

June 1995

TEACHER TRAINING

Status and Participants' Views of Delta Teachers Academy





United States
General Accounting Office
Washington, D.C. 20548

**Resources, Community, and
Economic Development Division**

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Congressional Committees

As requested by the Senate and House conferees for the fiscal year 1995 U.S. Department of Agriculture (USDA) appropriations act, we reviewed the Delta Teachers Academy program, which is funded primarily by the Department. The Academy, established in 1992, is intended to help address the educational needs of the Lower Mississippi Delta—one of the poorest, least developed regions in the nation. The Academy seeks to address these needs by improving the quality of elementary and secondary school teaching in the region.

In May 1994, we issued an interim report on the program.¹ This review (1) provides updated information on Academy activities and expenditures and (2) describes the views of Academy participants on the program's effectiveness, including its impact on teaching skills and subject area knowledge.

Results in Brief

USDA funding for the Delta Teachers Academy has nearly doubled from \$2 million in fiscal year 1994 to almost \$4 million in fiscal year 1995. During this period, the Academy expects to increase the number of teacher training days by 130 percent, from over 5,000 training days for 371 elementary and secondary school teachers in fiscal year 1994 to over 12,000 training days for 665 teachers in fiscal year 1995.

Teachers participating in the Academy have generally given it high marks. Their evaluations show that the Academy is viewed as effective in both increasing the understanding of academic subjects and providing new teaching skills—the Academy's two primary objectives. In addition, teachers noted that the program provided benefits and opportunities beyond those of other teacher training programs. They noted, for example, that the university scholars who trained the teachers brought in new ideas and perspectives from around the country and that the Academy provided longer-term and more continuous development opportunities for participants.

¹Delta Teachers Academy (GAO/RCED-94-213R, May 19, 1994).

Background

The National Education Goals, developed in 1991, and the Goals 2000: Educate America Act underscore,² among other things, the (1) importance of providing elementary and secondary school teachers with professional development programs and (2) educational emergency that exists in rural areas with large concentrations of children living in poverty. The act notes that rural schools often lack the means to effectively address the needs of these children and that intensive efforts should be made to overcome the problems of geographic isolation, inadequate financial resources, and other impediments to educational success.

The Delta Teachers Academy seeks to address these concerns by renewing and enhancing the subject area knowledge and teaching skills of elementary and secondary teachers in the Lower Mississippi Delta region. This region, comprising the Delta areas of seven states—Arkansas, Illinois, Kentucky, Louisiana, Mississippi, Missouri, and Tennessee—is predominantly rural and characterized by poverty and other impediments to education. For example, 33 percent of the Delta's children live in poverty, compared with 21 percent for the United States overall. (App. II shows the locations of children living in poverty in the United States.)

The National Faculty,³ an independent, nonprofit educational corporation, launched the Delta Teachers Academy as a pilot program in 1992 with a \$500,000 grant from the Department of Education. In 1993, the Academy was continued on a limited basis with about \$220,000 in funding from the BellSouth Foundation and the Winthrop Rockefeller Foundation. This funding was used to support 8 of the 10 original pilot program's teacher teams in 1993 and 1994. In 1994 and 1995, the Academy was expanded with grants of \$1.92 million and \$3.78 million, respectively, from USDA.⁴

The Delta Teachers Academy does not operate its own facilities. Rather, it conducts a series of 2-day teacher development sessions with university scholars and teachers in participating school districts throughout the academic year, followed by 2-week "summer institutes" on college

²The President and the nation's governors established the National Education Goals to focus public attention on restructuring schools and increasing expectations for improving students' performance. The Goals 2000: Educate America Act of 1994, P.L. 103-227, expanded the number of National Education Goals from six to eight.

³The National Faculty was founded in 1968 by the National Endowment for the Humanities, under the sponsorship of Phi Beta Kappa, the American Council of Learned Societies, and the American Council on Education. Its purpose is to help American schools strengthen teaching in the humanities, arts, and sciences.

⁴The Academy continues to receive funding from nonfederal sources. As of June 6, 1995, it had received a total of about \$240,000 in private funds to start a 3-year program for a team of teachers in Memphis.

campuses in the region. Participants beginning the program in 1995 will receive about 20 days of training annually for 3 consecutive years.

