

## Promoting Success among First-Generation Students in Economics: Challenges and Strategies

Eric P. Chiang  
Department of Economics  
University of Nevada, Las Vegas  
4505 S. Maryland Pkwy.  
Las Vegas, NV 89154  
Email: [eric.chiang@unlv.edu](mailto:eric.chiang@unlv.edu)

Erika V. Martinez  
Department of Economics  
University of South Florida  
4202 E. Fowler Ave.  
Tampa, FL 33620  
Email: [evm@usf.edu](mailto:evm@usf.edu)

**Abstract:** First-generation students are a growing segment of the college population, a trend aided by flexible learning formats that are increasingly available among institutions of higher learning. Moreover, greater interest in business disciplines offers an opportunity for economics programs to enhance enrollments and majors. However, first-generation students face challenges that are often evident when attempting analytical and technically-intensive courses such as economics, especially at the principles levels where deficiencies in prerequisite knowledge (e.g., math and statistics) and experience (e.g., financial literacy) create a disadvantage. Many first-generation students face obstacles that inhibit success, including financial barriers, language barriers, time constraints, and lack of peer and family support. This paper presents an analysis of how these obstacles can be moderated in economics through pedagogical strategies that emphasize an appreciation of learning, effective channels of communication, flexibility and clarity of instruction, practical applications, and connection with other disciplines. Through the use of best practices, economics courses can offer an effective pathway for first-generation students to pursue professional careers that enhance their future earnings and reduce the income gap these students face against their peers.

**Keywords:** First-generation; Student success; Learning outcomes

**JEL Classification:** A20, A22, I24

## **1. Introduction**

First-generation students (FGS) represent a growing segment among students in higher education. FGS are defined as students who are the first in their immediate families (including parents and older siblings) to pursue a college degree. Often, these students come from low-income households or whose parent(s) are immigrants seeking a better life for their children. As a result, many FGS face obstacles such as work and family obligations that make a college degree more difficult to achieve. However, structural changes in higher education over the past few decades have facilitated access, including improvements in remote learning technologies along with increased flexible class offerings. The COVID-19 pandemic further accelerated this trend, where the shift from in-person to online offerings resulted in many courses being offered exclusively online. Although there are debates on whether online and other flexible formats of learning are as effective as in-person learning, a positive externality resulting from these changes is the ability to reach more first-generation students.

Although increased availability of flexible learning formats has contributed to greater educational access for all students, the growth in the proportion of FGS in higher education has been especially pronounced. According to data from the National Center for Educational Statistics (NCES), FGS represented only 22% of college students in 1992. This proportion increased to 37% in 2016 and to 56% in 2023. FGS now comprise a majority of students in numerous colleges, even those that primarily offer face-to-face classes. Therefore, addressing the challenges faced by FGS should be a goal for all institutions of higher learning.

FGS are often burdened with many challenges, including helping out with family finances and other household responsibilities such as childcare for younger siblings. In addition to financial barriers and time constraints, many FGS face other obstacles such as language

barriers and the lack of peer support that may inhibit educational success. Therefore, FGS typically represent a smaller proportion of students at traditional 4-year universities where students are more often expected to devote their full attention to their studies.

This paper analyzes survey data from over 2,000 students from five public colleges and universities to compare the realities facing FGS to non-FGS. We focus on students enrolling in principles of economics courses (microeconomics and macroeconomics), a core requirement for most business majors that have grown in popularity along with other STEM disciplines. We address the challenges and concerns of students specific to studying economics, such as the math and graphical tools used in economics courses.

Using these findings, the paper outlines and discusses key strategies that can ameliorate obstacles facing FGS. These strategies include harnessing an appreciation of learning, emphasizing time management skills to avoid procrastination, and promoting effective channels of communication. Moreover, we provide best practices for instructors with large numbers of FGS, including ways to increase flexibility in learning, clarity of instruction, application of concepts to everyday situations, and connecting economic concepts to other disciplines.

## **2. Literature Review**

Although substantial literature exists on the challenges facing FGS in higher education (see Spiegler and Bednarek, 2013), no paper to our knowledge has focused on the challenges facing FGS in economics courses. The importance of focusing on economics is highlighted by two important facts: 1) economics is a discipline that requires technical and analytical skills that can create obstacles for FGS compared to their non-FGS peers, and 2) business majors are often viewed by FGS as a practical pathway toward a lucrative career and often require economics courses as a prerequisite.

