

**Summary for NSF ADVANCE Site Visit
Kansas State University
September 27-28, 2006**

The goals of the Kansas State University (K-State) ADVANCE Institutional Transformation project are:

- 1) Institute changes in existing departmental policies, procedures and practices, and develop new ones as needed, to foster a gender-equitable climate within partner departments,
- 2) Expand and enhance departmental recruitment practices to attract more women applicants and ensure that candidates are not subject to subtle bias in the search and hiring process,
- 3) Implement effective programs that foster the careers of women faculty and encourage their retention through tenure and promotion, and
- 4) Propagate the successes achieved in partner departments to all science, engineering and mathematics (SEM) departments.

Impact of ADVANCE Project on positions held by SEM women faculty at K-State

	1997	2003	2005
Percentage of full-time tenure line faculty in SEM departments who are women (Number of women)	10.0% (52)	13.3% (66)	14.4% (71)
Percentage of SEM full professors who are women (#)	4% (10)	4.7% (12)	7.3% (18)
Percentage of SEM associate professors who are women (#)	12.2% (18)	19% (28)	14% (20)
SEM women in administrative positions (SEM men)*	1 (43)	6 (42)	12 (41)

*Includes Provost, Associate or Assistant Provost, Dean, Associate or Assistant Dean, Department Head, Director

Hiring since the start of our project

- From Fall 1987 through Fall 2003, the average number of women hired per year into tenure-track appointments in SEM departments was 5.9, as compared to 24.6 men hired per year.
- In the first three years of our ADVANCE project (Oct. 2003-Sept. 2006), 30 women were hired into SEM tenure-track positions (or had positions converted into tenure-track), for an average of 10 women hired/year. Fifty one men, for an average of 17/year, were also hired.

Tenure, Promotion, and Retention

- The tenure outcomes, measured as retention in the 7th year after hire and averaged over 7 years of hiring cohorts, were 55.6% for SEM women and 69.8% for SEM men (not a statistically significant difference). The retention rate for SEM faculty members hired beginning in 1988-89 and later years and remaining through 2004-05 is 52.3% for women and 55.6% for men (n.s.).
- Ten SEM women have been promoted to full professor, nine to associate with tenure, and three associate professors received tenure since the start of the project. The comparable numbers for men are 28, 40, and four, respectively.

Project Structure and Organization

Our project includes project-wide, college-specific, and department-level initiatives to address barriers to the full participation and advancement of women faculty members. Specific barriers at K-State identified in our proposal are lack of effective recruitment, exclusion from networks, and subtle biases. K-State has a very decentralized culture with a wide-spread practice of delegation in which initiatives are primarily implemented and governed at the lowest possible level. The structure of our ADVANCE project was developed to be in alignment with this culture, and in the grant planning stage each of the participating colleges developed its own programs to enhance recruitment, retention, and advancement of women, which addressed issues particular to its own disciplines. During the project, we also have given the colleges and departments the flexibility to develop initiatives that best fit their internal cultures.

In determining the original scope of our program, we chose to work with the four colleges in which women faculty members were most underrepresented. These colleges include 27 SEM departments, of

which six are “partner” departments that committed to be “early adopters” of project initiatives. The colleges are: College of Agriculture (AG), College of Arts & Sciences (A&S), College of Engineering (Engg), and the College of Veterinary Medicine (VM); and the six “partner” departments are: Animal Sciences & Industry (AG), Biological & Agricultural Engineering, Biology (A&S), Chemical Engineering, Diagnostic Medicine/Pathobiology (VM), and Geology (A&S).

The project is guided by (1) the **Executive Committee**, composed of the PI, Co-PIs, deans who are Senior Personnel, and our Project Coordinator; (2) the **Steering Committee**, which includes the PI, one of the Co-PIs, WESP Director, representatives from all four colleges involved in the project, and the Project Coordinator; and (3) **SEM partner department heads** and the **Internal Advisory Board (IAB)**, which includes the department heads of the 21 SEM departments that are not partner departments and the Vice Provost for Research.

The Executive Committee meets monthly to set policy for the project, review progress, consider refinements or new activities to implement, and to address any identified areas of resistance or barriers. The Steering Committee meets monthly to review progress, provide suggestions for refinements or new activities to implement, and facilitate college-level initiatives. It also serves as the review committee for competitions for most project-level activities. The IAB meets with the project leadership and partner department heads semiannually to discuss the project progress, mechanisms for encouraging participation of women faculty members in their units, and to share ideas for improving the K-State gender climate.

We created during year three of the grant period a funding opportunity for the non-partner departments as part of our proposed dissemination and institutionalization efforts. Nine non-partner departments have received funding for initiatives that include some of the same activities undertaken by partner departments and other efforts that support the goals of our ADVANCE project. Department heads from our partner departments are serving as mentors for these non-partner departments.

