



**Staff Response  
To the Committee of Visitors Report  
NSF Director's Award for Distinguished Teaching Scholars**

**COV Meeting of November 4-5, 2005**

The purpose of this Memorandum is to respond to the Committee of Visitors (COV) report submitted to the Chair of the EHR Advisory Committee, Dr. Ron Williams, on November 26, 2004 by COV committee chairperson, Dr. Sally Mason.

The COV covered the first three years of the program (FY 2001 to FY 2003); the current competition (FY 2005) is the fifth round. During the first three years, applicants submitted proposals describing both their accomplishments and their planned project. After these were reviewed by a panel, a committee of NSF program officers (i. e., the DTS Committee) selected the slate of recommended awardees. In the fourth year, the program initiated a two-step review process. In the first step, short proposals describing the nominees' accomplishments were reviewed by a panel, and, with this information, the DTS Committee selected a subset of nominees who were asked to submit full proposals describing their projects. In the second step, a new panel reviewed these proposals along with the nominating materials and then the DTS Committee selected the slate of recommended awardees.

In summarizing its findings, the COV stated "this is an excellent and unique program," and they believe the DTS "program does an outstanding job of addressing emerging research and education opportunities." Further, "the NSF staff is to be commended for management of this unique and important program in their highly efficient manner. Our recommendations are meant to reflect suggestions for possible improvements as this program continues to grow and mature."

The COV's review process was guided by the requirements of the Government Performance and Results Act (GPRA) and by several questions developed by the Division of Undergraduate Education. In its report, the COV made comments and in doing so raised several issues. This response to the COV report addresses these issues in the order in which they are raised in the responses to the Core Questions and then to the NSF Staff Questions.

## **1. Final Selection Process**

*Issue:* In the response to Core Questions A.1.1, A.1.4, and A.1.6, the COV indicated that "the reasons for the final decisions are not entirely transparent" and they observed that "there were many very highly qualified and rated individuals who appeared to rank more highly than a few of the award winners." They indicated that this was "due partly to the fact that there are many applicants who appear to be highly qualified and all could not be winners," and that "there was no one who received an award who was not a well-qualified and highly deserving candidate."

**Response:** The final decision process has involved a number of program officers from all directorates (i. e., the DTS Committee) who used a semiformal, undocumented process to develop a consensus on the list of awardees each year. We will formalize and document this final selection process, which will involve two steps. In the first step of the process, program officers monitoring the panels will use the panels' reviews and ratings to identify a list of the more competitive nominees for further consideration. In the second step of the process, participating program officers will be assigned to read specific candidate's nominating and project proposals and to summarize their merits at a selection meeting where a structured ranking process will be used to select the awardees.

**Action:** Prepare a written description of the final selection process, use it in future competitions, and include it in the jacket materials.

## 2. Inconsistency in the Reviews

**Issue:** In the response to Core Questions A.1.3, the COV suggested that "the panelists perhaps need to be more carefully briefed before preparing their reviews" because "there was some inconsistency in reviews with regard to addressing the intent of the program and the criteria that were stated in the program announcement."

**Response:** Although the solicitation does address the importance of both the nominee's record and project and does provide criteria for evaluating both, the process still requires the reviewers to use their individual judgment and perspective as they integrate these factors to prepare their individual reviews and decide on their final ratings. Since this is a subjective evaluation, we expect more differences in the reviewers' views and ratings than we see with a more traditional set of proposals. However, we will revise the reviewer instructions in order to make the review criteria as clear as possible and to point out that the reviewers must review the intellectual merit and broader impacts of both the record and the project and that the integration of these factors involves individual judgment and perspective. Further, we will reinforce these ideas in the panel orientation session to ensure that panel summaries reflect an integrated evaluation of the nominees' record and project.

**Action:** Prepare a revised set of reviewer's instructions, use it in future competitions, and include it in the jacket materials.

## 3. Addressing Two Criteria in Panel Summary

**Issue:** In the response to Core Questions A.2.3, the COV stated that it would have been useful to them if the summaries "were broken down to show the synthesized comments explicitly for each of the individual merit review criteria, perhaps by using the same template for comments that individual reviewers used."

**Response:** For the individual reviews, FastLane provides two separate text boxes for the intellectual merit and broader impacts criteria so that the reviewers must separately address them. In contrast, the format of the Panel Summary entry page includes a single text box and reviewers must provide the structure themselves. At the orientation session before the panel meeting we advise panelists that we want the two criteria addressed separately with the appropriate headings at the beginning of each section and we monitor their works during the panel to encourage their compliance. Over the last few years, we have emphasized the need for separate sections more and more and believe that the situation has improved dramatically.

**Action:** Continue to encourage the reviewers to provide separate sections in their panel summaries and monitor the preparation of these summaries to ensure that they comply.

