NSF REPORT ON STEM EQUITY EVALUATION WORK – YEAR 1

The purpose of this section of the report is to describe the results of data collection from major activities during the first year. The evaluation was designed to accomplish three major goals: (1) to provide useful and actionable feedback for the STEM Equity Pipeline project team regarding the quality and effectiveness of training and services; (2) to synthesize feedback on the tools and processes developed as part of this project; and (3) to provide evidence of implementation success and impact on student and teacher outcomes. The questions that were specified for the evaluation were as follows:

(1) What do the facilitators and local educators most need to know about or learn through the various methods of assistance?

(2) Do the training services meet standards for effective delivery and optimal impact on participants' learning?

(3) How do the facilitators and local educators use what they learn/obtain from the trainings and services? Do facilitators feel empowered to provide the services for which they have been trained?

(4) Has the VLC been established in a way that can operate effectively?

(5) Is the operation of the VLC benefiting a significant portion of the intended audience?

(6) Are the services provided through the program associated with increased levels of female participation in relevant coursework and in STEM career paths?

During the first year, we collected feedback data on all major events and reviewed logs of all interactions between state facilitators and state contacts that were submitted by the facilitators. The latter provided us with information regarding the level of contact and the content of interactions. Evaluation data were also collected following each of the three webinars that were conducted during the first year (data not yet available on webinar conducted June 16, 2008). For each event, a separate data collection form was developed that was designed to capture data on the particular goals and specified outcomes for the event or activity. For question 6 above, we initiated the collection of relevant data from the states, but this process is ongoing and has required intensive work to obtain the data needed, clean and organize it, and facilitate the interpretation so that state facilitators and leaders can use it as part of their 5-step process: review performance data. This is discussed in more detail in the last section. Table 1 presents a summary of the evaluation work during the first year. The next section provides summary information on project activities and evaluation results. It begins with a review of the facilitators' training that was held in November 2007. Following that, there is an overview summary of all the state team events that took place and a summary of the results from the National Leadership Institute held in April 2008. Detailed summaries of each separate national and state event (including statistics on each aspect of the events collected through feedback surveys) are included in the Appendix. At the end of this section, there is a summary regarding data collection efforts undertaken to provide the baseline information needed to answer Question 6 above.

Funded by a grant from the National Science Foundation, GSE:EXT, STEM Equity Pipeline Project, Grant No. HRD-0734056

Table 1 Completed and Ongoing Evaluation Activities for Year 1

	Nov 07	Dec 07	Jan 08	Feb 08	Mar 08	Apr 08	May 08	June 08
Facilitator Training	3							
CA State Team Meeting			3					
MO State Team Meeting				3				
WI State Team Meeting				3				
Natl. Leadership Institute						3		
OK State Team Meeting						3		
IL State Team Meeting						3		
WI State Meeting on 5-Step Process								3
Webinar: STEM Equity Pipeline: What and why?					3			
Webinar: Assessing Effectiveness							3	
Webinar: Building Effective Program Assessments								3

Summary of Evaluation Results from State and National Events

Facilitator Training

As a first step to assisting five states increase the number of female students entering careers in science, technology, engineering, and math (STEM), the STEM Equity Pipeline project identified five facilitators to work with state teams. To prepare the facilitators for this work, the project conducted an initial training session held on November 29-30 2007 to review the project's overall goals, the role of the state teams, and the facilitator's role in working with the state teams.

MPR Associates, Inc, was contracted by the National Alliance for Partnerships in Equity to evaluate the STEM Equity Pipeline project. To this end, and in conjunction with the principal investigator of the project, Mimi Lufkin, two evaluation tools were created for the initial training. The first was a questionnaire designed to ascertain facilitators' knowledge, experience and familiarity with gender equity strategies and resources. The second was an evaluation survey of the training. A summary of the results is provided below, and a detailed report is included in the Appendix.

