

Preview of Award 1409638 - Annual Project Report

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Federal Agency and Organization Element to Which

Report is Submitted:

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

4900

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

08/01/2014 - 07/31/2016 Project/Grant Period:

08/01/2014 - 07/31/2015 Reporting Period:

Submitting Official (if other than PD\PI): Judith Iriarte-Gross Co-Principal Investigator

07/21/2015 Submission Date:

Signature of Submitting Official (signature shall be Judith Iriarte-Gross submitted in accordance with agency specific instructions)

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:

1. Collection, analysis and synthesis of institutional data.

Data were collected and analyzed for academic years 2010-2012 for the proposal. We have collected additional data for 2013-2014. These data include hiring, tenure and promotion, salaries, rank, leadership positions, resignation/termination and start-up packages. We have additional tenure and promtion data for 2014-2015. We also compared overall MTSU Tenure Track/Tenured faculty data to Tenure Track/Tenured STEM faculty for 2012 and are in the process of reviewing the latest data for the 2013-2014 academic year. See supporting file: MTSU Institution Data.

2. Development, administration and analysis of a Campus Climate Survey.

We developed a campus climate survey which was administered from November 2014 to January 2015 to all MTSU Tenure Track/Tenured and Full Time faculty. Full Time faculty are those who teach 15 hours or more and are not on the Tenure Track. The total number of Tenure Track/Tenured faculty for the 2013-2014 academic year was 786 and the survey response rate was determined to be 69.1%. See supporting file: Survey. The survey is also found at http://www.mtsu.edu/wistem/ADVANCE/components/ADVANCE/20SURVEY/%20with/%20citations.pdf

3. Institutional Buy-In Activities.

 Provost Bartel, as the PI for MTSU ADVANCE, encouraged participation of faculty and administrators at various campus leadership meetings and retreats. He communicated the importance of the ADVANCE campus

- climate survey with regular email reminders to the faculty.
- A campus-wide ADVANCE Project Kick-Off was held on October 30, 2014. http://www.mtsunews.com/?s=MTSU+ADVANCE
- MTSU ADVANCE website is found at http://www.mtsu.edu/wistem/ADVANCE/index.php
- Facebook news related to the MTSU ADVANCE project are posted on the Women In STEM Center at MTSU Facebook page.
- Internal Advisory Board (IAB) was established. Monthly meetings were held either in person or virtually to discuss survey promotion and logistics, ADVANCE events, and issues of concern. IAB members encouraged survey participation at faculty meetings and through informal networking. Members of the IAB are listed at http://www.mtsu.edu/wistem/ADVANCE /MTSU%20ADVANCE%20Internal%20Advisory%20Board.pdf
- External Advisory Board (EAB) was established. Members of the EAB are listed at http://www.mtsu.edu/wistem/ADVANCE /MTSU%20ADVANCE%20External%20Advisory%20Board%202015.pdf
- 4. Conduct Campus Focus Groups on areas of concern identified by the survey were conducted. Comments are being evaluated this summer.
- 5. Qualitative Interviews with women STEM faculty from departments that demonstrate the need for fuller information and analysis, dependent on the survey and institutional data. We may include interviews with faculty who have recently left the university to gain further insights on campus climate. Interviews are being conducted this summer.

Specific Objectives: A comprehensive salary equity study for all tenure track/tenured faculty by rank

and discipline is planned for fall 2015.

Significant Results: The total number of Tenure Track/Tenured and Full Time faculty for the

2013-2014 academic year was 786 and the survey response rate was

determined to be 69.1%. See supporting file: Survey. The survey is also found at

http://www.mtsu.edu/wistem/ADVANCE/components/ADVANCE%20SURVEY%20with%20citations.pdf

Key outcomes or Other achievements:

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

Co-PI Iriarte-Gross attended the 2015 ADVANCE/GSE Program Workshop from May 31 to June 2. She attended the New ADVANCE PI presentation on Sunday, May 31, Keynote addresses and Plenary Panels. She also attended the following sessions:

- 1. Subtle Gender Bias: Measuring and Addressing
- 2. Strategies to ADVANCE and Empower STEM Women through Networking, Training and Structural Change
- 3. New Initiatives in Faculty Professional Development
- 4. Helpful Strategies for Successful NSF Reporting
- Successful Interventions with Demonstrated Impact
- 6. ADVANCE Poster Session

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

Preliminary observations from the survey data were shared with the IAB in April 2015. These observations provided guidance for focus group topics. These topics were:

- 1. Promotion Policies
- 2. Leadership Development
- 3. Resources and General Campus Climate

We also presented a poster titled *ADVANCEing Women in Science, Technology, Engineering, and Mathematics (STEM) Careers at Middle Tennessee State University* at the 2015 NSF ADVANCE/GSE Program Workshop. See poster at http://www.mtsu.edu/wistem/ADVANCE/docs/Final%20ADVANCE%20poster.pdf

* What do you plan to do during the next reporting period to accomplish the goals?

We plan to complete the analysis of the campus climate survey and to identify specific barriers that affect the recruitment, retention and participation of women STEM faculty at MTSU. We will review relevant MTSU and TBR policies, offer campus forums on ADVANCE topics, inform the campus on findings and hold a MTSU ADVANCE Conference. We will disseminate findings at local and state conferences and in appropriate publications.

