

DOCUMENT RESUME

ED 478 500

TM 035 105

AUTHOR Scott, Dominic; Ivory, Gary; Rodriguez, Mariela
TITLE What Kind of Data Are Needed To Evaluate a Statewide Systematic Education Reform?
PUB DATE 2003-00-00
NOTE 21p.
PUB TYPE Reports - Research (143)
EDRS PRICE EDRS Price MF01/PC01 Plus Postage.
DESCRIPTORS *Data Collection; *Educational Change; Elementary Secondary Education; *Instructional Leadership; *Teacher Attitudes
IDENTIFIERS *Reform Efforts

ABSTRACT

Evaluators of a statewide systemic school reform effort used Likert-type survey items to assess teachers' satisfaction with the reform effort. They also asked teachers to respond to an open-ended item on the conversations about teaching and learning in which they had engaged in the previous 18 months. Thirty-three schools responded, for a total of 430 usable teacher questionnaires. Though response rates were low, qualitative analysis revealed that the teachers had conversed about the same topics the school reform effort had promoted. Discussing evaluation findings led the leadership of the school reform effort to new understandings of the kind of evaluation data why needed to continue to monitor their efforts. (Contains 6 tables and 12 references.) (Author/SLD)

Reproductions supplied by EDRS are the best that can be made
from the original document.

ED 478 500

Running head: EVALUATION OF STATEWIDE SYSTEMIC EDUCATION REFORM

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION
CENTER (ERIC)

This document has been reproduced as received from the person or organization originating it.

Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY

G. Ivory

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

1

What Kind of Data are Needed to Evaluate a Statewide Systemic Education Reform?

Dominic Scott

Millersville State University

Gary Ivory

New Mexico State University

Mariela Rodríguez

University of Texas at Brownsville

TM035105

BEST COPY AVAILABLE

Abstract

Evaluators of a statewide systemic school reform effort used Likert-type survey items to assess teachers' satisfaction with the reform effort. But they also asked teachers to respond to an open-ended item on the conversations about teaching and learning they had engaged in during the previous 18 months. Though response rates were low, qualitative analysis revealed that the teachers had conversed about the same topics the school reform effort had promoted. Discussing evaluation findings led the leadership of the school reform effort to new understandings of the kind of evaluation data they needed to continue to monitor their efforts.

What Kind of Data are Needed to Evaluate a Statewide Systemic Education Reform?

This article reports on efforts to ascertain the effectiveness of an initiative, *Re:Learning New Mexico*, in promoting systemic statewide change in P-12 schools. It arose out of a study conducted by graduate students in school administration. This study provides answers to four questions: First, what did the evaluation Team and the Re:Learning staff learn about Re:Learning's effectiveness from the data collected in spring 2000? Second, what did they learn about the worth of that approach to evaluation? Third, how has Re:Learning changed since the evaluation? Finally, what evaluation approaches may be indicated for the future?

Re:Learning New Mexico

Nearly two third of New Mexico's public school students are ethnic minority, and just under one-third live in poverty. On the percent of students scoring at or above *Proficient* on the components of the *National Assessment of Educational Progress*, New Mexico's scores range from six to 13 points below the national average, with a median difference of ten points. (Education Week, 2002, p. 71). The National Center for Public Policy and Higher Education ([NCPPE] 2000) reported that New Mexico is well below the top states in the Nation on high school completion, K-12 course taking, and completion of a higher education program. As will be apparent from evaluation data below, Re:Learning schools are experiencing excessive principal turnover.

Re:Learning, with a budget of approximately \$4.50 per student in New Mexico public K-12 education, attempts to foster academic achievement and equity through providing staff development at many levels of the school district, but particularly by working with teachers and principals. Re:Learning has no ongoing appropriation from the state government; each year, when the legislature meets, Re:Learning staff wait to hear if they have been funded. Perhaps

because of its tenuous funding situation, the Re:Learning New Mexico leadership has struggled for years with a dilemma: it believes it can be most effective by concentrating only on schools and districts that are willing to commit seriously to a systemic reform effort. Yet New Mexico policymakers have urged it, since it receives public money, to refuse no request for assistance from any public school. The Re:Learning leadership has worried that if it refuses such requests, it might lose state support, but that on the other hand if it diffuses its resources helping schools uncommitted to reform, it will be unable to show tangible results from its efforts and will lose state funding anyway.