The most recognized characteristics of FGS are that they are more likely to come from a lower socioeconomic background and have lower incomes (Inman and Mayes, 1999; Mehta et al, 2011). Therefore, FGS are more likely to apply for financial aid and face student loan burdens after college (Furquim et al, 2017). Moreover, the ambitions of FGS tend to focus more on helping their families financially after completing their degrees (Bui, 2002). An empirical study by Trejo (2016) found that first-generation status has a significant effect on one's college major choice; specifically, FGS are more likely to select majors with a clearly defined career path. Engle and Tinto (2008) found that low-income FGS are more likely to enroll at a two-year degree institution, and those who transfer to a four-year institution have a lower graduation rate compared to non-FGS. The authors emphasize the need to help FGS transition to four-year programs.

Several studies have focused on specific challenges faced by FGS and strategies to overcome them. Balemian and Feng (2013) surveyed first-generation college-bound students to uncover the challenges that may await them in college. For example, a greater proportion of FGS plan to work while in school and live at home, characteristics that may hinder the college experience. McFadden (2016) focuses on the health issues (both physical and mental) that FGS are more likely to encounter. Harrell and Forney (2011) focus on Hispanic FGS, arguing that a more extensive mentoring network is needed to help students transition from high school to college. An empirical study by Pham and Keenan (2011) show that proper counseling may help underrepresented students (including FGS) better prepare for college, and subsequently increase the likelihood of pursuing a college degree. Warburton et al (2001) show that providing FGS with opportunities to take rigorous courses in high school is an important determinant for achieving college success. Moreover, Próspero and Vohra-Gupta (2007) argue that *academic*

*integration* (the assimilation of the student into the academic life of a college) is a key determinant of college success among FGS, more than extrinsic motivation factors such as the desire to complete one's college degree for financial success. Pascarella et al (2004) similarly argued that "access" to college means more than just academic access, but providing the full college experience including extracurricular activities.

Another issue facing FGS is the ability of these students to overcome financial obstacles in the long run, after their college experience. A study by Fry (2021) shows that first-generation college graduates continue to lag economically compared to those who are not first-generation, suggesting that the challenges facing FGS extend beyond achieving college success. One reason provided by Hirudayaraj (2011) is that first-generation college graduates often lack the social and cultural capital that is typically learned from one's family upbringing, which may hinder one's employability in a knowledge-based economy. Lohfink and Paulsen (2005) find that while FGS have a higher withdrawal rate from college (especially from the first to second year), those who complete their degrees earn comparable salaries to their non-first-generation counterparts, thus providing a more optimistic view on future career outcomes.

An important conclusion from the existing research is that addressing the key obstacles facing FGS and providing the necessary resources and support can result in outcomes that are not empirically different from non-FGS (Terenzini et al, 1996). Moreover, after leveling the playing field, FGS can exceed the outcomes of non-FGS due to their determination and focus on more lucrative career choices. York-Anderson and Bowman (1991) show that a strong support system for FGS can provide greater opportunities for student success and future earnings. In the next section, we examine survey data comparing several characteristics between FGS and non-FGS. We also compare results between two-year and four-year degree-granting institutions.

### 3. Survey Data and Analysis

To provide a better understanding of the situations faced by FGS in higher education compared to their non-first-generation peers in the economics discipline, we surveyed over 2,000 students between May and October of 2023 at five public colleges and universities. These included three four-year institutions and two that primarily award two-year degrees. All students were enrolled in either microeconomic principles or macroeconomic principles, and the survey was assigned online (in Canvas), was optional (a small amount of extra credit was provided), and was anonymous (Canvas recorded the completion of surveys by students but the resulting data had no names attached). Also, the survey was implemented approximately one week after the first exam in all sections surveyed, allowing students to evaluate their experiences in the course after completing the first set of chapters and one exam.