Overall, the training was very well received and facilitators learned a great deal about gender equity and their role in the project. While the majority of facilitators had little or no experience with CTE and STEM issues, by the end of the training they understood issues related to CTE and increased their awareness of where to find resources related to STEM. Survey results also indicated several items or topics needing follow-up or further attention. They include:

General increase in knowledge about gender equity, specifically:

- Knowledge of leading training curriculum for the elimination of bias and stereotyping
- Deeper understanding of 5-Step Process and Attribution Theory
- Perkins 4 and special populations
- Knowledge of resources identified by acronyms
- Understanding of how VLC will work

Facilitators wanted to know more about:

- Research on women in STEM
- State approaches to meeting accountability requirements
- Successful state practices related to encouraging women in STEM courses and careers (ideally with data as evidence of success)
- Perkins and 5-Step Process, Resources

Summary of Evaluation of State Events Conducted: First Year of STEM Equity Pipeline Project

At the end of each state's training session, facilitators administered surveys to state team members. The surveys asked them to reflect on the session's contribution to their understanding of the STEM Equity project's content, goals, and plans. Respondents were asked to indicate the degree to which they agreed with various statements and then were given the opportunity to write any additional questions or comments about the session. Questions varied from state to state, but all surveys included questions that asked whether the session reflected careful planning and organization, whether the session's content was useful to the work that the team members did, and whether the session gave them ideas of next steps to take as part of the STEM Equity Pipeline team. Most instruments also included questions about whether the inclusion of root causes in the discussion was useful, and whether the session increased their awareness of relevant data sources. One or two states asked additional questions about other presentation topics, such as professional development, trends in STEM, and the 5-step process. The average score across states for the various questions is presented in the table below. Feedback was positive in that members generally agreed that the training session was useful in all the aspects mentioned in the survey. Examples of responses to the open-ended questions follow in the survey results for the individual states. (Detailed summaries of each event are included in the Appendix.)

Table 2. State team members' average responses to training session survey questions (1 = Strongly Agree; 4 = Strongly Agree)

Question	Average Score
Quality of Sessions	
Sessions were carefully planned/organized	3.7
Content was useful for work	3.6
Content Learning/Knowledge Development	
Understood STEM Equity project purposes/goals	3.4
Received ideas for next steps to take	3.3
Discussion of root causes was useful	3.2
Increased awareness of data sources	3.4
Other/Individual State Findings	
Increased awareness of professional dev. opportunities	3.3
Increased awareness of local/national trends in STEM	3.5
Increased understanding of the 5-step process	3.4
Increased understanding of STEM (WI only)	3.1
Increased ability to find/utilize Perkins data (MO only)	3.2
Helped to develop STEM Equity Pipeline plan (IL only)	4

State team training session feedback: Individual state results

California

On January 28, 2008, Mimi Lufkin, the state facilitator for California, convened the first state team session meeting in Sacramento. Over 60 state team members attended the session; of those, 40 completed the survey. Generally, state team members responded positively to the session: on average, they agreed that the format was useful, that the session increased their knowledge of gender equity issues, and that they had a clear understanding of the purpose and goals of the STEM Equity Pipeline project. About half of the survey respondents described the next steps they would take as part of the STEM Equity state team. Some of the responses are as follows:

- Connect with several individuals present to assist with legislation on education (including CTE), learn more about equity projects in the state, and inform the CA Commission on the Statutes of Women about the progress of the STEM project.
- Disseminate the "Chapter 6 Perkins Core Indication" tables (16, 17, 18, 19) to all community college occupational deans in my community college region, and to all regional coordinators in California.
- Begin looking at my region's allied health retention strategies by race/color and linguistic/cultural divide (I had looked at linguistic but not racial issues)
- Forward related event announcement and weblinks to the Director for posting online at the SharePoint site.

Suggestions provided by state team members included ensuring additional K-16 educator involvement and getting additional training on the Five-Step process. Finally, general comments about the session were overwhelmingly positive. State members indicated it was an important and excellent meeting.

Illinois

On April 28, 2008, Freda Walker, the state facilitator for Illinois, convened the first Illinois team session meeting in Normal, IL. 13 state members attended the session; of those, 11 completed the survey. Generally, members found the discussion of root causes as well as professional development opportunities helpful. According to survey response, the session also helped the members identify a plan for the team and gave them ideas of what they could do as part of it. Three respondents provided additional comments; all were positive, such as "We got everybody up to speed very quickly in a short time."

