

Recommendations of Review Panel  
On Cutting Edge Grants for Undergraduate Instruction  
FY 90-91

On May 9, 1990, the panel to review Cutting Edge Undergraduate Instruction Grant proposals for FY 90-91 met in Columbia.

This report was prepared by the staff following the instructions of the panel and has been reviewed and approved by the members of the panel.

The members of the panel, all of whom were selected because of their expertise and experience, are:

Dr. James A. Caillier  
Acting President  
Delgado (LA) Community College

Dr. William D. Carr  
Dean of Graduate Studies  
Jacksonville (AL) State University

Dr. John T. Lewis, III  
Vice President & Dean of Faculties  
West Georgia College

Dr. Russell G. Warren  
Vice President for Academic Affairs  
James Madison (VA) University  
(and President-elect  
Northeast Missouri State University)

A total of seventeen proposals were submitted, requesting a total of \$917,828. These are listed in Attachment I.

Prior to meeting here, each panel member individually read, evaluated, and rated each of the seventeen proposals. These individual ratings provided the starting point for the panel's subsequent discussions on May 9.

As a result of those discussions, the panel recommends that the following nine proposals be considered favorably by the Commission, subject to the availability of funds and subject to adjustments in the grant awards which may be negotiated by the Commission staff in each case:

Rank	Title	Institution	Funds Requested For FY 1990-91
1	*Instructional Effectiveness	Midlands TC	\$ 73,999
2	*Instruction in Biology & Psychology	Francis Marion	31,613
3	*Instructional Development	USC-Columbia	59,700
4	*Project REDESIGN	Furman U	32,540
5	*Curriculum Excellence	Flor-Darl TC	40,701
6	*Curriculum 2000	Lander College	73,544
7	Two-Year College Graduates	Piedmont TC	63,250
8	Calculus Laboratory	USC-Aiken	74,955
9	Women's College Liberal Arts	Columbia College	54,618
	Total		\$504,920
	* Continuation Projects		

There follows a summary of each of these nine proposals. Each summary includes a brief abstract of the proposal followed by a summary of the panel's comments on that proposal.

1. Developing A Model System for Assessing and Improving Instructional Effectiveness Within the Two-Year Technical College Setting, Midlands Technical College, Mr. Ted McClure, Principal Investigator.

Funded initially in FY 88-89 and receiving continued support in FY 89-90, this project involves the design and field testing of an evaluation system to assess and improve instructional programs at Midlands and other technical colleges. It is progressing on schedule as proposed originally.

This project has had a positive effect on undergraduate education at the host institution and it is applicable to other technical colleges. This is supported by the fact that the project has received considerable recognition in the region. Its multi-dimensional assessment model is comprehensive in nature. The principal investigator has a good reputation. There is strong institutional commitment to the project and adequate resources have been committed as well. Midlands Technical College has done an excellent job in disseminating information and assuming training responsibilities for other institutions interested in the project.

2. Conclusion of a Project to Evaluate and Improve Undergraduate Instruction in Biology and Psychology at Francis Marion College, Francis Marion College, Drs. Gary W. Hanson, Jesse J. Jordan, Larry J. McCumber, and David J. Stroup, Principal Investigators.

Funded initially in FY 88-89 and again in FY 89-90, this project represents the final year of funding for Francis Marion College's efforts to develop critical thinking skills among undergraduate students through the development and use of computer-augmented instructional strategies. The progress of the project was delayed somewhat in 1990 due to delays in receiving some of the equipment required for the project, but otherwise the project has operated smoothly.

The project contains strong technical merits, a good implementation plan, and has principal investigators with outstanding records of accomplishment in the area. Overall, the project has considerable prospects for improving undergraduate education as it expands from introductory courses to upper division courses and into more disciplines. There is a need for more dissemination work during this final year of the project, possibly in the form of national publications. Similarly, the project would benefit from more institutional support to enlist other departments to participate in the project.

3. The University Instructional Development Project, University of South Carolina-Columbia, Drs. John N. Gardner, George M. Reeves, and Michael F. Welsh, Principal Investigators.