Table 1 provides the total number of completed surveys at each of the five institutions along with the percentage of the sample comprising FGS. Table 2 provides descriptive statistics comparing FGS and non-FGS including the percentage of students who work full-time, work part-time, have previously taken a college-level or AP economics course, reported a concern with the math skills required to succeed in the course, reported a concern with the graphical skills required to succeed in the course, an indicator of the level of interest in the course, and their major (or planned major) in a business field including economics, finance, management, marketing, accounting, or real estate. Table 3 provides further details on the data by institution and first-generation status.

Survey results from Table 2 exhibit several key differences between FGS and non-FGS, some of which are highly expected (such as time constraints) while others shed insight into how economics programs might be an attractive area of study for FGS. With respect to time

constraints, 30% of our sample of FGS worked full-time, nearly twice the percentage of non-FGS (16.8%). This difference was more pronounced at four-year institutions, where non-FGS are less likely to work than at two-year institutions. Moreover, we find that FGS reported a greater concern regarding the math and graphing concepts that are common to economics courses, suggesting that one of the keys to promoting success in economics is to ensure students receive adequate proficiency in math, either via prerequisite courses or providing math tutorials within economics courses.

Another interesting finding from Table 2 is the level of interest in the economics course, where FGS reported a higher average level of interest in economics than non-FGS. Moreover, a marginally higher percentage of FGS chose to major in a business field (including economics). These findings suggest that although FGS may struggle in economics courses, they find these courses to be practical and can lead to career opportunities that their parents did not have. Since business careers are often viewed as well-paying, it makes sense that FGS favor business majors, despite the obstacles faced.

Analyzing the results by institution in Table 3, not all of the findings from Table 2 applied to all institutions. As mentioned earlier, students at two-year institutions tend to work more, regardless of whether they are a FGS or not. Also, there were differences in the likelihood of choosing a business major between institutions. The most consistent statistics across the sampled institutions were the level of interest in economics (where FGS had a higher average level of interest) and the concern regarding graphing tools (where FGS reported a higher level of concern except at one two-year institution).

**Table 1: Percentage of First-Generation Students in Sample**

College/University	Description	Observations	Percent First-Generation
#1	2-year public	27	14/27 = 51.9%
#2	2-year public	28	7/28 = 25.0%
#3	4-year public	788	226/788 = 28.7%
#4	4-year public	908	145/908 = 16.0%
#5	4-year public	293	122/293 = 41.6%

**Table 2: Descriptive Statistics: First-Generation vs. Non-First-Generation Students**

Characteristic	Total Percentage	First-Gen Percent	Non-First-Gen Percent
Work Full-time	411/2044 = 20.1%	154/514 = 30.0%	257/1509 = 16.8%
Work Part-time	936/2044 = 45.8%	221/514 = 43.0%	715/1530 = 46.7%
Previous Econ	941/2044 = 46.0%	239/514 = 46.5%	702/1530 = 45.9%
Math Concern	795/2044 = 38.9%	215/514 = 41.8%	580/1530 = 37.9%
Graphing Concern	1026/2044 = 50.2%	276/514 = 53.7%	750/1530 = 49.0%
Level of Interest*	1025/2044 = 50.1%	305/514 = 59.3%	720/1530 = 47.1%
Business Major	1666/2044 = 81.5%	422/514 = 82.1%	1244/1530 = 81.3%

\*Level of Interest = 1 if very interested or interested in course content; 0 if neutral or not interested