The 163 National Faculty scholars who have planned and taught the sessions in fiscal years 1994-95 are experts in their academic fields and come from over 90 universities and colleges throughout the United States. The institutions represented include Harvard University, Spelman College, Stanford University, and the University of Missouri. The scholars use a variety of instructional methods—lectures, discussion groups, field trips, films, readings, and laboratory and other hands-on workshops—to communicate both the subject matter and pedagogy—the science of teaching. The scholars are encouraged to relate to the teachers as peers rather than as students—intending to create a collegial environment for developing knowledge and skills.

The program's selection process begins with the National Faculty staff asking chief state school officers to recommend school districts that will be best able to benefit from the program, using the criteria of academic need and the clear support of local administrators. Officials of these districts in turn select one or more disciplines to be addressed and the teachers who will participate. The Faculty requests that participants have at least 2 years of teaching experience and the potential for becoming leaders who will disseminate to other teachers the skills and knowledge learned in the Academy.

Teachers meet with program staff before their training sessions to select the topics to be covered and to develop an agenda to meet their particular needs. Teachers participating in the Academy are encouraged to develop teaching plans incorporating their newly acquired skills so that they can serve as resources for other teachers in their districts.

The number of teachers, teacher training days, and counties and parishes involved in the program has increased since the Academy's first year of operation in 1992, as shown in table 1. (See app. IV for the counties and parishes of the participating teachers.) In 1995, the National Faculty expects to provide 12,037 training days. This is more than twice the number of teacher training days provided in the previous year.

Activities of the Academy

**Table 1: Academy's Training Activity,
Fiscal Years 1992-95**

Training delivered	1992	1993^a	1994	1995^b
Teachers	100	80	371	665
Participating counties and parishes	36	32	55	65
Teacher training days	930	376	5,238	12,037
2-week summer institutes	2	0	10	14
2-day academic sessions	10	25	95	215

^aFunding for 1993 was entirely from nonfederal sources.

^bEstimated.

Source: The National Faculty.

For the 215 2-day sessions in 1995, teams of about 15 teachers each will participate in a series of academic sessions with a different scholar leading each session. The 14 2-week summer institutes will begin in June 1995 on Delta college campuses. Each institute will host about 40 teachers and be led by three to four scholars. As of June 6, 1995, the Academy had conducted about 80 percent of its 215 planned 2-day sessions and had scheduled all of the remaining 2-day sessions and summer institutes. In addition, in May 1995, the National Faculty began providing grants on a pilot basis to teacher teams participating in the Academy to lead teacher development sessions in their school districts.

Over one-third of the 1994 and 1995 training sessions focused on math and/or science, with the remainder focused on English, history, geography, reading, and other subjects. The scientific sessions include agricultural issues, for example, the composition of soils and the use of pesticides and fertilizers.

Much of the training is interdisciplinary—several subjects are combined to view issues and solve problems. For example, in a 1994 math-science summer institute, one laboratory session demonstrated how to model pollution in lakes using matrices and linear equations. Another session demonstrated how the movements and behaviors of crawfish in a tank are quantified and how statistics help scientists interpret experimental results.

