Overview of ISU ADVANCE

Since its inception, ISU ADVANCE has been a program based on careful planning and data development, a program notably transparent as well as trans-disciplinary. Our central plan of a comprehensive institutional intervention that uses a bottom-up/top-down approach defines our efforts to effect and sustain change on our campus. With an expanding community of participants and partners, we have become the key campus repository for information and resources on the recruitment, retention, and advancement of an excellent and diverse STEM faculty. Nearing the end of our third year, we continue to model the institutional change we seek.

ISU ADVANCE Structure. The ISU ADVANCE Program began with a team of faculty who became the co-PIs, working to build a program foundation for three years before the submission of the grant. The co-PI “Team” (now 7 persons) still takes responsibility for central decision-making and works closely with three of its members in leadership roles: the PI, the Executive Director, and the Research Director. Our effectiveness is based on the enduring commitment of this group as well as on an active ADVANCE Council, made up of the PI and co-PIs, the Associate Deans and Equity Advisors in three focal colleges, the Associate Deans in two other STEM colleges, ADVANCE Professors in seven focal departments, two graduate students, and one Administrative Fellow. Other groups provide advice and counsel: the Internal Advisory Board (Executive Vice President and Provost [EVPP] and the deans of our five STEM colleges), the Equity Advisor/ADVANCE Professor Group, College Councils in three focal colleges, the Steering Committee, and the External Advisory Board. The program works with the EVPP Office to convene department chairs for training, and is refining its evaluation plan with input from the EVPP staff. To coordinate our many efforts and share information, we keep a semester calendar, a WebCT library, careful records and minutes, as well as a repository of institutional and survey data.

Goals, Themes, Principles. We are consistently guided by the NSF ADVANCE goals as well as the four goals that defined our grant proposal:

- **Goal 1**: Overcome known barriers to the advancement of women faculty in STEM disciplines
- **Goal 2**: Identify and eliminate department specific barriers to the advancement of women faculty in STEM disciplines
- **Goal 3**: Increase the representation of women and underrepresented minorities at senior faculty and leadership ranks
- **Goal 4**: Institutionalize positive change across the university.

We have used internal formative evaluation to assess our progress and respond to needs. Annual planning retreats for ADVANCE Council members have been used to recalibrate our efforts and shape each coming year. For example, Year 3 was guided by the theme of “Recruiting the best: the role of work-life flexibility,” six “Guiding Principles,” and six “Goals for the Year”. In January 2008 (Year 2), we hosted an external evaluation team whose recommendations helped us refine our organizational structure and redirect our financial resources.

Like other units outside the traditional department structure, we have experienced the ambiguities of sharing faculty, resources, responsibility, and administration with other academic units. As a result, we have learned to be flexible while creating a unique program known for high quality work. The remaining sections of this report will highlight progress and challenges in meeting our four goals, program evaluation progress, and future outlook.
Program Goals: Progress and Challenges

Our program for institutional transformation links structural initiatives at the levels of the college and institution (top-down) to department-level assessment of culture and practice (bottom-up). We use top-down and bottom-up approaches to address the four goals identified in the proposal.

Goal 1: To overcome known barriers to the advancement of women faculty in STEM disciplines, we have focused our efforts on 1) increasing transparency, 2) decreasing isolation from colleagues, 3) increasing the quality and quantity of mentoring, and 4) enhancing career flexibility.

Increasing the transparency of faculty advancement processes, decision-making, and evaluation criteria has been addressed via small group meetings, workshops (which were referred to as retreats in the grant proposal), educational CDs, and Web site resources. Equity Advisors and ADVANCE Professors have played a key role ensuring that we designed workable initiatives.

