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Preview of Award 1409638 - Final Project Report

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Cover

Federal Agency and Organization Element to Which Report is Submitted:	4900
Federal Grant or Other Identifying Number Assigned by Agency:	1409638
Project Title:	A Catalyst to ADVANCE the Participation and Advancement of Women in Academic STEM Careers at Middle Tennessee State University
PD/PI Name:	Brad Bartel, Principal Investigator Wandi Ding, Co-Principal Investigator Jackie Eller, Co-Principal Investigator Judith Iriarte-Gross, Co-Principal Investigator Karen Petersen, Co-Principal Investigator
Recipient Organization:	Middle Tennessee State University
Project/Grant Period:	08/01/2014 - 01/31/2018
Reporting Period:	08/01/2017 - 01/31/2018
Submitting Official (if other than PD\PI):	N/A
Submission Date:	N/A
Signature of Submitting Official (signature shall be submitted in accordance with agency specific instructions)	N/A

Accomplishments

* What are the major goals of the project?

The overarching goal of our project is to identify best practices for the recruitment, retention and promotion of women STEM faculty and thus, promote gender equity at Middle Tennessee State University, MTSU. This study, *A Catalyst to ADVANCE the Participation and Advancement of Women in Academic STEM Careers at Middle Tennessee State University*, will help us identify barriers that affect recruitment, retention, participation and promotion of women STEM faculty on our campus.

The major activities will be directed by the Project Leadership Team (PLT) and will provide answers to the following:

1. What is the distribution of MTSU STEM faculty by gender, rank and department?
2. What is the gender distribution of MTSU STEM faculty in leadership positions?
3. What are the outcomes of the tenure and promotion process for MTSU STEM faculty?
4. What is the allocation of resources for MTSU STEM faculty by gender?
5. What are the processes that lead to divergent outcomes and resource allocation by gender in STEM disciplines at MTSU?
6. Which policy changes could improve the recruitment, retention, and promotion of STEM women at MTSU?

We proposed the following activities for our self-assessment study:

1. Collection, analysis and synthesis of institutional data;
2. Development, administration and analysis of a Campus Climate Survey;
3. Conduct Campus Focus Groups on areas of concern identified by the survey;
4. Qualitative Interviews with women STEM faculty from departments that demonstrate the need for fuller information and analysis, dependent on the survey and institutional data; and
5. Identify and review MTSU and Tennessee Board of Regents (TBR) policies relevant to recruitment, retention and promotion of faculty. Additional policies may be identified for review dependent on findings from the climate survey, focus groups and interviews.

* What was accomplished under these goals (you must provide information for at least one of the 4 categories below)?

Major Activities:

The MTSU ADVANCE Project Leadership team promoted the importance of the MTSU ADVANCE grant to the campus and across Tennessee through the following majors activities:

1. Communications to faculty from Academic Affairs, the Internal Advisory Board and the Project Leadership Team
2. Periodic updates of the MTSU ADVANCE website: <http://www.mtsu.edu/advance/index.php>

3. Presentation of the MTSU ADVANCE project and results (Poster titled: *Middle Tennessee State University ADVANCE: Specific Recommendations and Action Items Needed for Change to Increase the Advancement of Women STEM Faculty*) at the 2017 ADVANCE workshop in Washington D. C. and at the MTSU College of Basic and Applied Sciences Scholars Day in March 2018

4. Co-PI Iriarte-Gross attended the National Diversity Equity Workshop in April 2017

5. Co-PI Iriarte-Gross was co-organizer and speaker at the 2017 Southeast Regional Meeting of the American Chemical Society Diveristy Day Symposium

6. Project Leadership Team met with Murray State ADVANCE team members in February 2018

7. Project Leadership Team continues to meet to discuss next steps for MTSU

- Specific Objectives: Recommendations made after completion of Climate Survey and analyses:
- A comprehensive salary study leading to a lobbying effort to make market adjustments.
 - Post-hire training for STEM women focused resource allocation processes and the imperative of requesting funds.
 - A comprehensive university evaluation of promotion and tenure policies to ensure that department and college policies reflect institutional priorities. •Training for new faculty about institutional workload and the tenure and promotion policies.
 - Formal mentoring.
 - Committed, systematic recruiting of women for leadership roles.
 - Review by MTSU Office of Institutional Equity and Compliance of the criteria for committee representation to ensure inclusiveness without over-burdening faculty of color and women.
 - Evaluation of leave policy to ensure flexibility for women STEM faculty to continue an active research agenda.
 - Investment in a work-life coordinator to facilitate resource support in a range of issues including: parenting, childcare, aging and elder caregiving, family services, etc.