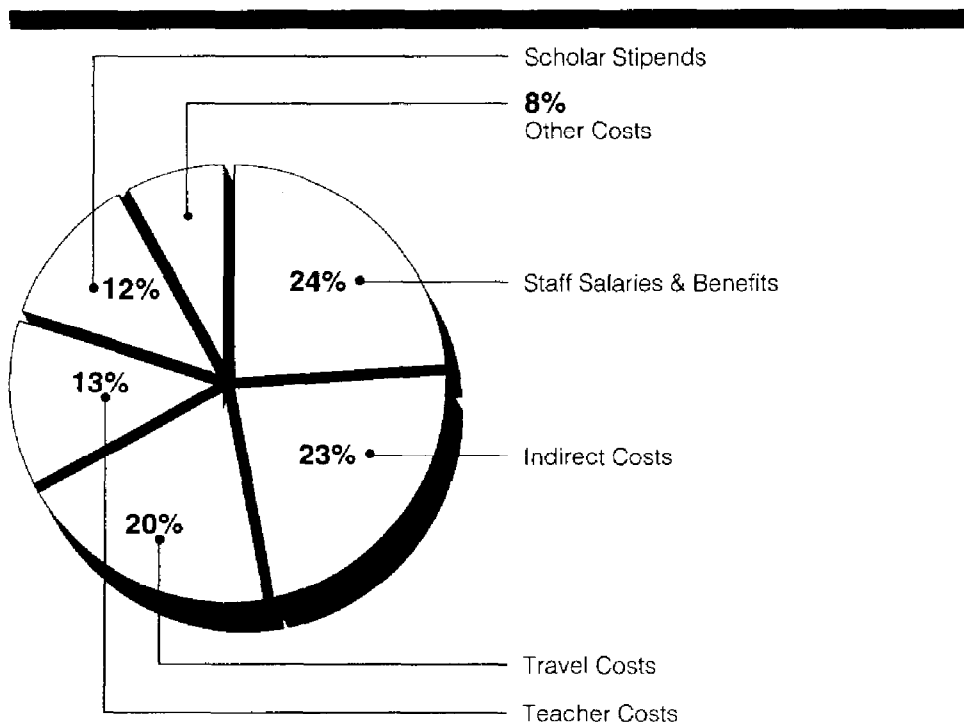
Academy Expenditures

As stipulated in the conference report, USDA provided \$3.94 million for the Delta Teachers Academy program for fiscal year 1995, nearly doubling the \$2 million provided in 1994. Of the fiscal year 1995 amount, \$3.78 million

went to the National Faculty to implement the Academy's activities. The Department retained \$157,000 for administrative expenses.⁵

As shown in figure 1, the National Faculty plans to spend about 47 percent of the \$3.78 million on the (1) National Faculty's salaries, wages, and fringe benefits and (2) program's indirect costs (i.e., administrative expenses). Travel expenses—primarily for scholars' and teachers' travel—represent the next largest share of the funding—about 20 percent. The cost for scholar stipends; teacher costs (i.e., payments for substitute teachers; participants' honoraria, and site coordinator stipends); and other costs make up the remaining 33 percent.

Figure 1: Planned Expenditures for the Delta Teachers Academy, Fiscal Year 1995



Source: GAO's analysis of data from the National Faculty.

⁵USDA typically retains between 4 and 8 percent of a program's funding to cover administrative costs.

Participants View the Academy as Effective

To evaluate the Academy's effectiveness, the National Faculty administers evaluations to teacher participants following each training session. The organization began administering these evaluations at the program's inception in 1992. In February 1995, the National Faculty contracted with Westat, Inc.,⁶ to analyze more than 1,000 evaluations from the 1994 Academy training sessions. Westat's resulting March 1995 report, *Assessment of the National Faculty's 1994 Delta Teachers Academy*, concluded that although the evaluation was limited in scope, its "results offer impressive evidence that the FY 1994 Academy is having a positive impact on the participating teachers."

In these evaluations, participants responded to questions relating to the effectiveness of both the session and the scholar leading it. Teachers used the following 4-point scale to rate the extent to which they agreed or disagreed with the given statement: 1 = strongly disagree, 2 = disagree, 3 = agree, and 4 = strongly agree. According to Westat's report, the mean responses ranged from 3.4 to 3.8 for statements indicating that the program accomplished the following for participants:

- increased their understanding of a subject area,
- resulted in new ideas for changing classroom teaching,
- met their goals and expectations,
- increased their enthusiasm for teaching,
- broadened their perspective,
- reinforced their sense of professionalism, and
- paired them with scholars who were effective teachers.

Appendix III provides the 1994 mean participant evaluation scores for 65 academic sessions and 10 summer institutes.⁷

In addition to reviewing Westat's report, we conducted a telephone survey of 11 randomly selected participants to obtain their views on the Academy's effectiveness, both in comparison with that of other teacher development programs and in the enhancement of their teaching and professional skills. Our survey included teachers from six of the seven Delta states. (See app. I for our methodology.) Once again, respondents'

⁶Westat, Inc., provides survey research and evaluation services.

⁷According to a National Faculty official, although 95 sessions were held in 1994, only 65 were evaluated. Team coordinators did not collect evaluations for 10 sessions, and 20 sessions were excluded because participants in those sessions had begun training in 1992 or 1993—pilot years that were not included in the evaluation.

reactions to the Academy were positive. On average, participants responded that the Academy

- was more effective than any other teacher development program they had participated in,
- was very effective in renewing or enhancing knowledge in one or more academic subjects, and
- was generally effective in enhancing the teaching skills and strategies required for teaching challenging academic content.

All 11 teachers listed a number of advantages the Academy had over other programs, with 5 of the 11 also listing disadvantages. The most frequently cited advantages were the scholars' expertise and the ideas and perspectives they brought in from around the country (cited nine times) and the intensity and/or continuity of the program (cited nine times). The most frequently mentioned disadvantage (cited twice) was that the Academy was less likely to be aimed at the specific grade level taught by the participant.