The Evaluation Team

This study arose out of a program evaluation course at New Mexico State University. The course project was that students design and implement an evaluation of a real life client's program. In spring 2000, four students formed a group (the Team) to evaluate Re:Learning. Although Re:Learning had existed for ten years and had had several external evaluators, its leaders were open to the Team's evaluation efforts. Furthermore, its need to justify its initiatives to secure continued financing disposed Re:Learning's leaders to embrace additional efforts to assess its impact.

Theoretical Framework

Evaluations to assess change in education often involve pre- posttests to measure achievement changes. However, statewide systemic change does not lend itself to this type of investigation. Though reformers hope that change efforts will eventually translate into improvements in school grades, test performance, student retention, and teacher satisfaction, these variables are subject to too many influences for correlations with specific reform efforts to be easily identified. Furthermore, reformers struggle to come up with indicators that "capture the

full range of goals that lie at the heart of all but the most limited school-based reform efforts” (Shields & Knapp, 1997, p. 290).

Kennedy (1999) asserted that, “even when researchers seek to document influences on student learning, they are often unable to find adequate measures of the outcomes they seek” (p. 345). Kennedy outlined four levels of approximations that may be indicative of change. These are, in *decreasing order of credibility*:

1. Classroom observations and standardized tests (Classroom observations are costly and perhaps unreliable; standardized tests may place an overly narrow range of demands on students),
2. Situated descriptions of teaching, i.e., teachers’ *very specific* descriptions of their own practices (These may be self-serving and difficult to interpret reliably),
3. Non-situated testimony about practice, i.e., surveys that ask about teacher practices *in general* (These are best thought of as revealing teachers’ espoused principles of practice; they may not reveal much about teachers’ theories in action), and
4. Testimony about effects of policies or programs (These have all the weaknesses of numbers 2 and 3, but more so). Although the fourth level of approximation is the furthest removed from the classroom, it is often the only recourse given time and financial constraints.

The information needed to support decision-making depends on how reformers define their task, e.g., raising test scores, developing standards, or seeking other outcomes. Some writers, however, have focused on the process of change, with Fullan insisting that teachers must “*converse* about the meaning of change” (emphasis original, 2001, p. 124); Hargreaves describing teachers brainstorming “ideas with their colleagues, ‘sparking off’ one another” (1997, p. 12); Wolf, Borko, Elliott, and McIver emphasizing “teacher-to-teacher” conversations

(2000, p. 375); and Shield's and Knapp writing about the "collaborative engagement of stakeholders in decision making" (1997, p. 289). In light of these scholars' views, documenting the extent and content of teachers' conversations becomes a key evaluation function.

Guba and Lincoln (1989) proposed evaluation that they called responsive, interpretive, and hermeneutic. They suggested that the evaluator "conduct the evaluation in such a way that each group must confront and deal with the constructions of all the others" (p. 41). They saw evaluation as a formative process that provided opportunities for new understandings to emerge. It is precisely these new understandings that Fullan (2001) argued were crucial for successful and sustained school reform.

Patton (1997) argued for utilization-focused evaluation, whereby along with development of a credible evaluation design, at least equal attention be devoted to identifying the "primary intended users" (Patton, p. 41) of the evaluation findings, involving them intensively in the design, and fostering their interest in the findings. Thus the evaluator must "attend to specific people who understand, value, and care about evaluation" (Patton, 1997, p. 50). Since the class was using Patton's text, *Utilization-Focused Evaluation*, the Team pursued the utilization-focused approach.

Procedures

The team began by seeking the primary intended users. Two team members met with the Re:Learning Steering Committee. The Steering Committee consisted of advocates of school reform from K-12 and postsecondary education institutions and representatives from business or community groups and a foundation that had provided funding. After the meeting the Team determined that the Steering Committee and the Re:Learning Staff constituted the primary intended users.

To ascertain what issues and concerns the primary users had, the Team sent them a letter or an e-mail asking them to respond to the following statement: “I would really like to know _____ about the program.” From their responses, the Team determined that the topics the project stakeholders were most interested in were related to *program effectiveness* and *continuity of change beyond the initial “honeymoon” period*. Primary intended users also wanted to know for participating schools how long the principal had been at that school, since they were concerned that high principal turnover might effect the continuity of change initiatives.

