MEMORANDUM

DATE: June 15, 2004

TO: Fae L. Korsmo

FROM: James Lightbourne, Senior Advisor
              Directorate for Education and Human Resources

SUBJECT: COV for Teacher Preparation (CETP and STEMTP) Program

              COI and Diversity Memo

The Committee of Visitors report for the Teacher Preparation (CETP and STEMTP) Program was approved at the EHR Advisory Committee meeting held at NSF in Room 830 on May 12-13, 2004. The COV consisted of 7 members selected for their expertise related to the goals of the program. They provided a balance with respect to the type of institutions supported through the program, gender, and representation from underrepresented groups. The following table shows the main features of the COV's diversity.

Member of EHR Advisory Committee	1
Institution Type	
University	4
Four year college	x
Two year college	1
K-12	1
Industry	x
Federal Agency	x
Professional Society	1
Location	
East	6
Midwest	1
West Coast	x
Foreign	x
Gender	
Female	4
Male	3
Race/Ethnicity	
White	5
Black	2
Hispanic	x
Asian	x
Pacific Islander	x

The COV was briefed on Conflict of Interest issues and each COV member completed a COI form. COV members had no conflicts with any of the proposals or files.

CORE QUESTIONS and REPORT TEMPLATE
for
FY 2003 NSF COMMITTEE OF VISITOR (COV) REVIEWS

Guidance to NSF Staff: This document includes the FY 2003 set of Core Questions and the COV Report Template for use by NSF staff when preparing and conducting COVs during FY 2003. Specific guidance for NSF staff describing the COV review process is described in Subchapter 300- Committee of Visitors Reviews (NSF Manual 1, Section VIII) that can be obtained at http://www.inside.nsf.gov/od/gpra/.

NSF relies on the judgment of external experts to maintain high standards of program management, to provide advice for continuous improvement of NSF performance, and to ensure openness to the research and education community served by the Foundation. Committee of Visitor (COV) reviews provide NSF with external expert judgments in two areas: (1) assessments of the quality and integrity of program operations and program-level technical and managerial matters pertaining to proposal decisions; and (2) comments on how the outputs and outcomes generated by awardees have contributed to the attainment of NSF's mission and strategic outcome goals.

Many of the Core Questions developed for FY 2003 are derived, in part, from the OMB-approved FY 2003 performance goals and apply to the portfolio of activities represented in the program(s) under review. The program(s) under review may include several subactivities as well as NSF-wide activities. The directorate or division may instruct the COV to provide answers addressing a cluster or group of programs – a portfolio of activities integrated as a whole – or to provide answers specific to the subactivities of the program, with the latter requiring more time but providing more detailed information.

The Division or Directorate may choose to add questions relevant to the activities under review. NSF staff should work with the COV members in advance of the meeting to provide them with the report template, organized background materials, and to identify questions/goals that apply to the program(s) under review.

Guidance to the COV: The COV report should provide a balanced assessment of NSF's performance in two primary areas: (A) the integrity and efficiency of the **processes** related to proposal review; and (B) the quality of the **results** of NSF's investments in the form of outputs and outcomes that appear over time. The COV also explores the relationships between award decisions and program/NSF-wide goals in order to determine the likelihood that the portfolio will lead to the desired results in the future. Discussions leading to answers for Part A of the Core Questions will require study of confidential material such as declined proposals and reviewer comments. *COV reports should not contain confidential material or specific information about declined proposals.* Discussions leading to answers for Part B of the Core Questions will involve study of non-confidential material such as results of NSF-funded projects. It is important to recognize that the reports generated by COVs are used in assessing agency progress in order to meet government-wide performance reporting requirements, and are made available to the public. Since material from COV reports is used in NSF performance reports, the COV report may be subject to an audit.

We encourage COV members to provide comments to NSF on how to improve in all areas, as well as suggestions for the COV process, format, and questions.

