Confidence in Attaining Short-term and Long-term Goals: Differences between First and Continuing-Generation College Students

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Abstract

-Talented African American, Hispanic, and American Indian undergraduates remain underrepresented in STEM (Bowman 2011; 2013).
- Several initiatives (e.g., NSF's Louis Stokes Alliances for Minority Participation (LSAMP) exist to tackle this problem.
- My study is part of the overall Michigan LSAMP program of research
- MI-LSAMP provides underrepresented students with various resources and supports that promote their retention and academic success.
- The research applies the Bowman Strengths-based Role Strain Adaptation model (2011) to investigate multilevel factors that promote students' academic and career success.
- I conducted t-tests to examine possible differences between first-generation and continuing-generation college students' confidence in attaining education and career goals.
- Overall, first-generation and continuing-generation college students were more similar than dissimilar in their confidence.

Introduction

-First-generation college students are undergraduates whose parents never obtained a bachelor's degree (e.g., Ives & Castillo-Montoya, 2020).

-Existing research indicates that compared to continuing-generation college students, first-generation college students
- earn fewer college credits
- are more likely to drop out
- are less likely to earn a bachelor's degree

-My study
- describes demographic differences between first & continuing generation college students
-examines similarities & differences in confidence of goal attainment across these two groups of students

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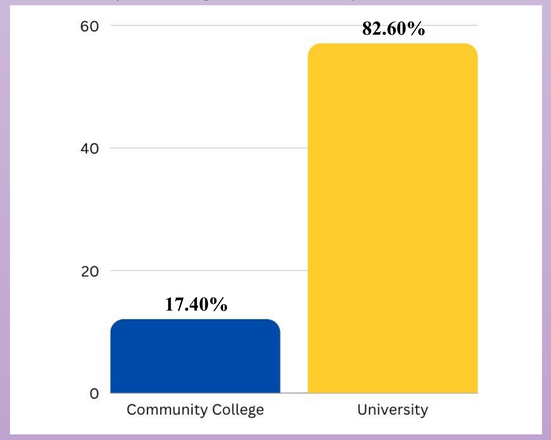
Method

-Participants
-69 students who started participating in MI-LSAMP during the 2022-2023 academic year or the summer immediately before.

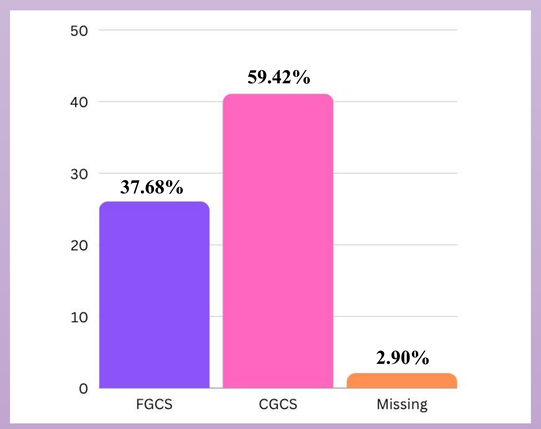
-Data collection
-My data are from surveys conducted on the MI-LSAMP students who participated in the summer program before the start of the academic year.
-Survey data were collected at the beginning and end of this program.

Percentage of students attending community colleges & four-year institutions



N = 69

Percentage of first-generation & continuing-generation college students



N = 69

Note. FGCS: First-generation college students
CGCS: Continuing-generation college students

Table 1. T-test of independent samples of short-term goals of first-generation college students and non-first-generation college students.

	CGCS	FGCS	t-value
	Mean (Std. Deviation)	Mean (Std. Deviation)	
A.Get good grades in STEM courses at your new institution	3.75(1.50)	4.33(0.52)	-0.90
B.Maintain the STEM professional network I had built at my previous institution	4.67(0.58)	3.83(1.17)	1.14
C.Be able to transfer successfully to a 4 year institution	4.67(0.58)	4.50(0.55)	0.42
D.Form relationships with one or more STEM-related mentors	4.14(0.80)	4.21(0.93)	-0.31
E. Develop a strong network of people in STEM	4.22(0.72)	4.25(0.90)	-0.13
F.Graduate with a major in a STEM discipline/field	4.74(0.44)	4.46(0.78)	1.78
G. Conduct a supervised research project related to STEM	3.97(0.88)	4.17(0.76)	-0.89
H. Complete an internship in a STEM-related company or industry	4.33(0.76)	4.46(0.66)	-0.66
I. Get good grades in STEM courses at your current institution	4.17(0.77)	4.42(0.50)	-1.40

Table 2. T-test for independent samples of long-term goals of first-generation college students and non-first-generation college students.

	CGCS	FGCS	t-value
	Mean (Std. Deviation)	Mean (Std. Deviation)	
A.Be able to successfully get into graduate school	4.21(0.60)	4.37(0.83)	-0.78
B. Find a career in STEM that you enjoy	4.35(0.68)	4.36(0.76)	-0.05
C.Meet all of your educational and career goals	4.35(0.68)	4.44(0.77)	-0.48
D.Apply to graduate school in a STEM-related discipline	4.36(0.78)	4.21(0.85)	0.66
E.In general, pursue a STEM-related career	4.68(0.58)	4.40(0.71)	1.68
F.Pursue a career as a college or university STEM faculty member	3.36(1.06)	3.32(1.16)	0.15
G.Pursue a career related to STEM education or communication	**3.11(1.05)**	**3.76(1.20)**	**-2.27**
H.Pursue a career in an industrial or corporate setting	3.62(0.89)	3.92(1.00)	-1.23
I.Pursue a STEM policy career outside of a college/university setting	4.27(0.80)	4.16(0.75)	0.55

Note. Numbers in parentheses represent the standard deviations.
*** - p < .05**

Conclusion

-The findings of this study have implications for educational practice and policy.
- First-generation college students may have different career aspirations and confidence levels compared to continuing-generation college students in STEM fields.
- Consideration of the unique challenges and strengths of first-generation college students is important in educational practice and policy.
- Interventions and support programs, like the MI-LSAMP program, should account for differences in career aspirations and confidence levels between first-generation and continuing-generation college students.