- Training to enhance awareness of issues: Diversity workshops for focal department chairs included guided analyses of case studies on transparency and on evaluating letters of reference. Two Reader’s Theatre performances included guided discussions on transparency, evaluation, and isolation issues faced by women in STEM departments.
- Recruitment: To increase the use of best practices in hiring, a resource CD on faculty search processes was developed by an Administrative Fellow and distributed via a well-attended workshop for department chairs in Spring 2008 (Year 2). Two well-attended campus-wide workshops were held in Fall 2008 (Year 3) and over 200 copies of the CD have been distributed across campus. In addition, all of the information is also available on the ISU ADVANCE Web site, and Equity Advisors have made presentations to search committee and department chairs. Our interventions in support of inclusive recruiting did not occur until late in Year 2 and we have not yet seen their effect on our indicator data. Prior to 2008-09 (Year 3), the percent of new hires who are women had not increased. Results from 2008-09 are not yet available.
- Tenure expectations: As a result of an initial diversity training workshop for focal department chairs and Council members, two chairs instituted the practice of gathering all assistant professors for a meal or coffee with Q&A about the P&T processes, strategies, and resources to assure that faculty members had access to information on professional advancement.
- Advancement from associate to full: The need for transparency in advancement from associate to full professor is also being addressed. Two colleges have held workshops on promotion from associate to full professor and our Administrative Fellow in Year 4 will focus on this issue.

A wide-ranging schedule of networking events sponsored or co-sponsored by ISU ADVANCE serves as a primary strategy for reducing isolation from colleagues. These events are held at both college and university levels and have included discussions related to career advancement and informal gatherings of women faculty; attendee evaluations have been strong. ISU ADVANCE has contributed to the intellectual vitality of STEM departments by sponsoring or co-sponsoring seminars from visiting scholars through its program of lectureship grants and its funding of visits by Eminent Scholars (selected by participating ISU ADVANCE Scholars).

A long-standing faculty mentoring program at ISU has been enhanced by the ISU ADVANCE Scholar program that funds the development of collaborative, networking, and mentoring relationships between women STEM faculty of color and non-ISU Eminent Scholars within their disciplines or specialty areas. Although the initiation of the program was delayed due to personnel limitations, we currently have an active group of ISU ADVANCE Scholars who are meeting and collaborating with their Eminent Scholars and we anticipate expanding the program next year. The Scholar program has also enhanced recruitment in some departments that have very few women. Additionally, college-level initiatives, including peer mentoring, have centered on developing and providing effective mentoring opportunities for all pre-tenure faculty.
To enhance career flexibility, ISU ADVANCE has taken a multifaceted approach to stimulating dialogue and improving university policies and practices. The New Norm of Faculty Flexibility conference in October 2008 brought national experts and engaged scholars to ISU to share research findings for developing and implementing effective institutional policies. The conference was attended by 145 individuals (40% from ISU, 60% representing 20 states and the District of Columbia), was sponsored by three external partners, five ISU colleges, as well as the Offices of the President and the EVPP, and was featured in local newspapers and in the national monthly Women in Higher Education. Year 3 of the program (2008-09) carried the theme “Recruiting the best: the role of work-life flexibility,” and featured the development and dissemination of a toolkit1 for chairs and deans and work-life Web resources for current and prospective faculty. Also in Year 3, ISU ADVANCE partnered with the EVPP Office to offer a workshop for department chairs on faculty flexibility, and the ISU ADVANCE workshop for chairs in Spring 2009 emphasized best practices for P&T in light of university policies, such as flexible tenure track options. The approval of a “Modified Duties” policy by the Faculty Senate in January 2009 was facilitated by efforts in one STEM focal department to codify departmental practices that offered teaching relief for new parents. ISU ADVANCE mobilized other groups on campus to compile and disseminate data that proved instrumental in making a successful case for the policy (approval of the policy is on hold due to financial constraints).

**Goal 2:** To identify and address department-specific barriers to the advancement of women faculty in STEM disciplines, we have focused our efforts on increasing understanding about how departmental structures, cultures, and practices contribute to or detract from faculty success. As specified in the grant proposal, and as adjusted in the modified budget submitted March 2007, we consulted with the Deans of 3 focal colleges (Agriculture & Life Sciences, Engineering, and Liberal Arts & Sciences) in the selection of 9 focal departments. In sets of 3, the focal departments are being phased into the project that we refer to as ISU’s Collaborative Transformation (CT) project (referred to in grant application as Participatory Action Plan for Comprehensive Institutional Intervention). Round 1 departments began in Year 1, Round 2 began in Year 3, and Round 3 will begin in Year 4.

