

Transitioning from WISE to WISER – Life after an NSF ADVANCE Grant

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Life after an NSF Grant

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Oakland University
2019 CoNECD

Title: Transitioning from WISE to WISER: Life after an NSF Grant

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Institution: Oakland University in Rochester, Michigan

Submitted to: 2019 CoNECD (April 2019)

- The WISE@OU (Women in Science and Engineering) program was active at Oakland University from 2011 to 2016.
- It was funded by an NSF ADVANCE PAID Grant (Award 1107072).

Oakland University started the Women in Science and Engineering program (WISE@OU) in 2011. The program was funded by an NSF ADVANCE PAID Grant (Award 1107072). The PAID grant program focused on partnerships for adaptation, implementation, and dissemination. The proposed project included a very large variety of activities designed to recruit and retain women STEM faculty at Oakland University (OU) with a four-pronged approach. The first prong involved a thorough campus analysis and planning based on the analysis. The second prong focused on recruitment and hiring practices at OU with training for all search and department chairs, implicit bias training for Deans, and the dissemination of family-friendly information. The third prong of the project involved faculty retention and professional development initiatives including new faculty orientation, a mentoring program, and professional development workshops. The fourth and final prong of the proposal included initiatives surrounding dissemination, especially to the region's 4-year and 2-year institutions.

The WISE@OU program was housed with the Dean's office of College of Arts and Sciences, and worked closely with the School of Engineering and Computer Science. In 2016, after a no-cost extension for the grant, the program was institutionalized within the Research Office at Oakland University.



- WISE@OU Leadership Team members included professors and administrators from across campus.

The WISE@OU Leadership Team members included professors and administrators from across campus. The team included: Kathleen Moore (Associate Dean of Arts and Sciences, professor of chemistry), Joi Cunningham (Assistant Vice President of Academic Human Resources and previous Director of Inclusion and Intercultural Initiatives), Laila Guessous (professor of mechanical engineering), Brad Roth (professor of physics), Julie Walters (associate professor of political science), and Jo Reger (internal evaluator, Director of the Women and Gender Studies program, and professor of sociology). Full-time staff support was provided by Leanne DeVreugd.

The various backgrounds, perspectives, and ideas of the Leadership Team members helped WISE@OU address many aspects of faculty and campus life, including research, teaching, service, and administration. Team members used their many contacts around campus to help spread the word about WISE@OU activities. The team fostered valuable connections between faculty in different departments and between faculty and administrators.

- To help identify and implement strategies that would increase faculty recruitment, retention, promotion and job satisfaction, WISE@OU conducted a climate survey and focus groups.

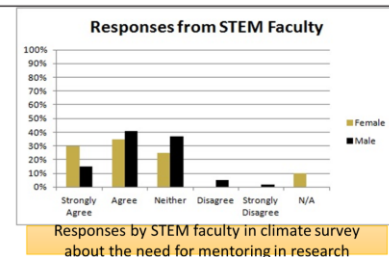
In April 2012, WISE@OU conducted an accelerated “institutional transformation” fact-finding endeavor, utilizing a climate survey, focus groups, and other faculty-related data. The WISE@OU Leadership Team compiled the information to determine the strengths and limitations of OU’s campus climate, and identify the issues facing STEM faculty. The climate survey was sent to all tenure-track and tenured faculty in the School of Engineering and Computer Science and in the College of Arts and Sciences (including Biological Sciences, Chemistry, Mathematics and Statistics, and Physics, as well as non-STEM departments). There was a 54% response rate, with 180 surveys completed. Of the faculty who indicated their affiliation, 65 were STEM and 105 were non-STEM. Of STEM faculty who responded to the survey, 67% were male and 33% were female.

- The climate survey explored issues of hiring, tenure, career growth and satisfaction, grants and research, departmental environment, and work-life balance.
- Separate focus groups were held for female STEM professors (all ranks), STEM department chairs, and under-represented minority faculty.