#### **4. Awardees from Underrepresented Groups**

**Issue:** In the response to Core Questions A.3.4, the COV indicate that they hope "that more attention will be paid to underrepresented group participation ... with respect to awardees."

**Response:** We agree that the diversity of the awardees is an issue and that it is highly desirable to recognize minority faculty members and female faculty members as DTS Scholars. We will increase our efforts to encourage submission of proposals from these populations. We will systematically search our list of awardees and work with the Research and Related Activities (R&RA) Directorates to identify individuals from underrepresented groups who have grants from other NSF programs. We will contact them and make them aware of the DTS program. In addition, we will contact various organizations targeting underrepresented groups (e. g., Society of Hispanic Professional Engineers (SHPE), Minorities in Engineering Division of the American Society of Engineering Education (ASEE), Advancing Minorities' Interest in Engineering (AMIE), Society of Women Engineers (SWE), Society for the Advancement of Chicanos and Native Americans in Science (SACNAS), American Indian Science and Engineering Society (AISES), National Organization for the Professional Advancement of Black Chemists and Chemical Engineers (NOBCCHE)) with a similar message.

**Action:** Undertake a systematic search to identify potential minority and female applicants and invite them to apply and to share the invitation with appropriate individuals.

#### **5. Reviewers from Underrepresented Groups**

**Issue:** In the response to Core Questions A.3.4, the COV indicate that they hoped "that more attention will be paid to underrepresented group participation ... (as) reviewers."

**Response:** In forming DTS panels, we have given a high priority to inviting women and underrepresented minorities to serve on panels. This makes the finding of reviewers from underrepresented groups even more difficult than it usually is. However, we also agree that we need to increase the involvement of both women and minorities in the DTS review process, and we will make renewed efforts to identify potential reviewers. We will systematically search our lists of awardees and reviewers and work with the R&RA Directorates to identify individuals from underrepresented groups who have grants from any of our programs.

**Action:** Undertake systematic searches to identify potential minority and female reviewers and to ensure that there is increased representation of women and underrepresented minorities on the review panels.

## **6. Variation in the Quality of the Awarded Projects**

**Issue:** In the response to Core Questions A.4.1, the COV noted that "in some cases it was unclear whether the award was given for new and original projects or because of the long-standing stature of the individual in his or her field." They noted that the "quality of the awards varied from good to excellent."

**Response:** Awardees are selected on the basis of both their record and their project, and so it is possible that a nominee with a remarkable record and a less than outstanding project could be selected for an award. This was particularly true in the first few years when the nominees submitted a single proposal describing both their record and project. We have observed that this is less likely to occur since we began using the two-step application process in which reviewers in the second step were instructed to separately evaluate the intellectual merit and broader impacts of both the record and the proposed project using four distinct sets of review criteria. In any event, we do not think that we have ever funded a weak proposal. Furthermore, since we adopted the two-step process, we have declined several proposals from truly outstanding individuals whose projects were not judged to be meritorious. In recent years, we have noted that many nominees propose safe, low-risk projects instead of the innovative, high-impact projects we expect. We will modify the solicitation and the instruction to reviewers to indicate more explicitly the importance of the project in the selection process and the nature of the projects expected.

**Action:** Modify the solicitation and reviewers instruction to indicate more explicitly that the projects are a critical factor in the decision process and that we expect innovative projects with a large potential impact.

## **7. Quality of Assessment Plans**

**Issue:** In the response to Core Questions A.4.1, the COV noted that “there was often no good plan for assessment of outcomes” and this shortcoming “did not appear to affect the status of an award.” In A.4.10, they indicated that “assessment plans need to be included in every proposal and evaluated for their value and effectiveness.”

**Response:** We agree and we will increase the emphasis on assessment in the solicitation and in the review process.

**Action:** Modify the solicitation and reviewers instructions to indicate the importance of assessment.

## **8. Geographical Diversity**

**Issue:** In the response to Core Questions A.4.8, the COV noted that while “geography is not an appropriate criterion for this program, it appears that greater effort in the future could be made to solicit proposal from a more geographically diverse set of institutions.”

**Response:** We agree that it would be ideal to have a broader distribution of Scholars across the country, but, with the small number of awards made each year, this would be difficult to achieve. We will contact all state EPSCoR directors, make them aware of the program, and ask that they promote the program to all the appropriate individuals in their state.

**Action:** We will contact all state EPSCoR directors and ask them to make all the appropriate individuals in their respective states aware of the program.

## **9. Proposal from Underrepresented Groups**

**Issue:** In the response to Core Questions A.4.12, the COV recommended “more effort to solicit proposals from members of underrepresented groups”.

**Response:** See Response under Item 4 above.

**Action:** See Action under Item 4 above.

## **10. Following Up on Annual Reports**

**Issue:** In the response to Core Questions A.5.1, the COV pointed out four issues: expanding the efforts to solicit high quality proposal, increasing the interest from underrepresented groups, including thoughtful assessment plans in each proposal, and consistently following up with investigators to provide annual reports.

