




Breakout Session 2:
Longitudinal Data Analyses for the
NSF Leadership Institute for Systemic Initiatives
“Celebrating and Sustaining Science,
Mathematics, and
Technology Learning Communities:
A Generation of Support”

November 4, 2005
Mayflower Hotel, New Jersey Room

Introduction

- 
- ❖ Who are we?
QRC Division of Macro International Inc.
 - ❖ What is our role in the Systemic Initiatives program?
We develop, administer, and maintain the online data collection instrument and all associated data. This online system is known as CDEWeb.

What Is CDEWeb?



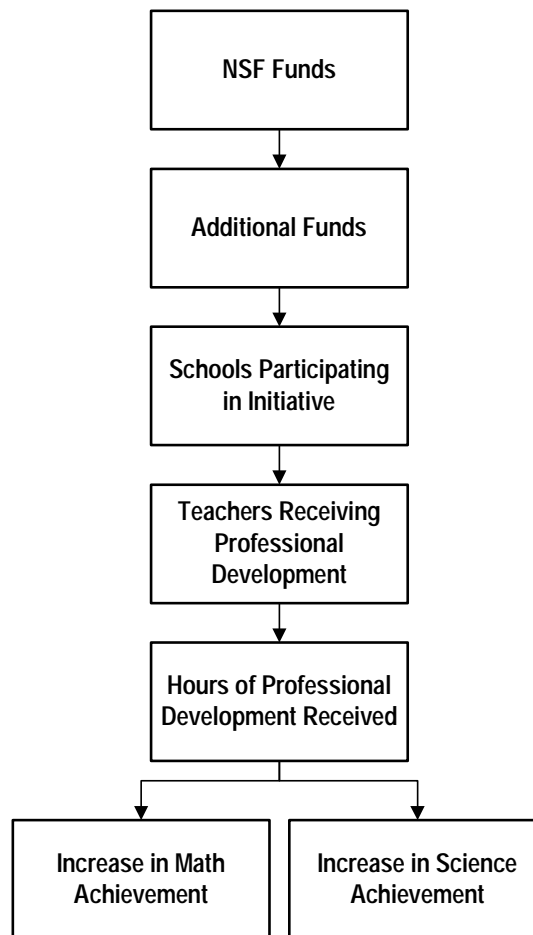
- ❖ The Core Data Elements collection system was one part of a multicomponent data collection system created for the Systemic Initiatives program.
- ❖ The system originally collected data for the Statewide Systemic Initiatives (SSI), Rural Systemic Initiatives (RSI), Urban Systemic Initiatives (USI), and Comprehensive Partnerships for Mathematics and Science Achievement (CPMSA).
- ❖ The last 2 years of data collection (school year (SY) 2002–2003 and SY 2003–2004) focused on the urban initiatives.

Purpose of This Presentation

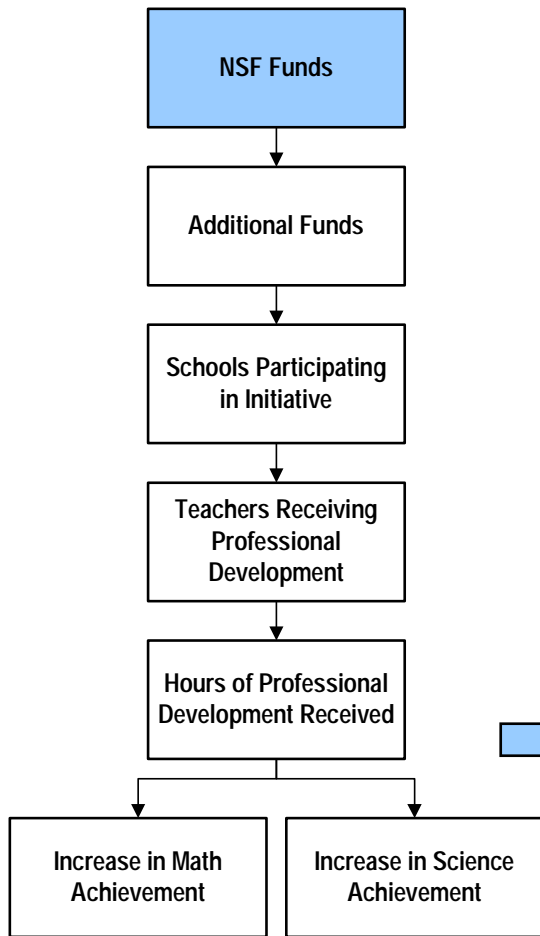


- ❖ How can you use the CDEWeb data collection system model to continue to track the effectiveness of initiative-supported services aimed at the improvement of mathematics and science achievement of all students?
- ❖ How can these data be useful to you in continuing to obtain support for your program?

