



Teaching-Research-Advancement Network to Secure Female Faculty for Organizational Retention and Management: Progress and Sustainability After Four Years

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Abstract

Teaching-Research-Advancement Network to Secure Female Faculty for Organizational Retention and Management (TRANSFORM) encompasses three broad strategies at Gannon University funded by the National Science Foundation (NSF) ADVANCE-PAID grant awarded in 2011. Now in the fourth year, TRANSFORM initiatives aim to recruit, retain, and advance women faculty in the STEM disciplines. At this point, efforts toward sustainability are well underway. Strategy 1 established the Careersfor2.com website, offering career networking opportunities for accompanying partners of regional hires. Options for community ownership of the website are being pursued. Strategy 2, the Research Initiation Award, has provided course releases for three female STEM faculty toward the goal of achieving advancement. An increase in productivity of these faculty has been observed and documented; thus, ongoing institutional support for the sustainability of this strategy is sought. Strategy 3 provides leadership development opportunities for faculty, educates administrators regarding issues affecting female faculty, and culminates in an annual regional leadership seminar. Sustainability of these initiatives is anticipated through a combination of administrative offices and the university's Center for Excellence in Teaching and Learning. The poster details achievements of the grant, measurement of the grant's impact, and sustainability plans moving forward.

Introduction

The goal of TRANSFORM is to increase the recruitment, retention, advancement, and leadership development of female faculty at Gannon University.

The grant is operationalized through three strategies:

- (1) **Dual Career Services:** Goal is to provide greater employment opportunities to accompanying partners; therefore, addresses recruitment and retention.
- (2) **Research Initiation Awards:** Goal is to provide resources for early- or mid- career female STEM faculty to support advancement in rank.
- (3) **Leadership Development Seminars and Workshops:** Goal is to increase the number of continuing education opportunities in the areas of leadership and to educate administrators on the issues affecting the success of STEM female faculty.

Internal Evaluation: The internal evaluator, Dr. Constantine Klorys, performed a formative assessment of Year 3 activities, and stated that good progress has been achieved towards all goals and objectives at this point. The TRANSFORM team implemented appropriate suggestions.

State of Female Faculty in STEM at Gannon University

First, female faculty constitute a third of the STEM faculty. The percentage has increased slightly.

Year	Total	Women	% of Women
2009-2010	64	18	28.13
2010-2011	66	22	33.33
2011-2012	65	21	32.31
2012-2013	70	24	34.29
2013-2014	72	26	36.11
2014-2015	73	24	32.88

Second, STEM female faculty do not have a strong presence at higher ranks. (*Instructor-rank not included.*)

Year	Professor		Associate		Assistant	
	Male	Female	Male	Female	Male	Female
2009-2010	18.8%	0.0%	23.4%	12.5%	25.0%	12.5%
2010-2011	18.2%	0.0%	24.2%	15.2%	19.7%	15.2%
2011-2012	20.0%	3.1%	24.6%	10.8%	18.5%	16.9%
2012-2013	22.9%	2.9%	18.6%	11.4%	20.0%	15.7%
2013-2014	23.6%	2.8%	18.1%	9.7%	18.1%	19.4%
2014-2015	20.5%	5.5%	17.8%	6.8%	19.2%	19.2%

Strategy One: Dual-Career Services

	Year 1- 2011-2012	Year 2- 2012-2013	Year 3- 2013-2014	Year 4- 2014-2015
Number of organizations contacted to use website to advertise professional openings	51	411	415	415
Number of participating consortium members	15	5	6	7
Number of people registering for the service	0	4	16	6
Number of people who find jobs using this service	0	0	0	0
Number of companies who utilize site for employment announcements	3	4	27	11
Number of positions listed	15	9	167	96
Number of registered people who use the service	0	1	6	3
Number of positions a spouse/partner applies to	0	0	2	0
Number of interviews obtained by a spouse/partner as a consequence of DCCNP activities	0	0	0	0
Number of positions filled by a spouse/partner using DCCNP website	0	0	0	0
Number of faculty who are retained by the university because spouse/partner found employment	0	0	0	0
Number of faculty who are retained by the university because spouse/partner found employment	0	0	0	0

Strategy Two: Research Initiation Award

Resources: Three credits of release time per semester for two years and a total of \$7500 for a research project.

Progress: To date, three female STEM faculty members have received the RIA. In Year Four of the grant, 4 of the 11 eligible faculty applied for the RIA. Dr. Quyen Aoh, Assistant Professor of the Biology Department, received the award for her proposal, *The Role of Trafficking from the trans-Golgi Network and Endosomes in Cell Survival*. Her work has not yet been assessed.