Significant Results: "White paper" was completed as of August 3, 2017

Recommendations and action items presented to campus (see attached poster)

Paper on focus group results was submitted to the Journal of Women and Minorities in Science and Engineering in early February 2018

Key outcomes or Other achievements: New focus on tenure and promotion guidelines in STEM departments (chemistry, others?)

Formal and informal mentoring programs/workshops are being developed for women associate professors

Co-PI Karen Petersen named Dean of the College of Liberal Arts

There are five women chairs (departments) or directors (schools) in the College of Basic and Applied Sciences, <http://www.mtsu.edu/cbas/chairs.php>

*** What opportunities for training and professional development has the project provided?**

- Formal and informal mentoring programs/workshops developed for women associate professors
- Invited STEM faculty to "be counted" as mentors through Million Women Mentors
- Established connection with OXIDE Program, Johns Hopkins
- Continue to promote ADVANCE message by hosting speakers such as Dr. Rigoberto Hernandez of OXIDE at Johns Hopkins, who visited campus in March 2018 and presented talk titled *Advancing Science through Diversity*. His visit was funded by MTSU Distinguished Lecture Committee, MTSU National Women's History Month Committee, Nashville Local Section of the American Chemical Society and the MTSU College of Basic and Applied Sciences

*** How have the results been disseminated to communities of interest?**

- MTSU ADVANCE brochure was developed, designed and disseminated to STEM departments, the ten MTSU colleges, to all administration units including the Provost and the President.
- ADVANCE post-it notes and pens (with the URL for the MTSU ADVANCE website) were provided to STEM departments and to new faculty in fall 2017. It was noted that the post-it notes with the tag line "Have you ADVANCED?" were popular with the faculty.
- ADVANCE posters were presented to the campus at the 2017 Tennessee Academy of Science, ADVANCE/GSE workshop in fall 2017 and at the 2018 MTSU Scholars Week.
- Communications relevant to ADVANCE are disseminated to campus through the Provost's Office.

Supporting Files

Filename	Description	Uploaded By	Uploaded On
ADVANCE 2017-2018.pdf	Middle Tennessee State University ADVANCE: Specific Recommendations and Action Items Needed for Change to Increase the Advancement of Women STEM Faculty	Judith Iriarte-Gross	05/05/2018

Products

Books

Book Chapters

Inventions

Journals or Juried Conference Papers

Licenses

Other Conference Presentations / Papers

Other Products

Other Publications

Patents

Technologies or Techniques

Thesis/Dissertations

Websites

MTSU ADVANCE Project

<http://www.mtsu.edu/advance/index.php>

On the MTSU ADVANCE website, we include the following content:

Overview: ADVANCE Project Summary

List of External Advisory Board, Internal Advisory Board and Project Leadership Team members,

Proposal Narrative and MTSU Climate Survey

Presentations

Resources

White Paper

Supporting Files

Filename	Description	Uploaded By	Uploaded On
ADVANCE poster 2017-2018.pdf	Attached poster provides recommendations and action items proposed based on the MTSU Climate Study. Title of poster is Middle Tennessee State University ADVANCE: Specific Recommendations and Action Items Needed for Change to Increase the Advancement of Women STEM Faculty	Judith Iriarte-Gross	05/05/2018
15514_ADVANCE Brochure.pdf	The Project Leadership Team designed a brochure to share information and recommendations with new and current faculty and administrators.	Judith Iriarte-Gross	05/05/2018

Participants/Organizations

What individuals have worked on the project?