Missouri

The state facilitator for Missouri, Louise Chiatovich, held two different sessions for her state, one from February 26-27 (with 8 attendees), and one on February 28 (17 attendees). The second session differed from the first in that. The first session was the Five Step Program Improvement Process training with the eight regional Career Education Coordinators from the Missouri Center for Career Education. The second session included members of the entire State Team who will be serving in an advisory capacity to the project. Team members attending the first session felt that they gained knowledge regarding data collection and evaluation for the STEM Equity project. Team members from the second session confirmed that they found the format of the presentation useful and that they increased their knowledge

surrounding gender equity, as well as professional development opportunities. In addition, they had a clear understanding of the METS Equity Project and their roles in it. With regards to the next steps they would take as a part of the project, some specific actions given were:

- Share basic info with curriculum directors at schools. Get website to directors/interested personnel.
- Pilot the 5-step process with a school under an improvement plan. Present to groups as resources allow.
- Provide list of online resources for team to explore as a jigsaw learning process; meet with CTE director to identify schools and begin a dialogue.

Finally, for both sessions, many of them wrote positively of the session when asked for additional comments, such as "Very effective presenters; well thought-out materials"; "Useful information that can be used to address a very real need in Missouri/US".

Oklahoma

The state team training session for Oklahoma was led by Bonnie Bostrom on April 16, 2008 in Oklahoma City, Oklahoma. 54 people attended the session, and of those, 38 completed the evaluation survey at the end. In general, state team members considered the session useful. Team members found the format useful and increased their knowledge surrounding gender equity, as well as professional development opportunities. In addition, team members had a clear understanding of the STEM Equity Project and their roles in it. Less than half of the members indicated specifically the next steps they would take, but some notable responses included:

- Use the data resources; I will encourage my fellow instructors to recruit women into their programs.
- Be more aware of how I react to my students (male vs. female). With recruitment, I plan to aim at a much younger audience.
- Put a link to the STEM Equity website on the ODCTE website.
- Include equity training in instructor workshops

Wisconsin

Wisconsin's initial state team training session was held in Madison, Wisconsin, on February 8, 2008. Howard Glasser, the state facilitator, led the discussion. Out of the 15 people who attended the session, nine completed a survey. Based on the responses, state team members considered the session useful. They approved of the format and increased their knowledge surrounding gender equity. On average, they also indicated that they knew how to find information and use the SharePoint site at the conclusion of the session. Almost everyone that filled out a survey described the next steps they would take. Response included:

- I will be cognizant of additional groups that may benefit from involvement in this project.
- I will continue to outreach to others about the project.
- I will try to use knowledge I gain to help educators promote STEM Skills. I will try to help us determine goals and ways to meet those goals.

While on average, respondents agreed with the statement "I understand the purpose and goals of the STEM Equity Project", two state members made specific comments about needing to clarify them further.

The second state team meeting was held from June 11-12, this time led by both Howard Glasser and Mimi Lufkin (Project Director). This meeting focused on training participants in how to use the Five Step Program Improvement Process. Out of 37 attendees, 25 filled out a survey. On average, every single scale question that was asked received a positive response (range: 3.3-3.8). According to these responses, state members felt that the meeting contributed to their understanding of the Five Step Process, of the resources available to help locals identify solutions, and professional development needs in the state. When asked for additional comments and concerns, however, the state members voiced a wide variety of opinions, reflecting their respective backgrounds. Some responses were:

- We are still in the building awareness phase – wish we were further along, but I am very happy with the team members.
- I am concerned about Capacity and Accountability. Without strong state accountability for district involvement, I will not have support for involvement from my district. Since my capacity is maxed, involvement will need a rearrangement of priorities so I can spend time with this project - My passion is only part, my superintendent will need encouragement for my involvement.
- As a representative of the state science fair I'd like to recommend the development of an industry/university research resource database. It would be valuable for me, as an educator, to refer female (or male) students to an individual that could mentor them through a science or engineering fair project.

National Leadership Institute

As part of the STEM Equity Pipeline project, leaders from each of the five participating states (California, Illinois, Missouri, Oklahoma, and Wisconsin) participated in a national meeting, the NAPE STEM Equity Leadership Institute, on April 9, 2008 in Washington, D.C. Twenty-eight people from state teams attended the session.