**Table 3: Descriptive Statistics by Institution and First-Generation Status**

Variable	CSN	SBCC	FAU	USF	UNLV
Work Full	17/27 = 63%	6/28 = 21%	225/788 = 29%	105/908 = 12%	58/293 = 20%
FG	8/14 = 57%	1/7 = 14%	95/226 = 42%	24/145 = 17%	26/122 = 21%
NFG	9/13 = 69%	5/21 = 24%	130/562 = 23%	81/763 = 11%	32/171 = 19%
Work Part	9/27 = 33%	16/28 = 57%	375/788 = 48%	387/908 = 43%	149/293 = 51%
FG	6/14 = 43%	5/7 = 71%	95/226 = 42%	59/145 = 41%	56/122 = 46%
NFG	3/13 = 23%	11/21 = 52%	280/562 = 50%	328/763 = 43%	93/171 = 54%
Prev. Econ	19/27 = 70%	10/28 = 36%	284/788 = 36%	507/908 = 56%	121/293 = 41%
FG	9/14 = 64%	0 / 7 = 0%	94/226 = 42%	85/145 = 59%	51/122 = 42%
NFG	10/13 = 77%	10/21 = 48%	190/562 = 34%	422/763 = 55%	70/171 = 41%
Math Conc.	13/27 = 48%	3/28 = 11%	348/788 = 44%	303/908 = 33%	128/293 = 44%
FG	8/14 = 57%	0/7 = 0%	105/226 = 47%	46/145 = 32%	56/122 = 46%
NFG	5/13 = 38%	3/21 = 14%	243/562 = 43%	257/763 = 34%	72/171 = 42%
Graph Conc.	12/27 = 44%	6/28 = 21%	397/788 = 50%	460/908 = 51%	151/293 = 52%
FG	7/14 = 50%	1/7 = 14%	117/226 = 52%	76/145 = 52%	75/122 = 62%
NFG	5/13 = 38%	5/21 = 24%	280/562 = 50%	384/763 = 50%	76/171 = 44%
Interest	20/27 = 74%	15/28 = 54%	391/788 = 50%	384/908 = 42%	215/293 = 73%
FG	12/14 = 86%	4/7 = 57%	124/226 = 55%	69/145 = 48%	96/122 = 79%
NFG	8/13 = 62%	11/21 = 52%	267/562 = 48%	315/763 = 41%	119/171 = 70%
Bus. Major	21/27 = 78%	21/28 = 75%	633/788 = 80%	731/908 = 81%	260/293 = 89%
FG	9/14 = 64%	3/7 = 43%	183/226 = 81%	114/145 = 79%	113/122 = 93%
NFG	12/13 = 92%	18/21 = 86%	450/562 = 80%	617/763 = 81%	147/171 = 86%



#### **4. Strategies for Supporting First-Generation College Students**

The findings from the previous section suggest that if institutions of higher education engage in strategies to support FGS, the potential rewards in terms of enrollment and majors can be substantial given that FGS favor academic majors with a clearly defined career path, such as business and economics. This section provides a summary of best practices in supporting FGS.

##### *a. Take a Compassionate and Inclusive Approach:*

Teaching to FGS effectively necessitates a keen awareness of potential personal biases and an empathetic approach. Educators can enhance their teaching practices to create an inclusive and supportive learning environment by challenging their own assumptions, increasing transparency, and demonstrating care, empathy, and encouragement. Instructors should critically evaluate assumptions they may have regarding students' knowledge, skills, and experiences. This self-awareness should lead to the design of more transparent assignments and classroom policies. Showcasing genuine care and empathy is vital for supporting FGS. This personal touch can greatly boost students' confidence and exploration of academic pathways. Examples of these strategies include:

- Review assignment design, participation expectations, and classroom policies to identify hidden biases.
- Make assumptions explicit to students, creating a dialogue on expectations and facilitating clearer communication.
- Encourage open feedback and discussions with students about their comfort level with course materials and expectations.
- Regularly check in with students to assess their well-being and academic progress.
- Offer individualized feedback and guidance to help students navigate challenges.

- Collaborate with university departments that specialize in supporting FGS and integrate these resources into instructional practices.

#### *b. Unveil the Hidden Curriculum*

FGS often enter higher education without the benefit of familial guidance or prior exposure to academic customs and practices. The lack of understanding of college culture can make the transition to college overwhelming, leading to confusion and feelings of intimidation (Davis, 2012). A commonly raised concern in the literature about FGS is the presence of a “hidden curriculum” in higher education (Chatelain, 2018). The hidden curriculum refers to the unwritten expectations and practices in higher education that may be unfamiliar to FGS. This hidden curriculum can place FGS at a disadvantage, as non-FGS students often have support systems to help them decode these unspoken rules and customs. To promote equitable instruction for FGS, it is essential to make the hidden curriculum more apparent. The following are some specific strategies that instructors can implement to support FGS:

- Create a comprehensive syllabus that clearly outlines course expectations, assignments, grading criteria, and due dates. Provide detailed explanations of course policies and academic resources.
- Schedule office hours at times convenient for all students and encourage FGS to attend. Offer virtual office hours to accommodate different learning styles and schedules. Offer hours by appointment.
- Promote the use of tutoring and writing centers by clearly explaining their services and benefits. Encourage FGS to seek additional support when needed.