Name	Most Senior Project Role	Nearest Person Month Worked
Bartel, Brad	PD/PI	1
Ding, Wandi	Co PD/PI	

Name	Most Senior Project Role	Nearest Person Month Worked
Eller, Jackie	Co PD/PI	
Iriarte-Gross, Judith	Co PD/PI	1
Petersen, Karen	Co PD/PI	
Hein, Michael	Faculty	
Thomas, Temiloluwa	Undergraduate Student	1

Full details of individuals who have worked on the project:

Brad Bartel

Email: brad.bartel@mtsu.edu

Most Senior Project Role: PD/PI

Nearest Person Month Worked: 1

Contribution to the Project: Dr. Brad Bartel is the PI for this project. He was the University Provost though May 2016 when he returned to the faculty. He is up to date on the status of the grant and assisted the co-PIs and project evaluator as needed. He reviewed the monthly budget reports from the Office of Research Services with Dr. Iriarte-Gross. He also reviewed the "white paper" and the MTSU ADVANCE brochure. He provided the PLT with advice on the university resources needed for a successful project. He continues to encourage key MTSU administrators from the top down to support MTSU ADVANCE.

Funding Support: None

International Collaboration: No

International Travel: No

Wandi Ding

Email: wding@mtsu.edu

Most Senior Project Role: Co PD/PI

Nearest Person Month Worked:

*review &
update*

Contribution to the Project:

Funding Support:

International Collaboration: No

International Travel: No

Jackie Eller

Email: jackie.eller@mtsu.edu

Most Senior Project Role: Co PD/PI

Nearest Person Month Worked:

*review &
update*

Contribution to the Project:

Funding Support:

International Collaboration: No
International Travel: No

Judith Iriarte-Gross

Email: judith.iriarte-gross@mtsu.edu
Most Senior Project Role: Co PD/PI
Nearest Person Month Worked: 1

Contribution to the Project: Dr. Judith Iriarte-Gross is a member of the Project Leadership Team and a co-PI. She manages the overall project which is based in the MTSU Women In STEM Center (WISTEM). She works with the internal and external advisory boards as well as with the PLT on project activities. She manages the ADVANCE website; organized the on-site visit of the Murray State University ADVANCE team; and dissemination of information about ADVANCE events such as the visit of Dr. Rigoberto Hernandez who spoke on "Advancing Science through Diversity." She presented the ADVANCE poster at the 2017 ADVANCE/GSE workshop and at Scholars' week on campus. She continues to promote faculty involvement through informal networking. Dr. Iriarte-Gross worked closely with Dr. Bartel on the ADVANCE budget. Finally she collaborated with the MTSU PLT on both the white paper and the submitted journal paper.

Funding Support: None

International Collaboration: No
International Travel: No

Karen Petersen

Email: karen.petersen@mtsu.edu
Most Senior Project Role: Co PD/PI
Nearest Person Month Worked:

Contribution to the Project:

Funding Support:

International Collaboration: No
International Travel: No

*review & update
update*

Michael Hein

Email: Michael.Hein@mtsu.edu
Most Senior Project Role: Faculty
Nearest Person Month Worked:

Contribution to the Project: Dr. Hein attended planning meetings. He participated in discussions about the white paper and contributed to the formation of recommended action items. He assisted in the planning sessions for completing the white paper.

Funding Support: None

International Collaboration: No
International Travel: No

*Review &
update*

Temiloluwa Thomas

Email: tpt2e@mtmail.mtsu.edu

Most Senior Project Role: Undergraduate Student

Nearest Person Month Worked: 1

Contribution to the Project: Temiloluwa Thomas assisted the Project with the following: Organized (travel, agenda, arranged reception and other meals, introduced guest to Provost, Dean and STEM Chairs, marketing event to campus) the visit of 2017 ADVANCE speaker, Dr. Stallings Designed and formatted first MTSU ADVANCE newsletter and is working on the fall 2017 ADVANCE newsletter this summer Assisted with the design of the MTSU ADVANCE brochure Worked with Academic Affairs to disseminate newsletter to campus community Worked with Dr. Iriarte-Gross to manage move of WISTEM Center to new space in the renovated Davis Science Building Invited and organized visit of Dr. Dorothy Phillips, 2017 NWHM speaker and proponent of diversity in STEM Completed her work with this project in June 2017