This project was funded initially in FY 89-90. In FY 90-91 it will provide formal training to graduate teaching assistants before they teach, in-service training while they are teaching, special assistance to international teaching assistants, and an evaluation of the results of the project. During its first year, the project proceeded on schedule, completing a needs assessment of teaching assistants, enlisting faculty support, preparing a teaching guide, and organizing, delivering, and evaluating a teaching workshop.

This project is a timely one headed by principal investigators with excellent credentials. It has the potential to have a substantial positive impact on the education of a large population of undergraduate students. It addresses a major weakness in undergraduate instruction in large research universities. The project has considerable institutional support and resources behind it. Provisions have been made to disseminate the results to other institutions. One weakness is that the utility of these results will be limited to large doctoral granting institutions.

4. Project REDESIGN, Furman University, Drs. Herbert B. Tyler and Nelly Hecker, Principal Investigators.

This project was funded in FY 88-89 and again in FY 89-90. Its focus is upon the redesign of the teacher education program at Furman, with the final outcome expected to be an innovative response to the

preparation of prospective teachers. Potentially, the project has implications at the national level. The project is progressing on schedule.

There is a significant opportunity to improve the undergraduate education of teachers by redesigning the curriculum. The project has clear objectives and a solid implementation plan. It is also being directed by capable investigators. Some concern was expressed that while the three additional project needs which are not curriculum issues are highly desirable, they represent an unnecessary expansion of the scope of the project. Furthermore, the methodology for addressing these issues is not clear. Concern was also registered over the lack of administrative support for the project in the form of matching funds.

5. Design for Curriculum Excellence, Florence-Darlington Technical College, Dr. James H. Altman, Principal Investigator.

The project received its initial funding last year (FY 89-90). The purpose of the project is to develop criterion-referenced assessment instruments to measure student learning outcomes in the College's associate degree programs. Substantial progress has been accomplished to date.

The project represents an effort to make educational programs responsive to the particular needs of business and industry, as well as resulting in better evaluation of and performance by undergraduate students. The project has a strong principal investigator, commitment by the institution, and adequate resources. When complete, the project may help to satisfy the assessment demands of accrediting agencies and others. However, there is only face validity to support the idea that the approach selected will increase the competencies of students. There is no evidence to support the hypothesis that students will perform better after this approach has been followed.

6. Curriculum 2000, Lander College, Dr. Richard A. Skinner, Principal Investigator.

Initial funding for the project was provided in FY 89-90. The project is now envisioned as a three year program designed to revise, implement, and assess Lander College's general education requirements. Progress to date has been satisfactory.

The project offers a good opportunity to strengthen and improve the general education requirements of undergraduate students at Lander College. It contains a sound implementation plan and is headed by a capable principle investigator. There is institutional commitment to the project and extensive involvement by the faculty. Concern was expressed regarding the proposed expansion of the project from two years to three years, with a general feeling that the third year was not necessary. It was also felt that far too much of the budget is allocated to stipends. The assessment components need strengthening as well. Finally, the proposed implementation date of the new curriculum is not stated.

7. Assuring the General Competence of Two-Year College Graduates, Piedmont Technical College, Dr. Curtis Miles, Principal Investigator.

This project is designed to assure that all of Piedmont Technical College's degree graduates possess both the technical competencies needed for employment and the more general competencies needed for career and personal success. The College also intends to create a system that will continue to operate effectively without external funding.

The major strengths of the project are its leadership and institutional commitment, its attempt to involve many elements of the college in the process, its clear objectives and timetable, and its modest request for funding. Concern was expressed that the project may be more complex and time-consuming than its timetable and budget suggest. Similarly, the proposal would have been strengthened by the addition of a more explicit assessment plan. Finally, it will be difficult to identify specific skills for some of the more abstract concepts, such as "to exhibit professionalism."

8. Establishment of a Calculus Laboratory, University of South Carolina-Aiken, Dr. Robert Phillips, Principal Investigator.

The purposes of this project are to establish a calculus laboratory and to restructure the introductory calculus course as a laboratory course similar to courses in the natural sciences. The objective of this restructuring is the development of a calculus curriculum which takes advantage of modern technology and applies calculus to familiar problems.

