

DRAFT

Report on Site Visit to Virginia Tech, June 15 and 16, 2006

1. Intervention Context

Units Directly Involved

The ADVANCE Institutional Transformation program focused on two colleges: College of Engineering (COE) and College of Science (COS), and all departments in both colleges were included. There was also evidence that faculty in the College of Agriculture and Life Sciences and the College of Veterinary Medicine had peripheral involvement in the ADVANCE program.

Other administrative offices as well as faculty groups involved in ADVANCEVT include the following: Provost, Associate Provost, Human Resources, Multicultural Affairs, Office of Equal Opportunity, the Women's Center, and the Black Caucus.

Evidence of Administrative Support

The site visit team heard consistent comments from a diverse representation of Deans, Department Heads, and faculty from the COE and COS that the ADVANCE program had strong administrative support from the Office of the Provost. This level of support provided credibility to the university community at large that ADVANCEVT is an important university initiative.

At the college level, there is evidence of administrative support from the College of Engineering and College of Science deans.

Evidence of Faculty Support

Former and current faculty Senate presidents were supportive. Additionally, there is evidence that many faculty allies exist across the campus. These individuals play an important role in facilitating change at all levels. The evidence of faculty support varies by College and Department, with COE faculty appearing to be more supportive than COS faculty. In particular, several COE men department heads indicated that the ADVANCE workshops and training helped them become more aware of the critical issues facing female faculty at VT. Particularly supportive were the heads of Engineering, Science & Mechanics (COE) and of Biology (COS).

Not surprisingly, women faculty strongly supported the program. However, non-tenured (but tenure-track) women faculty voiced mixed opinions about the level of faculty support they perceived. While some believe their department climate is supportive of their success and professional growth, a number indicated that the climate in the department is still detrimental to their success. Some examples cited include: lack of sensitivity to having young children, pressure to not utilize the "stop the clock" policy for fear of experiencing negative outcomes, and a greater willingness to help men faculty

find employment for trailing wives than for women faculty seeking help in placing trailing husbands.

2. Intervention Strategy

The ADVANCE team organized its four components according to a career sequence, as follows: pipeline components, recruitment and retention, leadership development, and policy changes.

The pipeline element (advancing women into faculty careers) had several elements. First, in a joint initiative with the University of Maryland, Baltimore County, it developed a nationwide summer conference for women post-docs and graduate students with the goal of establishing VT as a place that cares about women students and faculty, which should aid recruitment. In addition, insights generated at the conference and shared with VT stakeholders and with other campuses should further academic understanding about how STEM fields can be more welcoming to women.

Second, the ADVANCE team created a summer institute for under-represented minority graduate students. Given Professor Smith-Jackson's expertise and energy, the institute she is organizing should be valuable and lead to new insights, new networking opportunities and community-building for the women students and faculty involved.

Third, the “Transformative Graduate Education” campaign led by Dean DePauw is reinforcing many ADVANCE goals, including the development of a Graduate Student Center that will provide more support and community to all graduate students. Given the isolation of women students, in particular, this is a promising initiative.

Fourth, workshops for female students about succeeding in graduate school and in the professoriate seem to be valuable in demystifying the processes of academe and in improving the career ambition and readiness of women students.

Finally, the program created post-doctoral appointments for women, one of which has been completed. Four more begin in the fall, and the program has been retooled to give special consideration to women who are following non-traditional career paths.

The recruitment and retention element is also comprised of several components. First, The university is engaged in cluster hiring, in which several faculty are hired across disciplines, and many women recently have been hired in this way.

Second, workshops designed to educate faculty and department chairs about recognizing and correcting for unconscious gender bias in search process was noted by several as having been valuable. “I had no idea I was doing this” was a typical reaction. The ADVANCE brochure on bias was mentioned by many as effective. Visits to individual departments by ADVANCE leaders, such as Dr. Schmittman, also were mentioned as useful for implementing departmental “buy in” and for disseminating information about best practices.

Third, the program has been successful in using “pre-recruitment” visits. At least two departments reported success in bringing in prospective hires who they informally “wooed” and subsequently hired.