FY 2003 REPORT TEMPLATE FOR
NSF COMMITTEES OF VISITORS (COVs)

Date of COV: *October 9-10, 2003*	
Program/Cluster: *Teacher Preparation (CETP and STEMTP)*	
Division: *Undergraduate Education (DUE)*	
Directorate: *Education and Human Resources (EHR)*	
Number of actions reviewed by COV[1]: Awards:	**Declinations:** **Other:**
Total number of actions within Program/Cluster/Division during period being reviewed by COV[2]:	**Awards:** **Declinations:** **Other:**
Manner in which reviewed actions were selected: *Randomly selected jackets*	

PART A.   INTEGRITY AND EFFICIENCY OF THE PROGRAM'S PROCESSES AND MANAGEMENT

Briefly discuss and provide comments for *each* relevant aspect of the program's review process and management. Comments should be based on a review of proposal actions (awards, declinations, and withdrawals) that were *completed within the past three fiscal years*. Provide comments for *each* program being reviewed and for those questions that are relevant to the program under review. Quantitative information may be required for some questions. Constructive comments noting areas in need of improvement are encouraged. Please do not take time to answer questions if they do not apply to the program.

A.1 Questions about the quality and effectiveness of the program's use of merit review procedures. Provide comments in the space below the question**.** Discuss areas of concern in the space provided.

QUALITY AND EFFECTIVENESS OF MERIT REVIEW PROCEDURES	YES, NO, DATA NOT AVAILABLE, or NOT APPLICABLE

---

[1] To be provided by NSF staff.
[2] To be provided by NSF staff.

	Yes
Is the review mechanism appropriate? (panels, ad hoc reviews, site visits) Comments: The COV found that the initial review process is appropriate. Effort is made to assemble a review team that includes all segments of the STEM community as well as others who will be directly impacted by the specific goals of the program area. Documentation was provided that indicates panel diversity across a large array of factors (institution type, gender, ethnicity, geography). For example, the panel review team for Award DUE-0301962 included representatives from K-12 education, two-year colleges, departments of mathematics, and colleges of education. National visiting committees were formed to advise, assess and assist the CETPs. The selection and responsibilities of members are well defined in the CETP Program Announcement and Guidelines.	
Is the review process efficient and effective? Comments: Based on the email and other communications in the proposal jackets, it appears that the review process was quite efficient. The timelines included in the notebook show that all proposals received in both programs were processed in a timely fashion.	Yes
Are reviews consistent with priorities and criteria stated in the program's solicitations, announcements, and guidelines? Comments: The COV found that reviews were generally consistent with published criteria. The COV looked in detail at numerous panels, selected randomly to be representative of each program's portfolio: one declination, two funded, 1 ad hoc review, and a site visit. All indicated that the reviews were appropriate. Given that NSF desires a balanced portfolio, there is also abundant evidence that NSF exercises good judgment in selecting among meritorious projects to ensure such balance.	Yes
Do the individual reviews (either mail or panel) provide sufficient information for the principal investigator(s) to understand the basis for the reviewer's recommendation? Comments: In most cases the reviews did provide sufficient information for the PIs to understand the basis of the recommendation. The reviews were in general quite specific.	Yes

Do the panel summaries provide sufficient information for the principal investigator(s) to understand the basis for the panel recommendation? Comments: In general the panel summaries did provide sufficient information for the PIs. The panel chair's comments usually reflected the reviewers' concerns and supportive comments. One exception was a special project, which was not as strong as some of the others the COV looked at. In the review, there was a failure to mention that one of the strong concerns was the apparent lack of awareness of the national standards.	Yes
Is the documentation for recommendations complete, and does the program officer provide sufficient information and justification for her/his recommendation? Comments: The COV looked in detail at several proposals that were awarded even though the panels rated them significantly lower than other proposals that were declined. For example, in the STEMTP 03 competition, the top 7 proposals were rated between 4.6 and 5.0 and were all funded. One other project was rated 3.83 and ranked number 24 overall but was also funded. There was no rationale for this action given in the program director's narrative. Nonetheless, comparisons with several of the funded projects indicate that this award seems to be justified. NSF staff later provided verbal information indicating why this project was moved ahead of the other projects.	For the most part, yes.
Is the time to decision appropriate? Comments: Even though the STEMTP program received more than 100 proposals in each of FY 02 and 03, decisions on 98% of the proposals had been made before the six months had expired. Given the workload and the complexity of issues that must be considered, this ability to "decide" and to communicate that decision in so short a time is commendable. The COV felt that the summary data in the binders was excellent (the graphic was great!)	Yes

Discuss issues identified by the COV concerning the quality and effectiveness of the program's use of merit review procedures:

The one flaw in the system as noted above involves full documentation of the rationale for funding proposals whose ratings are lower than other projects that are not funded. In the STEMTP Proposal Recommendation guidelines, the FY2003 recommendations include a reference to an explanation of funding decisions when they are counter to panel review analysis. The COV noted that one project was funded with a 3.83 overall rating while 12 proposals with higher reviews were not funded. However, the jacket for the project in question did not include a "fully documented" rationale. There are no doubt appropriate rationales for this decision; e.g., that this was the only physics proposal. But the integrity of process would dictate that the rationale for these decisions be clearly documented. The Review Analysis Form includes a section for "Reviews in Conflict with Recommendations". Either this section should be used to include statements from program officers that make the rationale for support when looking at "the big picture" or a new section should be created for this purpose.