At the conclusion of the session, state team members were asked to evaluate the session's format and content, as well as its contribution to their understanding of the STEM Equity project and plans for their respective states. Respondents were also given the opportunity to describe the next steps their team will take, and how they saw the work developing over the next year and a half. With the exception of the open-ended question, team members were asked to rate each question on a scale of "1" (Strongly Disagree) to "4" (Strongly Agree). The original questionnaire, along with the average response for each question, is included in the Appendix. California team members did not have time to complete the survey and are not included in these averages. Six members from Illinois, 8 members from Missouri, 5 from Oklahoma, and 5 from Wisconsin filled out the survey.

This report is organized into three sections. The first provides a summary of evaluation findings from the scale questions. The second section concerns the responses given in the last, open-ended question. The third and final part of the report is the conclusion.

State team members' average ratings

Generally, response to the session's format was positive. All state members that filled out the questionnaire either agreed or strongly agreed that the institute reflected careful planning and organization, and that the meeting's content would be useful in his/her work related to gender equity. On average, respondents agreed or strongly agreed (average rating 3.5) that they obtained ideas about how to implement the project in their own states from learning about the activities of other states. Overall, they also knew who the experts are and how to tap them for assistance with the project (average rating 3.3).

However, respondents were more mixed over whether they actually met and got to know team members from other states (average rating 2.9).

With regards to the STEM Equity Pipeline project itself and their roles in it, state team members responded to most questions in the affirmative. On average, they agreed that they had a clear understanding of the roles and responsibilities of the state team, that they got a good start on their state implementation plan, and that they had specific ideas about what they would do next on the project (average score 3.0-3.2). They also generally agreed that they knew how to navigate the Virtual Learning Community/VLC and how to use its resources (average score 3.1). However, a sizable proportion of the state members did not have a clear understanding of the process of collecting outcome data for the evaluation or their responsibilities in that task (average score 2.7).

Open-ended responses

The majority of the respondents (15 out of 23 total) responded to the open-ended question asking, "In the space below, please write a brief description of what your team will do next on the project and (if possible) how you see the work developing over the next year and a half". Many of them identified setting up the next meeting for their state team as the next task. Some other notable next steps named were:

- Work on a goal for outcomes – then do a pilot 5-step in one school
- Develop professional development calendar based on data.
- Identify what STEM means in Wisconsin.

Other respondents took this opportunity to establish that their team was still in a formative state. Some of these comments include:

- Still establishing procedure to move ahead.
- Reconsider who is on the state team.
- We are struggling with our state plan…we have little time to hash this out.

Based on the survey responses, there were several positive aspects of the institute meeting. All respondents agreed that it was carefully planned and will be useful to them in their work related to gender equity. On average, they also obtained project implementation ideas from other states and found that their respective state teams got a good start on their own plans. Response was more mixed, however, when asked whether they had a clear understanding of their role and the process of collecting outcome data. When asked the specific next steps they would take as state team members, many of them mentioned convening additional meetings for their state.

NAPE STEM Equity Report to NSF: Data Collection Efforts

The STEM Equity Pipeline Project is intended to increase female engagement in secondary STEM Career Cluster programs that prepare young adults to transition to postsecondary education and, ultimately, to complete a higher education degree. Study activities call for collecting statewide data on the number of female students participating in and completing STEM Career Cluster programs in targeted programs within study states. Student level data, in the aggregate, and disaggregated by sex, race-ethnicity, socio-economic status, and disability status, will be used to assess statewide outcomes and to establish baseline performance levels for identified providers. Local educators, trained by state STEM Equity facilitators, will use compiled information to identify performance gaps for females enrolling in STEM Career Cluster programs and to adopt program improvement strategies to close any observed gaps.

Statewide data on females participating in and completing STEM Career Cluster programs are routinely collected by states to comply with federal reporting requirements data contained in the *Carl D. Perkins Career and Technical Education Act of 2006* (Perkins). The Act requires states to collect and report annual performance data on males and females participating in secondary and postsecondary career and technical education (CTE) programs that lead to employment in occupations that are nontraditional for their gender.[1] Although differences in state population definitions and measure constructions invalidate interstate comparisons, performance data within states can be used to support intrastate comparisons of local provider performance.