Several other recruitment and retention initiatives are covered below under the *policy changes* element.

The leadership development element is made up of three components: seed grants, a leadership fellowship program, and a leadership development program. Seed grant funds (using ADVANCE funding matched by funds from Deans) have provided research support for junior women faculty. Recipients praised the usefulness, timing, and flexibility of the grants and explained how the grants helped them maintain their research momentum and professional morale in ways they could not have predicted. Further, the grants (and the accomplishments related to them) improved their status and credibility in their home departments and in their disciplines.

The leadership fellowship program is a “shadowing” program providing release time to women faculty to learn about administrative jobs. Due to a relative lack of faculty interest, the program instead redirected resources into a leadership development program that designed custom-tailored professional development plans, coaching, and mentoring to give women in the university (not just in STEM disciplines) tools necessary for leadership. This program has been successful for the women who took advantage of it, as has the succession planning strategy where current chairs nominate and groom senior women to move into leadership roles as chair or dean.

The policy changes element centers on the creation or augmentation of family-friendly policies: a stop-the-clock tenure policy, work-life grants for graduate students, a childcare center, and a dual career program.

A Work-Life survey of faculty turned up the refrain that “all of our time seems to be university time,” with unhealthy pressures put on family and personal life. It also revealed discontent about unreliable or unavailable mentoring for pre-tenure faculty and about inconsistent opportunities for collaborative research projects involving senior and junior faculty. Respondents also were concerned about the lack of under-represented minority faculty. Data from faculty Focus Groups and other surveys reinforced these findings.

As a result, two new and long-overdue campus policies were developed: a Stop-the-Tenure-Clock policy for family considerations and a program for Work-Life grants to provide paid leave to graduate students for family reasons.

Renewed emphasis on the Dual-Career Office is the third component of the policy changes, and should assist with recruitment and retention. Several department chairs said they had high hopes for the effectiveness and sustainability of this office.

Finally, development of an on-campus Day Care Center is an important step towards beginning to meet faculty needs, yet some junior faculty still feel demoralized that this capacity is taking so long to be developed.

3. Changes/Revisions in Strategy

Following are changes from the original proposal and their rationale:

Importantly, there have been several deviations from the original proposal due to disputes and changes among the project's leadership. There was a significant budget allocation for a therapist to aid in conflict resolution. This dissonance seems to have slowed the project timeline rather dramatically and has resulted in a budget reallocation. In addition, PI's and co-PIs have changed and will change again.

Also importantly, the project has not included an external review beyond this midpoint review by the NSF site-visit team.

There appears to be a lack of intentional mentoring program models for departments and much departmental mentoring seems *ad hoc*.

The goal of developing a departmental peer group (mentioned on page 6 of the proposal) does not appear to have been supported by a well-developed plan. Workshops for departmental chairs morphed into meetings with department chairs and deans, visits to on-going chairs' breakfast meetings and minor meetings, rather than the more intentional workshops and training that were originally proposed.

The ADVANCE team put the leadership fellowship component on the back burner in response to the reluctance of many women to consider leadership positions, and instead devoted more energy to the leadership development component. This reorientation seems appropriate.

There have been changes to the post-doctoral program and the seed grant programs based on evidence that they could be strengthened by changing the eligibility pools. Targeting non-traditional pathways for the post docs and opening up the seed grant program to women beyond the two original schools seem to be positive moves.

Although the first year campus-wide workshop was over-subscribed, the third year campus-wide workshop had fewer attendees than anticipated. This decline in interest has not been clearly addressed.

The project has expanded its original access-adaptation-transformation model to a more fully expanded one based on the Eckel and Kezar (2003) model. This appears to be a helpful change.

4. Logic behind project intervention

In the initial NSF proposal submitted by VT in 2002, the investigators included a change model. According to the proposal, “the process of transformation begins with access of women to the academy in the fields of science and engineering, continues with adaptation and change toward a more inclusive university, and finally results in institutional transformation” (p. 2).