I. Project-wide initiatives Women faculty members in all 27 SEM departments in the four colleges are eligible to participate. Of our six original proposed initiatives, five are fully functioning programs; one was re-examined and eliminated. We have created an additional initiative, the Special Assistant to the Provost position, using internal funding. Furthermore, the ADVANCE project has hosted four prestigious women to give university-wide lectures that addressed gender issues in SEM disciplines.

The **Equity Action Workshops** provided the foundation for implementation of all initiatives. Participants gained a greater understanding of gender issues and were then better prepared to create a more equitable climate within their units. Two external consultants, Dr. Virginia Valian, Hunter College, and Dr. Cynthia Burack, Ohio State University, facilitated the first two workshops. The other workshops were facilitated by K-State administrators. Workshop topics were (1) gender schema and their impact on the evaluation of women [three sessions], (2) department websites and the messages they convey [four sessions], (3) recruitment of women and individuals from underrepresented groups [one session], and (4) faculty leave issues [one session]. Outcomes were assessed by pre- and post-workshop surveys.

This initiative has had the following outcomes for individuals as well as for the university:

- Raised awareness of the various barriers women faculty members encounter.
- Elevated level of discussion regarding recruitment, retention and advancement of women faculty.
- Provided venues for sharing information about challenges and successful approaches to handling difficult situations that women encounter.
- Heightened the recognition of the importance of the dual career issue.
- Addressed Project goals 1 and 2.

The **ADVANCE Distinguished Lecture Series (ADLS) Program** establishes and expands the professional networks of tenure-track women faculty members by giving them the opportunity to invite nationally recognized leaders (male or female) for a lecture and a campus visit. Each eligible faculty member may submit an application to host one leader each year. The Steering Committee reviews the

applications and provides feedback to the faculty hosts. In addition to the speakers sharing their expertise via campus lectures and one-on-one interactions with the faculty hosts, the speakers provide guidance and mentoring for the hosts and foster inclusion of the hosts in wider professional circles. During their visits to our campus, the speakers have engaged in a variety of activities such as visiting the host's research lab, working with the host to refine research techniques, or giving a guest classroom lecture. Many of the hosts and their speakers have planned future meetings and collaborations. During the first three years of the project, 21 of the 27 SEM departments had eligible tenure-track women faculty members, and 27 of 40 eligible women in 17 of the 21 departments received awards to host speakers. Eleven of these women requested to host multiple speakers. Thirty nine lectures have been given to date.

This program has had the following outcomes as assessed by written reports and interviews with hosts:

- All participants have reported benefits such as establishing important professional relationships; obtaining feedback on current research projects and exploring ideas for future research projects; identifying possible areas of collaboration, and receiving suggestions to improve teaching.
- Longer-term benefits include introductions by speaker to other leaders in the discipline.
- Most report plans for future interactions with their speakers and reciprocal visits.
- A high level of enthusiasm from hosts, department heads and deans for this program.
- Explicitly reduces isolation and expands the professional network of the participants. It also serves to enhance faculty recruiting and fosters career development (Project goals 2 and 3).

The **Career Advancement Program (CAP)** was developed to facilitate the transition of tenured women into senior-level faculty ranks or into administrative positions. This is a competitive program in which women identify mentors who can advise them on critical mid-career advancement topics. Funds may be requested to support research or undertake professional development activities. Thirteen women have received full funding and three women have received partial funding for their proposed projects.

This program has had the following outcomes:

- Four of these CAP award recipients have subsequently been promoted to full professor, and one of these four successfully competed for an administrative position at our institution.
- Emphasized the importance of addressing the needs of mid-career women faculty and their professional advancement (Project goal 3).

The **K-State ADVANCE website** was created to share information about the various project initiatives and outcomes, make available NSF indicator data, and provide links to resources and news items on gender issues in SEM. The website can be accessed at <http://www.ksu.edu/advance>.

The **Work/Life Resources at K-State website** was developed to function as a central resource of information for the current campus community as well as for prospective students, faculty members, and staff. Topics covered include relocation, health care, dependent care, education, recreation, employment, and other items of interest to individuals considering employment or enrollment at K-State. The website can be accessed at <http://www.ksu.edu/worklife> and it addresses Project goals 2 and 3.