In addition, while there is extensive external review prior to initial funding decisions, the degree to which the external review process impacts continued funding is less well defined. For example, review scores to extend follow-up awards in the CETP were significantly lower than initial funding awards (For example, CETP 2001 awards ranked from 3.5-2.75 while their initial funding awards ranked from 4.63-3.0).

A.2 Questions concerning the implementation of the NSF Merit Review Criteria (intellectual merit and broader impacts) by reviewers and program officers.
Provide comments in the space below the question. Discuss issues or concerns in the space provided.

IMPLEMENTATION OF NSF MERIT REVIEW CRITERIA	YES, NO, DATA NOT AVAILABLE, or NOT APPLICABLE
Have the individual reviews (either mail or panel) addressed whether the proposal contributes to both merit review criteria? Comments: The CETP preproposal review forms clearly address the intellectual merit and broader impacts issue. However, while the proposal reviews for CETP clearly cited strengths and weaknesses of the proposal, they often did not specifically address the merit review criteria. On the other hand, all of the STEMTP proposals that members of the COV examined did address both criteria. The COV suspects that this is the case with most of the early proposals versus later proposals. The increased emphasis in later years on the merit criteria is evident. Panelists seem to have varying interpretations regarding the two criteria, and that is reflected in their comments. For example, does "significant impact" mean that the project increases the number of teachers in the Chicago area, or does it mean that the model is easily replicable?	 Yes/no
Have the panel summary reviews addressed whether the proposal contributes to both merit review criteria? Comments: As above, the answer is no for many of the CETP proposals but the answer is yes for the STEMTP proposals examined by the COV.	 Yes/no
Have the *review analyses* (Form 7s) addressed whether the proposal contributes to both merit review criteria? Comments: Yes, the review analyses do address both of these criteria, even if the panel summaries do not.	 Yes

Discuss any issues or concerns the COV has identified with respect to NSF's merit review system.

The COV found that both consistency among reviewers as well as the "baseline" knowledge of what the merit review criteria mean continue to be a challenge. The latter is especially confusing because the NSF documentation is clear on this point. The review process relies on a high level of inter-reviewer reliability. Further, the review process provides a means for developing and supporting new investigators. It is easy to recognize this need as a concern.

Beyond raising this issue and concern, the COV suggests the following approaches to improve these issues.

1. Create a Fast Lane based system of certification for individuals to serve on panel review teams. The certification process could include panel member demographics and provide an IRB style tutorial and assessment to prepare panel reviewers to respond to the reviews with sufficient details to be beneficial to the PIs and the Program Officers.

2. Present Panel Review Workshops at national meetings with examples of proposals and the difference between excellent, very good, etc. reviews (both in terms of the proposal and the degree to which the review itself informs PI's and Program Officers). The participants in the workshop could turn in a form that Program Officers could use to assist them in adding to panels. The COV understands that this is already being done to some extent.

A.3 Questions concerning the selection of reviewers. Provide comments in the space below the question. Discuss areas of concern in the space provided.

SELECTION OF REVIEWERS	YES , NO, DATA NOT AVAILABLE, or NOT APPLICABLE
Did the program make use of an adequate number of reviewers for a balanced review? Comments: The review teams for both CETP and STEMTP were very diverse and balanced.	Yes
Did the program make use of reviewers having appropriate expertise and/or qualifications? Comments: The COV sampled numerous CETPs (including follow-ons) and STEMTPs. The reviewers were all appropriate and had the right qualifications.	Yes
Did the program make appropriate use of reviewers to reflect balance among characteristics such as geography, type of institution, and underrepresented groups? Comments: The COV sampled numerous CETPs (and follow-ons) and STEMTPs. The review teams seem to be balanced by gender, ethnicity, and discipline as shown in Table 12. It did appear, however, that an overwhelming number of panelists were drawn from baccalaureate institutions or universities, not school districts or two-year colleges.	Yes