- Highlight the resources available at the career center, including resume-building workshops, job fairs, and internship opportunities. Show FGS how to take advantage of these resources.
- Offer guidance on effective study techniques, time management, and organization. Provide tips on balancing coursework with other responsibilities.

Many of the above practices and resources may appear to be common knowledge. Yet, it may be surprising to find out that many students are not familiar with office hours and their purpose. Therefore, it's important not to assume that students are familiar with "college jargon". Instead, find opportunities to explain what practices will be used in each course, how they will be used, and the benefits students will receive when taking advantage of these resources.

### *c. Address Psychological Factors*

FGS often face unique psychological challenges that can impact their academic success and overall well-being. Effective teaching practices that address psychological factors include helping students overcome imposter syndrome, cultivating a growth mind, and fostering academic help-seeking behaviors.

Imposter syndrome is a common psychological challenge for first-generation high-achieving students (Davis, 2012). They may attribute their success to external factors rather than their own abilities. This perception can negatively affect their academic performance, social integration, and emotional health (Galina, 2016; Ewing et al., 1996).

The distinction between a fixed and growth mindset plays a critical role in academic success. Encouraging a growth mindset can enhance a student's willingness to learn and persist through challenges (Bowman and Levitov, 2020).

To address imposter syndrome and support a growth mindset, educators can:

- Provide regular feedback and positive reinforcement to boost self-confidence.
- Offer mentorship programs to connect students with experienced peers or faculty.
- Promote self-reflection to help students recognize their accomplishments and capabilities.

To promote a growth mindset:

- Emphasize the importance of effort and perseverance in the learning process.
- Highlight stories of successful individuals who overcame obstacles through continuous learning.
- Encourage students to view challenges as opportunities for growth and development.

FGS may hesitate to seek academic assistance, believing it reflects inadequacy. Educators can help students overcome this barrier by:

- Creating a supportive learning environment where questions and seeking help are encouraged.
- Offering resources for academic support, including tutoring services, study groups, and office hours.
- Demonstrating that seeking help is a sign of initiative and a commitment to academic success.

By addressing imposter syndrome, cultivating a growth mindset, and promoting academic help-seeking behaviors, educators can create an inclusive and supportive learning environment for first-generation college students in principles of microeconomics courses. These strategies contribute not only to academic success but also to the overall well-being of FGS as they navigate the challenges of higher education.

#### *d. Craft an Inclusive Course Structure with Flexibility*

FGS often encounter external demands that can hinder their ability to prioritize studying and effectively pace their learning throughout the semester. Providing a clear course structure with weekly deadlines and low stakes grading as well as recognizing and addressing obstacles that FGS may face, are some teaching practices that create a supportive course structure while providing flexibility, ultimately benefiting all students and particularly FGS (USC Center for Teaching Excellence).

A flexible course structure and teaching clarity play a pivotal role in motivating students, increasing student persistence and improving their academic performance. The Wabash National Study of Liberal Arts Education underlines the importance of these elements particularly for the support of first generation and low-SES students (Wang et al., 2015; Roksa et al., 2017). In addition to structure and increased clarity, instructors should recognize the external challenges and obstacles that FGS may face, such as work, family responsibilities, or financial constraints and offer flexibility and accommodations where appropriate. Approaches to implement these practices include:

- Communicate learning objectives and instructional methods clearly to guide students throughout the semester.
- Reinforce the relevance of each activity, assignment, and assessment to the broader course goals.
- Discuss how specific skills and knowledge acquired will aid students in their academic and personal growth.
- Provide frequent updates and reminders to help students stay on track.

- Prevent students from falling behind by establishing clear, consistent weekly deadlines for assignments, readings, and activities. By breaking down the course into manageable segments, students can pace their learning effectively.
- Consider scaffolding, retrieval practice, interleaving, and other teaching practices that break assignments and activities into smaller steps with frequent review.
- Allow for extensions on assignments or exams when students face unexpected challenges.
- Offer multiple attempts on assignments or assessments to accommodate different learning styles.
- Consider allowing students to drop some assignments or replace them with alternative forms of assessment when necessary.