Main topics of the survey included hiring, tenure, career growth and satisfaction, grants and research, departmental environment, and work-life balance. Questions addressed department climate (networking, interactions with colleagues, and available resources), the tenure process, career guidance and expectations, and support for research (grants, mentoring, space and resources).

WISE@OU also hosted focus groups for faculty to find out more about the issues in STEM departments. Focus groups sessions were held for STEM female faculty from all tenure-track ranks as well as STEM department chairs (all male at the time) and STEM faculty from under-represented populations (all male at the time). The focus group sessions allowed faculty to more openly discuss their challenges.

- Needs on campus:
 - More mentoring in research
 - Department chair training
 - Faculty development opportunities
- WISE@OU created trainings and workshops to address these needs.



Survey responses indicated that most STEM faculty (64%) were especially interested in more professional development opportunities and career management training. A majority of STEM faculty (81%) strongly indicated that they needed more support in the grant application process. Over half (59%) of STEM faculty wanted more mentoring in research.

Focus group findings expanded on the survey results. For example, although survey responses in general indicated that faculty members were more satisfied than dissatisfied with the campus climate, the focus group participants identified factors that detracted from career satisfaction, including workload issues, low salaries, and a gender-biased environment.

WISE@OU worked to address these challenges through workshops and trainings for faculty in the STEM departments (and across campus). Over the course of the grant program, WISE@OU initiatives focused on career planning (including tenure), work-life leave options, granting writing and funding opportunities, and mentoring.

- Workshops for junior STEM faculty
- Campus-wide events for mid-career faculty
- Partnership with Academic Human Resources
- Collaboration with Center for Excellence in Teaching and Learning (CETL)

WISE@OU created a series of luncheons where junior STEM faculty could meet each other as well as administrators and senior faculty. These events were a unique opportunity to bring together faculty who didn't normally interact. Newly-hired STEM faculty were contacted at the start of each semester and given a brief introduction to WISE@OU and its initiatives. There were typically one to two lunches each Fall and Winter for STEM faculty members. Each session provided time for informal networking as well as addressed a relevant topic – such as planning for the summer, connecting with upper-level administrators (including the Provost and Chief Information Officer), and working on grant proposals.

Workshops were generally hosted for STEM non-tenured faculty, however select sessions were for mid-level career faculty from all departments or for department chairs. These workshops focused on planning for promotion (associate to full professor) and goal setting.

In addition to career-related workshops, WISE@OU addressed bias-related concerns through collaboration with Academic Human Resources. We created training for search committees and resources to help chairs better understand policies and practices related to hiring, tenure, and work-life.

One of the existing centers on campus was the Center for Excellence in Teaching and Learning (CETL). CETL was an established center that hosted teaching-focused workshops for faculty, and it was a well-known and easily accessible location for workshops. WISE@OU typically hosted two workshops each Fall and Winter semester

at CETL. Topics included mentoring (faculty and students), working with students, time management, and writing. In addition, WISE@OU and CETL created a chairs' training program to assist faculty with this leadership role.



- WISE@OU transitioned into the Oakland University Research Office in Fall 2016 and is now known as the WISER (Women in Science, Engineering, and Research) program.

Throughout the final year of the grant and during the no-cost extension year, the WISE@OU Leadership Team worked hard to emphasize the importance of institutionalizing the program and sustaining the initiatives that were effective in improving the campus climate. The team met with campus leaders (including the Provost and President) to discuss sustainability. Ultimately, the decision was to include the WISE@OU program within the Research Office. Around the same time as the grant funding ended, a new Chief Research Officer was hired and he joined the WISE@OU Leadership Team. As the program transitioned into the Research Office, WISE@OU became WISER (Women in Science, Engineering, and Research).

For the past two years, WISER has continued faculty development programming and expanded the focus beyond the STEM fields. Workshops now focus on existing topics as well as provide new emphasis on positioning, long-term research agenda development, and collaboration between education fields and the sciences.

