

LSC Core Update

Evaluator Meeting Focus: Assessing the Quality of LSC Professional Development Programs

As LSC evaluators collect and analyze data to address the six core evaluation questions, they routinely view the program through a variety of lenses. The lens may be “close-up” — e.g. when evaluators observe an individual professional development session; at other times, the lens “zooms out” as data from questions, interviews, and professional development observations are examined to address a larger core evaluation question, such as “What is the overall quality of the LSC professional development activities?”

Criteria for assessing an individual professional development session are quite distinct from the criteria evaluators use in assessing the overall quality of the professional development activities. Any one professional development session may not address all of the purposes of the LSC. For example, sometimes professional development programs begin by concentrating on deepening teacher content knowledge and postpone until later helping teachers think about classroom applications. Rather than rating a session lower because it didn't do something it never set out to do, in the core evaluation individual professional development **sessions** are evaluated in relation to their particular purposes.

It's a different story when the evaluator is asked to assess the **overall** quality of the professional development activities. LSC programs are held accountable for achieving all of the important goals of the LSC. The recent evaluator meetings focused heavily on the criteria for assessing LSC professional development programs. Evaluators were able to practice applying these criteria to the evaluation of hypothetical LSCs, using science and mathematics project vignettes

created by HRI. Evaluators focused on five areas to consider in assessing the overall quality of the professional development program. These areas included two enabling characteristics and three key functions of LSC professional development activities. In consultation with NSF and project evaluators, HRI developed a list of questions to consider when assessing each of the five areas; these are detailed below.

Enabling Characteristics

Two areas have been identified as enabling characteristics for a high-quality professional development program:

- having well prepared professional development providers, and
- creating an environment in which teachers are able to be both learners and reflective practitioners.

By themselves, these factors do not create teacher learning, but they create the conditions which make teacher learning more likely. Questions to consider include the following:

Assessing the preparedness of professional development providers:

- Is there a shared vision of high-quality science and mathematics education and the professional development needed to achieve it?
- Has there been sufficient orientation to program goals, strategies, and the needs of participants?
- Have leadership roles/expectations been communicated effectively?
- Has there been appropriate attention to the development of leadership content and the skills needed to carry out professional development roles?
- Is there adequate support for professional development providers as they carry out their roles?

Assessing the quality of the culture of professional development activities:

- Is there an atmosphere of trust, respect and openness to ideas?
- Is there shared dialogue and collaboration among participants? between participants and facilitators?
- Do participants see the activities as relevant and useful to them?

Key Functions

Having established the right conditions for effective professional development, the three “key functions” which NSF expects every LSC to address are: (1) enabling teachers to deepen their understanding of the mathematics/science content addressed in the instructional materials they are expected to use in their classes; (2) helping teachers learn how to use the designated instructional materials and appropriate pedagogy to develop students' conceptual understanding of mathematics/science; and (3) providing teachers with support as they implement the instructional materials in their classrooms.

Questions to consider include the following:

Assessing the quality of efforts to deepen teachers' understanding of the content addressed in the instructional materials:

- Are appropriate time and emphasis given to disciplinary content?
- Is the disciplinary content addressed by the program: (a) matched with teacher needs? (b) presented accurately and accessibly? (c) sufficiently integrated throughout the professional development?
- Is the attention toward key concepts/disciplinary areas well balanced?
- Does the program ensure that teachers who need disciplinary content get it?

Assessing the quality of efforts to help teachers learn how to use the designated instructional materials and appropriate pedagogy to develop students' conceptual understanding:

- Are appropriate time and emphasis given to having teachers explore and become conversant with the designated instructional materials?
- Does the professional development highlight the key conceptual understandings underlying the instructional materials?
- Are appropriate time and emphasis given to professional development in pedagogy, including: (a) attention to how students learn, (b) addressing the needs of diverse learners and (c) using effective assessment strategies?
- Does the professional development program model effective pedagogy?
- Does the professional development program make effective pedagogy explicit?

Assessing the quality of support provided to teachers as they implement the instructional materials in their classrooms:

- Is continuing support well matched to participant needs?
- Does the program have sufficient opportunities and encouragement for teachers to reflect upon and discuss their experiences in the course of implementation?

