Assessment Report 2013-14
TRIO Programs/McNair Scholars

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Department Website URL: http://www.bgsu.edu/offices/sa/trio/mcnair/index.html

Signature Program/Service Overview

The program being assessed is the McNair Scholars Program, specifically the 8-week 2014 Summer Research Institute (SRI) component of the program. The broad goal of the 2-year McNair Scholars Program is to prepare undergraduates from first-generation, low income families and those from groups underrepresented in graduate-level education (as specified by the U.S. Dept. of Education) for graduate studies culminating in earning the PhD. The specific purpose of the SRI is to have McNair Scholars who have completed their junior year at BGSU: 1) engage in a scholarly research project of their own design under the guidance of a faculty mentor to learn research methodology and presentation and writing skills in preparation for graduate research and study, and 2) prepare for the graduate school admissions process by gaining familiarity with required admissions tests, writing resumes and personal statements, completing graduate applications, and other similar activities. During the SRI, McNair Scholars stay on campus for 8 weeks and spend 20 hours per week on independent research and 10 hours per week participating in seminars and workshops. Scholars take a graduate school admissions test prep course (Kaplan GRE), which requires about 10 hours a week of work outside the classroom. The SRI was held on the BGSU campus from May 19 – July 24, 2014. It also included travel to a McNair Research Conference hosted by the University at Buffalo, in Niagara Falls, NY, July 24-27. The Scholars presented their research results to McNair Scholars from other schools as the culmination of the SRI. The SRI plays an important role in assisting the McNair program in meeting its broad goals of preparing students for graduate school by having the students 1) actually engage in a master’s thesis-like project and 2) effectively complete most components needed for graduate school applications. The McNair staff works with Scholars to complete their graduate school applications throughout Fall 2014, using the products created during the SRI.

LEARNING OUTCOMES

University Learning Outcome

University Learning Outcomes addressed include:

I. Intellectual and Practical Skills:

1. Critical and Constructive Thinking:
   Inquiry: a close examination of an issue or situation in a search for information or truth; determining what questions should be asked; recognizing opportunities; formulating hypotheses; seeking information and evaluating claims; making discoveries and reaching new understandings; and making informed judgments.

2. Communication:
   Writing: communicate clearly and effectively to an identified audience. To be effective, written communication should be informed by audience analysis, demonstrate reflection, employ critical thinking, and make appropriate use of supporting argument and citation.
   Presenting: speak, show, demonstrate, exhibit or perform for an individual or group. Effective presentation engages the intended audience, includes the use of non-verbal forms of communication and may employ a variety of media.

II. General and Specialized Knowledge: “…expertise in a particular disciplinary area or major.”

III. Integrate, Apply and Reflect: Synthesis and advanced accomplishment across general and specialized studies.

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Student Affairs Learning Outcomes

1. Divisional Student Learning Outcome #1: Intellectual and Practical Skills
   Effective Communication
   - Writing: Students are able to research, integrate, support and defend ideas; produce clear and concise written communications; develop correct structure for written pieces; apply professional standards to written documents.
   - Presenting: Students are able to provide effective presentations to engage the audience; demonstrate a confident presentation style through the application of credible knowledge, clear annunciation, and the ability to read verbal/non-verbal cues

2. Divisional Student Learning Outcome #2: General and Specialized Knowledge
   Specialized knowledge
   - Career and Specialization Development: Students are able to develop an expertise in a particular disciplinary area or major; advance the knowledge and core concepts of a chosen profession; develop a meaningful and personal career action plan.

3. Divisional Student Learning Outcome #4: Integrate, Apply, and Reflect
   Integration: Students will be able to apply academic knowledge and co-curricular experience to further career and personal goals; be able to research, collect information, experiment and summarize findings.
   Application: Students are able to create a career action plan that continuously seeks opportunities for expanding personal and professional development

Signature Program Learning Outcomes with Target Achievement Level

For all 4 learning outcomes:
- Audience/Who will be assessed: 2014 McNair Summer Research Institute (SRI) participants (demographic information follows under Project Sample/Participant Overview), n=11
- Program/Project/Service being assessed: 2014 McNair SRI
- Timeline for measurement: From the beginning to the end of the 2014 SRI, May 19 - July 27, 2014

1. 100% of McNair Scholars who participate in the Summer Research Institute (SRI) will be able to demonstrate knowledge of the research process from inception to completion. Students will specifically be able to:
   A) Gather previous research and articulate research ideas (identify, collate, and synthesize knowledge). This will be demonstrated by the completion of a Literature Review.
   B) Design a research project to create new knowledge, as demonstrated by completion of a research project, defined as producing tangible results
   C) Share this new knowledge, as evidenced through the writing and the submission of a research paper, poster, and powerpoint presentation.

2. 75% of McNair Scholars who participate in the Summer Research Institute will be able to communicate the components of their summer research through giving a poster presentation and an oral presentation at a conference or other research symposium.