A comprehensive salary equity study for all tenure track/tenured faculty by rank and discipline is planned for fall 2015.

Supporting Files

Filename	Description	Uploaded By	Uploaded On
Progress Report October 1 2014.pdf	October 2014 progress report from evaluator.	Judith Iriarte-Gross	07/17/2015
Progress Report February 7 2015.pdf	February 2015 progress report from the evaluator.	Judith Iriarte-Gross	07/17/2015
SURVEY with citations.pdf	MTSU Campus Climate Survey	Judith Iriarte-Gross	07/17/2015
MTSU Institution Data.pdf	MTSU Institution Data: Preliminary Report 1. Tenure Track /Tenured STEM Faculty by Department, Rank, and Gender for Fall 2013 & Fall 2014 2. STEM hiring data analysis 2013-14 3. Preliminary STEM faculty Salary analysis (gender equity) 2013-14	Judith Iriarte-Gross	07/18/2015

Products

Books

Book Chapters

Inventions

Journals or Juried Conference Papers

Licenses

Other Conference Presentations / Papers

Judith Iriarte-Gross, Brad Bartel, Wandi Ding, Jackie Eller, Karen Petersen, Michael Hein, Gretchen Webber, Denielle Meyerink (2015). *ADVANCEing Women in Science, Technology, Engineering, and Mathematics (STEM) Careers at Middle Tennessee State University*. 2015 ADVANCE/GSE Program Workshop. Baltimore Maryland. Status = PUBLISHED; Acknowledgement of Federal Support = Yes

Other Products

Other Publications

Patents

Technologies or Techniques

Thesis/Dissertations

Websites

MTSU ADVANCE

http://www.mtsu.edu/wistem/ADVANCE/index.php

The MTSU ADVANCE website is housed within the MTSU Women In STEM Center's website.

Supporting Files

Filename	Description	Uploaded By	Uploaded On
Final ADVANCE poster.pdf	MTSU ADVANCE poster.	Judith Iriarte-Gross	07/17/2015

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	1
Eller, Jackie	Co PD/PI	1
Iriarte-Gross, Judith	Co PD/PI	1
Petersen, Karen	Co PD/PI	1
Hein, Michael	Faculty	1
Webber, Gretchen	Faculty	1

Name	Most Senior Project Role	Nearest Person Month Worked
Estes, Michelle	Graduate Student (research assistant)	1
Meyerink, Denielle	Graduate Student (research assistant)	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 University Provost and PI for the MTSU ADVANCE project. He announced the award to the campus community at the start of the fall 2014 semester and continues to encourage the commitment of key MTSU administrators from top down to this project. He has provided the necessary university resources required for the success of this project. These resources also include the assistance of Academic Affairs and the Office of Institutional Effectiveness Planning and Research with respect to data collection for this study. He keeps fully informed on the progress of the research and assists the co-PIs, evaluator and research associates as needed. He provides his conference room and use of a conference call line for Project Leadership Team and Internal Advisory Board meetings. Provost Bartel receives and reviews monthly budget reports from the MTSU Office of Research Services. He provided funding for a campus-wide ADVANCE kick-off event in fall 2014.

Funding Support: None

International Collaboration: No

International Travel: No

Wandi Ding

Email: wandi.ding@mtsu.edu

Most Senior Project Role: Co PD/PI Nearest Person Month Worked: 1

Contribution to the Project: Dr. Wandi Ding is a co-PI and member of the Project Leadership Team (PLT). She helped identify and finalize members of project's Internal (IAB) and External (EAB) Advisory Boards. Dr. Ding communicated with IAB, EAB and evaluator on first steps of this project which included layout of project website and design of the campus climate survey. She assisted with the social media profiles for the project. The project began on August 1, 2014 (one month past the anticipated start date of July 1, 2014). Dr. Ding updated the timeline to reflect the new start date. She arranged meetings for discussions of project with Leadership Groups and STEM Departments across campus. Dr. Ding participated in the development of talking points for presentations. She helped unveil the MTSU ADVANCE project to campus with a public launch in the foyer of the new Science Building in October 2014. She continues to meet with MTSU Leadership Groups and STEM Departments to discuss and encourage faculty involvement with ADVANCE. She continues to promote institutional buy-in through these activities. She is conducting an extensive analysis of survey data with other members of the Project Leadership Team. She works with IEPR, the MTSU Institutional Effectiveness, Planning and Research Office and Academic Affairs to further analyze data on Tenure track/Tenured faculty data; Hiring data; Startup packages and Faculty terminations-resignations data. She helped to identify topics from survey for focus groups.

Funding Support: None

International Collaboration: No

International Travel: No

Jackie Eller

Email: jackie.eller@mtsu.edu

Most Senior Project Role: Co PD/PI Nearest Person Month Worked: 1

Contribution to the Project: Dr. Eller accepted the position as the Dean of the College of Graduate Studies and Vice Provost for Research one month prior to the awarding of the grant. She has served in a non-reimbursed capacity due to her administrative position. She has attended most meetings of the ADVANCE Project Leadership Team (PLT). Dr. Eller has contributed to the development of the survey instrument and assisted in the overall analysis of the survey data that led to the focus groups. She contributed to the question design for the focus groups, assisted in arranging the logistics for the focus groups, attended each of the focus groups, and provided assistance in the interpretation of the focus group data.