- Training support for chairs
- Research support for junior faculty
- Group mentoring program (Engineering)

WISER continues to work on initiatives that improved the campus climate. Our main focus areas include training support for chairs, research support for junior faculty, and group mentoring (including a specific program for engineering).

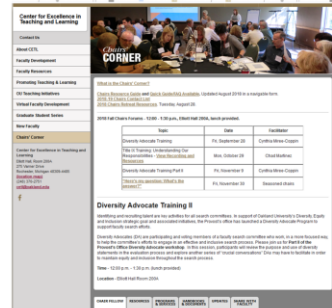
Chair Training

- Why focus on chairs?
 - Chairs at OU have faculty status rather than administrative rank, leading to
 - some leadership deficiencies across campus.
 - Chairs are 'visible' leaders and have the potential to improve faculty satisfaction.
 - In absence of formal training, Chairs tackled departmental issues without guidance.
 - Results from climate survey and focus groups showed that Chairs desired more training and support.
- Chair Training Topics

At Oakland University, department chairs have faculty status rather than administrative rank. The Leadership Team recognized chairs as visible 'leaders' for their units and their potential for improving faculty and student satisfaction. Until the WISE@OU initiatives began, there was no formal chair training on campus. In the absence of formal training, chairs had been left to tackle departmental issues on their own without much guidance. Through climate survey and focus group comments, WISE@OU found that chairs desired more training and support.

One major gap that existed on campus was a lack of training for department chairs and program directors. When we chose to prioritize sharing information and developing resources for department chairs, we specifically looked at examples of training programs from the University of North Texas ([Chair Academy](#)) and Boise State ([Resources for Academic Leaders](#)). We determined main topic areas for chairs' training, including hiring/recruitment, retention/advancement, promotion/tenure, mentoring, department climate/work-life, planning courses, and managing difficult situations.

- Collaboration with CETL
 - [Chairs' Corner website](#)
 - [Resource Guide](#)
 - Retreat and Forums for Chairs



WISE@OU worked with the Center for Excellence in Teaching and Learning (CETL) and created the “Chairs’ Corner” website to provide development opportunities and support to department chairs. WISE@OU helped CETL create the Chairs’ Resource Guide, which included a comprehensive list of policies, contacts, resources and other information for chairs and program directors. This document was especially useful to new chairs as they adjusted to their role and could use the guide for reference and direction. WISE@OU also provided useful books and article recommendations, which were posted on the “Chairs’ Corner” website and addressed topics including hiring, retention, tenure, mentoring, work-life, planning and coursework, and difficult situations.

As part of chairs’ training, CETL hosted a Chairs Retreat in the summer and Chairs Forums over the course of the year to provide additional information and resources. The retreat provided guidance and best practices on specific topics, and also created a time for department leaders to interact with each other and administrators on campus (such as the leaders from our Academic Affairs / Provost’s office).

- Pathway to Grants
- Hiring of Research Development Officers
- Workshops
 - NSF, NIH, mission-driven agencies
 - Pivot funding database

As WISE@OU interacted with newly hired STEM faculty, it was apparent that the assistant professors were concerned over obtaining grants to support their research. It was important for STEM faculty to get a grant, as it was an expectation for tenure and promotion. The WISE@OU Leadership Team members addressed these concerns through meetings with junior faculty, explaining the application process, and reviewing applications. These meetings became known as the "Pathway to Grants."

Since WISE@OU has transitioned to become WISER, the Research Office hired two Research Development Officers (RDOs). The RDOs' main responsibility is to support faculty in seeking funding and preparing grant applications. They lead monthly workshops focused on the structure and awards from the National Science Foundation and National Institutes of Health, with future programming planned for mission-driven agencies and navigating the Pivot funding database. These workshops are open for all faculty (all ranks and departments).

