

SC ATE – National Visiting Committee Annual Meeting

March 9 – 10, 2001

Greenville, South Carolina

NVC Members Present:

Ashok Agrawal	St. Louis Community College, St. Louis, Missouri
Stephen Cheshier	Southern Polytechnic State University, Marietta, Georgia
John E. (Jack) Johnston	Exxon Research and Engr. Co, Annandale, New Jersey
Robert M Hartley	Duke-Fluor Daniel, Charlotte, North Carolina
Ida J. Hill	Chesterfield County Public Schools
Doug McKay	SC Department of Commerce, Columbia, South Carolina
Richard Satchwell	Illinois State University, Normal, Illinois
George Timblin	Central Piedmont Tech. College, Charlotte, North Carolina
Jack Waintraub	Middlesex County College, Edison, New Jersey

NVC Members Absent:

Marilyn Mays	North Lake College, Irving, Texas
John Penica	AMP, A Tyco International, Ltd., Harrisburg, Pennsylvania

NSF Staff Present:

Dr. Elizabeth Teles

The annual meeting began with a visit to Tri-County Tech. The team members had the opportunity to visit with students involved in the ET Core program. Two groups of students presented reports on their projects. The reports included description of technical problems and issues dealing with working on teams and problem solving approach of instruction. After the ET Core presentation, the NVC team participated in a teleconference with students, faculty and staff from Florence-Darlington, Piedmont Technical College, and Tri-County Tech. The discussion focused on issues dealing with teamwork, project based teaching and learning, communications skills, and other aspects of the ET Core curriculum.

In the afternoon the committee met with SC ATE Management Team to review the progress on the project. The committee also heard a report from the external evaluators. The next morning NVC met for a closed door meeting with Dr. Elizabeth Teles, the NSF officer. Exit briefing with the center Management Team followed this meeting. The NVC meeting ended at about noontime on Friday.

Observations

Project Goal: The SC ATE organization has made an excellent start to what can be a true systemic reform. The roots established by this Center are strong and should result in a strong program. Although the growth of the program is small at the present time, the NVC believes that the Management Team has proven that the pre-ET and ET Core programs work, and use of the pedagogical methods developed by this Center work as well. Therefore we believe that the initial goal of this Center has been achieved and this project has been a success. Since this was a pilot level program to assess the feasibility and to establish a culture for program of this type, small beginning is to be expected.

Management Team: The NVC continues to be amazed by the commitment and excellent teamwork demonstrated by the Management Team. Elaine Craft deserves great compliments for her leadership and dedication to this project. Her leadership skills keeps the other members of the Management Team and faculty members involved in the project excited and committed the project. The Management team has been consistently very responsive to the suggestions and input given by the NVC members.

Curriculum and Promotional Material: The quality of the material developed by the SC ATE organization is of highest quality. The promotional material is very attractive, and is easily adaptable by any institution. The curriculum material is sound both in content and in pedagogy. The Pre-ET curriculum has been adapted by several institutions, including at least one ATE center.

Students: The students who participated in the project presentation and in the teleconference spoke very highly of the Center's activities. They were excellent ambassadors of the SCATE programs. They appeared to be very confident and articulate in their presentation. Their performance is an excellent endorsement of the goals of the projects, i.e. the students possess the skills being promoted by the Center and its programs.

Faculty: The faculty members we met personally and over the teleconference appeared to deeply committed to the Center's activities. In spite of the heavy teaching load, faculty members continue to be excited about their involvement in this activity. Faculty members involved in the Center's activity represent various academic areas and components of the curriculum. The Management team deserves commendation for assembling a very diverse faculty team, the faculty team represents a good balance of in gender and ethnic diversity.

Career Exploration Component: The career exploration component of the Center's activity is very well designed and is right on target. This component should be widely disseminated to other institutions for adaptation.

Concerns

Recruitment: Although the Management Team has developed excellent recruitment material, low enrollment in Pre-ET and ET Core programs continues to be a cause for concern. It appears that one of the short-comings in the recruitment effort both at the state

level and at the local level is the lack of staffing, focused toward recruitment of engineering technology students. In this regard it is recommended that effort should be made to seek industry support. Since the local industry has been supportive in providing funds for the ATE Scholars program, it may be possible to raise private funds to hire at least one staff member who can focus his/her attention on statewide promotion and marketing of engineering technology programs. The NVC realizes individual institution's role and domain in recruiting students for their own institutions; however, state level thrust and support for ET marketing and recruitment may be a cost effective way to benefit all institutions.

Sustainability: Although the NVC members compliment the state for providing staff support the Center, the NVC remains very concerned about the long-term sustainability of this effort. In this regard in consultation with the system and institutional administrators effort should be made to develop a set of metrics that can be used to demonstrate to the administration the success of the Center's activities, which could lead to continued support by the administrators. This metrics could include a cost-benefit analysis. The Management Team should consider spending some effort to determine to identify and publicize the cost side of the cost/benefit trade-off.

Although the NVC continues to be impressed with the commitment and dedication of the project management team and their long-term tenure with this project, and also the diversity of faculty members involved in instruction is impressive, the NVC is concerned that no one from the rank-and-file of faculty has surfaced as a new and upcoming leader and champion of this project. Therefore, we are concerned that should one of the four management team members moves on to other responsibility, the future and continuation of the project may be in jeopardy. Development of an agreed to set of metrics that would support continued effort by the administrators. This should include a cost-benefit analysis. There needs to be more work on the cost side of the cost/benefit trade-off

Evaluation / Assessment: It appears that the external evaluators still using anecdotal data in their evaluation report. It is strongly recommended that the evaluators establish a better line of communication with institutional research offices to gather student success related data. It is also suggested that the evaluators find ways to highlight the "cost benefits' for this program.

Technology: Technology initiatives such as student teleconferences should be used to as a tool to promote teaching and learning methodology in institutions currently not using the SC ATE program.

Training and Rewards for New and Present Faculty: Effort should be made to ensure that newly employed faculty is trained in the pedagogical methods being promoted by SC ATE. Additionally, the state or the institutions must find ways to reward the faculty members involved in this pedagogical method. The NVC is concerned that faculty members are not going to be able to use this time consuming and intense method of teaching unless there are some tangible rewards from the system.

Summary Comments

The NVC members believe that the South Carolina Center for Advanced Technological Education (SC ATE) has been a success. The primary goal of this Center was to develop curricula for Pre-ET and ET Core with the overall goal of improving retention in ET programs. Based on the data collected by the project evaluators, the Technology Gateway and ET Core programs have collectively proven to improve student retention. Although the secondary goal of the Center, to enhance student recruitment in ET programs has still not been realized, it appears that many of the factors that affect and impact student recruitment are outside the influence of the Center's Management Team. Based on the industry's support for the ATE Scholars program and internship opportunities, exposure for the ET programs in the state of South Carolina has increased.

The SC ATE Center and its Management Team members have gained national recognition because of their excellent work, dedication to improving engineering technology education, and the team members never ending effort to promote and disseminate their activities.