Data Collection Procedures

Project startup activities call for collecting baseline Perkins data on female participation in, and completion of STEM Career Cluster programs within study states. This includes aggregate, statewide performance data, averaged across all providers in the state, as well as individual, provider level data. To compile this information, beginning in December 2007, MPR researchers began contacting state Perkins data analysts to request state Perkins data on CTE concentrators[2] participating within state-defined STEM career clusters,[3] and on two Perkins nontraditional measures for secondary and postsecondary programs.

Specifically, MPR requested state administrators to supply raw data used to calculate a state's nontraditional participation and completion measures for the 2004-05, 2005-06 and 2006-07 program years. These data consist of counts of the number of underrepresented students participating in or completing CTE programs preparing students for employment in nontraditional occupations, along with the number of all students (male and female) participating in identified programs. States were also

[1] A nontraditional occupation is one in which males or females comprise less than 25 percent of the workforce.
[2] Although state definitions may vary, a CTE concentrator generally is defined as a secondary student who has completed at least half of the credits within a state-recognized CTE program sequence. At the postsecondary level, a CTE concentrator includes students who have completed at least 12 credits of a CTE program sequence consisting of 12 or more academic and technical credits that terminates in the award of an industry recognized credential, certificate, or a degree, or who (2) completes a short-term CTE program sequence of less than 12 credit units. The federal Consolidate Annual Report (CAR) form requires that states submit unduplicated counts of CTE concentrators participating in the 16 career clusters identified by the States' Career Clusters Initiative.
[3] The federal Consolidate Annual Report (CAR) form requires that states submit unduplicated counts of CTE concentrators participating in the 16 career clusters identified by the States' Career Clusters Initiative. States with program areas broader than the 16 career cluster areas, or with programs that cut across more than one cluster, are required to select an appropriate cluster in which to count the student.

Funded by a grant from the National Science Foundation, GSE:EXT, STEM Equity Pipeline Project, Grant No. HRD-0734056

requested to supply information disaggregated by sex, race-ethnicity, and special population status.[4] Since states are required to submit this information to the U.S. Department of Education on an annual basis, to comply with Perkins reporting requirements, it was anticipated that states would have little difficulty supplying these statistics.

Obstacles to Data Collection

After repeated requests, MPR researchers were able to obtain Perkins performance data for secondary and postsecondary providers from three states—Missouri, Oklahoma, and Wisconsin. Researchers also were able to obtain secondary, provider level data from California, and, as of the time of this report, were awaiting data from Illinois. Difficulty in obtaining state data can be attributed to the following factors:

1. *Structure of State Management Information Systems*—State data analysts in four states were initially unable to extract provider level data from their state information systems to respond to researcher requests. Although school districts and colleges submit performance reports to the state agency on an annual basis, these data were either not integrated into state level data systems, were entered in a way that required analysts to develop specialized programs to extract the information, or were not maintained in active files once the reporting year had passed. As a consequence, data analysts were forced to delay data production until appropriate programming code was written and/or historical performance data were located and uploaded.

2. *Inaccuracies in State Reporting*—Researchers discovered that, in two instances, state agencies were using population definitions and/or data collection strategies that produced inaccurate counts of underrepresented students. These errors meant that states have been reporting inaccurate data to the U.S. Department of Education since the authorization of the 1998 Perkins Act. For example, measure construction in one state was based on all concentrators participating in nontraditional coursework, irrespective of whether they were from an underrepresented group (the numerator), relative to all concentrators participating in CTE programs in the state (the denominator). In another instance, a state incorrectly required that students be an 11th or 12th grade concentrator to be included in the state's participation measure. While both states agreed to rerun data for project purposes, time required to produce new data runs have delayed project reporting.

3. *Inability to Process Data Requests*—Data requests directed to state data analysts coincided with states' efforts to draft new, five-year Perkins plans for submission to the U.S. Department of Education by the April 1, 2008 deadline. Following state plan submission, states were required to respond to federal questions about their plan, which took precedence to the STEM Equity Project request. Additionally, cutbacks in state education department staffing have reduced data analysts' ability to respond in a timely fashion to external requests. Ultimately, MPR researchers were forced to enlist the project director, Mimi Lufkin, to call state directors of CTE to request that analysts process data files.