The **Academic Career Exploration (ACE)** initiative was intended to acquaint new undergraduate SEM women students of color with academic career options to encourage them to consider graduate school and the professoriate. As we began to plan implementation of this program, a series of meetings with undergraduate students of color and diversity directors from SEM colleges revealed that current academic success is the paramount issue for these freshmen and sophomore students and that post-baccalaureate planning is distant from their minds. Thus, the Executive and Steering Committees decided this initiative would not be effective as originally designed. Other programs, created at K-State after initiation of the ADVANCE project, have similar goals to ACE; we feel that these programs, while not uniquely targeting SEM women students of color, will fill the niche that was intended for the ACE initiative. We feel certain that the needs of the ACE target audience will be met and do not plan to further pursue this initiative.

The **Special Assistant to the Provost** program is a competitive opportunity that provides a semester-long central administrative experience for tenured faculty members. Calls for applications are issued each spring, faculty members submit applications, and a review committee interviews candidates. Those selected for this position work closely with the Provost and members of the Provost's staff on an administrative project of mutual interest to the Office of the Provost and to the faculty member. To date, six faculty members, including three women and two individuals of color, have participated.

II. College-specific programs Each of the four participating colleges created its own program to address particular issues faced by its women faculty members.

The **College of Agriculture Professional Development Program** offers small competitive awards to tenured and tenure-track women faculty members to enhance their scholarly and instructional activities. Eighteen of 20 total eligible women (holding current ranks of University Distinguished Professor [1], Full Professor [6], Associate Professor [7], and Assistant Professor [4]) participated in the first three years of the project. 32 total awards have been made.

This program has had the following outcomes reported by the participants:

- Support provided for domestic and international conference attendance, workshop participation, sabbatical leave, and visits to other universities.
- Benefits included making new contacts in a research area, developing grant proposals with new colleagues; enhancing an existing research area; learning about educational innovations at other universities; and implementing new leadership skills.
- Reduces isolation and expands the professional network of the participants. It also serves to enhance faculty recruiting, retention, and career advancement (Project goals 2, 3, and 4).

The **College of Arts & Sciences** has two programs: the **Administrative Shadowing Program** to encourage tenured women to pursue administrative interests and the **Career Enhancement Opportunities** (CEO) initiative for tenure-track women faculty members to enhance their scholarly activities.

The Administrative Shadowing Program has had one participant, an Associate Professor. She developed student learning outcomes and assessment measures for her department, attended leadership workshops, and participated in an assessment workshop. Her mentor was the female head of a closely allied department. Benefits reported include (1) increased awareness of leadership techniques; (2) insight into advancement of individuals and communication within academic units. This woman received promotion to Full Professor in the academic year following her shadowing experience. No additional applications were received for this program, and it is not an active initiative. However, some applications to the CAP have included aspects of administrative mentoring as part of their projects. Thus, this activity, which addresses Project goal 3, is being pursued in other project initiatives.

The CEO initiative has made awards to 18 of 21 eligible women (all Assistant Professors) from all nine SEM departments in the college in the first three years of the project. 35 total awards have been made.

The following outcomes have been reported by the participants:

- Support provided for domestic and international conference attendance, workshop participation, research support, and visits to other universities.
- Benefits included establishing important professional relationships; obtaining feedback on current research projects and exploring ideas for future research projects; increasing visibility for their research; identifying possible areas of collaboration; learning a research new technique; jump-starting a new line of research; meeting program officers from funding agencies which resulted in successful grant proposals and panel service.
- Reduces isolation and expands the professional network of the participants. It also serves to enhance faculty recruiting, retention, and career advancement (Project goals 2 and 3).

The **College of Engineering** has two programs: **Research Enhancement Visits (REV)** for tenured and tenure-track women faculty members to enhance their scholarly activities and the **Recruiting to Expand Applicant Pools (REAP)** initiative to encourage departments to undertake proactive recruitment methods designed to attract women candidates.

The REV program has made awards to 6 of 12 eligible women (1 Professor, 1 Associate Professor, and 4 Assistant Professors) in the first three years of the project. Fifteen total awards have been made.

Outcomes reported by the participants:

- Support provided for domestic and international conference attendance, workshop participation, and visits to other universities, research centers and federal agencies.
- Benefits included making contacts for future research collaborations; providing visibility within their research disciplines; receiving review of research from member of National Academy of Engineering who encouraged submission of research to journal he edits; and meeting program directors of federal funding agencies to discuss research proposals.
- Increases opportunities for research at major facilities. Reduces isolation; expands professional network and national recognition of participants at an early stage in their careers. It also serves to enhance faculty recruiting, retention, and career advancement (Project goals 2 and 3).

The REAP program was used in two searches in 2005 and has had the following outcomes:

- Department heads and faculty members from two departments visited six universities producing large numbers of women doctorates in the disciplines; made presentations at national meetings to advertise faculty openings; met individually with women to encourage them to apply.
- Four-fold enhancement in applicant pool size in both searches with more qualified candidates and more qualified women.
- Three women were hired.
- Recognition across college of effectiveness of active recruiting approach in increasing quality as well as representation of women in applicant pools (Project goal 2).