In addition, 9 out of 10 teachers⁸ said that the program resulted in changes in their curriculums or practice. For example, five teachers said that they had increased their use of hands-on exercises—e.g., using objects that can be manipulated to demonstrate mathematical concepts—as a result of the Academy. In another instance, a Mississippi teacher taught her class how to analyze the content of television and other media to determine, for example, what messages are being conveyed in commercials. As a result of an Academy session on literature, this teacher also eliminated from her curriculum literature that could be viewed as demeaning to women and minorities. In another case, a Louisiana teacher stated that her high school did not have a geography program prior to her participation in the Academy. However, because of the geography-related materials and teaching ideas she received in the Academy, she was able to develop a geography program for the school. Her school now requires every ninth grade student to take 1 year of geography. Once a week, the students have an atlas day, when they plot imaginative “road rallies” or use a series of clues to spot map locations.

More Comprehensive Evaluations Planned

The National Faculty has not yet evaluated the impact of the Academy on participants' teaching practices. However, it is undertaking two additional evaluations of the program's impact and effectiveness. For the first

⁸One teacher did not answer this question.

evaluation, Westat, Inc. is surveying 90 teacher participants to address such issues as the Academy's perceived impact on teachers' (1) changing their curriculums or practices and (2) assuming leadership roles in curriculum development or other activities. This evaluation is scheduled to be completed by early summer 1995.

For the second evaluation, the National Faculty is working with Westat, Inc. to plan a more comprehensive evaluation of all Faculty programs. This evaluation will assess, in greater depth, the questions addressed in the first evaluation and other items, such as the Faculty's selection and preparation of scholars. Westat, Inc. is proposing that this evaluation include visits to participants' classrooms to determine the Academy's impact on the participants' teaching practices. The evaluation is scheduled to be conducted in fiscal year 1996.

The National Faculty does not plan to measure the Academy's impact on student achievement. According to Westat, Inc. evaluation experts, it is difficult to demonstrate that changes in student achievement result from one particular teacher development activity because many factors affect student achievement. This difficulty is compounded by the fact that no more than a few teachers from any single school typically participate in the Academy.⁹ In addition, since 1994 was the first nonpilot year, it is too early to measure the Academy's long-term impact on teachers' performance.

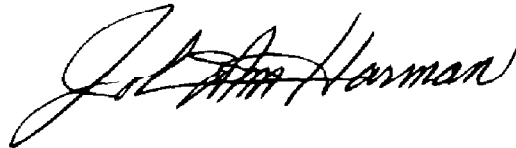
Agency Comments

In commenting on a draft of this report, the president of the National Faculty stated that our account of the Academy and its current status is accurate and fair. (See app. V.)

We performed our work between March and June 1995 in accordance with generally accepted government auditing standards. Our scope and methodology are discussed in appendix I.

⁹Our previous report, *Precollege Math and Science Education: Department of Energy's Precollege Program Managed Ineffectively* (GAO/HEHS-94-203, Sept. 13, 1994), noted that research in the area of teacher enhancement and its impact on student achievement has been limited.

We are sending copies of this report to the appropriate congressional committees, the Secretary of Agriculture, the National Faculty, and other interested parties. Copies will also be made available to others upon request. Please contact me at (202) 512-5138 if you or your staff have any questions. Major contributors to this report are listed in appendix VI.

A handwritten signature in black ink, reading "John W. Harman". The signature is written in a cursive style with a large initial "J" and "H".

John W. Harman
Director, Food and
Agriculture Issues

List of Requesters

The Honorable Mark O. Hatfield
Chairman

The Honorable Robert C. Byrd
Ranking Minority Member
Committee on Appropriations
United States Senate

The Honorable Thad Cochran
Chairman

The Honorable Dale L. Bumpers
Ranking Minority Member
Subcommittee on Agriculture, Rural Development,
and Related Agencies
Committee on Appropriations United States Senate

The Honorable Bob Livingston
Chairman

The Honorable David R. Obey
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Committee on Appropriations
House of Representatives

The Honorable Joe Skeen
Chairman

The Honorable Richard J. Durbin
Ranking Minority Member
Subcommittee on Agriculture, Rural Development,
Food and Drug Administration, and Related Agencies
Committee on Appropriations
House of Representatives

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**Figure 1: Planned Expenditures for the Delta Teachers Academy,
Fiscal Year 1995**

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Abbreviations

GAO General Accounting Office
USDA U.S. Department of Agriculture

Scope and Methodology

To obtain background information on the Delta Teachers Academy, we interviewed officials and reviewed reports and documents and from the U.S. Department of Agriculture's Office of Inspector General and the Cooperative State Research and Education Extension Service; the Department of Education's Office of Educational Research and Improvement; the National Education Goals Panel; state departments of education in Mississippi, Louisiana, and Illinois; Mississippi State University's National Center for Technology Planning; Michigan State University's National Center for Research on Teacher Learning; and the National Council for Accreditation of Teacher Training.