	Yes
Did the program recognize and resolve conflicts of interest when appropriate? Comments: NSF has a fair and efficient conflict of interest policy. Anecdotal evidence (experience of people on the COV) indicates that NSF addresses and handles conflict of interest in a prompt, efficient and professional manner. The program officers have always been very careful at the beginning of each review panel attended by members of the COV. NSF might be well served to explore some opportunity to provide evidence that the foundation indeed does document how conflict of interest is handled. At present no effort is made to indicate when a panel member was removed from discussions because of a conflict. At best, the Program Officers might indicate the names of individuals contacted to serve on panels who were not included because of potential conflicts. However, it is not clear that anyone would benefit from this.	

Discuss any concerns identified that are relevant to selection of reviewers.

Clearly, program officers place a high premium on selection of reviewers. The overall quality of the reviews is apparent. One can notice improvements in the reviews over time (from early CETP days to recent STEMTP days). The individual reports in the STEMTP and more recent CETP jackets sincerely attempt to address the criteria, and the summaries appear to represent consensus. NSF is to be commended for these obvious improvements in the selection of reviewers and the improvements in the overall quality of the reviews themselves.

However, the COV did still see some problems with certain reviewers and suggests that NSF look into ways of better preparing new reviewers (as suggested above).

A.4 Questions concerning the resulting portfolio of awards under review. Provide comments in the space below the question. Discuss areas of concern in the space provided.

RESULTING PORTFOLIO OF AWARDS	APPROPRIATE, NOT APPROPRIATE, OR DATA NOT AVAILABLE
Overall quality of the research and/or education projects supported by the program. Comments: The overall quality of the projects seemed appropriate especially in how they addressed national and local needs, but research aspects were nonexistent in most of the CETP and STEMTP proposals. It appears that this is being addressed in the new TPCs. The early CETPs did not do much assessment work (except for the CORE). A previous COV report on the CETP program indicated that there was little in the way of viable assessment of the effectiveness or the results of the program. NSF is to be complimented on their immediate and effective response to this issue. The follow-on program for all CETP projects has addressed this issue, though the COV feels that even more time will be necessary to address all of the issues raised by the earlier report. For example, the SRI report indicates that results of CETP versus non-CETP programs were statistically insignificant. The COV feels that it is too early to assess the educational quality of the STEMTP.	Appropriate
Are awards appropriate in size and duration for the scope of the projects? Comments: Award amounts in STEMTP are relatively small and consequently the projects are fairly narrowly focused. Given that the intended scope of the project is well laid out in the solicitation, it can be argued that the award sizes are appropriate. At the same time, each project would probably argue that more money would have led to greater effectiveness and impact.	Appropriate

Does the program portfolio have an appropriate balance of: • High Risk Proposals? Comments: The COV did not know how to find evidence of this. First, the COV did not know what an appropriate balance would be; second, how would the COV find the evidence? If one assumes that a new investigator is an indicator of higher risk, the ratio for both programs was 6 out of 34. There was only one in CETP; the rest in STEMTP. One COV member personally thought that the "engineering project" sounded somewhat of a high risk.	
Does the program portfolio have an appropriate balance of: • Multidisciplinary Proposals? Comments: Most of the CETP proposals involved both mathematics and science and most of the sciences were represented. The STEMTP projects were more narrow, as intended.	Appropriate
Does the program portfolio have an appropriate balance of: • Innovative Proposals? Comments: This is very difficult to assess. It would help if the program officers could explicitly tag projects that could be candidates for this rank. Occasionally, reviewers have used the word "innovative" in their comments. (i.e., Florida International University's effort to prepare urban science teachers: 0302111). One could argue that the NSF thinking that created the CETP was very innovative. It created "across department conversations."	
Does the program portfolio have an appropriate balance of: • Funding for centers, groups and awards to individuals? Comments: CETP projects are large consortia by virtue of the initiative. STEMTP projects are more localized and focused. Because of the nature of these programs, there are no individual awards. It appears that the initiative itself determines whether the proposer is a center, group, or individual.	