Funding Support: None

International Collaboration: No

International Travel: No

What other organizations have been involved as partners? *Karen? OLA?*

Name	Type of Partner Organization	Location
MTSU College of Basic and Applied Sciences	Academic Institution	Murfreesboro TN
MTSU Institutional Effectiveness, Planning and Research	Academic Institution	Murfreesboro TN
MTSU Institutional Equity and Compliance	Academic Institution	Murfreesboro TN
MTSU Provost's Office	Academic Institution	Murfreesboro TN

Full details of organizations that have been involved as partners:

MTSU College of Basic and Applied Sciences

Organization Type: Academic Institution

Organization Location: Murfreesboro TN

Partner's Contribution to the Project:

In-Kind Support

Facilities

Other: Advice

More Detail on Partner and Contribution: Dean Fischer of the MTSU College of Basic and Applied Sciences provided space and other in-kind support for the MTSU ADVANCE Project. He was involved with the ADVANCE project at University of Alabama Birmingham and has served as an informal consultant to the

MTSU ADVANCE Project. He reviewed the "white paper" and made suggestions which added to the final document.

MTSU Institutional Effectiveness, Planning and Research

Organization Type: Academic Institution

Organization Location: Murfreesboro TN

Partner's Contribution to the Project:

Collaborative Research

More Detail on Partner and Contribution: IEPR provided salary data for the MTSU ADVANCE project.

MTSU Institutional Equity and Compliance

Organization Type: Academic Institution

Organization Location: Murfreesboro TN

Partner's Contribution to the Project:

Financial support

In-Kind Support

Collaborative Research

More Detail on Partner and Contribution: MTSU IEC provided the reception for EAB meeting in April 2015. Dr. Marian Wilson is the special assistant to the President and is the director of the MTSU Institutional Equity and Compliance Office. She had made valuable comments and suggestions to the MTSU ADVANCE PLT.

MTSU Provost's Office

Organization Type: Academic Institution

Organization Location: Murfreesboro TN

Partner's Contribution to the Project:

Financial support

In-Kind Support

Facilities

Collaborative Research

Personnel Exchanges

More Detail on Partner and Contribution: The Provost's Office provided Tenure Track/Tenured and Full Time faculty data which included Hiring data, Startup packages, and Faculty terminations-resignations data. Space and funding for the Kick-Off reception as well as promotion of the campus climate survey to the campus was provided by Academic Affairs. The Provost also provided the ADVANCE PLT with a direct "line" through his assistant to faculty and the campus community with current ADVANCE communications.

What other collaborators or contacts have been involved?

Nothing to report

Impacts

What is the impact on the development of the principal discipline(s) of the project?

Based on our final ADVANCE recommendations, the Department of Chemistry is reviewing its tenure and promotion guidelines.

The vice provost of faculty is organizing a formal mentoring program and workshop for women associate professors to understand the process needed to apply for and move up to the rank of full professor.

What is the impact on other disciplines?

Nothing to report.

What is the impact on the development of human resources?

We made a recommendation for post-hire training for STEM women faculty. This training should focus on how to submit a successful grant application and how to ask the chair for needed resources for research, service, and teaching. We want all women faculty to recognize the importance of "asking."

Tenure and promotion policies are being reviewed with training recommended for new faculty, chairs, and deans.

Formal mentoring and specifically, recruitment of women for leadership roles on campus are recommended.

What is the impact on physical resources that form infrastructure?

The WISTEM Center is now settled in its new space. The Center attracts women students, faculty, advisors, and administrators due to its open door policy.

What is the impact on institutional resources that form infrastructure?

Nothing to report.

What is the impact on information resources that form infrastructure?

Nothing to report.

What is the impact on technology transfer?

Nothing to report.

What is the impact on society beyond science and technology?

Nothing to report.

Changes/Problems

Changes in approach and reason for change

Nothing to report.

Actual or Anticipated problems or delays and actions or plans to resolve them

Nothing to report.

Changes that have a significant impact on expenditures

Nothing to report.

Significant changes in use or care of human subjects

Nothing to report.

Significant changes in use or care of vertebrate animals

Nothing to report.

Significant changes in use or care of biohazards

Nothing to report.

Special Requirements

Responses to any special reporting requirements specified in the award terms and conditions, as well as any award specific reporting requirements.

Nothing to report.