3. 100% of McNair Scholars who participate in the Summer Research Institute will be able to identify the components of the graduate school application and admission process as evidenced by the completion of a graduate school search matrix and drafts of a personal resume and statement.

4. 75% of McNair Scholars who complete the Graduate Record Examination workshop will be able to demonstrate effective test-taking strategies by a demonstrated increase from pre-test to post-test scores


METHODS AND PROCEDURES

Project Sample/Participant Overview
11 McNair Scholars participated in the 2014 SRI. All had completed their junior year. Data was obtained from the entire population of McNair Scholars who participated in SRI. (Thus we used the population, not a sample.) Data was collected via surveys with both quantitative and qualitative methods, completed assignments, and personal interviews prior to admission into the program and at the end of the SRI. Response rate was 100%. All participants had applied to be McNair Scholars in Spring 2013 and were chosen for participation in the program based on their desire to pursue graduate studies immediately after obtaining their undergraduate degree and who met other program eligibility criteria. These criteria include: 1) first-generation, low-income students OR those from groups underrepresented at the graduate level as defined by the US Department of Education (African American, Latino/a, Native American, Pacific Islander), 2) US citizen, 3) GPA of 2.9 or higher; 4) recommendation from 2 faculty members, 5) interview with McNair staff and Scholars.

Demographics (N=11)
- Age Range: 20-22
- Class Rank: All had completed their junior year and planned to graduate in Spring 2015 or later (e.g., Fall 2015).
- Gender: Female = 6 (55%), Male = 5 (45%)
- Race/Ethnicity: African-American = 8 (73%), White = 3 (27%)
- Eligibility Classification: First Generation/Low Income = 9 (82%) Underrepresented = 2 (18%)
  Both underrepresented and first generation/low income = 6 (55%)

Data Collection Timeframe
Data was collected from all participants at multiple time points:

1) By survey, interview and application package prior to entrance into the McNair Scholars Program, in Spring 2013
2) By survey, evaluation of completed work, observation, and interview after SRI completion in summer, specifically the end of July 2014.

Data Collection Methods

Multiple methods:

1) Surveys at 2 time points over the course of a year and a half (February 2013 - July 2014) to gauge student progress and learning using
   a. Quantitative (numerical Likert scale) methods:
      i. Example: Students will be asked to rate on a scale of 1-5, with 1 indicating strongly disagree to 5 indicating strongly agree, statements such as “I am familiar with how to apply for graduate assistantships”
   b. Qualitative methods, such as open-ended questions:
      i. Example: Students will be asked “Name 3 types of graduate assistantships typically available.”
2) Assessment of work completed during the SRI (research presentations, research paper, and other products such as CV/resume, personal statement, etc.)
   a. Students completed resumes/CVs, personal statements, research posters, etc., which were evaluated and critiqued by faculty mentors and McNair staff
   b. Students gave poster and oral powerpoint presentations, which were observed and evaluated by McNair staff
3) Exit Interviews to gain a deeper understanding of the students’ experiences and to receive recommendations for improvement for next year.
4) Graduate admissions test pre- and post-tests, specifically scores on a diagnostic pre-study course Graduate Record Exam (GRE) and scores on the actual GRE (or intermediate practice test after/during GRE course completion if actual GRE has not yet been taken).
Limitations

Both quantitative and qualitative methods were used to gain numerical data as well as a deeper understanding of student learning. One main limitation is small population size (n=11), so results may lack generalizability. Also, the McNair program has specific eligibility requirements, which would affect generalizability to a larger population that does not share these individual characteristics (for example, desire to pursue graduate studies, which provides motivation for McNair students).

RESULTS AND CONCLUSIONS

Sharing the Results

Results will be shared in multiple ways: Accomplishments of McNair Scholars, including conference presentations, are covered on the Facebook page of the McNair Scholars Program (BGSU McNair Scholars). Information is further disseminated through departmental newsletters and emails. Results are included in all Annual Performance Reports submitted to the U.S. Department of Education, which funds the McNair Program. Results are also included in feature articles and stories about McNair Scholars published by the university, such as website features. Finally, family, friends, mentors and university representatives are all invited to a Recognition Ceremony and Research Symposium where the McNair Scholars present their research posters and receive recognition for their work. This symposium/ceremony was held in July 2014.

Summary of Results

SLO #1: Objective met. 11 of 11 Scholars (100%) have either completed all research components, including a literature review, tangible results, and a research paper meeting program standards or have such work in progress.

SLO #2. Objective met. 11 of 11 Scholars (100%) presented their research to the public as a poster on the BGSU campus at the McNair Annual Research Symposium held July 16, 2014. Additionally, 11 of 11 Scholars (100%) presented their research to peers from other programs at a regional McNair conference July 24-27 in Niagara Falls, NY.