	Appropriate
Does the program portfolio have an appropriate balance of: • Awards to new investigators? Comments: Six of the twenty-five awards (minus the CETP Follow-on) are to new investigators. This seems appropriate.	
Does the program portfolio have an appropriate balance of: • Geographical distribution of Principal Investigators? Comments: For the STEMTP program, eight funded projects were located in the midwest, while there were only three in the east, three in the south and four in the west. States in the southeast and northwest were missing in the CETP program. On the other hand, this was not a concern to some members of the COV. NSF's strength lies in its peer review process, selecting the best of the best.	Appropriate
Does the program portfolio have an appropriate balance of: • Institutional types? Comments: There was a noticeable lack of HBCUs and HSIs in the pool of STEMTP awardees. In addition, 9 out of 37 awards in the CETP and STEMTP programs were made to master's degree institutions, and only 1 out of 37 went to a bachelor's degree only institution.	
Does the program portfolio have an appropriate balance of: • Projects that integrate research and education? Comments: There is some of this. However, the new initiative, Teacher Professional Continuum, appears to have a stronger research component. Because of the nature of the programs, few of the STEMTP or CETP projects attempted to integrate scientific research into their educational components.	

	Appropriate
Does the program portfolio have an appropriate balance: • Across disciplines and subdisciplines of the activity and of emerging opportunities? Comments: This looks adequate. Major needs for teachers have been identified.	
	Appropriate
Does the program portfolio have appropriate participation of underrepresented groups? Comments: There appears to be a significant representation of underrepresented groups in the portfolio of funded proposals. However, as noted above, there were no two-year colleges funded under STEMTP, nor were there any HBCUs funded. Overall, the minority PI level was only 3% but about 16% of the programs funded targeted minority participants.	
	Appropriate
Is the program relevant to national priorities, agency mission, relevant fields and other customer needs? Include citations of relevant external reports. Comments: The greatest national educational need is quality science and math teaching according to the The National Commission on Mathematics and Science Teaching for the 21st Century's report "Before It's Too Late." Many of the funded STEMTP projects address alternative routes to a teaching career, which is certainly a national priority. They are also very important to each locality within the country. The SRI study, Summative Evaluation of the Collaboratives for Excellence in Teacher Preparation, contains numerous citations.	
Discuss any concerns identified that are relevant to the quality of the projects or the balance of the portfolio. The only major concerns were the absence of funding for HBCUs and HSIs, as well as very limited participation by two-year colleges in the STEMTP program.	

A.5 Management of the program under review. Please comment on:

Management of the program.
Comments:

The timeliness of program officer/applicant or PI dialogues, the clarity of the documentation, and the magnitude of the operations all indicate that the management of the program is of the highest quality.

Responsiveness of the program to emerging research and education trends.
Comments:

The COV has some issues here, but they are addressed more fully in part C below.

Program planning and prioritization process (internal and external) that guided the development of the portfolio under review.
Comments:

Both the program planning and prioritization process appear to be adequate.

Discuss any concerns identified that are relevant to the management of the program.

For STEMTP, there were limited resources and a high declination rate, which probably translated into a lot of management work for relatively small outcomes. Nonetheless, management of this and the CETP program has been excellent.

PART B. RESULTS :   OUTPUTS AND OUTCOMES OF NSF INVESTMENTS

NSF investments produce results that appear over time. The answers to questions for this section are to be based on the COV's study of award results, which are direct and indirect accomplishments of projects supported by the program. These projects may be currently active or closed out during the previous three fiscal years. The COV review may also include consideration of significant impacts and advances that have developed since the previous COV review and are demonstrably linked to NSF investments, regardless of when the investments were made. Incremental progress made on results reported in prior fiscal years may also be considered.

The following questions are developed using the NSF outcome goals in the FY 2003 Performance Plan. The COV should look carefully at and comment on (1) noteworthy achievements of the year based on NSF awards; (2) the ways in which funded projects have collectively affected progress toward NSF's mission and strategic outcomes; and (3) expectations for future performance based on the current set of awards. NSF asks the COV to provide comments on the degree to which past investments in research and education have contributed to NSF's progress towards its annual strategic outcome goals and to its mission:
*   To promote the progress of science.
*   To advance national health, prosperity, and welfare.
*   To secure the national defense.
*   And for other purposes.

B. Please provide comments on the activity as it relates to NSF's Strategic Outcome Goals. Provide examples of outcomes (nuggets) as appropriate. Examples should reference the NSF award number, the Principal Investigator(s) names, and their institutions.