To describe the Academy program, we reviewed the National Faculty's grant applications, plans, budgets, status reports, schedules, participant workbooks, and institute agendas and interviewed the National Faculty officials.

To obtain the views of Academy participants:

- We reviewed summary statistics provided to us by Westat, Inc., for the 1994 training session evaluations from teachers who began participating in the Academy in 1994. The evaluations were completed by 292 (100 percent) of these participants in the 1994 summer institutes and 842 (84 percent) of the 1,003 participants in the 2-day sessions.
- We surveyed 11 teacher participants by telephone. The National Faculty provided a list of 344 teachers who participated in the Academy in 1994. From this list, we randomly selected 35 participants to survey. After three attempts to contact each of the 35 participants, 11 participants responded. These participants came from six of the seven Delta states and had attended both a summer institute and an academic session.
- In addition, we judgmentally selected and interviewed by telephone three teachers. These teachers were selected from a list of 25 teachers identified by the Faculty as teachers who had introduced substantive changes into their classrooms as a result of participating in the Academy program.

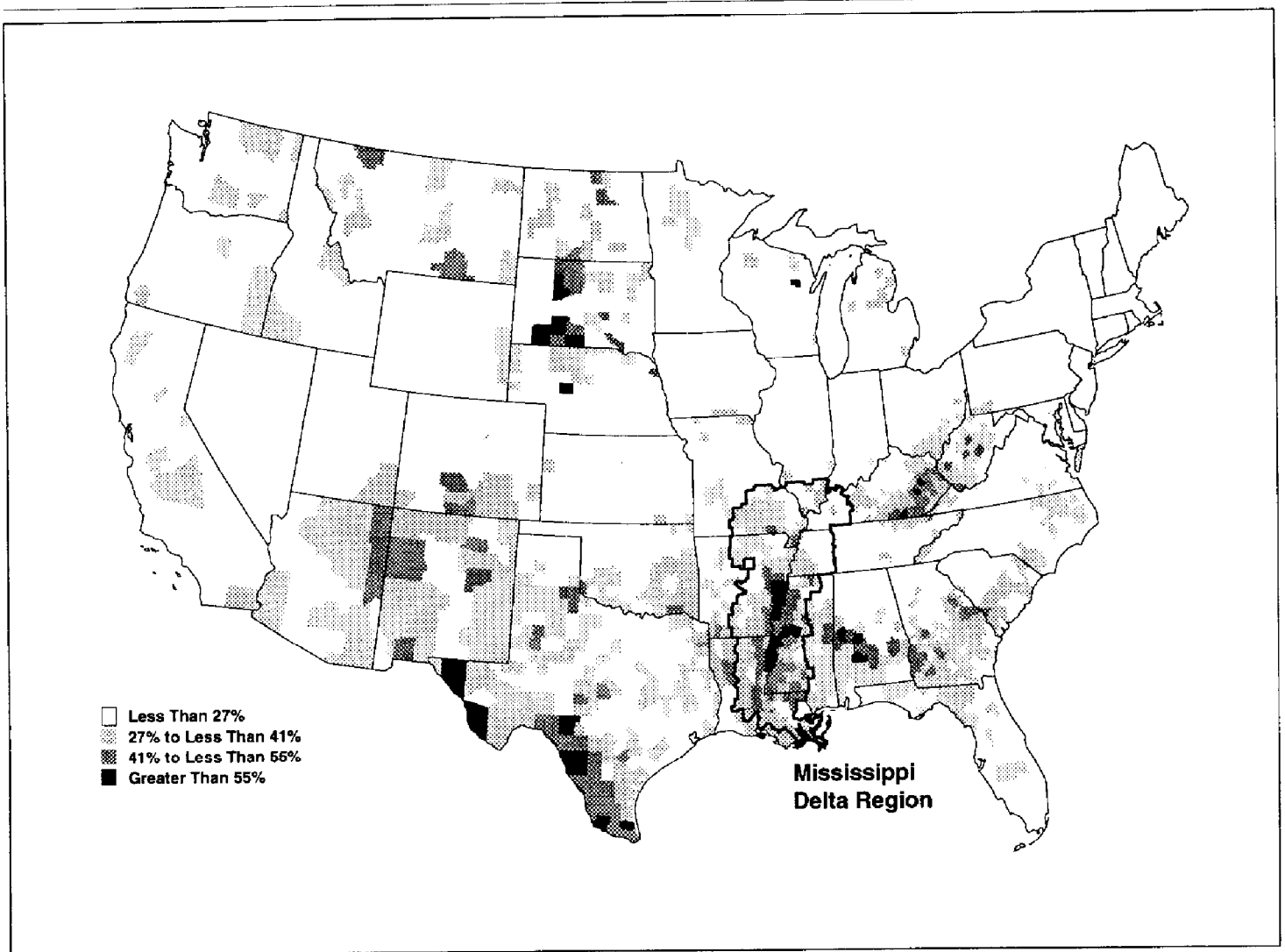
To understand the issues involved in evaluating the Academy program, we reviewed Westat's proposals for its (1) survey of 90 teacher participants and (2) in-depth evaluation of Faculty programs and discussed evaluation issues with Westat officials.