There is a demonstrated need for the project, given the nationwide failure rate of 50% for introductory calculus courses. The goals and objectives are stated clearly. The evaluation component is sound. The principal investigator is capable and experienced in the project area. Four concerns were expressed. First, there is a lack of evidence that all of the faculty in the mathematics department support the proposal. Second, the scope of the project is limited to one subject in one discipline. Third, the evaluation component of the project comes after the expenditure of the grant funds. A pilot study with documented results would be appropriate. Fourth, the panel felt that the institution could share more in the equipment costs.

9. Making Connections: Integrating Leadership and Collaborative Learning Into a Women's College Liberal Arts Curriculum, Columbia College, Dr. Miriam F. Rawl, Principal Investigator.

Columbia College proposes to revise its general education curriculum to conform to the principles and competencies affirmed in its new mission statement. As such, it hopes to integrate women's strengths in learning patterns and in leadership and managerial styles with a coherent liberal arts curriculum. Funding will be requested for three years.

The program is innovative, well conceived, and well planned. Headed by a capable principal investigator, the project emphasizes the development of interdisciplinary courses which should enhance the quality of undergraduate education. There is strong institutional backing for the project and a willingness to provide adequate matching funds. Two concerns were cited. The first had to do with excessive budgets for faculty stipends and salaries. The second concern was that the project may require only two years to complete instead of three.

The panel does not recommend that any of the remaining eight proposals be approved. While there is some merit in each, the panel's judgement is that further work to strengthen each proposal would be required.

A summary as in the cases above of each of these eight follows, arranged only in alphabetical order by institution.

The Applications of Interactive Video Technologies to Enhance Undergraduate Instruction, Clemson University, Dr. William M. Surver, Principal Investigator.

The purpose of this project is to improve undergraduate instruction at Clemson University through the use of interactive video technologies such as videotape and videodisk. Included in the project are a faculty development plan, an evaluation plan, and a dissemination plan for Clemson faculty members.

The project could have an impact on the faculty, bringing about changes in their methods of instruction. The proposal is well-written, headed by a well-qualified principal investigator, and it has clear goals and objectives. Four weaknesses were cited. There is no review of the existing literature, resulting in a tendency to "reinvent the wheel." Indeed, much of the material is currently available for use. The proposal needs more planning and developmental work, particularly in the area of faculty support. There is no strong evidence of institutional support or commitment. Finally, the expenditures for the project are excessive.

Clearinghouse for the Professional Development of South Carolina's Adult Educators, College of Charleston, Dr. Pamela C. Tisdale, Principal Investigator.

This project proposes to develop a Clearinghouse for the Professional Development of South Carolina's Adult Educators which will assist in the development of a cadre of educators who can help improve the State's literacy rates. The project would provide staff development activities for adult educators, serve as an information clearinghouse, and provide staff development activities for business leaders interested in reducing illiteracy among their employees.

While the project obviously has merits, it is not in keeping with the present program guidelines. Moreover, it will have no impact on undergraduate education. While the project may have merit for funding from some source, it does not appear to be well suited for the Undergraduate Instruction Grant program

Will Blueprints Still Be Used in the Year 2000?, Greenville Technical College, Mr. Oscar Eugene Wilson, Principal Investigator.

The goal of this project is to enhance the Architectural Engineering Technology and Construction Engineering Technology programs at Greenville Technical College by redesigning the curriculum to incorporate state-of-the-art training which will better prepare graduates for employment within the industry.

The project is well planned. It may serve the needs of students and industry and improve the quality of undergraduate education. The business community appears to support the project. Concern was expressed over the fact that more background work should have been done prior to the submission of the proposal. Particular attention should have been directed to schools already using similar approaches, and the availability of appropriate software. Similarly, the scope of the project is limited to two career programs, but it is an expensive project. There is very little financial commitment from Greenville Technical College or from the business community. Finally, the proposed project may well not require three years for its completion.

Project Support, North Greenville College, Dr. Gayle Price, Principal Investigator.

This project is designed to address the problem of students coming to North Greenville College with histories of poor learning habits, little concept of the nature and demands of college life, repeated academic failures and undeveloped career goals, all of which make it difficult for instructors to engage students in the learning process soon enough or fully enough.