B.1 NSF OUTCOME GOAL for PEOPLE: Developing "a diverse, internationally competitive and globally engaged workforce of scientists, engineers, and well-prepared citizens."

Comments:

The CETP and STEMTP initiatives focus on bringing about reform in science and mathematics education, preparing better trained teachers, and strengthening our knowledge of the learning process. As such, they do follow the NSF outcome goal for people.

A number of projects supported by these programs make a vigorous attempt to bring practicing scientists or mathematicians into the teaching profession. Many of the STEMTP projects seek to develop alternative sources and pathways for prospective teachers. For example, the University of Missouri (0202847) project works with the state's Troops to Teachers program to recruit retiring military personnel into the teaching profession, primarily in rural schools. The Arizona program (0302125) focuses on increasing the number of American Indian teachers with excellent STEM knowledge and leadership skills. The University of Illinois Chicago (0302119) project recruits persons with strong science and mathematics backgrounds from underrepresented populations to teach in struggling urban schools. The CUNY CETP (0119078) focuses on producing a diverse and talented workforce for the region: 38% of their CETP students were Black and 36% were Hispanic. And the MET Summit II Conference Special Project Award (0302288) has an emphasis on "participation by HBCUs and other institutions that produce minority teachers or teachers that work in areas with high concentrations of minority students."

The nation loses too many teachers in the first 5 years. Induction programs address this crisis. Such projects in the CETP and STEMTP programs include : CETPPA (9986753) and TxCETP (9987332) and, of particular note, the STEMTEC (0221265) program that has an induction program that includes a teacher collaborative group, STEM Education Institute programs including Science and Engineering Saturday Seminars, and a redesigned online seminar and master's degree program.

B.2 NSF OUTCOME GOAL for IDEAS: Enabling "discovery across the frontier of science and engineering, connected to learning, innovation, and service to society."

Comments:

Many CETP and STEMTP projects led to the formation of new curricula, new courses, and stronger linkages between faculty from education and the disciplines. This is a positive contribution to the NSF outcome goal for ideas.

Notable examples include the following projects. The Virginia CETP (0119904) influenced the requirements for prospective K-6 and Middle School teachers to require 24 hours of mathematics and science for the K-6 license and an equivalent of a minor in the area taught for middle school teachers. Through the additional course requirements students were exposed to inquiry-based and technology-rich learning environments and also learned about the global implications of science and mathematics. The evaluation report on the Maine MSTEC (9987444) cites examples of how teachers are incorporating inquiry-based approaches to learning resulting in the students integrating, inventing, and creating meaning and connections.

Several projects have involved prospective teachers in a variety of cutting edge projects that involve both innovation and research. For example, the Colorado STEMTP project (0302134) makes a strong effort to involve prospective teachers in projects that incorporate state-of-the-art technologies in elementary college courses across the science and mathematics curriculum. Students become involved in hands-on, technology and inquiry based projects in courses that range from calculus to freshman physics, astronomy to molecular biology. Students also have access to internships at local technology firms such as SUN Microsystems. The Pittsburgh STEMTP project (0301962) involves prospective teachers in a "big ideas in mathematics" capstone course that gives them the ability to involve high school students in similar explorations at the frontier of mathematics.

B.3 OUTCOME GOAL for TOOLS: Providing "broadly accessible, state-of-the-art and shared research and education tools."

Comments:

Few tools were developed in the CETP and STEMTP programs, but that may be reasonable given the nature of these programs. A good example of a program producing a state-of-the-art tool is the Arizona project (0084434) that produced a battery of tools. Other examples of tools developed include: The institutional CETP, UTeach (9953187), has developed an electronic portfolio system that allows pre-service teachers to track their progress toward meeting their state requirements; the CUNY program (0119078) has numerous student surveys that could have broader applicability; and there was extensive use of the Classroom Observation Protocol, COP, developed by Lawrentz. Perhaps the creation of the Core evaluation mechanism is the best example of a tool emerging from these programs.

PART C. OTHER TOPICS

C.1 Please comment on any program areas in need of improvement or gaps (if any) within program areas.