Data Hierarchy



NSF Funds



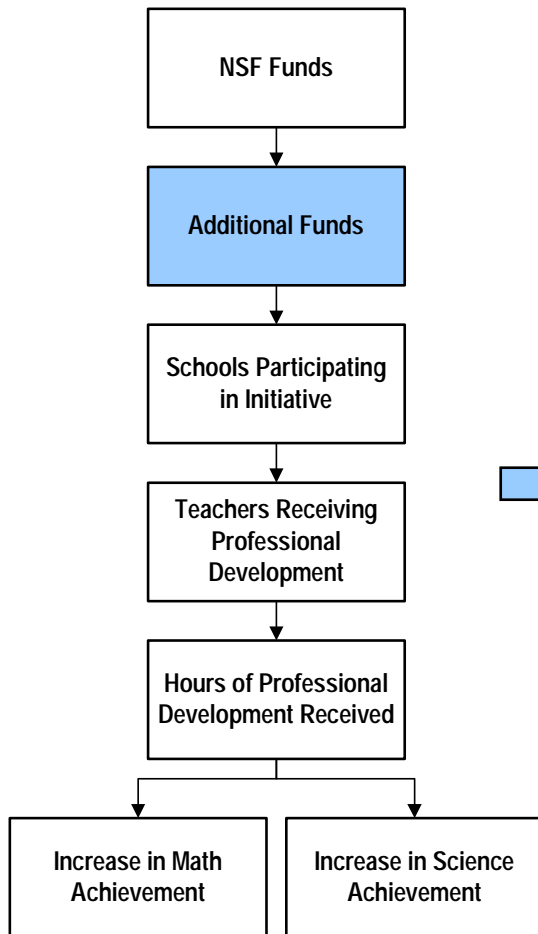
1b. Use of NSF/SI Funds

Estimate what percentage of your NSF/SI funds, and what percentage of your Total [budgeted funds](#) (from all sources, including NSF/SI) were being directed toward the listed activities during the [2004 Federal fiscal year](#) ¹. To delete funds you've added that are no longer used, click on the check box next to the appropriate fund and then select one of the 'Save & ...' navigation buttons below. However, you can not delete an added fund from this screen if it is selected as being used on screen 1c.

Do not enter decimals (.) or percent (%) symbols.

Category ²	Percent of NSF/SI Funds	Percent of Total Budgeted Funds ³
Frameworks Development	<input type="text"/> %	<input type="text"/> %
Curriculum and Instructional Mat. Dev.	<input type="text"/> %	<input type="text"/> %
Student Assessment	<input type="text"/> %	<input type="text"/> %
Professional Development	<input type="text"/> %	<input type="text"/> %

Additional Funds

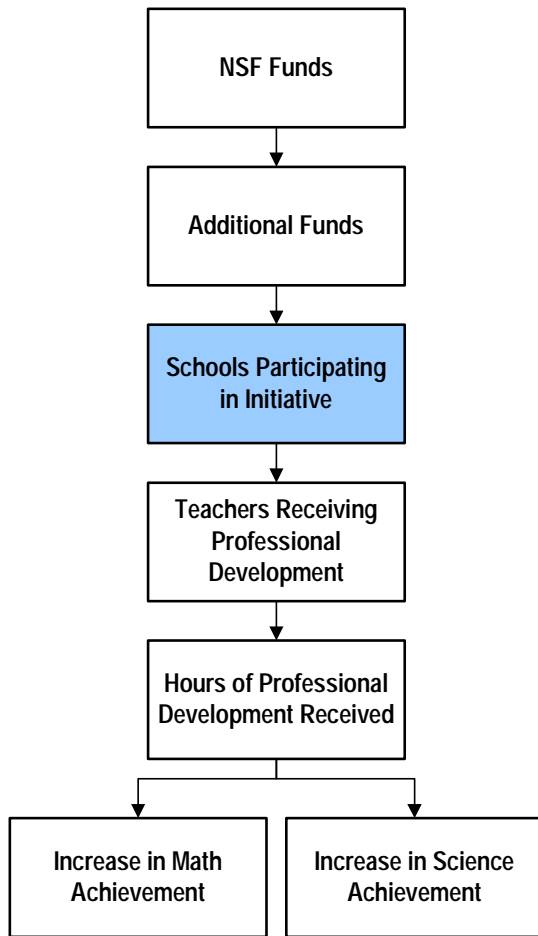


1c. Amount of Additional Funding

Estimate the total amount of budgeted funds from each of the following sources that are being used to support SI activities during the [2004 Federal fiscal year](#) ¹.