Since that time, the ADVANCTVT Leadership Team has introduced a new theoretical framework: Eckel and Kezar’s (2003) typology of change. This model categorizes change according to its depth and pervasiveness and its degree (low or high). The ADVANCEVT Leadership Team has operationalized a “Model for Transformative Change” by developing a framework that includes the following components: core strategies, indicators of change, ADVANCE outcomes, and assessment and evaluation. This model of change should facilitate the increase of women in STEM faculty and the number of women in academic leadership positions.

Several faculty members interviewed indicated that although ADVANCEVT focuses on women in STEM fields, these initiatives could be extended to non-STEM fields, which would benefit the university as a whole and facilitate institutional transformation.

The four program elements include activities and initiatives to achieve the goals and objectives of the ADVANCTVT program. While the programs and activities are extensive, they appear to be loosely coupled. As a result, the elements are not tightly integrated and do not appear to be synergistically fluid.

In analyzing the program elements and related activities, an observation made by the site visit panel is that the program implementation has centered primarily on elements addressing individual opportunities for women (e.g., pipeline, leadership opportunities, helping find employment for a spouse or day care for a child, and flexibility for pre-tenure family needs) rather than transformational change of the institution (i.e., departmental-level and college-level culture and climate).

5. Summary of Evidence for Link between Project Intervention and Institutional Change

The ADVANCE project team has collected and analyzed several metrics to assess its effectiveness. Notably, surveys on work-life issues seem to have placed a better finger on the pulse of the concerns of the VT community. Additionally, head counts of faculty by rank, gender, terms and salaries have shown many positive changes. There is a clear record of baseline and hiring data for the course of the project. Interviews have shown positive impacts of the seed grant program.

Interviews indicate that the leadership development effort has had an impact on women’s readiness and willingness to assume leadership.

The site visit panel found evidence from its interviews that the workshop on unconscious bias and the brochure on that topic have been successful in raising awareness, perhaps because they included scientific backing (references to scholarly publications) and carried the NSF cache. Chairs' interviews also revealed that departmental visits by ADVANCE leaders have been effective.

The panel found a lack of systematic impact statements about climate changes at the departmental level.

6. Evaluation

Most important, the required external evaluation has not yet been performed, and that should be completed as soon as possible in order for program leaders to make changes that can be implemented for the remainder of the grant period.

The project is actively engaged in disseminating the findings from its extensive data-gathering report. The work-life survey findings about climate and work-life balance need to be heard by a still-wider audience, so we recommend continued attention to “getting the word out.” It appears that some chairs perceive that their departments do not have a problem with climate, and data from this report (redacted so that individual identities are protected) should be helpful in this regard. This data-gathering report might be augmented to serve as an evaluation tool to indicate how effective ADVANCE has been in changing climate and work-life balance problems.

It does not appear that effort is on-going to conduct a systematic formative evaluation. Reports evaluating the Seed Grants and the Leadership Development programs are short and based only on interviews with participants in the programs. More rigorous evaluations would be useful. Other possibilities would have been to compare participants to a similar small group of women who did not have the benefit of the programs. Such a strategy would still involve interviews, but would provide a basis for comparisons, thus allowing an evaluation of gains in skills and confidence (Leadership program) and in making progress towards fulfilling research goals (Seed Grants). Given the emphasis on Pipeline initiatives, formative and summative evaluations would seem to be in order for this element as well. Similarly, evaluations of the Policy element, the key component of institutional change, are also in order.

In regard to the Leadership Development element, the “shadowing” program was evaluated in-house and found to be premature, so the program reorganized the sequence to be more effective.

7. Potential for Sustainability

Post-ADVANCE funding might come from a number of sources. One suggestion is that the Provost's Office considers finding funding streams, such as overhead recovery from grants, and targeting a percentage of such funds to be used to continue support for various activities developed with ADVANCE funding. Another way to secure dollars to continue

support for various activities and initiatives would be to involve the Vice President for Development to fund raise for various initiatives. Another suggestion would be to modify the guidelines of existing programs (such as the Aspires program) to be inclusive of the ADVANCE VT program.