The CT project is designed to compile department-level information about workplace climate, and then to use this information to develop collaborative strategies for enhancing aspects of departmental climate that can positively impact faculty recruitment, retention and promotion. CT is a project that respects differences across departments in work cultures departments embrace, routine departmental practices, and structures for organizing work. Climate results, which are based on the analysis of focus group and interview data from each department, are “mirrored back” to faculty. After faculty in each department receive the results of the climate study, they develop their own department-specific change strategies. ISU ADVANCE researchers work with the departments throughout this process. Results from the CT project are disseminated at ISU workshops, which are attended by ISU faculty and administrators. Results are also disseminated at STEM and SBS professional association conferences and in academic journals. Details of CT Project structure and methods are explained in the Year 3 Annual Report.

**CT Departmental Climate Project Findings, Impact, and Dissemination.** Results from focal department climate studies have been analyzed and reported in confidential departmental reports; and analysis of data for each first-round focal department revealed 9-10 key findings per department. A synthesis of climate issues based on the analysis data across all 3 of the first round focal departments is available in our report, “ISU ADVANCE Collaborative Transformation: Synthesis Report of Year 1 Department-Level Findings” (Bird and Hamrick 2008). Six main themes emerged from the first round of the CT project: spatial proximity and facility issues; gaps between stated ideals and reality; mentoring of assistant and associate professors; democratic participation; recruitment and retention; and family-friendly policies. Following the implementation of change strategies in each of the first round focal departments, a second synthesis report of departmental transformation outcomes was also prepared describing progress on addressing such

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1 Adapted with permission from the UC Faculty Family Friendly Edge (http://ucfamilyedge.berkeley.edu/)
issues, see “ISU ADVANCE CT Project: First Round Focal Department Transformational Strategies and Outcomes (January 2008 – January 2009)” (Bird, Constant, Janzen, Powell-Coffman 2008). These synthesis reports have been widely distributed on campus, are available on the Web site, and were the focus of well-attended workshops in April 2008 and January 2009. These synthesis and dissemination processes will be repeated for round 2 and 3 departments; for example, second round focal department reports are currently in draft form and will be reported in a second “synthesis report” of climate study findings across the first and second round focal departments next year. These reports outline a process other departments can use to address climate issues, that is they serve as a portfolio of resources.

To date, CT dissemination includes 8 reports for the ISU campus; 1 report for the NSF ADVANCE PI meetings; multiple papers, proceedings, and posters for Education, STEM, Philosophy, and Social Science disciplinary conferences; 1 published book chapter, and 1 forthcoming journal article. Our co-PI team has also produced a model document on joint authorship.

**CT Project Progress to Date and Future Outlook.** Over the first 3 years of the ISU ADVANCE Program, much has been accomplished with the CT project, and the analysis produced in departmental and synthesis reports confirms the continuing existence of barriers to advancement noted in our grant proposal; the faculty in the first round focal departments have accepted responsibility for needed change and have implemented many of the change strategies they developed themselves. ADVANCE Professors in second round departments are currently working with their faculty and ISU ADVANCE researchers to discuss the primary findings for their departments and to revise drafts of each focal department report. During years 4 and 5 of the program, the impact of the CT project will also be assessed using quantitative data from the COACHE and AAUDE surveys. ISU first administered the COACHE and AAUDE surveys in 2005 and 2008 respectively; by administering these surveys again in 2009 and 2011, we will be able to draw comparisons between focal and non-focal departments in levels of workplace satisfaction (in Time 1 and Time 2) and to ascertain how CT efforts have improved workplace climate in the focal departments.