Source	Budgeted Amount in Dollars ²	Predominant Uses of Funds (List up to 3 uses for each source) ³	
Eisenhower Elementary and Secondary Funds	Do not use commas or decimal points. \$ <input type="text" value="0"/>	First Use	<input type="text" value="Select first predominant use of funds"/>
		Second Use	<input type="text" value="Select second predominant use of funds"/>
		Third Use	<input type="text" value="Select third predominant use of funds"/>
Other District / School Funds	Do not use commas or decimal points. \$ <input type="text" value="0"/>	First Use	<input type="text" value="Select first predominant use of funds"/>
		Second Use	<input type="text" value="Select second predominant use of funds"/>
		Third Use	<input type="text" value="Select third predominant use of funds"/>

Participating Schools



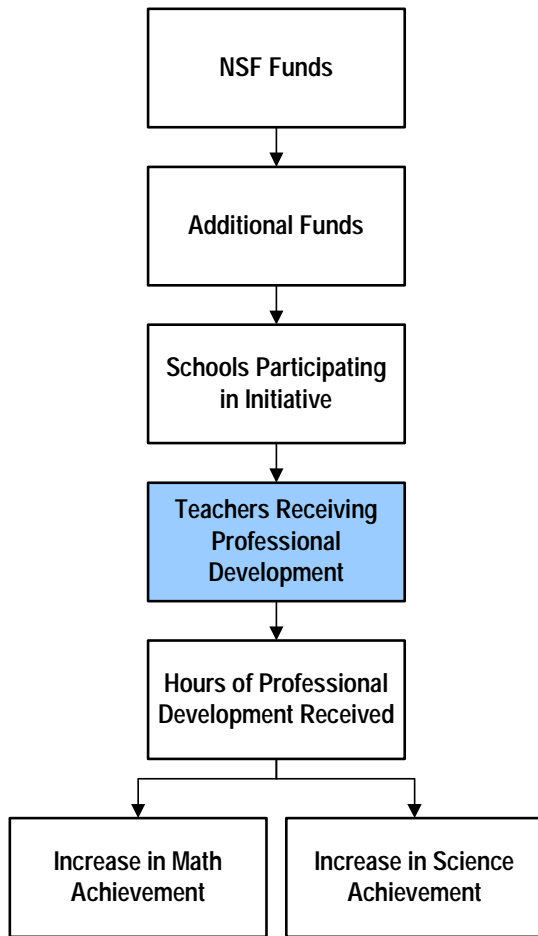
2a. Districts, Schools, and Enrollment Summary

Provide the number of [districts](#), the number of [schools](#), and the number of [students](#) in the [system](#)¹ during the fall of the 2003-2004 [school year](#)²

Total Number of Districts	Districts				
In the System ¹	<input type="text" value="0"/>				
Participating ² in the SSI during the 2003-2004 School Year	<input type="text" value="0"/>				
Participating ² in the SSI for 3 years or more.	<input type="text" value="0"/>				
Total Number of Schools	Elementary Schools	Middle Schools	High Schools	Ungraded Schools	Auto Total Schools
In the System ¹	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
Participating ⁴ in the SSI during the 2003-2004 School Year	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
Participating ⁴ in the SSI for 3 years or more.	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>