The previous year (1998-1999) an evaluation team for Re:Learning had surveyed teachers with an eight-item survey that called for responses on a Likert-type scale (Table 1).

Put Table 1 about here.

For 1999-2000, the Team reused those eight items and added an open-ended question: “During the past eighteen months, what topics of conversation about *teaching and learning* have you engaged in?”

The Team decided to send the survey to randomly selected schools that had been active participants in the program within the last year. Out of a total of 175 schools, the Team selected 58 (2,100 teachers) using stratified random sampling: (14 high schools, 12 middle schools, and 32 elementary schools). To enhance the return rate, the Team first made phone calls to the school principals informing them that they would be receiving the survey and asking them to distribute the surveys to their faculty and return them in the stamped, pre-addressed envelope provided. Team members also asked the length of time each principal had been in his/her present position. Then the Team sent packets of survey forms to the principals of these schools with a

cover letter describing the purpose of the survey and asking their cooperation. After four weeks, the Team made reminder phone calls to those principals who had not returned the surveys.

Findings

Thirty-three schools responded to the survey with a total of 430 usable questionnaires (20% of the teachers in the selected schools). Then the Team asked 18 principals attending a meeting of Re:Learning's "Principal's Institute" to distribute surveys in their schools, thus tapping another 760 teachers. Returns from this distribution increased the number of usable surveys received by some 190 (25% of the teachers) from 13 more schools.

Findings from the Likert-type Items

For the Likert-type items, the Team calculated percentages of teachers selecting each response. Percents of positive responses are shown in Tables 2 and 3.

Put Tables 2 and 3 about here.

The most dramatic finding was that elementary teachers appeared the most satisfied with Re:Learning, and that satisfaction decreased through the middle and high school levels. In fact, the median percent of positive responses reported (across the eight items) in Tables 2 and 3 was 81.5% at the elementary, 75% at middle school and 61% at high school levels. This suggests that Re:Learning has been most successful at the elementary level and may need to reconsider its approaches at the high school level. Or, it may be simply that secondary schools, with their larger size and traditional commitment to subject specialization, are slower to respond to change initiatives.

The second finding was that overall, the Principal’s Institute schools did not respond substantially more positively than the non-Principal’s Institute schools. This finding was of interest because the Team and the Steering Committee had assumed the Principals’ Institute schools to have made a greater commitment to Re:Learning and that the result would be greater effectiveness and perhaps greater satisfaction. The median percent reported (across the eight items) in Tables 2 and 3 was 78% for the non-Principals’ Institute schools and only 77.5% for the Principal’s Institute schools. The survey data did not provide strong support for the notion that the level of commitment required of Principals’ Institute schools contributed to more positive responses.

Findings from the Open-ended Question

The Team then met to read responses to the open-ended question, discuss themes that emerged, and categorize responses according to those themes (Guba & Lincoln, 1989). A total of 30 separate themes were coded (Seidman, 1997) and these were listed in terms of frequency in line with Lee’s advice that even with qualitative material it is sometimes useful to “count the countable” (1999, p. 121).

Four hundred thirty-two teachers at 46 campuses responded to question 12: 243 teachers at 25 elementary schools, 86 teachers at 10 middle schools, and 103 teachers at 11 high schools. Table 4 shows the topics most often mentioned by teachers at the elementary, middle, and high school level.

Put Table 4 about here.

Five of the top ten topics at each school level were common to all three levels. These were alternative assessment, standards/benchmarks/curriculum mapping, teaching methods, learning and teaching styles/brain research, and state mandated tests/accountability. Were these topics a result of Re:Learning's professional development, or were they simply topics uppermost in the minds of teachers generally? All these topics had been the subjects of workshops, seminars, and sessions designed by Re:Learning. Hence it is reasonable to consider that Re:Learning activities "contributed in concrete ways" (Patton, 1997, p. 217) to the popularity of these topics of teachers' conversations.

For the schools that responded to the survey, the Team divided the total number of items mentioned by all teachers by the number of teachers employed at each level. This was done to control for size of the schools (presumably larger populations can have more conversations). Table 5 shows a "fair" comparison among elementary, middle, and high schools of the "total amount of talk about teaching and learning." We can see from the above that the number of teachers reporting conversations about teaching and learning decreased as we move from elementary to middle and then to high school. This corroborates the findings from the analyses of the Likert-type items, where teacher beliefs about the impact of Re:Learning on each of the three areas decreased across the elementary, middle, and high school continuum.