To summarize some of the specific findings above, the COV noted that the following areas could use some improvement:

Better training of reviewers.
More two-year college presence in STEMTP
More of a HBCU and HSI presence in STEMTP
Better documentation of projects that are funded even though their panel rankings are lower than those of other, non-funded proposals

More generally, the education enterprise needs a progress mechanism. Unlike what happens in traditional research, each new gain in knowledge in education is not necessarily transmitted to the common shared vision. All the projects within these two programs were to develop models. Those models are the outcomes (or products) of these investments. Where are the models? Can the NSF list them? To say that CETP and STEMTP were successful implies that there are models. Where is the plan to bring those models into the common shared vision? The addition of the CETP follow-on was timely and innovative but will be useless if there is not a vehicle to add the insights into the field.

The CETP PI meetings seem to have been quite successful in bringing together individuals involved in teacher prep. Is there now any occasion where all PIs from teacher education programs funded by NSF are brought together?

C.2 Please provide comments as appropriate on the program's performance in meeting program-specific goals and objectives that are not covered by the above questions.

Both the CETPs and the STEMTPs accomplished most of their stated goals. However, like nearly all other funded projects, it is difficult to see evidence of the sustainability or institutionalization of these efforts. A random search of the websites of the early CETPs showed that most are out of date.

C.3 Please identify agency-wide issues that should be addressed by NSF to help improve the program's performance.

As we on the COV understand the history, originally teacher preparation and teacher enhancement were part of the same program. Sometime later, these two programs were separated, with TP going to DUE and TE landing in ESIE.   Now it appears that these two programs are being combined again in ESIE, with DUE playing a relatively minor coordinating role. The COV has two concerns about this:

1. The teacher enhancement portion of these programs may now overwhelm the teacher preparation portion.

2. The important role of DUE in teacher preparation may now be marginalized.

More specifically, there is a concern that salient components of specific programs currently funded and overseen by DUE be continued in the future. Since CETP and STEMTP are being discontinued, a potential void has been created. For example, explicit in the CETP solicitation is the expectation that teacher preparation programs have full institutional support and the concerted effort of many stakeholders, including faculty and administration from two-year, four-year and research institutions; school districts; the business community; and state departments of education. There is good evidence that teacher preparation programs in CETP worked to ensure these components. Will future TP programs work to ensure these collaborations? The CETP solicitation is specific in numerous other ways about what the continuum of teacher preparation means, and about how projects should be designed to include described features and components. It is important that TP program solicitations be explicit about the inclusion of (indeed, a focus on) these features, that future TP programs be configured to include these components in one funded program, and that funding of future TP programs be robust enough to support these activities.

DUE programs officers are well-qualified and experienced in areas related to undergraduate teacher preparation. It is important that future TP programs enjoy significant involvement of DUE and other well-qualified program officers, who are well-positioned in the review process to ensure appropriate attention to undergraduate education.

Attention needs to be given to the proper balance for the total EHR programs as these DUE programs fade away and new ones arise in other divisions. For example, the CETPs and STEMTPs had the "call" to engage the faculty from both the arts and sciences and the education schools. The MSPs presumably cover this (the TPCs don't seem to) but those are much larger grants. What has shifted over the past 10 years is a drift away from smaller projects and a (seemingly) intentional abandonment of preparing the elementary teacher (with the exception of the master teacher).

C.4 Please provide comments on any other issues the COV feels are relevant.

Accountability for the success of a program should be linked to the degree to which the goals of the projects it supports articulate the goals of program. The accountability for each individual project's success should then be easily linked to these initial goals. The annual report and final report systems should require PI's to address the formative, summative and confirming evidence used to show the extent to which a goal is reached. One possible way to expedite this would be to have the initial proposals submitted in data base bites. Goals statements, for example, could be placed in individual cells at the time a proposal is submitted. Once a project was funded, these cells could be coded by a Program Officer to link them to the specific goals of a program. At the time of an annual report, Fast Lane would provide the PI's with their stated goals (one-at-a-time). PI's would be required to address the formative or summative evidence of the degree to which the project has reached its stated goals. Any modifications made in the ways in which the project has attempted to reach the goals should also be detailed.

C.5 NSF would appreciate your comments on how to improve the COV review process, format and report template.

The entire process was quite good. The COV received all of the information that was needed, including extra data that we requested, in a timely manner. The template works: The early questions in the template created activities that fueled the answering of this last part.

SIGNATURE BLOCK:

_____

For the [CETP and STEMTP]
[Robert L. Devaney]
Chair