**Response:** We have already addressed the first three items (proposal quality in Item 6, underrepresented group involvement in Items 4 and 5, and assessment in Item 7). Concerning the annual reports, NSF requires annual reports on all awards and,

although most of the Scholars do submit their reports on time, some are delinquent. In order to deal with these few, we will review all awards each year when we make new awards to identify and remind all Scholars who have delinquent reports. In order to stimulate substantive interaction among the Scholars, we will initiate an annual forum where all Scholars gather to discuss topics related to the integration of research and education in a structured manner. The first will address strategies for achieving broader impacts.

**Action:** We will systematically check the annual reports for all projects and we will initiate an annual forum where the Scholars can address important topics related to integrating research and education.

## **11. Increased Visibility**

**Issue:** In the response to Core Question C.1, the COV pointed out the need for greater program visibility at NSF and at the awardees' institutions and also for an "enhanced external visibility across the board."

**Response:**

We agree that the program needs greater internal and external visibility. Over the years we have tried, with limited success, to increase the visibility of the program within NSF by involving program officers from other directorates in the review process, in the final internal selection process, and in the award ceremony. We will renew these efforts and try to focus on specific program officers who have made research awards to the Scholars in the past. Also, as noted above, we also will initiate an annual forum where the Scholars will meet to address specific issues related to the integration of research and education, and we will encourage participation from the research directorates in this forum. To provide visibility within an awardee's institution, we have provided travel support to enable the institution's chief academic officer to attend the award ceremony. In addition, we send press releases to all the appropriate news outlets. When it comes to increasing the visibility within these institutions, the Scholars themselves will have to play a major role but NSF can provide some assistance by targeting the topic of one of the annual DTS forums to be the role of a Scholar in his or her own institution. To provide external visibility, we hold the fairly elaborate award ceremony at the National Academy and invite a wide audience from professional societies, the scientific press, and other private and government agencies. Information about the awardees is posted on the NSF web site and interviews are available on the PKAL site. We did arrange a meeting where the Scholars and the Howard Hughes Medical Institute Professors discussed topics of mutual interest. We have tried twice unsuccessfully to get a DTS session on the program at the American Association for the Advancement of Science (AAAS) annual meeting. However, several of the Scholars in engineering have arranged a special session at the American Society for Engineering Education (ASEE) Annual Meetings and at the Frontiers in Education (FIE) Conference. We plan to encourage

Scholars in other disciplines to pursue special sessions at their professional meetings and at other venues.

**Action:** We will: (1) renew our efforts to involve program officers from the research directorates by targeting specific individuals who have made research awards to the Scholars, (2) continue the ceremony at the National Academy, (3) increase our efforts to publicize the program and the awardees through press releases and other outlets, (4) organize an annual forum where the Scholars address a topic related to integrating research and education, and (5) encourage Scholars to organize special sessions at various national meetings.

## **12. More Systematic Dissemination**

**Issue:** In the response to Core Questions C.1, the COV pointed out that the program would be enhanced by "more systematic and intentional dissemination of the activities of the award winners."

**Response:** We agree and we will increase the emphasis on dissemination in the solicitation and in the review process. In addition, as we noted above in Item 10 on increased visibility, we also will initiate an annual DTS forum and encourage the Scholars to organize special sessions at national meeting and other venues.

**Action:** Modify the solicitation and reviewers instruction to indicate the importance of dissemination, initiate the annual forum, and encourage DTS sessions at national meetings.

## **13. Undesirable Changes in Solicitation**

**Issue:** In the response to NSF Staff Question A.1, the COV noted that "the solicitation for the current year includes a change that was a concern."

**Response:** No change in emphasis was intended. The following sentence, which was dropped from the FY 2003 solicitation, will be reinserted as: "The program aims to have an impact on: (a) the scholars themselves, (b) other faculty, (c) academic institutions, and (d) undergraduates and K-12 teachers and students. The award will support scholars' continued activities and growth as educators and researchers and enhance their visibility and influence as leaders in reforming the culture of institutions of higher education."

**Action:** The sentence will be reinserted.

## **14. Telling the Scholars' Stories**

**Issue:** In the response to NSF Staff Question C, the COV raised several issues. First of all, they suggested that the awardees have a fascinating and evolving story to tell about how they are influencing their discipline and institutions and that studying these stories might lead to the identification of institutional best practices.

**Response:** See Response under Items 11 and 12 above.

**Action:** See Action under Items 11 and 12 above.

## **15. Dissemination**

**Issue:** In the response to NSF Staff Question C, the COV also noted that “the dissemination of the experience of these scholars should be vastly expanded and should be broader than the winner’s own discipline or their own institutions.”