We did not evaluate the impact of the program on the participants' students because of the methodological difficulties involved in such

Appendix I
Scope and Methodology

evaluations. We also did not verify the number of participants and sessions provided by the National Faculty.

Children Living in Poverty, 1990



Source: GAO's analysis of data from the Bureau of the Census.

Mean Scores of Teacher Evaluations for 1994 Summer Institutes and Academic Sessions

Tables III.1 and III.2 show the mean scores, by question, on the evaluations completed by teachers who began participating in the Academy in 1994. The total number of evaluations completed was 1,134; 842 were for academic sessions, and 292 were for summer institutes. The response categories for the evaluations were the following: 1 = strongly disagree, 2 = disagree, 3 = agree, and 4 = strongly agree.

Table III.1: 1994 Academic Session Evaluation Results

Evaluation statement	Mean
Impacts on the teacher	
My understanding of my subject area has increased	3.46
My enthusiasm for teaching has increased	3.41
I have already thought of ways to change my classroom teaching as a result of this session	3.43
Assessment of the academic sessions	
The National Faculty scholar was an effective teacher	3.72
The National Faculty scholar was particularly adept at stimulating and leading discussions	3.68
The National Faculty scholar respected the views and contributions of program team participants	3.78
The readings/materials used by the scholar enhanced my understanding of the issues addressed during the session	3.54
Effort and progress	
I contributed to the success of the session by preparing thoroughly for it and participating actively in it	3.43
The program team's goals and expectations for this session were realized	3.46

Note: In 1994, teachers participated in a series of 2-day sessions during the academic year.

Source: Westat, Inc.