SLO #3. Objective met. All Scholars (100%) completed a graduate school matrix, and created resumes/CVs and personal statements to use when applying for graduate school.

SLO #4: Objective in progress. The 10 Scholars whose graduate schools require the GRE for admission took a GRE pretest and completed a 20 classroom-hour study course. (The other Scholar requires a different admissions test for a specific fields of study, and is preparing on his own.) GRE post-test scores are pending – the post-test score is the actual GRE, which Scholars will be taking in August and September 2014.

In a post-SRI survey, Scholars indicated that they were familiar with and felt comfortable with the graduate school admissions process, designing and presenting research, and the steps necessary to obtain a PhD.

Several successful changes were implemented to the 2014 SRI based on feedback from last year’s program:

- GRE study started prior to the summer. Students began GRE vocabulary study during spring semester, and thus had a head start to the official Kaplan GRE class that ran from May-July.

- GRE class time was doubled, with the addition of an extra day each week to the official Kaplan course. The Kaplan class met once a week, then the students met again later that week to go deeper into the Kaplan material or supplemental material.

- A graduate school visit was reinstated. In the 2013 program, the graduate school visit had been cut due to lack of funding. This year, students visited Michigan State University to learn more about the graduate school visit and interview process. Students met with faculty members in their department of interest and also interacted with current graduate students.
Key Results

1. Prior to SRI, the majority of students rated their research skills as “poor” or “average.” After SRI, 100% rated their research skills as “good” or “excellent.”

McNair Scholars’ Rating of Research Skills Prior to SRI (blue) and After SRI (red)

2. 100% of participants “agreed” or “strongly agreed” that they were familiar with research methodology after SRI, as compared to a wide range of levels of familiarity prior to SRI.

McNair Scholars’ Rating of Research Methodology Familiarity Prior to SRI (blue) and After SRI (red)

3. 100% of students rated their level of comfort with performing research as “comfortable” or “very comfortable” after completing SRI.

McNair Scholars’ Rating of Level of Comfort in Performing Research After SRI
4. 100% of McNair Scholars “agreed” or “strongly agreed” that they were knowledgeable about graduate school admission requirements after completing SRI.

McNair Scholars' Rating of Level of Knowledge of Graduate School Admission Requirements Before SRI (blue) and After SRI (red)

5. 100% of McNair Scholars “agreed” or “strongly agreed” that they were knowledgeable about financial sources to fund graduate school after completing SRI.

McNair Scholars' Rating of Level of Knowledge of Financial Funding for Graduate Studies Before SRI (blue) and After SRI (red)

6. 100% of McNair Scholars “agreed” or “strongly agreed” that they were aware of and knowledgeable about the contents of the GRE after completing SRI.

McNair Scholars' Rating of Level of Knowledge about the Contents and Role of the GRE Before SRI (blue) and After SRI (red)
7. 100% of McNair Scholars “strongly agreed” that they able to locate and accurately complete a graduate school application after completing SRI.

Scholars provided qualitative data as well in response to open-ended questions. Some quotes include:

- I was able to gain confidence in myself and also knowledge regarding research, graduate school, and the GRE. Before the McNair SRI I was not confident in public speaking and I hated the idea of presenting. However, through McNair I was able to gain confidence within myself.

- I have gained a new appreciation and understanding for research as a process rather than just an assignment or compilation of tasks. I appreciate the support from staff….I have gained a clear sense of direction on my path to graduate school.

- It has definitely prepared me to apply for graduate school and took a lot of the stress off. I now feel much more confident in my abilities as a researcher.

- I have gained a new understanding of how to conduct research and how to prepare myself for post graduate schooling.

- I learned a lot about how to complete a research project and gained very valuable help with graduate school admissions materials like the CV, personal statement, and even filling out an application.

**ACTION TAKEN / CLOSING THE LOOP**

**Decisions and Recommendations**

The McNair Summer Research Institute fulfilled its stated objectives of providing an undergraduate research experience and familiarizing participants with the process and requirements for graduate school admission and success. These objectives were met by having participants engage in an average of 20 hours of research a week to complete a research project, and an additional 10 hours a week to attend seminars and workshops to create products needed when applying for graduate school, such as CV/resumes, personal statements, etc. Additionally, participants completed a GRE-prep class to ensure success on this graduate entrance exam, visited a graduate school, presented at a poster symposium, and orally presented research at a regional conference.

What could have been done differently:

- Participants could have attended a conference previous to the one at which they presented to observe others present and to gain a deeper understanding of what conferences are like. Due to limited funds, we were not able to attend two conferences this summer. In the past, students have attended a conference in June to observe, then presented at a conference in July.
Future Recommendations based on collected data:

- Attend an additional conference to further prepare students for their own conference presentations

- Keep the changes made to GRE study: Start GRE preparation in spring semester, and double the time allocated for GRE class in the summer.

- Keep the graduate school visit