- PI Academy for Research and Engagement
 - 30 non-tenured faculty from all fields
 - Monthly training sessions, plus networking events and coaching
 - External mentor (top scholar in field)

One key aspect of current faculty development initiatives as related to research is the concept of positioning. This concept extends beyond grant writing training and incorporates multiple aspects of long-term research planning to help a faculty member become competitive in their field. To introduce positioning to junior faculty, the Chief Research Officer (and member of the WISER Leadership Team) established the Oakland University PI Academy for Research and Engagement in 2017. This program is coordinated by the WISER Program Coordinator. The PI Academy is made up of 30 non-tenured, tenure-track faculty members from across the university. Participants are nominated by chairs, associate deans, and others to take part in this career development program. Members of the PI Academy are potentially research active faculty with some evidence of being visible in the literature and their field.

The PI Academy combines didactic and discussion sessions with training from nationally recognized grant writing experts and external mentoring. Monthly sessions address topics including navigating university resources, finding funding, grant writing, being a principal investigator (planning, management, compliance, dissemination), and professionalization as a faculty member. In addition, one or two networking sessions are hosted per semester (Fall and Winter) to bring together similarly situated faculty and involve chairs, Deans, and upper-level administrators (President, Provost). Participants also receive virtual coaching from a grant writing expert to assist them with creating their research enterprise and establishing long-term career goals.

Mentoring is an important part of the PI Academy, and the program hosts an external

mentor for each participant. PI Academy members identify the top scholars in their field from whom they can learn and with whom they can build their network. Mentors are expected to help professionally support their mentee and work with them to develop their long-term research agenda – a key element to positioning. Mentors are invited to campus to meet with their mentee, tour the campus and their lab/research space, and present a seminar. This event allows additional faculty members to benefit from the mentor's experience and expertise. The aim of the external mentoring program is that the mentor and mentee work together over the ensuing year on at least one significant project. It is the hope that their mentorship extends beyond the year and becomes a long-term relationship which benefits the mentee's career.

Lack of formal mentoring programs was an issue. Some of our initiatives include:

- WISE@OU Cohort Luncheons
- School of Engineering and Computer Science (SECS) Faculty Development Coordinator
- Initiative underway by the Provost's office to establish a campus-wide mentoring program

Through discussions with STEM department chairs and faculty, WISE@OU determined that there was no formal mentoring programs in place. On the climate survey, most faculty indicated they did not receive assistance in the form of mentoring and career development, especially in research. WISE@OU recognized that new faculty in any department face similar challenges, and we established cohort mentoring to help bring together junior faculty from different STEM departments who may not typically interact with each other. We held luncheons for faculty from the math, science, and engineering departments. These luncheons were one of the few opportunities for faculty from different units to interact. Each event presented information on a topic (such as career planning, seeking funding, or meeting with campus leaders and administrators) as well as time for networking to help establish collegial support and collaboration. The cohort luncheons proved to be successful, as attendees found peer mentors as well as guidance from the senior STEM faculty who were part of the WISE@OU Leadership Team.



Cohort luncheons typically included newly-hired faculty from the biology, chemistry, engineering, math, and physics departments.

- Engineering Dean appointed one of the WISE@OU co-PI's as a Faculty Development Coordinator (FDC) for the School.
- FDC provides mentoring to junior faculty, both in group settings, as well as one-on-one
- Assists with things such as tenure and promotion, grants, teaching concerns, navigating SECS, addressing work-life balance issues; Also provides assistance to mid-career faculty
- Provides a centralized contact person that faculty can go to with questions
- Refers faculty to "experts" in the School and at the university in research, teaching and service

The dean of the School of Engineering and Computer Science was particularly receptive to WISE@OU's message about the need for mentoring and appointed a faculty member, one of the co-authors and a co-PI on the ADVANCE grant, to serve as a coordinator for a school-wide faculty mentoring program. The SECS currently has four departments and about 70 faculty members. One distinguishing feature of the School is that all of its faculty are governed by the same tenure and promotion criteria, hence minimizing differences between disciplines. While the faculty mentoring program in the School is still evolving, below are some key features of the program:

The program has a Faculty Development coordinator (FDC) who serves as a point person for untenured faculty within the School. It is important that the coordinator be perceived as approachable, available, knowledgeable and willing to help.