The **College of Veterinary Medicine (CVM)** has created a peer group-mentoring program, **Parallel Paths**, open to female and male faculty members. It is intended to foster the development of junior faculty, sustain the productivity of senior faculty, and create an environment that helps them be successful in their teaching, research, clinical, and service roles. Twenty junior faculty members and six senior faculty facilitators have participated in two peer mentoring groups that meet monthly. These participants include 11 women and 15 men. 27 professional development awards have been made to 18 group members (8 female and 10 male). Outcomes were assessed by reports, surveys, and focus groups.

The Parallel Paths Program has had the following outcomes:

- Teaching awards for all four classes of the Doctor of Veterinary Medicine (D.V.M.) curriculum were developed and funding obtained from corporate donors for 2005 through 2008.
- Established a professional development seminar series. Topics have included the promotion and tenure process, leadership skills, and successfully obtaining NIH grants. Speakers have come from CVM departments, other universities, and the NIH.
- Organized a seminar series that provides information on basic concepts of teaching and learning.
- Held monthly dinner meetings to discuss issues and concerns of junior faculty. Topics include gender and other diversity issues; leadership skills; teaching strategies and techniques; assessment of students; learning styles; proposal writing; graduate student and resident training; work/life balance; and promotion and tenure. Dinners are funded by the Dean of the CVM.
- Support provided for attendance at professional meetings, conferences, and short courses; visits with research colleagues, and support for student help in teaching and research.
- Reported benefits include increased collegiality; enhanced cross-departmental dialogue; opportunities to learn about other faculty members' research interests; improved understanding of the promotion and tenure process; and an environment conducive to professional growth.

- Reduces isolation and expands the professional network of the participants. It also serves to enhance faculty recruitment, retention, and career advancement (Project goals 2 and 3).

III. Department-level initiatives Each of our six partner departments was tasked with review and revision of its department website, review and revision of its policies on annual evaluation, promotion and tenure to eliminate subtle gender biases, and implementation of the Career Milestones for Academic Personal Success (MAPS) initiative. Career MAPS are flexible, personalized timelines describing career goals and the milestones needed to achieve them. Because of the differing issues faced by women faculty in the partner departments and the decentralized culture of our institution, the approaches taken by the departments to accomplish these tasks varied.

The department-level initiatives have had the following outcomes:

- All six partner department websites were revised and were evaluated by our consultant, Dr. Cynthia Burack, using the rubric she developed.
- The websites also were evaluated by four campus focus groups, which included male and female junior faculty members and graduate students. The evaluation of the websites by the focus groups corroborated the importance of the elements included in the rubric.
- Departments have reviewed and revised their policies in an on-going process.
- The Career MAPS initiative has been implemented as part of overall mentoring plans in partner departments and in other units.
- Awards have been made to department faculty members to review and revise department websites; for travel to professional conferences, workshops, and meetings; for recruitment of new faculty members; for release time and summer salary to conduct research; and for purchase of research materials, supplies, and equipment.
- Reduces subtle gender biases; enhances faculty recruitment, retention, and advancement (Project goals 1, 2, and 3).

IV. Dissemination

- Presentations were made to the department heads in all four SEM colleges at the start of the project. Periodic updates are provided to the IAB and at department heads' meetings.
- A K-State ADVANCE display about our initiatives spends one week in each SEM department.
- Eight presentations at national conferences (2003-2006) on K-State ADVANCE initiatives.
- Four peer-reviewed conference papers and one abstract published (2004-2006).
- Submitted a book chapter describing our ADLS program (2005).
- Three presentations given at other institutions on the K-State ADVANCE program (2004-2005).
- Provided advice to five institutions preparing ADVANCE grant proposals (2004-2005).

V. Institutionalization

- The College of Agriculture has committed to continuing its professional development program.
- The Colleges of Arts & Sciences and of Engineering are pursuing development efforts to continue support for the ADLS program.
- The College of Engineering has committed to continuing the REV and REAP programs. The College established a hiring incentive that provides 30% of the salary for any woman or member of an underrepresented minority group hired, for as long as that individual remains at K-State.
- The College of Veterinary Medicine has committed to continuing the Parallel Paths program.
- The central administration is considering which aspects of the project-level initiatives to sustain.
- An elevated level of awareness and conversation about gender issues in SEM departments and colleges has led to an increase in the number of women faculty members hired into the tenure-track, promoted, and appointed to administrative positions. Deans and department heads have noted that success in one department “spills over” into other units, and that the presence of women in administrative meetings has changed the tenor of the discussions that occur. The diversity of our programs lends strength to our overall project and contributes to its success.