



Assessment of the Multicultural Scholars Program at Oregon State University

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Introduction: Multicultural Scholars Program (MSP)

- Program funded by the National Institute of Food and Agriculture.
- Intended to encourage first generation, minority students to pursue careers in Science, Technology, Engineering and Mathematics (STEM).
- Enrollment includes: a full-ride scholarship, faculty mentor, research project and summer internships.
- Participants are required to pursue a degree in Bioresource Research (BRR) in the College of Agricultural Sciences at Oregon State University.

Introduction: Bioresource Research

- BRR is a challenging science and research program that prepares students for STEM related careers.
- Students are required to complete a 2-year mentored research project culminating in a thesis and public seminar.
- Many BRR students receive grants to support research, present at professional meetings and/or author papers published in peer-reviewed journals.
- Since 2006, 100% of BRR graduates have found placement in jobs, graduate or professional schools within 3 months of their graduation.

Research Objective

- Assess the effectiveness of the Multicultural Scholars Program by observing the following among the 2011-2012 cohort:
 - Social and Cultural Identity
 - Family Encouragement
 - Academic Self-Efficacy
 - General Self-Efficacy
 - Personal Goal Orientation
 - University Support
 - Knowledge of Research

Assessments

Measured Area	Assessment
Social and Cultural Identity	Multi-Group Ethnic Identity Scale (Phinney, 1992)
Family Encouragement	Educational Encouragement Scale (Gloria et al., 1999)
Academic Self-Efficacy	Assessment of Academic Self-Efficacy and Motivation Scale (MSLQ, 1995)
General Self-Efficacy	
Personal Goal Orientation	
University Support	University Environment Scale (Payakkakom, 2008)
Knowledge of Research	Undergraduate Research Evaluation (Kardash, 2000)

MSLQ: Motivated Strategies for Learning Questionnaire (Garcia & Pintrich ,1995)

Methods

- 2011-2012 Cohort of MSP students
- Six students (5 Male, 1 Female)
- Constructs measured at mid-point of Freshman year (2011-2012) & mid-point of Sophomore year (2012 – 2013).
- Online assessment
- Average completion time: 20 Minutes

Findings: Freshman Year

Measured Area	Freshman Year
Social and Cultural Identity	4.18
Family Encouragement	5.12
Academic Self-Efficacy	5.11
General Self-Efficacy	4.75
Personal Goal Orientation	5.14
University Support	4.51
Knowledge of Research	5.12

Items measured on six-point scales.

Findings: Sophomore Year

Measured Area	Sophomore Year
Social and Cultural Identity	3.60
Family Encouragement	4.90
Academic Self-Efficacy	4.92
General Self-Efficacy	4.71
Personal Goal Orientation	4.74
University Support	5.03
Knowledge of Research	4.84

Items measured on six-point scales.

Findings: Change in Constructs

Measured Area	Freshman Year	Sophomore Year	Difference
Social and Cultural Identity	4.18	3.60	-0.58
Family Encouragement	5.12	4.90	-0.22
Academic Self-Efficacy	5.11	4.92	-0.19
General Self-Efficacy	4.75	4.71	-0.04
Personal Goal Orientation	5.14	4.74	-0.40
University Support	4.51	5.03	+0.52
Knowledge of Research	5.12	4.84	-0.28

Items measured on six-point scales.

Discussion

- Decline in Social and Cultural Identity & Family Encouragement
 - Previous research has identified a similar pattern among minority college students (Ethier & Deaux, 1994; Rendon, Jalomo & Nora, 2000; Sussman, 2000).
- Decline in Academic and General Self-Efficacy
 - Freshman Year Required Courses: Entry level Biology, Chemistry and English
 - Sophomore Year Required Courses: Organic Chemistry, Physics and Statistics
- Decline in Knowledge of Research & Personal Goal Orientation
 - 2-year mentored research project begins Junior year.
 - Research project is student directed, potentially strengthening personal goal orientation.

Programmatic Interventions

- MSP students are required to participate in MANRRS (Minorities in Agriculture, Natural Resources and Related Sciences).
- Students take BRR100 & BRR200 which focus on developing and sustaining academic support and introducing students to important critical thinking, problem solving and teamwork skills.
- Students attend MSP social events including a fall welcome party and dinners with MSP faculty.
- MSP students serve as mentors for elementary students at a local school who are interested in science.
- Development of a new course focused on research and experimental design. Course takes a team problem solving approach with the goal of fostering MSP cohort interactions.

Conclusions

- The MSP program provides a well-rounded college experience to students who, otherwise may not have had that experience.
- The sophomore year is an academically challenging year for MSP students.
 - Investigation into the development of MSP study groups is recommended.
- Qualitative analysis of MSP students may identify additional needs of students enrolled in this program.

Thank you!

Questions?