Teachers Receiving Professional Development



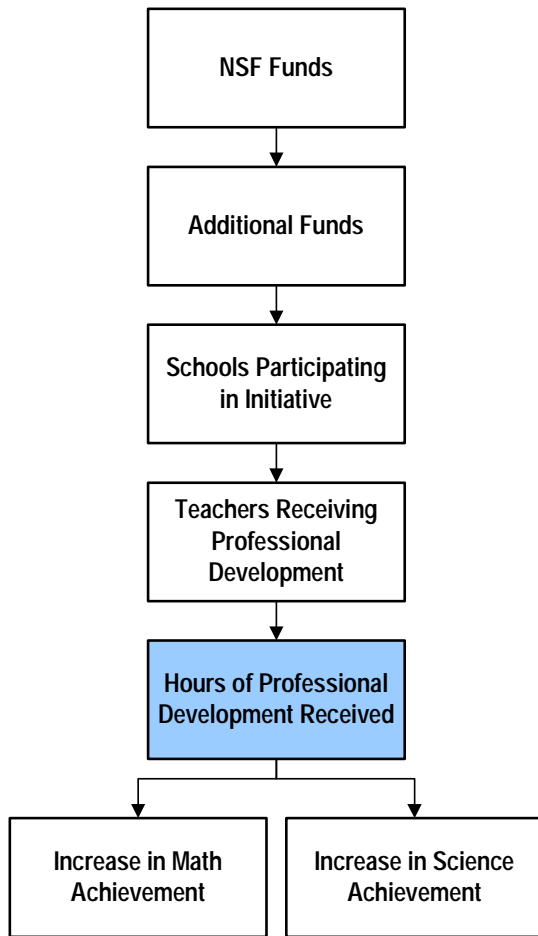
2b. Mathematics/Science Teachers and Administrators

Provide the following information about teachers teaching mathematics and/or science ¹ and K-12 administrators in all of the school(s) in the [system](#)².

Grade Level and Position	Total Number of Teachers During the 2003-2004 School Year ³	Number of Teachers Who Have Received Initiative-Sponsored Professional Development ⁴	
		During the 2003-2004 School Year ³	Since the Beginning of the Initiative ²
Elementary Teachers ¹	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
Middle School Mathematics Teachers ¹	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
High School Mathematics Teachers ¹	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
Middle School Science Teachers ¹	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
High School Science Teachers ¹	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
Auto Total	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>



Hours of Professional Development



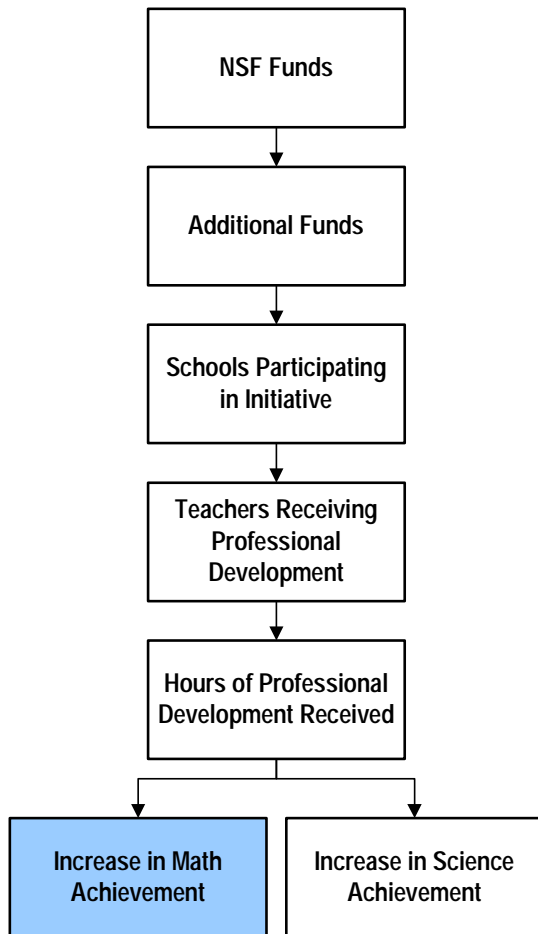
2c. Hours of Professional Development¹ in All Schools in the System²

For teachers teaching mathematics and/or science and K-12 administrators in all schools in the system², estimate the amount of initiative-sponsored professional development, including followup, received during the 2003-2004 school year³.