*e. Provide Transparent Assignments and Evaluation*

FGS particularly benefit from enhanced clarity in assignments and evaluation practices (Winkelmes, 2016). Utilizing rubrics and providing sample assignment submissions are some practices that ensure transparency in learning objectives and assessment criteria (Stevens and Levi, 2005). Strategies include:

- Provide detailed criteria for assessing assignments, making expectations transparent.
- Illustrate the expected quality and depth of work.
- Help students understand the criteria and standards for assignments.
- Empower students to self-assess and improve their work.
- Offer a consistent framework for evaluating student work.
- Facilitate constructive and fair grading, reducing uncertainty for FGS.

*f. Leverage Economics Concepts to Engage FGS through Culturally Responsive Teaching*

Culturally responsive teaching in economics involves recognizing and embracing the characteristics and experiences of FGS to create an engaging and inclusive learning environment. Economists can use culturally responsive teaching for FGS relatively easily because economics is a subject that inherently deals with real-world issues and practical decision-making. Since economics is centered on understanding how individuals and societies make choices to allocate resources and these choices directly affect the daily lives of FGS, it makes the subject matter immediately relevant to their experiences.

Furthermore, by noting the common characteristics of most FGS, economists can use them to find several ways to “call-in” FGS to the class discussion without “calling them out” directly. The survey results above reflect many of the FGS characteristics found throughout the literature. Common characteristics of FGS include limited access to social capital, increased financial constraints, poorer math background, greater difficulty achieving a work-education-life balance, increased resilience and determination, varying family and community influence, and career aspirations. Examples of how these characteristics can be incorporated into economics concepts to make the material more relatable and engaging include:

- Offering a detailed math review to each course. This could be an extra online tutorial so that it does not take up class time. Given that FGS show significant challenges with math relative to their non-first-generation peers, including a math review could be beneficial in addressing educational gaps and building confidence.
- Explore the concept of opportunity cost by considering the financial trade-offs FGS might face. For instance, show how the decision to work part-time while attending college affects their ability to invest in education.

- Explore the concept of externalities by discussing how the educational attainment of one family member can have positive spillover effects on others. Explain how FGS' pursuit of higher education can benefit their families and communities.
- Incorporate discussions about public policies and their implications. Instructors can use these discussions to engage FGS in topics related to social and economic equity, which often align with their experiences and values.
- Examine labor market trends and the challenges FGS may encounter in balancing work and education. Discuss the impact of part-time jobs or work-study programs on their earning potential and career opportunities.
- Emphasize the value of human capital and how FGS can invest in their education to increase their earning potential over time. Showcase stories of successful individuals who overcame challenges through determination and education.
- Present college education as an investment and discuss concepts like the return on investment in education. Help FGS understand the costs and long-term benefits of their college experience.
- Examine the role of human capital in labor market segmentation. Discuss how educational choices can affect career options and earning potential, providing real-world examples of how education can open doors to different career paths.
- Explores topics that focus on income inequality and economic mobility. FGS are often motivated by a desire to improve their socioeconomic status, and economics can help them understand the dynamics at play in this context. Discuss how economic mobility relates to FGS' aspirations. Use examples that highlight how education and career choices can impact their ability to move up the socioeconomic ladder.



- Discuss the importance of financial literacy and the role it plays in making informed decisions about budgeting, savings, investments, and retirement planning. Use practical examples related to personal finance and investments that resonate with FGS and connects economic principles to their financial challenges.

By incorporating these characteristics and concerns of FGS into economics concepts, instructors can make the material more relevant and engaging. This approach helps FGS see the direct applicability of economic principles to their lives, making the subject matter more relatable and motivating for them.

## **5. Student Attrition and Diversity in Economics**

Student retention serves as a critical indicator of student achievement. Several challenges faced by FGS are associated with higher rates of student attrition. Among the general factors contributing to attrition, insufficient student support is a prominent concern. Additionally, student attrition is linked to issues like academic disengagement, anxiety, limited academic readiness, feelings of social isolation, financial constraints, self-doubt, difficulties in comprehending the higher education terminology, as well as a lack of connections on campus (USC Center for Teaching Excellence). The teaching practices outlined above can have a major impact on student attrition and diversity in economics.