4. *Lack of Communication among Secondary and Postsecondary Systems*—State agencies designate a single state agency, typically the secondary Department of Education, to serve as the state fiscal agent for Perkins. Administrators in this agency typically communicate directly with OVAE staff, relaying messages to administrators in other education agencies when warranted. MPR researchers found that there was limited communication among secondary and postsecondary Perkins staff, which delayed

[4] Special population status includes students who are: disabled; economically disadvantaged; a single parent; a displaced homemaker; Limited English proficient; or who have migrant status

receipt of performance data. In one instance, MPR administrators were unable to obtain postsecondary performance data through its secondary state Perkins contact.

Although requests for performance data took substantial time to process, as of June 2008, MPR researchers had secured complete baseline for three of the five study states, obtained incomplete data for a fourth state, and extracted promises from state administrators in two states—one with missing data and one that had supplied inaccurate information—that data aligning with project (and federal) reporting guidelines would be submitted by mid-July 2008.

While state inability to submit performance data for local providers is disheartening, the response is indicative of the problems associated with improving student participation in CTE programs that prepare youth for nontraditional occupations. Although state staff acknowledge the importance of providing equitable access to CTE programs, state technical assistance efforts primarily focus on increasing the academic attainment of CTE concentrators, in part to ensure that schools meet their *No Child Left Behind* accountability targets. Increasing state performance on other measures, such as program completion and placement into advanced education or employment also receive relatively greater attention.

Researchers' inability to obtain access to provider data for the nontraditional measures also illustrates the challenges that local educators face in undertaking improvement efforts. Historically, state education departments have failed to analyze and act on nontraditional data reports submitted by local providers. The result is a one-way flow of information, with data collected by local providers fed to the state agency, which, in turn, compiles and forwards the information to the U.S. Department of Education. The absence of federal sanctions of chronically low-performing states has, over time, undercut the need for state agency administrators to take corrective actions, which, in turn, has diminished pressure on local providers to improve program performances. Lack of accurate data also has compromised provider ability to identify relatively high performing programs, which might provide examples of promising practices that might be adopted in other locations.

Using Data for Program Improvement

Not all the news is discouraging. MPR researchers were able to secure complete data files for three states as of June 2008, and are in contact with analysts in remaining states to obtain complete files. Thanks to researcher efforts, state analysis procedures for the nontraditional measures have been substantially altered in two study states, and it is anticipated that data reports in future years will provide a more accurate picture of actual performance of local providers at the secondary and postsecondary levels.

Perhaps most promising is that MPR researchers, in collaboration with the project director and STEM Equity state team facilitators, have succeeded in establishing a "Culture of Data" within participating states. Technical assistance provided to state administrators and local provider staff have helped participants to understand the correct way to collect and report data and how to analyze information to identify underperforming and outstanding providers. Training services provided to local program staff, profiled elsewhere in this report, also have sensitized program participants on the need to collect data to document program outcomes.

MPR researchers will use base year data to establish benchmarks for statewide performance on the nontraditional measures. Though changes in the definition of a CTE concentrator and the construction of the nontraditional completion measure likely will undercut the use of prior year data for future analyses,[5]

[5] The 2006 Perkins reauthorization lowered the threshold for CTE concentration. Under the preceding 1998 legislation, a secondary CTE concentrator was a student completing three or more courses in a CTE program

initial collection efforts have succeeded in training STEM Equity Project and local provider staff on the core data elements needed to assess program success over time. And now that initial data collection challenges have been identified and addressed, it is anticipated that future collection efforts will produce more accurate information provided in a timely manner.

Year 2 evaluation activities focus on collecting accurate data on the number of female students participating in and completing STEM programs in providers benefiting from targeted technical assistance activities. Subsequent year data will be used to assess trends in student performance over time and relative to baseline data collected in Year 1, where accurate and appropriate. Annual statewide performance data will also be collected to assess individual provider performance relative to state averages.