Grade Level and Position	Number Who Received Initiative-Sponsored <u>Professional Development</u> ¹				Auto Total
	At Least 1 Hour, but Fewer Than 60 Hours	At Least 60 Hours, but Fewer Than 120 Hours	At Least 120 Hours, but Fewer Than 200 Hours	200 Hours or More	
Elementary School Teachers ⁴	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
Middle School Mathematics Teachers ⁴	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
High School Mathematics Teachers ⁴	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
Middle School Science Teachers ⁴	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
High School Science Teachers ⁴	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>



Increase in Math Achievement



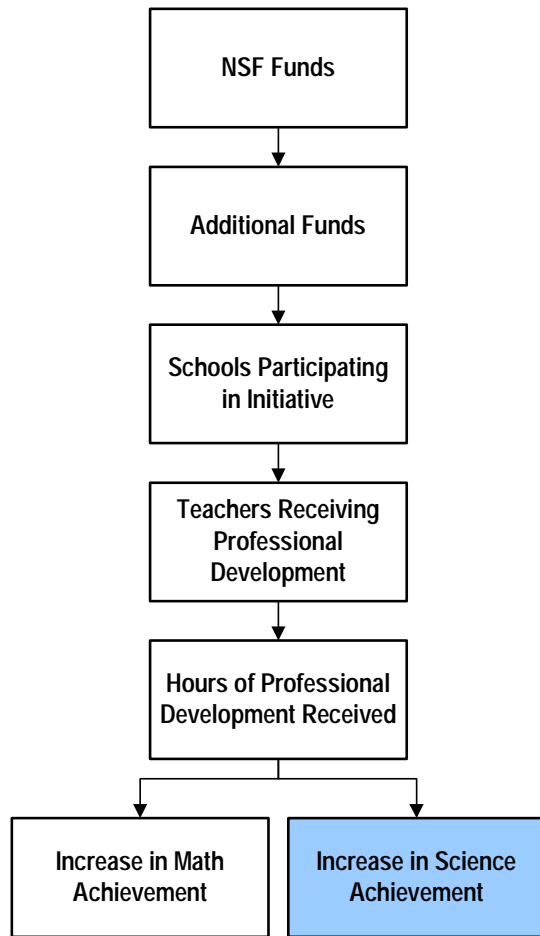
2f. Student Achievement in Mathematics in Schools Participating¹ for 3 Years or More

Provide the following information about student achievement on a selected battery of mathematics tests in the schools that have been participating¹ in the initiative for 3 years or more.

School Level	Number of schools using the same mathematics assessment over the past 3 years ²	Number of schools in column (a) in which there has been an overall increase in the test scores of students (in at least one grade level) on a mathematics assessment over the past 3 years
	(a)	(b)
Elementary Schools	<input type="text" value="0"/>	<input type="text" value="0"/>
Middle Schools	<input type="text" value="0"/>	<input type="text" value="0"/>
High Schools	<input type="text" value="0"/>	<input type="text" value="0"/>
Ungraded Schools	<input type="text" value="0"/>	<input type="text" value="0"/>
Auto Total	<input type="text" value="0"/>	<input type="text" value="0"/>



Increase in Science Achievement



2g. Student Achievement in Science in Schools Participating¹ for 3 Years or More

Provide the following information about student achievement on a selected battery of science tests in the schools that have been participating¹ in the initiative for 3 years or more.

School Level	Number of schools using the same science assessment over the past 3 years ²	Number of schools in column (a) in which there has been an overall increase in the test scores of students (in at least one grade level) on a science assessment over the past 3 years
	(a)	(b)
Elementary Schools	<input type="text" value="0"/>	<input type="text" value="0"/>
Middle Schools	<input type="text" value="0"/>	<input type="text" value="0"/>
High Schools	<input type="text" value="0"/>	<input type="text" value="0"/>
Ungraded Schools	<input type="text" value="0"/>	<input type="text" value="0"/>
Auto Total	<input type="text" value="0"/>	<input type="text" value="0"/>



An Example



- ❖ One way to focus on the effectiveness of your program is to explore how professional development has affected student achievement. You could use the data to answer questions such as:
 - Is there a correlation between the development of teachers and administrators and an increase in the test scores of students in mathematics or science?
 - Can ranges of hours of professional development demonstrate the maximum return on increases in student test scores? (NOTE: CDEWeb collects professional development hours for the following breakouts: 1–59, 60–119, 120–199, 200+.)
 - Do the identified ranges of most effective professional development hours among teachers and administrators vary among school levels (i.e., elementary, middle, and high)?

Conclusion



- ❖ CDEWeb is currently available online for your use at www.qrc.com/cdeweb, and we encourage you to use the reports of your data.
- ❖ For example, you can download a blank Microsoft Excel workbook that provides the format for data collection used by CDEWeb.
- ❖ Contact us with any questions about the system or to obtain your user name and password:
 - Toll-free number: (866) 227-7127
 - E-mail: esrsi@qrc.com