and our preliminary findings, however, the primary objective was not dissemination of our results but rather to build community and seed new research ideas and collaborations between participants. A large portion of the day was set aside for data exploration and brainstorming. Participants were given access to the anonymized data set – which is publicly available⁴ – and provided with the identifier for their institution. Thus faculty could identify their institution but for all others could only see type of institutions (e.g. MSI or PWI, women’s college or co-educational, 2 year or 4 year). Participants had time to explore the data together and also heard from speakers on related projects and grants. In the afternoon participants met in affinity groups organized by geography and institutional characteristics to discuss ideas and next steps.

At the end of the day, participants reflected on ideas to hold on to, interventions to consider and research/data that is needed to move forward. Faculty identified important notes for future projects including focusing on class/socio-economic status in addition to race and gender, learning more about pre-college economics exposure since selection into the major may be as, if not more, important than retention, and considering interventions that encourage pathways between two year colleges and four year colleges. At the close of the mini-conference faculty expressed gratitude for the opportunity to collaborate and reflect on how to increase inclusion in their classes but also for space to consider research that would advance knowledge broadly on this topic. Faculty from community colleges and small programs were especially vocal and noted that too often they are siloed and do not have a chance to interact with other economics faculty who are facing similar opportunities and challenges.

Lessons learned for building more inclusive research in economics education

One take away from our research findings (Krafft, West, Bellas, Lo, Moua, et al. 2024; Krafft, West, Bellas, Lo, Mendosa, Agbenyiga, Dombroski, and Her 2023) is that identity is not as predictive of RBG nor persistence as past research suggested (Bayer et al. 2020). Institution type did impact some aspects of student’s sense of RBG but often in surprising ways that point to important new questions for future research, underscoring the importance of including and analyzing diverse institutions.

⁴ De-identified data are publicly available from openICPSR: <https://doi.org/10.3886/E198108V1>

Key takeaways from the research project and especially the mini-conference include a need to invite faculty from regional and identity-focused institutions into conversations about representation in economics. Quite literally, the mini-conference attempted to change who was “at the table” in the discussion of RBG and persistence in economics. Disproportionate numbers of underrepresented students are at less selective institutions (Georgetown University Center on Education and Workforce 2018; National Academies of Sciences Engineering and Medicine 2019), and faculty at these schools have varying degrees of support for research. Programs like the NSF “Build and Broaden” grant can help build capacity but ongoing efforts are needed to continue these conversations and spur new research. Future research efforts can combat elitism in the field and increase the odds that interventions are scalable and reach a critical mass of students by actively recruiting departments at schools with high shares of underrepresented students to participate in research on best practices.

Additionally, the focus on making any data collected publicly available and inviting faculty to collaborate not only in data collection but also in analysis (with the opportunity to identify and study their own institution) has the potential to spur more research that systematically evaluates the effectiveness of practices that are currently being tried but not studied. Projects, such as the Economic Education Network for Experiments, that invite faculty from multiple schools to contribute to the data collection and analysis can create sample sizes that detect differences that would be hard to identify with small-scale, single institution studies. Efforts that coordinate across campuses should resist the urge to focus on large and elite departments since smaller departments at non-elite schools may disproportionately serve underrepresented students. However, intentional outreach and financial support may be particularly necessary to reach such institutions (The Economic Education Network for Experiments 2024).

Conclusion

The lack of diversity in economics is evident (Stansbury and Schultz 2023; Committee on the Status of Minority Groups in the Economics Profession (CSMGEP) 2023; Chari 2023) and has critical implications for the future of the field if trends persist (Antman et al. 2024b; 2024a; Bayer and Wilcox 2019; May, McGarvey, and Whaples 2014). Addressing this issue, especially at the undergraduate level, requires understanding of underrepresented students’ sense of relevance, belonging, and growth mindset (RBG) (Bayer et al. 2020; Allgood and McGoldrick 2023). However, prior research largely excludes less elite institutions ((Bayer et al. 2020; Avilova and Goldin 2024; The Economic Education Network for Experiments 2024), where underrepresented students are more likely to attend (Georgetown University Center on Education and Workforce 2018; National Academies of Sciences Engineering and Medicine 2019).

Our experience on this project conveys several important lessons. The first is to cast a wide net in recruiting participants, both because response or retention rates might be lower than hoped and for the sake of including colleagues who may feel excluded from a lot of research opportunities. The second is to solicit input from participants on both the current work and

directions forward. The third is that while research is important, hoped-for results don't always materialize.

Our findings bring new insights from identity-focused and 2-year institutions to help fill this gap. We find that institution type impacts some aspects of RGB in unexpected ways and that identity is not predictive of RGB or persistence, which differs from previous literature (Bayer et al. 2020), raising questions for future research. By sharing results and data with faculty from participating institutions in a mini-conference, we facilitated inter-institutional collaboration that led to the sharing of interventions and enriched the overall project. The conference empowered faculty to analyze and contextualize their data, share best practices, and network with faculty from similar institutions - breaking down barriers facing faculty in smaller programs. The outcomes from the mini-conference emphasize the impact of engaging faculty representing underrepresented students and institutions on fostering diversity in economics. With this project and future research, we hope to demonstrate how designing intentionally collaborative interventions could be the key to solving the diversity issue in economics.

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