**Goal 3: Increase the representation of women and underrepresented minorities at senior faculty and leadership ranks.** Since the proposal was written (2005), five high level academic leadership positions have been filled at Iowa State, three by women (Executive Vice President & Provost, Vice President for Research and Economic Development, Dean of Human Sciences), one by an Hispanic male (Dean of Design), and one by a white male (Dean of Engineering). Each of these new leaders is committed to ISU ADVANCE Program goals. The College of Engineering Search Committee and Diversity Committee collaborated on making diversity a key part of finalist interviews. We are creating a critical mass of top administrators who are aware of, and committed to, improving the status of women.

Indicator data show that the number of women full professors has been increasing during the current decade. In 2001, the first year for which we collected indicator data, there were 86 women full professors, of which 30 were in STEM disciplines. In 2006, the first year of the ISU ADVANCE Program, there were 99 women full professors, 40 in STEM, and in 2008 there were 101, 44 in STEM. This increase in full professors has increased the pool of women candidates for leadership positions filled internally. The largest decline among female STEM faculty has been at the associate professor level, although some of the decline is due to promotion to full professor.

Service on important committees is an important aspect of leadership. The percentage of women on college promotion and tenure committees increased slightly between 2006 and 2008. As a result, in 2008 the percentage was about the same as the percentage of full and associate professors combined (26%).

The ISU ADVANCE Program is partnering with leadership development programs across campus to strengthen the leadership opportunities for women and under-represented minorities. Following a year of planning, the Emerging Leaders Academy’s inaugural class of 20 faculty and staff began in January 2009. Of the 11 participating faculty, 8 are women. The ISU ADVANCE Program is collaborating with the Women’s Leadership Consortium (WLC) to sponsor the Women’s Leadership Series, which brings
workshops and speakers to campus. In addition, WLC and ISU ADVANCE are working to extend data collection and to monitor women’s participation in key university committees, especially those related to the budget, where diverse representation can contribute directly to institutional change.

**Goal 4: Institutionalize positive change across the university.** Many of the positive changes facilitated and enacted by ISU ADVANCE, some of which have already been described in this document, have been woven into the fabric of Iowa State University and will survive beyond the ISU ADVANCE Program’s funding period.

At the university level, we have promoted data-driven decision-making to deal with goals in recruitment, retention, work life integration, and job satisfaction. For example, data from the AAUDE faculty satisfaction survey have been presented by the Executive Vice-President and Provost to important leadership groups, including the faculty senate (~75 faculty representatives) and the President’s Council (~200 university administrators and leaders). Her presentations highlighted differences of gender and race in mentoring, perceived departmental climate, sources of stress, and attitudes toward career flexibility policies such as the tenure clock extension policy and part-time tenure-track positions. The Provost’s presentations have emphasized the importance of these issues to the excellence of the university and have enhanced discussion with deans, department chairs, and faculty leaders.

Another way that members of the ISU ADVANCE co-PI team and Council have helped to create sustainable change is through their service on university-wide committees, working groups, and grant-writing teams. ISU ADVANCE members are part of the following efforts: (1) Women’s Leadership Consortium, which includes among its mission statement, “promoting institutional change by providing women's perspectives while introducing new initiatives, monitoring current policies and programs, and maintaining priorities across campus”; (2) FIRES (Faculty Initiatives to Recruit and Retain Excellence in STEM), a faculty working group with the goal of collaborating on externally funded initiatives to increase the number of under-represented minorities and women, with a special focus on STEM disciplines; (3) development of an Innovation through Institutional Integration (I3) Program (NSF); (4) the University Committee on Women, which advises the President and Executive Vice President and Provost on issues of gender equity; and (5) the Advisory Committee on Diversity Program Planning and Coordination, a university-wide committee charged with ensuring success in and accountability to diversity goals.