Evaluators spent time at the regional meetings talking about examples of common "flaws" or lapses in quality that might occur. In the area of mathematics/science content, for example, the program might focus almost exclusively on pedagogy, or the disciplinary content might be presented as isolated facts/concepts unconnected to the "big ideas" of the discipline. In the area of helping teachers use the designated instructional materials, lapses in quality might include either not modeling effective pedagogy, or modeling but not explicitly discussing effective pedagogy; ignoring issues related to how students learn the particular content area; or failing to provide time for teachers to reflect on classroom implementation. Finally, in the area of support for teachers during implementation, prob-

lems might include lack of coaching/mentoring opportunities, or instructional materials/supplies not being available when needed.

Lead evaluators are responsible for conducting 3 of the 5-8 professional development observations required by the core evaluation. In addition, they will need to pull together the data from others' observations to assess the overall quality of the professional development program when they write the core evaluation report.

District Policies and Practices

While core evaluation Question I focuses on the quality of the LSC professional development, Questions V and VI look at the program from the perspective of supportiveness of context and sustainability of LSC reforms. At the beginning of each project, and again in the final year, participating districts are asked to provide information about district policies and practices. In the intervening years, PIs are expected to keep themselves informed about any changes in these areas. Each year, PIs and lead evaluators are asked to work together to "rate" the extent to which policies and practices in the participating districts facilitate or impede the LSC reforms. The evaluator then uses those ratings, in conjunction with other data about how the LSC is playing out in the districts, in reporting on support for the LSC reforms and the likelihood that they will be sustained beyond the grant period.

The 1998-99 Data Collection Manual has 3 sections devoted to "Project Plans and Contexts", one for beginning projects, one for projects in their "middle" years, and one for projects in their final year. In each case, PIs are asked to complete a "District Context Worksheet" for each district (or a sample of 3 representative districts if the project includes more than 3). PIs will also be interviewed by the lead evaluator each year about how the LSC is addressing district context issues. In addition to providing information needed for the core evaluation, NSF's expectation is that focusing on the con-

text for standards-based mathematics/science education, and the major barriers to reform, will help PIs decide whether changes are needed in the project design/strategies to increase the likelihood of systemic reform.

Among the questions PIs are asked to consider:

1. Are district scope and sequence documents well-aligned with standards-based instruction? Do teachers know they are expected to use these documents in planning instruction?
2. Do the district assessments provide incentives for teachers to use standards-based curriculum, instruction, and assessment?
3. Is there a system in place for providing teachers with the necessary materials and supplies in a timely fashion?
4. Are other reforms in the district consistent with the LSC reforms, emphasizing teaching for understanding and high expectations for all students?
5. Do school schedules provide adequate time for hands-on, investigative mathematics/science? Time for teachers to plan mathematics/science instruction individually and with their colleagues?
6. Are various stakeholders (principals, central office administrators, parents, teacher unions, etc.) supportive of mathematics/science reform?
7. Are there systems in place for garnering and maintaining support from stakeholders? For on-going monitoring and maintaining the alignment of district policies and practices with the mathematics/science reform vision?
8. Are there incentives in place for teachers to participate in ongoing mathematics/science professional development?
9. What is the project doing to ensure institutionalization of the LSC reforms in the participating districts?

Send us your questions about the LSC core evaluation system. Questions of general interest to the LSC community will be answered in this newsletter.

Q: I understand that the core evaluation data collection year is September 1 - August 31. If the first year of a project is a partial year, are we still responsible for collecting all of the core evaluation data?

A: Projects beginning in the spring of 1999 need to do the full round of spring data collection, including administering questionnaires to all principals and a sample of teachers in the project, and having "certified" observers conduct observations of a random sample of 10 classes. However, new projects need **not** conduct the full complement of professional development observations; two observations conducted by the lead evaluator during the period from project award to August 31 will suffice.

Q: I thought HRI selected a sample of 300 teachers for questionnaires, but our project received 307. Is this a mistake?

A: The current sampling design involves drawing a random sample of 300 teachers from each project each year for questionnaire administration, and then a subsample of those for observations and interviews. Occasionally there are not enough "treated" teachers in the random sample of 300 to satisfy the sampling algorithm. In those cases, HRI randomly selects additional treated teachers for observations and/or interviews and adds them to the 300 for questionnaire administration, which explains why a project may receive a sample of 305 or so when they were expecting 300.

Q: We got our sample and there are 12 teachers to be observed. I thought only 10 were required per year.

A: NSF has indicated that if a project does not complete the required number of classroom observations or teacher interviews during the data collection year, the balance will be added to the following year's requirement. If a project completed 8 out of 10 classroom observations in 1997-98, then they will need to do 12 in 1998-

1999.