Put Table 5 about here.

Table 6 shows a "fair" comparison of Principals' Institute to non-Principals' Institute schools. Overall, the Principals' Institute schools did not report as many conversations about teaching and learning as non-Principals' Institute schools.

Put Table 6 about here.

Finally, we found that Re:Learning leaders' concerns about principal mobility were well founded. The mean principal tenure at the 46 schools was only 3.6 years (elementary: 4.8 years, middle school: 2.4, and high school 2.1).

Discussion

In the "Purpose" section, we listed four questions for this study. We answer them here.

What was Learned about Re:Learning Effectiveness?

Anecdotal evidence of the effectiveness of Re:Learning had suggested that it was successful. In previous years, external evaluators had asserted, "professional development received rave reviews, workshop after workshop," "staff have done an excellent job of structuring projects so that schools grow and improve," and "the "initiative is grounded in research, is supported by key stakeholders, and has evolved through the process of change without losing the focus on impacting students, educators, and communities." The Team, assuming that teachers are the best judges of Re:Learning's effectiveness, concentrated on ascertaining teachers' attitudes Re:Learning. Our findings suggest that there are high levels of support for and satisfaction with Re:Learning. Responses to the open-ended question suggest that at least some teachers are conversing about the topics Re:Learning emphasizes. The findings from our analysis of the qualitative data suggest that teachers' conversations about topics initiated by Re:Learning were extensive and varied. Twenty-nine topics were discussed and in many schools, teacher conversations coalesced around topics covered by the project staff. This

suggests that initiatives developed by the project have had a lasting impact on teachers' conversations and consciousness.

The relatively lower positive findings from the secondary schools and the unimpressive findings from the Principals Institute schools are cause for concern and give Re:Learning information about foci for fine-tuning its efforts.

What was learned about the worth of this approach to evaluation?

The combination of quantitative and qualitative data gathered from the survey provided the Team and Re:Learning two approximations from which to assess teachers' perceptions of and involvement in Re:Learning. The evaluation findings, we believe, add validity to the notion that teachers' self-report of conversations can help assess the impact of a statewide systemic change initiative such as Re:Learning.

Kennedy (1999) asserted, "no one has attempted to measure the relationship between fourth-level testimonials about policy impact and any closer levels of approximation." Given the cost, time, and complexity involved in first level strategies (i.e., classroom observations and standardized tests), teacher testimonials might be the best affordable alternatives. Question 12 of the survey, by providing an opportunity for teachers to report those topics of discussion they had engaged in during the previous 18 months, evoked a greater than expected response. This suggests that the quantity and variety of conversations about topics addressed by change agencies might provide another level of evaluation. At the same time, Re:Learning leaders and evaluators must face the fact that this survey had a low return rate, despite calls to the campuses to urge cooperation with it. The unknown representativeness of the findings is a serious blow to the evaluation's credibility. Further research could investigate whether and the extent to which teachers' self-reports of conversations correlate with findings generated by traditional, and

sometimes more expensive, evaluative methods. To measure success with more confidence, Re:Learning leaders should consider allocating funds to acquiring at least some data from Kennedy's (1999) other levels of approximations of change

How has the Program Changed Since the Evaluation?

Re:Learning has decided to offer a three-tiered approach to providing professional development to schools. With limited resources and many calls for assistance, Re:Learning has decided that it can both be more effective and can more validly assess its effectiveness by adjusting the level of its support to *the degree of formal commitment a school and district will make to participate Re:Learning*. For the lowest level of commitment, the Re:Learning will offer only regional workshops. For the highest level, it will work intensively with school and district staff. For the middle level, it offered support between the lowest and highest levels. None opted for the lowest level. Simultaneously, Re:Learning staff report that state policy-makers have backed off their earlier position that the Re:Learning must not refuse support to any school that asks. In fact, in 2001-2002, interested schools agreed to commit to either the middle or highest level. None expressed interest in the lowest level of participation.

What Evaluation Approaches may be Indicated for the Future?

This study helped the Steering Committee clarify its specific goals in promoting systemic change, and extended the hermeneutics to include one of Re:Learning's focus population (i.e., the teachers.) As a result of the Team's evaluation, the Steering Committee became more focused regarding which evaluation questions it wanted answered. The evaluation also supported Re:Learning's concerns about principal turnover.