Our Equity Advisors, in the university’s three largest colleges, have worked with ADVANCE Professors in six focal departments to bring such university-wide discussions to the college level. Equity Advisors have helped design new workshops on promotion and tenure and have ensured that ISU ADVANCE goals were guiding the work of Deans’ Cabinets and college diversity committees. The women and men in these roles are articulate about ISU ADVANCE change efforts, and are developing lasting leadership skills. In fact, the power of the CT approach lies in the fact that faculty members in focal departments engage in developing and managing their own change efforts. This creates a culture supporting the maintenance of a positive work climate for women and men. And when change is made at the levels of cultures, practices, and structures, the academic departments have the capacity to sustain transformation through changes in administration and demographics. During Year 3 we have broadened the group of Equity Advisors and ADVANCE Professors by rotating new people into these leadership roles. We are also cognizant of the need to direct activities in ways that will advance the careers of the program participants who are associate professors—and have had direct discussions with deans and department chairs about this advancement issue.

**Evaluation Progress**

We are working with a staff member from the EVPP Office to develop a synthetic evaluation of our program. The evaluation framework applied to the ISU ADVANCE program follows Stake’s (1972) responsive evaluation and is responsive to the realities of the program and to the reactions, concerns, and
issues of the participants. Due to the nature of the comprehensive institutional intervention, our evaluation seeks to measure understanding of transformation and to include different perspectives when reporting the success or failure of the program.

Embedded within this summary of our program are several examples of significant accomplishments that stem from ISU ADVANCE evaluation including the collection of institutional data, development of numerous workshops and resources to overcome known barriers, dialogue about and changes to university policies, identification of common departmental barriers, and implementation of change strategies resulting from CT efforts. Additional effort is needed to evaluate how specific ISU ADVANCE initiatives support comprehensive institutional change. The following activities are planned for Years 4 and 5 to support the evaluation of ISU ADVANCE:

- Development of an evaluation plan with attention to objectives, outcomes, program elements, and assessment activities. The evaluation plan follows a logic model method to provide a process for linking activities to outcomes (and in turn evaluation of impact).
- Creation of a synthesis report that integrates findings across program activities, documents programmatic efforts that address objectives, and identifies areas of need for additional programmatic and assessment effort.
- Review and interpretation of key performance measures.
- Strategic use of the evaluation plan, synthesis report, and performance indicators to engage ISU ADVANCE stakeholders in a conversation to support progressive focusing on program goals.

Future Outlook

We are at a critical point in the development of our program, with an effective organizational structure and committed participants—from co-PIs to the Executive Vice President and Provost. Our CT project is complex, with research leaders who are proficient in juggling the details of handling three cohorts of departments at different stages of participation. And we find a constant need to recalibrate the dual focus on top-down (our impact through policy change, training, and community and resource building) and bottom-up (CT activities and ADVANCE Professor work). This leaves the Equity Advisors and college representatives in a critical middle ground that will be key to sustainability of the project past the funding period; we already have commitments from our three focal deans to continue the Equity Advisor position. We are impatient that we have not yet seen the impact of our work in the numbers of women faculty in STEM, but our project is designed to build institutional change in a slower way that will last. Our geographic location means we face additional challenges in recruiting and retaining faculty of color in STEM, but next year, we will be adding to our successful ISU ADVANCE Scholars program a new graduate assistant (funded by the EVPP) to enhance our work with women faculty of color. We will also be building our connection to AGEP and its support for advanced graduate and early career persons of color in STEM.

While we envisioned a “toolkit” as a key product of our work at the grant writing stage, we have recognized the need to develop more flexible and dynamic resources for faculty and administrators on the front lines of institutional transformation. The term “toolkit” implies that “problems” can be easily fixed, and we know that, instead, systemic barriers require intervention and sustained discussion at many levels. We believe our resources will be more flexible and lasting. With the commitment of Institutional Research and brand new data on faculty recruitment from Equal Opportunity and Diversity, we have accumulated rich data resources to help us measure the impact of our program. With our second set of COACHE data and another external evaluation in Year 4, we will be able to continue our evaluation at a new level. Working with the Women’s Leadership Consortium and the Executive Vice President and Provost, we also have plans to produce a portrait of leadership with benchmarks for progress in gender representation, particularly at the level of department chair. We have demonstrable progress in the ISU ADVANCE program, but we also recognize the importance of our continued efforts at institutional transformation.