NAPE STEM Equity Report to NSF: Webinar Evaluation Results

Table 3. Percentage of respondents indicating they strongly agree or agree with various statements about the STEM Equity Webinar: The STEM Equity Pipeline Project--What and Why? (March 19)

	Strongly Agree/Agree
1. The webinar reflected careful planning and organization.	96
2. The content of the webinar will be useful to me in the work I do related to gender equity.	92
3. I did not have any problem with the logistics of connecting to the webinar.	88
4. I understand the purpose and goals of the STEM Equity Project.	96
5. This session gave me ideas of how I can get involved in professional development or state-level activities.	91
6.I now have a better understanding of the status of women in STEM (Science, Technology, Engineering, Mathematics) in secondary and postsecondary education and in career fields.	96
7. This session increased my awareness of data and information sources.	92

Note: The response rate for these questions ranged from 47 to 54%.

Table 3 shows a very strong positive response for the first webinar delivered as part of the project. The slightly lower rating for the item on the logistics of connecting is still very high for a first-time effort. All of the other goals for the session seem to have been met to a high degree. There were no open-ended items on the survey for this webinar.

sequence, which, in most cases, was synonymous with program completion. Under the 2006 Act, secondary students need only complete 50 percent of course credits to qualify for concentrator status. The 2006 Act also bases the nontraditional completion measure on CTE concentrators completing a program sequence, as compared to CTE completers (often interpreted to mean graduating CTE concentrators) in the 1998 Act.

Table 4. Percentage of respondents indicating they strongly agree or agree with various statements about the NAPE Stem Equity Webinar: Assessing Effectiveness (May 21, 2008)

	Strongly Agree or Agree
1.The webinar reflected careful planning and organization.	97.1
2.The content of the webinar will be useful to me in the work I do related to gender equity.	90.6
3.I did not have any problem with the logistics of connecting to the webinar.	79.4
4.I understand the purpose and goals of the STEM Equity Project.	97.0
5.This session gave me ideas of how I can get involved in professional development or state-level activities.	78.8
6.I now have a better understanding of the role of evaluation in program implementation—the range of outcomes that can be measured and the methods that can be used.	93.9
7.I am now familiar with the Assessments of Women and Men in Engineering (AWE) and know how to access them if I want to explore using them.	97.1

Note: The response rate for these questions ranged between 51 and 54%.

The table above shows that the majority of those who responded to the feedback form on the webinar either agreed or strongly agreed with the statements made about the webinar. The lowest ratings were in getting ideas of how to get involved in professional development and problems with the logistics of connecting to the webinar. Those who responded to the open-ended question generally indicated that the information was useful and that they knew how they would put it to use in their own endeavors. A few thought that it was information they already knew and that there might need to be more differentiation of information for different levels of knowledge. One that indicated it was information she knew also said that she benefited from hearing about the practical applications of the tools presented.

Table 5. Percentage of respondents indicating they strongly agree or agree with various statements about the NAPE Stem Equity Webinar: Building Effective Program Assessments (June 16, 2008)

	Strongly Agree or Agree
1.The webinar reflected careful planning and organization.	93.5
2.The content of the webinar will be useful to me in the work I do related to gender equity.	90.3
3.I did not have any problem with the logistics of connecting to the webinar.	90.3
4.I now have a better understanding of the purpose, activities, and products of the AWE project.	100.0
5.This session helped me understand the various assessment products available from AWE.	96.8
6. I learned how to use many of the tools developed by AWE.	82.1
7.I gained new ideas about how I could use the AWE products in my own work or how I could help others use them.	86.2
8.I understand how we can customize the AWE instruments for our own use.	93.5

Note: The response rate for these questions ranged between 54% to 61%.

As will be noted from the results shown in Table 5, a very high percentage of the participants that responded to the feedback form agreed or strongly agreed with the statements about the quality and format of the webinar. The lowest ratings could easily be due to the limitation of a one-hour webinar, during which it would be most difficult to teach participants how to use the tools or give them a range of ideas on how to use them in their own work. Six participants provided information regarding what they'd like to know more about. Requests included to know more about how to adapt for specific purposes, how to use them for longitudinal work, and how to use them on a large-scale basis, for example, for a national organization.