**Response:** See Response under Items 11 and 12 above.

**Action:** See Action under Items 11 and 12 above

## **16. Mentoring Faculty**

**Issue:** In the response to NSF Staff Question C, the COV, in the third of the seven issues they raised in this response, noted that the “awardees should clearly be engaging in mentoring current and perspective faculty” and that “there appears to be unevenness in this activity.”

**Response:** We agree and share some of the COV’s disappointment in the amount of faculty mentoring being undertaken. We will increase the emphasis on the importance of mentoring in the solicitation, in the reviewers instructions, and in the final internal selection process. In order to encourage and assist existing Scholars, we will suggest that one of the annual forums be devoted to strategies for helping other faculty integrate research and education.

**Action:** Modify the solicitation, reviewers instructions, and internal final selection process to indicate the importance of mentoring and address the topic in one of the annual DTS forums.

## **17. NSF's Role in Dissemination**

**Issue:** In the response to NSF Staff Question C, the fourth issue concerned NSF’s need to take a more active role in “developing a communications plan that better conveys the intent and results of this award both internally and externally” and in promoting “greater interactions between awardees and professional societies or other possible venues for broader dissemination.”



**Response:** We agree that NSF has a role in the dissemination of DTS activities, but we also believe that the Scholars have to take most of the responsibility, particularly in the final planning and implementation of these activities. As noted several times already, we are initiating an annual DTS forum. Also, as we noted above, we have tried unsuccessfully to get a DTS session on the program at the American Association for the Advancement of Science (AAAS) annual meeting. However, we have successfully encouraged the engineering Scholars to organize a session at the American Society for Engineering Education (ASEE) Annual Meeting and Frontiers in Education (FIE) Conference, obviously these efforts must continue and increase.

**Action:** Continue an active role in organizing the annual DTS forum and in encouraging Scholars to organize DTS sessions at national meetings.

## **18. Recognizing and Characterizing Showcase Institutions**

**Issue:** In the response to NSF Staff Question C, the COV next noted that in the dissemination plan, “more attention needs to be paid to showcasing the institutions where such activities are encouraged and nurtured.”

**Response:** We agree and believe that this is one topic that could be addressed at the annual DTS forum.

**Action:** Initiate the annual DTS forum and suggest that one of the forums be devoted to recognizing or characterizing the programs and policies of universities and colleges that support the integration of research and education.

## **19. Creating Linkages Between DTS and CAREER Awardees**

**Issue:** In the response to NSF Staff Question C, the COV suggested “creating linkages between the DTS award winners and CAREER award winners and/or other groups of young and/or future faculty at particular institutions.”

**Response:** We agree and intended that the DTS Scholars would engage in mentoring activities. Thus we plan to increase the emphasis on mentoring in the solicitation, in the review process and in the final selection process as we discussed above in Item 16. The idea of linking DTS and CAREER awardees is worth pursuing and we will suggest it as a topic for the DTS annual forum.

**Action:** As noted in Item 15, we will modify the solicitation, reviewers instructions, and internal final selection process to emphasize the importance of mentoring and suggest mentoring and DTS-CAREER linkages as topics for the annual DTS forum.

## **20. Encouraging Advocacy Activities with Congress**

**Issue:** In the response to NSF Staff Question C, the last issue raised by the COV concerned “inviting awardees to participate more frequently in advocacy activities with Congress on behalf of the scientific and educational initiatives.”

**Response:** NSF cannot be involved in advocacy activities.

**Action:** None

## **21. Diversity of Awardees**

**Issue:** In the response to NSF Staff Question D, the COV noted that current awards are “distributed across a demographically limited group of individuals and institutions” and that there is an “urgency and need to make a stronger effort to include individuals from underrepresented groups and/or from other types of institutions such as MSIs.”

**Response:** See Response under Items 4, 5, and 8.

**Action:** See Action under Items 4, 5, and 8.

## **22. Changing the Award to Enhance Its Prestige**

**Issue:** In the response to NSF Staff Question D, the COV pointed out that the award should “not be perceived as merely a good teaching award” and that there is a need to “enhance the prestige of this award.” They suggested that decreasing the number of awards and increasing the size of the award would help and that making it more of a “prize” than a grant also would enhance its prestige.

**Response:** We share the concerns about the perception that the award is a “teaching award” and agree that its prestige needs to be enhanced. However, we do not believe that changing the amount and number of the awards will have much of an impact. Also, reducing the number of awards makes dealing with all of the diversity and selection process issues discussed above much more problematic. In our opinion, the overall perception of the award depends almost exclusively on the disciplinary research reputation of the awardees and on how visible this is to the broader community. Thus we should select only individual who are renowned for excellent research in their discipline and strive to increase the visibility and dissemination of the program as we discussed in Items 11, 12, and 17 above.

**Action** See Action in Items 11, 12, and 17 above.