Does rapid turnover of principals lead to discontinuities in school reform efforts? Certainly, some research suggests so (Muncey & McQuillan, cited in Wolf et al., 2000). In that

light, what chance do the schools in our study have to sustain such efforts? In any reform situation, it is crucial to have organization member buy-in, especially when the organizational leadership is unstable. This makes it particularly important to find a way to monitor teacher perceptions of the reform. Some have suggested that leadership roles be diffused throughout the school or what Wolf et al. called “cooperative leadership” (p. 366). This concept prompted a discussion among the Steering Committee about what a school would look like before, and what it might look like after, such a change. One member recommended collecting data on staff retention rates as an indicator of effective change. Surveying teachers to discover if they saw any change in principals’ leadership and evaluation of staff was suggested. The focus of school staff meetings, conversations generated at these, and particularly discussions regarding students’ work were also discussed as possible areas of further investigation.

Conclusion

The effectiveness of statewide initiatives for school change is complex and difficult to assess. To get a fuller picture of the breadth and depth of change initiatives, one must use methods other than the quantitative. Change is evident not only in measurable achievement outcomes, but also in the quality of relationships within the school itself. Conversations generated by teachers around the foci of change may be signs of deep processing of the substance of change efforts. As school leaders begin to realize this, further research will be needed into the nature and extent of conversations around change efforts. This is particularly important given that policymakers “want evidence of better goal setting, rational program choices to attain those goals, and documentation of results” (Wang, et al. 1998, p. 66).

References

- Education Week (2000, January 13). Quality counts 2000 [Special issue].
- Fullan, M. (2001). *The new meaning of educational change* (3rd edition). New York: Teachers College Press.
- Guba, E. G. and Lincoln, Y. S. (1989). *Fourth generation evaluation*. Newbury Park, CA: SAGE Publications.
- Hargreaves, A. (1997). Rethinking educational change: Going deeper and wider in the quest for success. In A. Hargreaves (Ed.), *Rethinking educational change with heart and mind* (pp. 1-26). Alexandria, VA: Association for Supervision and Curriculum Development.
- Kennedy, M. M. (1999). Approximations to indicators of student outcomes. *Educational Evaluation and Policy Analysis*, 21(4), 345-363.
- Lee, T. W. (1999). *Using qualitative methods in organizational research*. Thousand Oaks, CA: Sage
- NCPHE. (November, 2000a). *Measuring up 2000: The state-by-state report card for higher education*. San Jose, California: Author.
- Patton, M. Q. (1997). *Utilization focused evaluation. The new century text*. (3rd. edition.) Thousand Oaks, CA: SAGE publications.
- Seidman, I. (1998). *Interviewing as qualitative research: A guide for researchers in education and the social sciences* (2nd. edition). New York: Teachers College Press.
- Shields, P. M. & Knapp, M. (1997). The promise and limits of school-based reform: A national snapshot. *Phi Delta Kappan*, 79 (4), 288-294.
- Wang, M. C., Haertel, G. D., Walberg, H. J. (1998). Models of reform: A comparative guide. *Educational Leadership*, 55 (7), 66-71.
- Wolf, S. A., Borko, H., Elliot, R. L., & McIver, M. C. (2000). "That dog won't hunt!": Exemplary school change efforts within the Kentucky reform. *American Educational Research Journal*, 37 (2), 349-393.

Table 1

Survey used for evaluation of the Program in 1999-2000 and in 2000-2001

For the [Program] professional development in which you participated in the last eighteen months, to what extent have those activities

	Not at all	To a small extent	To some extent	To a great extent	
1. Contributed to the improvement of your instruction?	1	2	3	4	
2. Helped you to implement curriculum and performance standards?	1	2	3	4	
3. Promoted collaboration with other teachers?	1	2	3	4	
4. Been appropriate for the grade level(s) and subject(s) you teach?	1	2	3	4	
How often is [the Program's] professional development for teachers at this school					
	Never	Rarely	Sometimes	Frequently	Always
5. Designed or chosen to support the goals of the <u>school's</u> [state-required improvement plan]?	1	2	3	4	5
6. Designed or chosen to support the goals of the district's [state-required improvement plan]?	1	2	3	4	5
7. Planned by teachers at this school?					
8. Have you participated in any [Program] professional development activities that focus on student assessment {e.g., methods of testing, evaluation, performance assessment(s), or rubric(s)}?					
	Not at all useful				Very useful
Yes	1	2	3	4	5
Then what was the impact of the activities?					
No					