By recognizing the strengths of FGS, fostering an inclusive learning environment, providing personalized support, and addressing the obstacles that contribute to attrition, educators can make a significant impact on student retention. Implementing best teaching practices tailored to the needs of FGS not only benefits this student population but also contributes to a more inclusive and successful higher education environment for all.

FGS are more likely to come from low-income or minority backgrounds and to be parents, caregivers, or immigrants (Bui, 2002; Lohfink and Paulsen, 2005). Therefore, by creating an inclusive environment for FGS, economics programs can tap into a broader talent pool and attract a more diverse range of students. The survey results above indicate that FGS report a higher level of interest in economics than non-FGS. We already have their attention. With a little effort geared toward best teaching practices for FGS, the retention of these underrepresented groups can be increased.

Clearly, economic discussion benefits from diverse perspectives. When FGS are actively involved in economics programs, they bring unique viewpoints, experiences, and insights that enrich classroom discussions, research, and policy analysis. Diverse perspectives can lead to more comprehensive and well-informed economic theories and solutions.

It is therefore important to remember that representation matters. Take time to highlight diverse scholars in the field, such as including references and materials by first-generation economists or inviting guest speakers from diverse backgrounds. When FGS see successful individuals from similar backgrounds excelling in economics, it can inspire them and others like them to pursue the field. Positive representation plays a crucial role in encouraging students from underrepresented groups to consider and persist in economics.

Acknowledging first-generation college students in economics programs not only benefits FGS but also contributes to the broader goal of increasing diversity in the field. This emphasis on inclusion, equity, and representation can lead to a more varied and representative cohort of economics professionals, which ultimately enriches the field and its impact on society.

## **6. Conclusion**

This paper highlights several key findings based on a survey of over 2,000 college students. Among this sample, approximately one-third identified as a FGS. Economics plays a potentially valuable role in connecting the goals and aspirations of FGS, who disproportionately favor majors in business fields that are viewed as more directly correlated with high-paying careers. Therefore, increasing the value of an economics curriculum to a FGS can lead to many potential outcomes, including increasing diversity in the economics discipline, promoting financial literacy, improving decision-making skills by conveying the broad value of economic applications, and increasing career opportunities that can ultimately reduce income inequality and wage gaps. FGS offer a wealth of practical knowledge and experiences that enhance learning for all students. Therefore, by harnessing these experiences into the classroom, instructors can provide effective learning paths to generate student success while promoting enrollments and majors.

## References

- Balemian, K., & Feng, J. (2013). First Generation Students: College Aspirations, Preparedness and Challenges. *College Board*.
- Bui, K. V. T. (2002). First-generation college students at a four-year university: Background characteristics, reasons for pursuing higher education, and first-year experiences. *College Student Journal*, 36(1), 3-12.
- Bowman, N. A., & Levto, A. H. (2020). Understanding and using growth mindset to foster college student learning and achievement. *New Directions for Teaching & Learning*, 2020(164), 75–83.
- Chatelain, M. (2018). We Must Help First-Generation Students Master Academe's 'Hidden Curriculum. *Chronicle of Higher Education*.
- Davis, J. (2012). *The first generation student experience: Implications for campus practice, and strategies for improving persistence and success*. Stylus Publishing, LLC..
- Engle, J., & Tinto, V. (2008). Moving beyond access: College success for low-income, first-generation students. *Pell Institute for the Study of Opportunity in Higher Education*.
- Ewing, K. M., Richardson, T. Q., James-Myers, L., & Russell, R. K. (1996). The relationship between racial identity attitudes, worldview, and African American graduate students' experience of the imposter phenomenon. *Journal of Black Psychology*, 22(1), 53-66.
- Galina, B. (2016). Teaching first-generation college students. *Vanderbilt University Center for Teaching*
- Fry, R. (2021). First-Generation College Graduates Lag behind Their Peers on Key Economic Outcomes. *Pew Research Center*.
- Furquim, F., Glasener, K. M., Oster, M., McCall, B. P., & DesJardins, S. L. (2017). Navigating the financial aid process: Borrowing outcomes among first-generation and non-first-generation students. *The ANNALS of the American Academy of Political and Social Science*, 671(1), 69-91.
- Harrell, P. E., & Forney, W. S. (2003). Ready or not, here we come: Retaining Hispanic and first-generation students in postsecondary education. *Community College Journal of Research & Practice*, 27(2), 147-156.
- Hirudayaraj, M. (2011). First-generation students in higher education: Issues of employability in a knowledge based economy. *Online Journal for Workforce Education and Development*, 5(3), 2.
- Inman, W. E., & Mayes, L. (1999). The importance of being first: Unique characteristics of first generation community college students. *Community college review*, 26(4), 3-22.