**Appendix III
Mean Scores of Teacher Evaluations for
1994 Summer Institutes and Academic
Sessions**

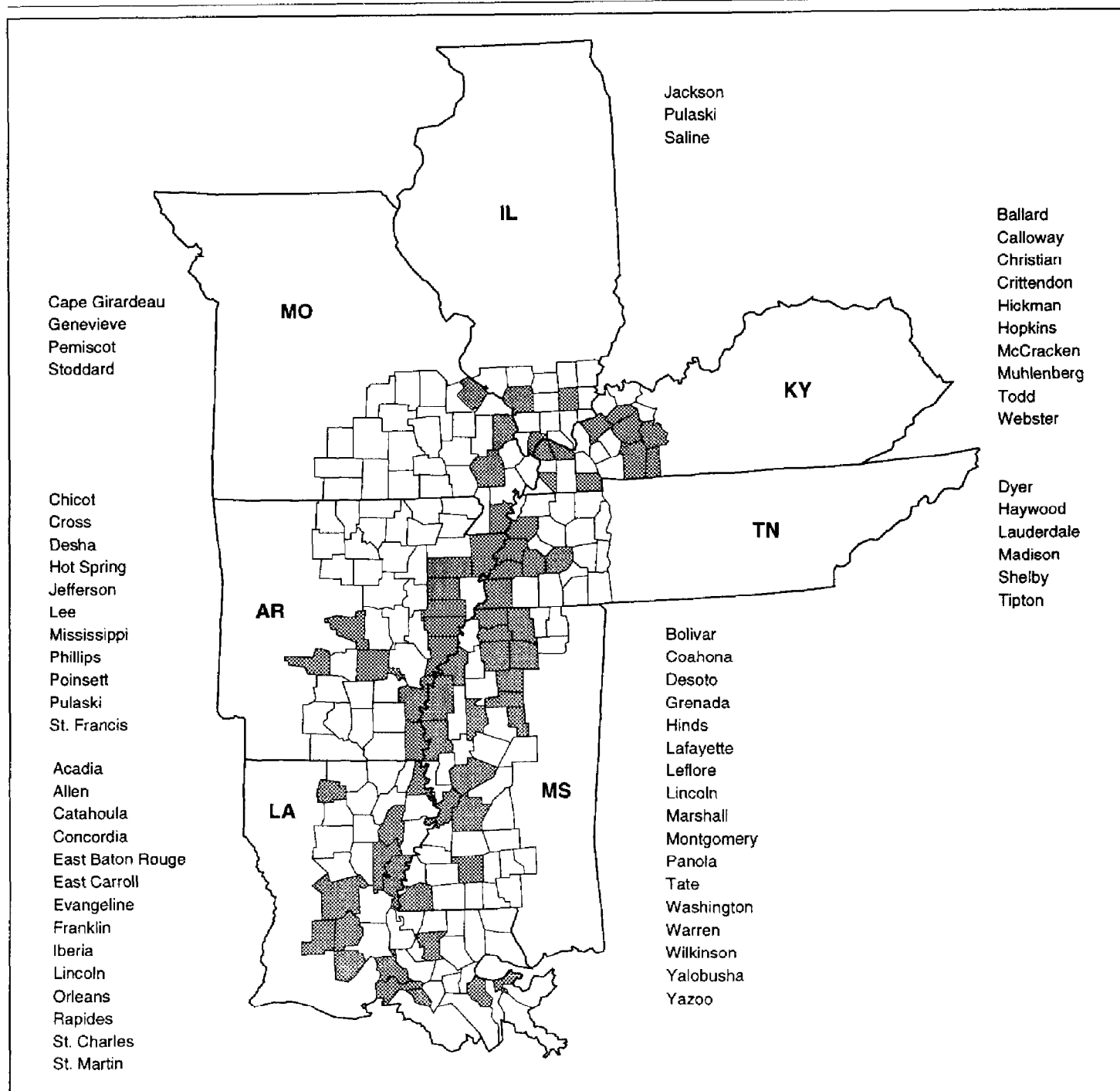
Table III.2: 1994 Summer Institute Evaluation Results

Evaluation statement	Mean
Impacts on the teacher	
My understanding of my subject area has increased	3.54
My understanding of a related subject has increased	3.56
My perspective has been broadened by the Academy	3.76
Interaction with scholars has reinforced my sense of professionalism	3.76
My enthusiasm for teaching has been renewed	3.68
This experience has diminished the isolation of being in the classroom	3.50
I have a heightened regard for my colleagues as resources for exchanging ideas and improving my teaching	3.70
I have already thought of ways to change my classroom teaching as a result of this session	3.61
I plan to continue studying the subject areas with other program participants outside the formal structure of this summer institute	3.61
Assessment of the academic sessions	
The plenary sessions were of significant value to me	3.67
The scholars were effective teachers	3.79
The scholars were particularly adept at stimulating and leading discussions	3.76
The scholars respected the views and contributions of the associates	3.84
The readings/materials used by the scholars enhanced my understanding of the issues addressed in institute sessions	3.56
The readings and preparation required for the summer institute were challenging but reasonable and manageable	3.01
I benefited from the contribution and participation of my colleagues	3.77
The summer institute was well planned and organized	3.67
The schedule for the summer institute was well designed	3.62
Services provided by the National Faculty were of high quality	3.76
Services provided by the universities were of high quality	3.54
The overall quality of the summer institutes was excellent	3.33

Note: Each summer institute was 2 continuous weeks.

Source: Westat, Inc.

Counties and Parishes of Teacher Participants, 1994-95



Note: Shaded Delta counties are those that had teacher participants in 1994-95.

Source: GAO's analysis of data from the National Faculty.

Comments From the National Faculty



Michael L. Lomax
President

June 6, 1995

Mr. John W. Harman
Director, Food and Agriculture Issues
U.S. General Accounting Office
Washington, D.C. 20548

Dear Mr. Harman:

Thank you for the draft of the GAO's report on the Delta Teachers Academy. We find the report's account of the Academy and its current status to be both accurate and fair.