Funding Support: None

International Collaboration: No

International Travel: No

Judith Iriarte-Gross Email: jiriarte@mtsu.edu

Most Senior Project Role: Co PD/PI Nearest Person Month Worked: 1

Contribution to the Project: Dr. Judith Iriarte-Gross is member of the Project Leadership Team (PLT) and a co-PI on this project. She manages the overall project which is based in the MTSU Women In STEM (WISTEM) Center. She works with the PLT, IAB and EAB to implement MTSU ADVANCE activities. These activities included the Kick-Off in October 2014, monthly meetings of the PLT and IAB, website management, promotion of the campus climate survey and others. She worked with Provost Bartel and Academic Affairs to schedule and host the project's Kick-Off reception. The Kick-Off drew participation from top down with congratulations offered by President McPhee. She met with Leadership Groups and STEM Departments to identify IAB members and to promote participation in the ADVANCE campus climate survey and subsequent focus groups. She continues to promote faculty involvement with ADVANCE through informal networking and formal meetings with colleagues across campus. Dr. Iriarte-Gross invited Dr. Ellen Mappen, an EAB member, to visit campus as a Distinguished Lecturer. Dr. Iriarte-Gross organized an EAB meeting while Dr. Mappen was on campus this past April and the participants discussed how the PLT could move forward once the campus climate survey analysis was completed. Dr. Iriarte-Gross is a long-time AWIS member and will propose appropriate AWIS professional development workshops as necessary. PI Bartel and Dr. Iriarte-Gross oversee the budget for the project and approves timesheets for the graduate student. She collected data and organized, designed and printed the project's poster for the 2015 ADVANCE/GSE Workshop. She also represented MTSU ADVANCE at the meeting in Baltimore.

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: 1

Contribution to the Project: Dr. Karen Petersen helped design, write, and edit the MTSU ADVANCE Campus Climate Survey that is the centerpiece of this initiative. She worked with faculty and administrators to promote the survey and increase participation. Petersen worked extensively with the data which included re-formatting data for analysis and conducting extensive analyses of the survey data. Petersen reported preliminary results to Project Leadership Team and used the data to help identify topics for focus groups. In addition to her work on the survey, Petersen assisted with the ADVANCE Kick-off on campus and met routinely with Co-PIs and the Internal Advisory Board.

Funding Support: None

International Collaboration: No

International Travel: No

Michael Hein

Email: Michael.Hein@mtsu.edu

Most Senior Project Role: Faculty

Nearest Person Month Worked: 1

end date So Denielle

Contribution to the Project: Dr. Michael Hein: Dr. Hein attended planning meetings and the launch meeting. He participated in the development of the survey. He worked with the team to gather feedback from the Internal Advisory Board on a draft of the survey and helped to finalize the survey. He provided progress evaluation reports in October, after the team had reorganized to meet the challenges of a new timeline and in February, after the survey results were in. He supervised the work of Denielle Meyerink, graduate assistant, in putting the survey online and pulling the data from the survey.

Funding Support: None

International Collaboration: No

International Travel: No

Gretchen Webber

Email: Gretchen.webber@mtsu.edu Most Senior Project Role: Faculty Nearest Person Month Worked: 1 end date La Michello

Contribution to the Project: Dr. Gretchen Webber: Gretchen Webber has been actively engaged in various aspects of data collection for this project. Specifically she has assisted in survey question formulation, and participated in regular project leadership team meetings to coordinate and finalize survey. She has provided on-going input to multiple communications that are sent from ADVANCE team. Dr. Webber has participated in and conducted several data analysis and interpretation meetings to analyze survey results. After receipt of survey open-ended comments, she performed preliminary data analysis on written comments from the online survey. She has developed focus group protocol questions. She and Dr. Eller have coordinated, arranged, and scheduled two focus groups. Dr. Webber has conducted two focus groups and one interview. She is currently examining the focus group transcripts for patterns and themes.

Funding Support: None

International Collaboration: No

International Travel: No

What other organizations have been involved as partners?

Name	Type of Partner Organization	Location
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 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.

MTSU Provost's Office

Organization Type: Academic Institution Organization Location: Murfreesboro TN

Partner's Contribution to the Project:

In-Kind Support Facilities

Collaborative Research

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.

What other collaborators or contacts have been involved?

Becky Cole, Provost's Office

Linda Jordan, IEPR

Dr. Marian Wilson, IEC

Dr. Bud Fischer, College of Basic and Applied Sciences

Dr. Mark Byrnes, College of Liberal Arts

Impacts

What is the impact on the development of the principal discipline(s) of the project? Nothing to report.

What is the impact on other disciplines? Nothing to report.

What is the impact on the development of human resources? Nothing to report.

What is the impact on physical resources that form infrastructure? Nothing to report.

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.