The FDC reaches out to all newly hired faculty as soon as she is provided with their contact information by department Chairs. She sends a warm email welcoming the new faculty to OU, providing contact information, offering to answer questions/provide assistance and meeting with the new faculty over the summer if they come to visit the area.

The FDC meets individually with new faculty and provides them with school-specific information that they may need when they first arrive at OU.

The FDC organizes several group get-togethers for untenured faculty throughout the year. These include informal coffee/chat gatherings to socialize and discuss issues that may be on their minds, as well as more formal meetings (similar to the cohort luncheons but specific to SECS faculty) focused on topics such as tenure and promotion, teaching issues, etc.

The FDC also meets with individual faculty one-on-one either at the request of the faculty member or initiated by the FDC who may have observed the faculty member struggling with an issue. One area that the FDC highly encourages faculty to come discuss with her is promotion and tenure reviews.

The FDC offers to review grant proposal drafts or to help identify other faculty willing to do so. This activity is becoming less needed with the hiring of Research Development Officers and the inception of the PI academy.

The FDC follows a “mentor network” model, serving as a facilitator who can connect faculty with others who may be better able to help with a specific issue (such as teaching, research, childcare, etc.). The FDC does not have all the answers and is not expected to. Rather, the FDC identifies faculty within the school and the university who can serve as great resources in specific areas and works on connecting faculty to them. The FDC knows to advise faculty dealing with medical issues, requiring a leave or wondering about maternity leave to contact Academic Human Resources.

- Full professors (SECS: 6/12 women faculty; represent 22% of SECS full professors, up from 13%)
- Female Leadership in STEM
 - Associate Deans
 - Provost's Office

WISE@OU did not limit its activities to untenured faculty. It also worked with mid-career women faculty. In particular, it encouraged and mentored women faculty in the School of Engineering and Computer Science to go up for full professor. This initiative was very successful with half of the women faculty in SECS holding the rank of full professor.

Furthermore, women STEM faculty now hold leadership positions: associate dean in SECS and CAS, and interim associate provost. A former woman chair from SECS is now a dean at another institution.

- Dual Hiring
- Better Positions
- Resources
 - Graduate Student support
 - Lab space

As a growing institution with limited resources, there are continuing challenges. One has to do with the issue of dual hiring. The university does not have a mechanism in place for that, which places some constraints on our ability to attract women and URM faculty. The hiring process is also slow. Faculty also indicate the need for more graduate student support and lab space in order to be able to grow their research programs further.

Lessons Learned

- Leadership buy-in is key
 - Upper-level administration
 - Lower-level administration
- Program needs to be sustained

As we have learned, in order to achieve significant changes at the institutional level, it is critical to get buy-in from leadership, both at upper and lower levels of administration. Resources need to be allocated to such programs in order for them to be sustained.

Acknowledgments

The authors gratefully acknowledge the support of the National Science Foundation ADVANCE Grant Program through NSF award # 1107072. They also acknowledge the additional support of Oakland's Office of the Provost and Vice President for Academic Affairs, the CAS and SECS Deans' offices, the Office of Research Administration, the Center for Biomedical Research, the Oakland University Center for Excellence in Teaching and Learning and the Michigan Space Grant Consortium.

- Resources on the WISER website:
 - www.oakland.edu/research/wiser
- Resources about positioning:
 - How Your Grant Proposal Compares (David A. Stone, 2009) <https://www.chronicle.com/article/How-Your-Grant-Proposal/47471>
 - Becoming a Successful Principle Investigator (David A. Stone, 2010) <https://www.chronicle.com/article/Becoming-a-Successful/66133>

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