Moreover, we have found the process of providing information to the GAO for the report to be a constructive one. In particular, responding to the requests of your associate, Ms. Beverly Peterson, has led us to develop new means of data collection and summary that we believe will help us to better monitor our progress.

Although the participants' views included in the report are generally very positive, we also appreciate the comments from several teachers about aspects of the Academy experience that might be improved.

In sum, the GAO report not only confirms our belief that the Delta Teachers Academy is valuable to participating teachers and their students, but also will help us to do an even better job in the future.

Sincerely,

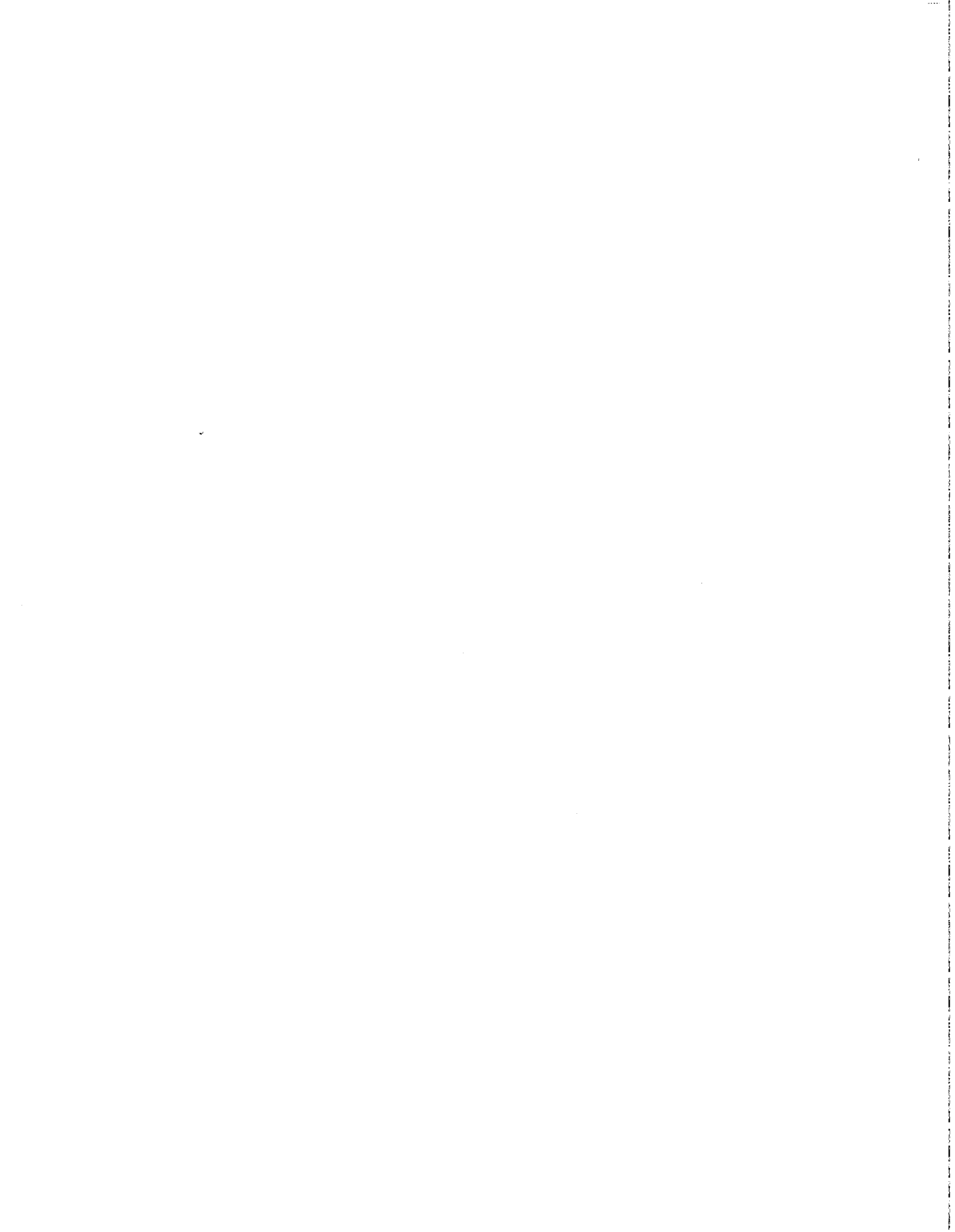
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