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The Student Benefits of a STEMM Scholarship Program

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Abstract

“According to a recent report by the Center on Education and the Workforce, eight million new jobs will be available in STEMM-related fields by 2018” (<https://ohiohighered.org/cof>). The distinguished Choose Ohio First Scholarship has been granted to a select group of technology majors at Franklin University since 2012, many of whom have gone on to gain employment in technology-related fields, while remaining in the state of Ohio.

Qualitative and quantitative research methods were used to measure the Choose Ohio First Scholars’ academic persistence, graduation, and employment compared to the other students, who were declared Computer Science and Management Information Sciences majors, at Franklin University.

Initial statistical analysis indicated that there was a positive correlation between the Choose Ohio First Scholars’ academic persistence, graduation, and employment. Choose Ohio First Scholars were more likely to graduate from Franklin University than the general student body enrolled in Computer Science and Management Information Sciences majors. Students who receive additional academic support and financial support from their institution might be more likely to graduate and gain employment in their fields of study than students who do not receive additional support.

Choose Ohio First

The Choose Ohio First Scholarship Program is part of the state's strategic effort to significantly strengthen Ohio's position in world markets such as aerospace, medicine, computer technology and alternative energy (<https://ohiohighered.org/cof>). To date, more than 28,000 Choose Ohio First scholarships have been awarded to scholars enrolled in 49 Ohio public and private institutions. The scholarships have leveraged more than \$107.7 million in matching funds from Ohio colleges and universities, and their business partners (<https://www.ohiohighered.org/cof>).

Hypothesis

It was hypothesized that between 2012-2015 Franklin University Choose Ohio First Scholars ($n = 97$) were more likely to continue course work and graduate than the general student population with declared technology majors in Computer Science and Management Information Sciences ($n = 353$).

Methods

As part of the Choose Ohio First Scholarship Agreement at Franklin University, scholars are required to complete a survey at the end of the academic year. The survey captures demographic information, employment information, plans upon graduation, participation in experiential learning and Choose Ohio First experience. The Choose Ohio First scholars’ responses were compared with all other declared Computer Science and Management Information Sciences majors, not part of the Choose Ohio First program.

Discussion

The data demonstrates that the Choose Ohio First Scholarship has impacted student success within the Computer Science and Management Information Sciences majors. All three years, the attrition rate for Choose Ohio First scholars was lower than the other STEMM students and the average number of credits earned by Choose Ohio First scholars were approximately five times that of the other STEMM students. The only graduates in the Computer Science and Management Information Sciences programs, within the past three years, were Choose Ohio First scholars. We anticipate similar student success with the addition of Information Technology, Cyber Security/Information Security, and Web Development scholars to the program during the 2015-2016 academic year.

Upon graduation, 100% of the Choose Ohio First graduates entered the workforce in the state of Ohio during 2014-2015. The majority of graduates entered the workforce in a STEMM field. Franklin University has played a role in the Choose Ohio First strategic efforts to significantly strengthen Ohio's position in STEMM fields. Further investigation is warranted to determine how the Choose Ohio First scholarship program is positively impacting the graduation and retention rates.

Cohort data 2012-2013

	Number in AY 12-13	% STEMM Bach.	% non-STEMM Bach.	% left, no degree – include transfer students	% not graduated, but still enrolled in STEMM	% not graduated but still enrolled in non-STEMM	Average Credits earned
Undergraduate COF	22	36.4% (8)	4.5% (1)	22.7% (5)	18.4% (4)	18.4% (4)	63
Other STEMM students	129	0%	0%	12.2% (16)	77% (99)	10.8% (14)	12.8

Nine out of the 22 Franklin University COF scholars graduated with a bachelor’s degree during the 2012-2013 academic year. The only graduates in the CS and MIS programs were COF scholars. Five COF scholars left the program, compared to 16 students who were not affiliated with COF that left the CS and MIS programs during the 2012-2013 academic year.

Cohort data 2013-2014

	Number in AY 13-14	% STEMM Assoc.	% STEMM Bach.	% left, no degree – include transfer students	% not graduated, but still enrolled in STEMM	% not graduated but still enrolled in non-STEMM	Average Credits earned
Undergraduate COF	33	6% (2)	6% (2)	12% (4)	73% (24)	3% (1)	42
Other STEMM students	106	0%	0%	6.6% (7)	85% (90)	8.4% (9)	9.2

Four out of the 33 Franklin University COF scholars graduated with a degree during the 2013-2014 academic year. The only graduates in the CS and MIS programs were COF scholars. Four COF scholars left the program, compared to seven students who were not affiliated with COF that left the CS and MIS programs during the 2013-2014 academic year.

Cohort data 2014-2015

	Number in AY 14-15	% STEMM Assoc.	% STEMM Bach.	% left, no degree – include transfer students	% not graduated, but still enrolled in STEMM	% not graduated but still enrolled in non-STEMM	Average Credits earned
Undergraduate COF	42	4.8% (2)	19.0% (8)	16.7% (7)	59.5% (25)	0%	54.3
Other STEMM students	118	0%	0%	9.3% (11)	87.3% (103)	3.4% (4)	9.9

Ten out of the 42 Franklin University COF scholars graduated with a degree during the 2014-2015 academic year. The only graduates in the CS and MIS programs were COF scholars. Seven COF scholars left the program, compared to 11 students who were not affiliated with COF that left the CS and MIS programs during the 2014-2015 academic year

Descriptive Analysis