WEB UPDATE

All Core Evaluation Data Now Submitted Via the Web

N SF is requiring that, starting with the 1998-99 data collection year, all data be submitted via HRI's online data entry forms. Go to <http://www.horizon-research.com/LSC> and click on the "LSC Online Forms" heading.

All online forms may be filled out, submitted and recalled to be edited or changed later. You will now be able to fill out only part of a form by using the "Submit Partial Form" feature, complete it at a later date and then use the "Submit Complete Form" button. Note that at the end of the data collection year, only those forms which have been submitted using the "Submit Complete Form" button will be counted toward the total number received by HRI.

Lead Evaluator Section Added to LSC Website

T he new Lead Evaluator section on the HRI website serves two basic purposes: it allows lead evaluators to maintain a list of their projects' certified observers, and it provides a summary of each project's data collection activities. **Lead evaluators must create their project's observer list before any online data forms may be entered.**

Lead evaluators can access this section by going from the "LSC Online Forms" section to the "Lead Evaluator Section." Before they can enter data on the forms, lead evaluators will need to set up a list of their projects' observers (both classroom and professional development) by using the "Add Observer" form within the Lead Evaluator Section. Once added to the list, the observers will appear as choices in a drop-down menu on the project's online protocols. Classroom observers will be added to their project's list only if they are on HRI's list of certified observers. Please note that until the lead evaluator adds an observer to the project's certified observer

list, observations performed by that individual cannot be submitted as complete forms.

Lead evaluators can now use this section to provide an online record of their data submissions. For example, they can ascertain how many professional development observation protocols have been submitted for their project, and whether those protocols were partial or complete submissions. A "View Data" option allows Lead Evaluators to convert their projects' data into a spreadsheet.

FYI

Helping Principals Answer the Race/Ethnicity Question on the LSC Questionnaire

W e have gotten some calls from projects about the race/ethnicity question (#14) on the Principal Questionnaire, which has been reworded from last year's version to satisfy new OMB regulations.

The question is divided into two parts. The first part (14.a.) asks how many students are Hispanic or Latino and how many are not. The two columns should add up to 100%.

The second part (14.b.) asks for a racial breakdown of all students. Those categorized as Hispanic/Latino in 14.a. need to be included in the appropriate categories in 14.b. For example, if a school has 30 percent Hispanic students, half of whom are Black and half of whom are White, the principal would need to add 15 to the percent of non-Hispanic Blacks and 15 to the percent of non-Hispanic Whites to get the figures for Blacks and Whites in the school for 14.b.

As an alternative, projects can request that HRI send an electronic file that lists the name and LSCID of each school. The project would then provide the information using the same categories we have requested in the past, instructing principals to ignore question #14 on the questionnaire.



Dates to Remember

- 3/1-5/31/99** 1999 LSC Core Evaluation Spring Data Collection Activities
- 6/30/99** Completed teacher and principal questionnaires due at HRI
- HRI sends out reporting guide lines for 1998-99 data collection year
- 7/31/99** HRI sends out questionnaire data tables to projects
- 8/31/99** End of 1998-99 data collection year
- 9/15/99** Lead evaluators provide Description of 1998-99 Data Collection Activities
- 10/15/99** 1998-99 Core Evaluation reports due at HRI

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HRI Seeking Videotapes of Professional Development

We are still looking for videotapes of professional development sessions for use in training evaluators. Please let HRI know if you are willing to videotape one of your professional development activities. The core evaluation contract can pay up to \$250 for you to hire someone to videotape two hours of a professional development session with the understanding that we can use it in training evaluators. Please contact us if you are interested in responding to this request.

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(This newsletter is available on the Web.)

Annual LSC Core Evaluation Requirements

1. Professional Development Observations (5–8 per year)
 - Teacher Questionnaires (300 per subject)
 - Principal Questionnaires (population)
 - Classroom Observations (Minimum of 10 per subject)
 - Individual Teacher Interviews (10; not conducted baseline data collection year)
 - PI/Project Team Interviews
- Most data collection activities are conducted March–May annually, except professional development observations and the PI/Project Team Interviews, which may be conducted throughout the data collection year (September 1 through August 31). The PI is responsible for making sure that core evaluation data are collected in a timely fashion and reported to HRI each fall for inclusion in the annual Cross-Site Report prepared by HRI.