The second awardee, Dr. Lin Zhao, Electrical and Computer Engineering Department, significantly improved her portfolio as a result of the RIA. Her first year of work on the project, *Doubly-Fed-Induction-Generator Modeling and Control for Wind Energy Harvesting*, resulted in two technical papers including 3 graduate student co-authors and included new collaborations with Dr. Hui Zhong from Shandong University, P.R. China and Helin Wen, a Singapore, global-visiting student.

The progress of the first RIA awardee, Dr. Sarah Ewing, was evaluated at the end of her two year award period using the rubric developed by the co-PIs and presented last year at the ADVANCE conference. See the analysis section.

Strategy Two: Research Initiation Award (RIA)

Challenges: Direct funding of the RIA for female, STEM faculty is unlikely to be continued in its current form.

Benefits: The University has made several changes and invested additional resources that are likely to positively impact STEM female faculty.

- Significantly increased the budget for internal, faculty research and development grants.
- Increased the release time credits provided for faculty scholarship.
- Implemented a formal application process for awarding of the release time for scholarship.

Analysis: The rubric, based on the Boyer Model of Scholarship and the University's scholarship expectations, was used to evaluate the outcome of the first awardee's scholarly output. The research work was quantified using a scale of 1-5 for the listed categories of scholarship. Results are shown in the Table. The * is used to designate the years in which Dr. Ewing had the release time and funds from the RIA. Benchmark information is provided to show the impact of the release time on productivity.

Data show a significant increase in peer-reviewed work by this faculty member compared with her work prior to receiving the award. This peer-reviewed work includes four published articles in this time frame compared with no published articles during the prior three years. Although not indicated by the rubric, the award recipient also shows significant increase in work with undergraduate students compared with her work during the prior three years and compared with two of her peers in the sciences. The science departments serve undergraduate students only. All of Dr. Ewing's work includes undergraduate co-authors. The award recipient indicates that the release time significantly helped to advance her work.

Category	Points per item	AY* 13-14	AY* 12-13	AY 11-12	AY 10-11	AY 09-10
Professional, Peer-reviewed & Communicated						
External Grants received larger than \$50,000	5					
Published International Journal articles / Book Chapters	5					
Published Articles; National or International Conference Paper/Proceedings	4	12	4			
External grants received less than \$50,000 but more than \$20,000	4					
External grants received less than \$20,000	3	6		6		
Research/poster presentations given at meetings/conferences	3	36	6			
Professional & Communicated						
Internal grants received	1		1	3	1	2
Mentoring student research grants	1		3	2	1	3
Non peer-reviewed (student or otherwise) oral/poster presentations	1	11	5	11	4	4
Total Points		65	19	22	6	9
% of work peer reviewed		83%	53%	27%	0%	0%

Strategy Three: Leadership Development

Progress: During Years 3 and 4, three leadership trainings (2.5 hours each) and one leadership forum for chairs (2.5 hours) have been offered per semester. The *Regional Leadership Symposium* took place on the third week of May during the last two years.

LEADERSHIP TRAININGS		
Date	Topic	Attendance
SPRING 2014 Series		
24 Jan	<i>Conflict Resolution and Problem Solving Strategies</i>	16
20 Feb	<i>Embracing Change and Overcoming Resistance</i>	10
28 Mar	<i>The Architecture of a Positive Work Environment</i>	10
31 Jan	Department Chair Session: <i>Implicit Bias in Hiring</i>	16
FALL 2014 Series		
19 Sept	<i>Communicate with Impact</i>	11
10 Oct	<i>How to Get People to "Buy Into" CHANGE!</i>	14
7 Nov	<i>Working in Teams – Building From Your Strengths</i>	16
21 Nov	Department Chair Session: <i>Dealing with Difficult People</i>	23
SPRING 2015 Series		
23 Jan	<i>Leading from Strengths – An Overview of Strengths-Based Leadership</i>	14
20 Feb	<i>Resolving Conflicts</i>	25
27 Mar	<i>Power Distance</i>	28
30 Jan	Department Chair Session: <i>Conducting Evaluations and Providing Feedback</i>	15

ONE-DAY LEADERSHIP SEMINAR		
Date	Topic	Attendance
20 May 2014	Transformational Leadership	78
19 May 2015	Project Management	114

Evaluation/Assessment: Workshop topics were selected based on requests from faculty at previous workshops. Presenters were a combination of external and internal experts on these topics. Participant evaluations indicated that workshops were useful and well executed, and that they met their stated objectives.

Sustainability Plans: Transfer the administration of the workshop series to Gannon's Center for Excellence in Teaching and Learning (CETL). The focus of the workshop series may become broader to encompass a variety of topics regarding faculty success in order to sustain appeal and attract new participants.

Dissemination and Acknowledgement

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Website: <http://www.gannon.edu/transform>

Digital Postcards: Two versions deployed to 859 Deans of Engineering and Sciences in the region promoting the 2014 and 2015 *Regional Leadership Symposium*.