Table 2
 Percent of teachers responding with “to some extent” or “to a great extent” to the question, “For the [Program] professional development in which you participated in the last eighteen months, to what extent have those activities:

	Elementary Schools		Middle Schools		High School	
	Non-PI ^a (N=235)	PI ^b (N=104)	Non-PI (N=131)	PI (N=30)	Non-PI (N=81)	PI (N=57)
1. Contributed to the improvement of your instruction?	77%	82%	79%	60%	57%	60%
2. Helped you implement curriculum and performance standards?	80%	83%	76%	53%	53%	58%
3. Promoted collaboration with other teachers?	74%	79%	74%	70%	53%	56%
4. Been appropriate for the grade level(s) and subject(s) you teach?	80%	81%	80%	50%	68%	66%

^a Non-PI schools were selected randomly from among all Program schools

^b PI schools were those from which the principal participated in the Program’s “Principals’ Institute”

Table 3

Percent of teachers responding with “3” or better on a 5 point Likert-type scale^a to questions 5, 6, & 7, “How often is [Program] professional development for teachers at this school:

	Elementary Schools		Middle Schools		High School	
	Non-PI ^b (N=235)	PI ^c (N=104)	Non-PI (N=131)	PI (N=30)	Non-PI (N=81)	PI (N=57)
5. Designed or chosen to support the goals of the school’s [state-required improvement plan]?	91%	95%	81%	83%	79%	77%
6. Designed or chosen to support the goals of the district’s [state-required improvement plan]?	90%	94%	83%	74%	80%	87%
7. Planned by teachers at this school?	75%	76%	63%	73%	55%	58%
8. [For those who answered “yes” to the questions that they had participated in Program professional development activities on assessment] Then what was the impact of the activity(ies)? ^d	(N=184) 82%	(N=83) 94%	(N=100) 84%	(N=23) 78%	(N=53) 62%	(N=40) 78%

^a Where 1 = “Never,” 2 = “Rarely,” 3 = “Sometimes,” 4 = “Frequently,” and 5 = “Always.”

^a Non-PI schools were selected randomly from among all Program schools

^b PI schools were those from which the principal participated in the Program’s “Principals’ Institute”

^c Where 1 = “Not at all useful;” 5 = “Very useful;” and 2, 3, and 4 are not defined

Topic	Number of teachers that mentioned it
Elementary Schools	
Literacy/vocabulary building/4-block reading	129
Alternative assessment	68
Standards/benchmarks/curriculum mapping	60
Teaching methods	60
Learning and teaching styles/brain research	45
State-mandated tests/accountability	44
Technology	39
Classroom management	36
Enablers and disablers in the organization	29
Special education	27
Middle Schools	
Standards/benchmarks/curriculum mapping	35
Alternative assessment	27
Teaching methods	22
Socratic seminar	22
Technology	21
Thematic unit planning	18
Classroom management	16
Learning and teaching styles/brain research	14
State-mandated tests/accountability	13
Collegial coaching/critical friends group	13
High Schools	
Standards/benchmarks/curriculum mapping	32
Four by four block scheduling for secondary schools	24
Literacy/vocabulary building/4-block reading	16
Student motivation, lack of	14
Advanced placement/gifted	13
Alternative assessment	12
Learning and teaching styles/brain research	12
Teaching methods	11
Thematic unit planning	10
State-mandated tests/accountability	9

Table 5

Comparison of amount of talk about teaching and learning reported by elementary, middle, and high schools, controlling for size of the populations

	1. Number of teachers employed	2. Number of items listed	Ratio of Column 2 to Column 1
Elementary	727	733	1.0
Middle	396	292	0.74
High	520	233	0.45

Table 6

Comparison of amount of talk about teaching and learning reported by non-Principals' Institute and Principals' Institute schools, controlling for size of the populations

	1. Number of teachers employed	2. Number of items listed	Ratio of Column 2 to Column 1
Non-Principals' Institute Schools	1088	910	0.84
Principals' Institute Schools	558	349	0.63



U.S. Department of Education
Office of Educational Research and Improvement (OERI)
National Library of Education (NLE)
Educational Resources Information Center (ERIC)