Another suggestion for sustainability is for the Provost to spread the leadership horizontally across the institution. There needs to be horizontal, vertical, and multidisciplinary leadership that must be maintained in order for the initiatives to be sustainable.

Sustainability also would be enhanced if methods for dissemination of “best practices”—such as workshops for chairs—were more organized and if power-holders such as chairs were more involved. Chairs and other leaders must be developed as long-term advocates for gender equity on campus. A series of workshops should begin the process. Much more thought must be devoted to this component--and much haste made in implementing it--in order to realize the products and by-products of such a series.

The cluster hire program, while not associated with the funding for AdvanceVT, has been a useful vehicle for recruiting women. While this program has helped recruit women at VT, leaders should bear in mind the potential for this to lead to a status differential or a two-tiered system that differentiates cluster hires from departmental hires, potentially negatively affecting retention.

Sustainability would be enhanced if mentoring programs across the institution were more formalized and uniform. Examples to consider emulating are the mentoring programs in Engineering Science and Mechanics and in Biological Sciences.

8. Dissemination

The flyer on unconscious gender bias has been effective. It was wise to adapt and use the UW-Madison brochure on this topic. Perhaps more flyers on gender-related topics (e.g., on being the first or one of only a few women in a department, on negotiating strategies, or on strategies for overcoming barriers) should be considered. There appear to be no ADVANCE materials for potential mentors and mentees; brochures describing mentoring might be valuable and could potentially help ADVANCE programs on other campuses.

Videotaping or podcasting testimonials of ADVANCE participants might be helpful on various occasions in recruiting both women students and faculty. Similarly, having men chairs and faculty (such as Ken Ball, Bill Knocke, and Bob Jones) disclose on videos why and how they are working to promote gender diversity and equity might be quite useful. Their influence on their peers (both at VT and elsewhere) could be considerable, given their eloquence and effectiveness. Perhaps VT could be “out in front” in this regard.

We understand that Professor Jones has developed guidelines for mentors and ADVANCE might consider helping disseminate this. He also has developed a guide to

working with the Stop-the-Clock policy; again this document could be adapted and disseminated by ADVANCE.

9a. Recommendations to Project Leaders

First, an external review should be arranged to be conducted as soon as possible so that the remaining years of the grant can be used for the greatest benefit.

Second, further formative and summative evaluations are in order. Activities of the four Working Groups should be documented and evaluated. Written annual reports that include results of interviews with constituent groups (plus quantitative data, where appropriate) would be useful in making changes that better meet constituents' needs. In particular, follow-up interviews on the impact of the "education" and "awareness" activities in regard to search committees should be conducted. This could be done via a comparison of differences in recruitment outcomes for those departments most involved and departments minimally or uninvolved. Finally, it is advisable to document and track the effect of the work ADVANCE has done with department chairs to see if those with whom they have worked most closely are changing in ways that others are not.

Third, the site visit panel recommends instituting regular and on-going meetings or workshops through which chairs who have had success in meeting ADVANCE goals can share their knowledge with other chairs. The proposal (p. 6, last full paragraph) discusses the reasons for having such structured interactions, and specifically mentions retreats and structured activities. The implementation of such interactions is crucial to effecting departmental change.

Fourth, the Provost's office intends to continue the Leadership Development element by creating a Faculty Institute on Leadership that will include men and women. In order to continue the gains made from ADVANCE, the site visit panel suggests that the curriculum embed a curricular component that concerns gender.

Finally, in regard to the cluster hiring program, safeguards should be implemented. For pre-tenure cluster hires, it is important to ensure that their ties to units beyond their home departments do not unduly burden them or open them to concerns that they have split loyalties. Also, while funding for these positions is currently shared by departments and the Provost, ensuring that the Provost's support is on-going seems wise, as other campuses where Provost-level support runs out after a few years has left new hires' standing compromised.

9b. Recommendations to NSF

The site visit team felt that any use of NSF funds for counseling or mediation services for Project directors who were unable to cooperate would be inappropriate.

The site visit team also suggests giving timelines for when workshops for department chairs and other leaders must begin. The team fears that without some pressure to get this underway, the institution will not have time to accomplish their goals.