

Evaluation of the NSF ADVANCE Catalyst project at Murray State University

Differences and Deficits Affecting Women STEM Faculty: Creating a Framework for Change at a Rural Public University

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This report is based on discussions and observations during a site visit on Friday, 16 September 2016, as well as documents provided before and during that visit or available via the internet. This report is a formative assessment in the early stages of the project.

Executive Summary

Clear assignment of responsibility and good communications mean that the team is making timely progress on all aspects of the project. The timing of the award was particularly fortuitous. Receiving the funding information from the NSF in May allowed the team to put in a very productive summer and start the new academic year with plans and organization well underway. Several components have been accelerated (policy review, existing data analysis, peer mentor circles, survey) while others remain on the anticipated schedule (site visits, speakers) as suits the project component. The team is working well together. Existing connections as well as those being developed through this project bode well for building awareness and encouraging dissemination of findings.

Objective 1:
Identify the pattern
of representation of
women in STEM
disciplines

Four activities are planned to address this objective:

1. Policy & Program review

Dr. Robin Zhang leads in this area and has compiled an extensive comparison of policies. She included 32 benchmark institutions. In addition, starting from the ADVANCE Implementation Mentors Network resources,

more detailed information about programs of support at 18 ADVANCE institutions has been compiled. This review also contributes to Objective 2, although such a purpose was not explicitly included in that objective. There is a great deal of fuel for reflection in the information gathered. As a new department chair and as a member of the President's Commission on Diversity and Inclusion, Dr. Zhang is well positioned to bring forward for discussion information obtained from this review.

2. Analysis of Existing Data

The Murray State Office of Institutional Research and Office of Institutional Diversity, Equity, and Access are showing excellent cooperation and have already provided an initial set of data to Dr. Maeve McCarthy, who is the lead for this part of the project. The structure of MSU means that some departments fall into more than one analysis category – for example a primary difference between the STEM category and the JCSET category of departments is the addition of Agriculture and Psychology departments to the STEM group. The team is already reflecting on the data obtained so far, which focuses on percentages within the various groups. Future data sets are planned that will provide a finer grain of detail about hiring pools.

There may be challenges associated with figuring out how to get the information that could answer the questions sparked by the initial data and other grant initiatives (e.g., tracking individuals to determine retention in the tenure track).

3. Focus Group Interviews and Individual Interviews

Institutional Research Board (IRB) paperwork for the interview portion of the project has been completed. The team has moved away from focus groups due to concerns about whether focus groups would remove too many people from the pool of possible interviewees. This seems reasonable given the available population and the intent to use stratified random sampling. Dr. Echo Wu, who will conduct the interviews, and Dr. Paula Waddill, who will aid in analysis of the data, have strong backgrounds and expertise in this area. Dr. Wu, in particular, is outside the departments classified as STEM and this may provide a level of comfort to potential interviewees with regard to speaking freely.

The current question list is still being refined, but includes a significant section that probes the rural aspects that are a focus of the project. There are also multiple questions that should provide insight into the difference and deficit factors that the team is using as a framework, without being leading questions. For example, questions about strengths and weaknesses, fairness, family pressures, and sources of support.

4. Survey

The IRB approval for the survey and discussions with the Cornell Survey Research Institute are well underway. Dr. Paula Waddill, who leads the survey work, has reviewed surveys used at other ADVANCE institutions. Using primarily questions that have also been used elsewhere strengthens the ability to compare the data obtained at MSU to other ADVANCE institutions. This should aid in identifying commonalities and differences as well as contribute to the generalizability of ADVANCE projects. Extensive use of conditional questions is being used to allow probing questions as appropriate to individual faculty responses.

The current question categories include tenure-clock issues, tenure process, professional experiences, climate (wide range, including students, colleagues, etc.), workload (including creativity/scholarship/research and service), family/personal life, retention, mentoring, and demographics (including leadership roles at MSU). Difference and deficit factors seem to be well probed by the question selections.

Objective 2: Learn about the various policies and programs for institutional transformation that have been successfully implemented at other similar universities, and educate MSU stakeholders about issues that contribute to underrepresentation of women faculty in STEM.

Three activities are planned to address this objective.

1. Site Visits

Dr. McCarthy is responsible for planning these visits. Logically, this aspect of the proposal was not accelerated by the earlier-than anticipated funding, since site visits are likely to be more productive during the traditional academic year. Communications regarding scheduling and planning are ongoing and are taking into consideration when the visits will be most productive.

2. Workshops

Workshops are always an interesting component of ADVANCE Catalyst grants, since the focus of these grants is more on preparation for possible transformation, rather than transformation itself. That said, the team has plans for visitors that will provide good insights for possible MSU initiatives and productive conversations with the MSU research team and broader community.

Dr. McCarthy is currently in discussions with the first planned speaker, (Dr. Joan Herbers of Ohio State University) and the team about the most useful structure for her visit. There is good attention to the calendar to distribute the workshops to provide an ongoing awareness of the project topic.

3. Meetings at MSU

Each member of the research team has roles on campus that contribute to the dissemination of project findings. This will work synergistically with the planned meetings with outside speakers. The active participation on the team of Dr. Steve Cobb has been important to helping to keep the ADVANCE project in the awareness of higher administration.

Objective 3:
Improve campus climate by establishing a sustainable mentoring program for women STEM faculty

Two activities contribute to this objective:

1. Peer Mentoring Circles

This aspect of the project also benefited significantly from the early funding decision. Over the summer mentors were identified. Multiple training sessions were led by Dr. Christine Grant from North Carolina State University via Google Hangouts. Materials were prepared to advertise the mentoring circles. This positioned the team to be ready to implement the circles as the academic year began. There has already been a reception to initiate the program. The mentors are positive about the training and are thinking about how to address issues that may arise in the circles, such as confidentiality, power concerns, etc. Response has been strong enough that three circles will be formed and start to meet this fall. Planned topics include relationship building and work-life choices.

2. Assessment of the Impact of the Circles

Assessment of the circles is planned for later in the year after the circles are established and seems on track for implementation.

Other observations

Changes to advisory board were made from that originally proposed due to NSF request. There is now an external and an internal advisory board rather than a single combined board. A meeting schedule has been set up that will provide the team with frequent interactions – more often than many projects, actually.

Changes to the project timeline are consistent with earlier than anticipated funding. Policy review and existing data moved earlier, as did survey development. Mentoring circles got a jump start on the academic year. Other things, such as site visits and speakers, were not accelerated, as it makes sense to carry out those components when more people are present.

MSU shows some positive trends in the data so far. Initial thoughts on the existing data show some positive trends that the team can build on in a supportive way – “Let’s find out what we have been doing and make sure to continue it and get better”.

The mentoring programs may build a network and sense of community among STEM departments that could overcome the physically dispersed nature of the departments on the MSU campus. Should it prove beneficial, the research team and the mentors are already considering how the program might be institutionalized.

Murray State University provides a good rural perspective to complement other ADVANCE projects. The team has good strengths and is working well together. Connections to and support from administration and the broader MSU community are present and being nourished.