REPRODUCTION RELEASE

(Specific Document)

TM035105

I. DOCUMENT IDENTIFICATION:

Title: <i>What kind of data are needed to evaluate a statewide systematic education reform?</i>	
Author(s): <i>Scott, D., Ivory, G., Rodriguez, M.</i>	
Corporate Source:	Publication Date:

II. REPRODUCTION RELEASE:

In order to disseminate as widely as possible timely and significant materials of interest to the educational community, documents announced in the monthly abstract journal of the ERIC system, *Resources in Education* (RIE), are usually made available to users in microfiche, reproduced paper copy, and electronic media, and sold through the ERIC Document Reproduction Service (EDRS). Credit is given to the source of each document, and, if reproduction release is granted, one of the following notices is affixed to the document.

If permission is granted to reproduce and disseminate the identified document, please CHECK ONE of the following three options and sign at the bottom of the page.

The sample sticker shown below will be affixed to all Level 1 documents

The sample sticker shown below will be affixed to all Level 2A documents

The sample sticker shown below will be affixed to all Level 2B documents

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY

Sample

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

1

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN MICROFICHE, AND IN ELECTRONIC MEDIA FOR ERIC COLLECTION SUBSCRIBERS ONLY, HAS BEEN GRANTED BY

Sample

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

2A

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN MICROFICHE ONLY HAS BEEN GRANTED BY

Sample

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

2B

Level 1



Check here for Level 1 release, permitting reproduction and dissemination in microfiche or other ERIC archival media (e.g., electronic) and paper copy.

Level 2A



Check here for Level 2A release, permitting reproduction and dissemination in microfiche and in electronic media for ERIC archival collection subscribers only

Level 2B



Check here for Level 2B release, permitting reproduction and dissemination in microfiche only

Documents will be processed as indicated provided reproduction quality permits.
If permission to reproduce is granted, but no box is checked, documents will be processed at Level 1.

I hereby grant to the Educational Resources Information Center (ERIC) nonexclusive permission to reproduce and disseminate this document as indicated above. Reproduction from the ERIC microfiche or electronic media by persons other than ERIC employees and its system contractors requires permission from the copyright holder. Exception is made for non-profit reproduction by libraries and other service agencies to satisfy information needs of educators in response to discrete inquiries.

Sign here, → please

Signature: <i>G. M. Ivory</i>		Printed Name/Position/Title: <i>Gary Ivory, Assoc. Prof.</i>	
Organization/Address: <i>New Mexico State University</i>		Telephone: <i>505-646-6842</i>	FAX: <i>505-646-4767</i>
<i>P.O. Box 30001, MSC 3N</i>		E-Mail Address:	Date: <i>5 Jul 83</i>
<i>Las Cruces, NM 88003-8001</i>		<i>givory2@sbcglobal.net</i>	



III. DOCUMENT AVAILABILITY INFORMATION (FROM NON-ERIC SOURCE):

If permission to reproduce is not granted to ERIC, or, if you wish ERIC to cite the availability of the document from another source, please provide the following information regarding the availability of the document. (ERIC will not announce a document unless it is publicly available, and a dependable source can be specified. Contributors should also be aware that ERIC selection criteria are significantly more stringent for documents that cannot be made available through EDRS.)

Publisher/Distributor:
Address:
Price:

IV. REFERRAL OF ERIC TO COPYRIGHT/REPRODUCTION RIGHTS HOLDER:

If the right to grant this reproduction release is held by someone other than the addressee, please provide the appropriate name and address:

Name:
Address:

V. WHERE TO SEND THIS FORM:

Send this form to the following ERIC Clearinghouse: ERIC CLEARINGHOUSE ON ASSESSMENT AND EVALUATION UNIVERSITY OF MARYLAND 1129 SHRIVER LAB COLLEGE PARK, MD 20742-5701 ATTN: ACQUISITIONS
--

However, if solicited by the ERIC Facility, or if making an unsolicited contribution to ERIC, return this form (and the document being contributed) to:

ERIC Processing and Reference Facility
4483-A Forbes Boulevard
Lanham, Maryland 20706

Telephone: 301-552-4200
Toll Free: 800-799-3742
FAX: 301-552-4700

e-mail: ericfac@inet.ed.gov
WWW: <http://ericfacility.org>