Lohfink, M. M., & Paulsen, M. B. (2005). Comparing the determinants of persistence for first-generation and continuing-generation students. *Journal of College Student Development*, 46(4), 409-428.

McFadden, D. L. (2016). Health and academic success: A look at the challenges of first-generation community college students. *Journal of the American Association of Nurse Practitioners*, 28(4), 227-232.

Mehta, S. S., Newbold, J. J., & O'Rourke, M. A. (2011). Why do first-generation students fail? *College Student Journal*, 45(1), 20-36.

Pascarella, E. T., Pierson, C. T., Wolniak, G. C., & Terenzini, P. T. (2004). First-generation college students: Additional evidence on college experiences and outcomes. *The Journal of Higher Education*, 75(3), 249-284.

Pham, C., & Keenan, T. (2011). Counseling and college matriculation: Does the availability of counseling affect college-going decisions among highly qualified first-generation college-bound high school graduates. *Journal of Applied Economics and Business Research*, 1(1), 12-24.

Próspero, M., & Vohra-Gupta, S. (2007). First generation college students: Motivation, integration, and academic achievement. *Community College Journal of Research and Practice*, 31(12), 963-975.

Roksa, J. (2017). Family Resources, Siblings, and Exchange of Support Between Low-Income Young Adults Pursuing Higher Education and Their Families.

Spiegler, T., & Bednarek, A. (2013). First-generation students: What we ask, what we know and what it means: An international review of the state of research. *International Studies in Sociology of Education*, 23(4), 318-337.

Stevens, D. D., & Levi, A. (2005). Leveling the Field: Using Rubrics to Achieve Greater Equity in Teaching and Grading. *Essays on Teaching Excellence, Professional and Organizational Development Network in Higher Education*, 17 (1).

Terenzini, P. T., Springer, L., Yaeger, P. M., Pascarella, E. T., & Nora, A. (1996). First-generation college students: Characteristics, experiences, and cognitive development. *Research in Higher education*, 37, 1-22.

Trejo, S. (2016). An econometric analysis of the major choice of first-generation college students. *The Developing Economist*, 3(1).

University of South Carolina Center for Teaching Excellence. Strategies to Effectively Teach First Generation Students. Retrieved Oct 15, 2023. From: [https://sc.edu/about/offices\\_and\\_divisions/cte/teaching\\_resources/dei\\_toolbox/first\\_generation\\_students/index.php#:~:text=Incorporate%20first%20generation%20experiences%20in,explicit%20with%20instructions%20and%20directions.](https://sc.edu/about/offices_and_divisions/cte/teaching_resources/dei_toolbox/first_generation_students/index.php#:~:text=Incorporate%20first%20generation%20experiences%20in,explicit%20with%20instructions%20and%20directions.)

Wang, J. S., Pascarella, E. T., Nelson Laird, T. F., & Ribera, A. K. (2015). How clear and organized classroom instruction and deep approaches to learning affect growth in critical thinking and need for cognition. *Studies in Higher Education*, 40(10), 1786-1807.

Warburton, E. C., Bugarin, R., & Nunez, A. M. (2001). Bridging the Gap: Academic Preparation and Postsecondary Success of First-Generation Students. Statistical Analysis Report. Postsecondary Education Descriptive Analysis Reports.

Winkelmes, M. (2016). Helping faculty use assessment data to provide more equitable learning experiences. Urbana, IL: University of Illinois and Indiana University, National Institute for Learning Outcomes Assessment (NILOA).

York-Anderson, D. C., & Bowman, S. L. (1991). Assessing the college knowledge of first-generation and second-generation college students. *Journal of College Student Development*.