The proposal deals with an obvious need and shows concern for developmental students. Moreover, the testing component using available computer packages makes good sense. Overall, however, the proposal is underdeveloped and premature. A review of the literature needs to be done prior to the development of the proposal. Much can be learned from such an exercise. Far more institutional commitment, planning, and involvement is needed as well. Concern was also expressed over equipment expenditures which do not appear to comply with program guidelines. Finally, it is not clear what will be done in terms of changing the existing programs at the College.

A Proposal to Establish the Institute for Effective Undergraduate Curriculum, Instruction, and Evaluation, South Carolina State College, Dr. Doris B. Matthews, Principal Investigator.

This project proposes to establish the Institute for Effective Undergraduate Curriculum, Instruction, and Evaluation. The purpose of

the Institute is to strengthen the quality of education received by undergraduate students at South Carolina State College by enhancing faculty members' competence in developing curricula, delivering instruction, and evaluating instructional effectiveness. Funds are being sought for three years.

This is an ambitious project with potential for improving undergraduate education. The addition of up-to-date technology should improve the quality of some classroom instruction. The proposal has clear goals and objectives. The principal investigator has strong credentials. On the other hand, concern was expressed that the proposed project was far too broad in scope. Essentially the proposal seeks funds for curriculum development, faculty development, the implementation of assessment, the implementation of faculty evaluation, and the enhancement of instructional technology. The proposal would profit were it to be broken up into more manageable subparts with reasonable timetables. Concerns were also raised about the budget and the lack of a long-term plan to keep the faculty current with technological changes in equipment. Similarly, the question of how the Institute would be funded on a permanent basis is not addressed.

Improving Instructional Programs Through Performance-Based Assessment for a Consortium of Small Technical Colleges, Technical College of the Lowcountry, Dr. Yvonne Michel, Principal Investigator.

This project is designed to develop the means to assess objectively the training and proficiency of graduating students in industrial programs having only one faculty member. It proposes to develop a consortium of technical colleges which can provide teams of experts from compatible industrial program to evaluate the performance of students in such programs.

The project addresses the needs of isolated faculty members. It would foster cooperation between faculty at the participating institutions. The institutions in the proposed consortium appear to be committed to the project. The use of teams of experts from outside a particular institution to evaluate program in one-person departments is a novel approach to assessment. Concern was expressed over the principal investigator's lack of experience in this area. It was also felt that the proposal needs to be reworked, paying particular attention to a prior review of the literature and the specific program guidelines. As it now stands, there are gaps in the proposal and important information is missing. There also appears to be no financial commitment from the host institution. Finally, only a small number of students would benefit from the project.

Critical Thinking and Writing Assessment Development Project, University of South Carolina-Salkehatchie, Dr. Sandra Willis, Principal Investigator.

This project proposes to develop and implement techniques and instruments designed to teach and assess students' acquisition of critical thinking and writing skills across the curriculum.

The project has certain merits, such as the notion of combining writing and critical thinking skills. Its goals are clear and the project is headed by a competent investigator. Overall, however, the project needs further development and refinement. More research on what has been done by others is needed since similar models are widely available. It was also felt that more institutional support and cost-sharing were in order. By using existing models, the project could be undertaken at less cost.

Retooling a Mathematics Curriculum for Graphing Calculators,  
Winthrop College, Drs. Ronnie C. Goolsby and Mary B. Martin, Principal  
Investigators.

This project is designed to develop a prototype curriculum for mathematics students which utilizes the Hewlett Packard-28S scientific calculator. The claim is made that, if introduced at the beginning of the calculus experience and maintained throughout the degree program, this graphing calculator will generate new enthusiasm for mathematics, expose students to interesting problems in the sciences, and enable students to strengthen their fundamental mathematical skills.

There is a demonstrated need to strengthen programs in mathematics. The proposed project will allow more instructional time in class and assist students in the use of advanced technology. On the other hand, the program is not very innovative and it is limited to one technique in one discipline. Concern was expressed over the lack of evidence of support by other members of the mathematics department and the fact that the program may be so "flexible" that some instructors may not use it. More institutional commitment and financial support is needed. Overall, the project appears to be quite expensive relative to its benefits; its costs could be reduced.

#