

**Minneapolis Public Schools 2001 Social Studies
Best Practices Grant**

Linking Authentic Instruction to Students' Achievement

Using Peer Coaching

Evaluation Report

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Executive Summary

Background

In January 2001 the Minneapolis Public School District received a grant from the Minnesota Department of Children, Families and Learning to implement a professional development model. The project, entitled *Linking Authentic Instruction to Students' Achievement Using Peer Coaching*, was designed to “enhance teachers’ understanding and skills as they relate to authentic instruction and student achievement” (Carmichael-Tanaka, 2000, p. 1). Four full-day professional development seminars were conducted between February 15, 2001 and June 15, 2001.

Project Features

Research-Based

The *Linking Authentic Instruction to Students' Achievement Using Peer Coaching* Project is based primarily on the work of Dr. Fred Newmann and his associates at the University of Wisconsin. Newmann and Associates (1996) offer an integrated conception of authentic achievement that encompasses assessment tasks, instruction, and student work. All three elements—tasks, instruction and student work—must reflect the core principles of authenticity: the *construction of knowledge* using *disciplined inquiry* to explore problems and issues that have *value beyond the classroom*.

Several studies (Avery, 1999; Avery & Palmer, 2001; Newmann & Associates, 1996) indicate that authentic pedagogy (instruction and assessment) is linked to authentic student performance. That is, the more instruction and assessment tasks focus on *constructing knowledge* using *disciplined inquiry* to explore issues that have *value beyond the classroom*, the more student performance is likely to reflect a high level of thinking and the use of significant disciplinary concepts and methods. It is therefore critical to improve the quality of the instruction students receive and the assessment tasks students are required to complete.

The Professional Development Model

Between January and June 2001, 45 teachers participated in four all-day seminars. The goals of the seminars were that teachers be able to:

1. Translate the theoretical framework that links the Minnesota High Standards and authentic pedagogy (instruction and assessment) into practice;
2. Create peer-coaching teams to embed the authentic instruction criteria into daily practice at each participating site;
3. Implement model lessons and score their own students’ work.

During the project, each teacher worked with a “peer coaching partner.” Substitute teachers were available for each coaching pair every two weeks for one day. The time was to be used to observe one another’s instruction and reflect on instructional practices. Teachers were to use the skills learned in their peer coaching training to work with their partner in applying the criteria for authentic instruction.

Participant Characteristics

A total of 45 teachers signed up to participate in the project. Of those, 34 were social studies teachers; the remaining 11 teachers included bilingual education, special education, communication skills, and language arts teachers. Seventeen of the teachers taught at the high school level, while the other 28 teachers taught in elementary or middle grade schools.

Impact on Instruction, Assessment and Student Performance

Impact on Instruction

Authentic instruction requires teachers to help students:

- | Engage in higher order thinking;
- | Explore significant social science concepts in depth;
- | Engage in substantive conversations with their peers; and
- | Recognize connections between classroom knowledge and the “world beyond the classroom.”

In looking at changes over time, we saw statistically *significant improvement in the authenticity of teachers’ instruction*. In particular, teachers showed great improvement in the degree to which they were able to engage students in higher order thinking and help them explore significant social science concepts in depth. It is likely that the content focus of the seminars accounts for the teachers’ increased ability to develop deep knowledge as opposed to more superficial knowledge.

Impact on Assessment

The standards for authentic assessment tasks require teachers to develop tasks that require students to:

- | Organize information and consider alternative perspectives or solutions;
- | Work with significant social science concepts and methods of inquiry;
- | Communicate through writing;
- | Make connections to the “world beyond the classroom”; and
- | Display their knowledge to audiences other than the teacher.

Although the assessment tasks teachers developed at the end of the project scored higher on most of these dimensions than did the tasks submitted at the beginning of the project, the overall *improvement on the quality of the assessment tasks was not statistically significant*. This finding is not too surprising given that the focus of the seminars was on developing authentic *instruction*.

Impact on Student Performance

Programs designed to improve instruction and assessment are ultimately seeking improvements in student achievement. The concept of authenticity used in the *Linking Authentic Instruction* project highlights the “intellectual quality” of a student’s performance. Specifically, authentic student performance requires students to:

- | Demonstrate strong analytical abilities;
- | Show an in-depth understanding of significant disciplinary concepts; and
- | Communicate their understanding in writing.

A comparison of student work completed at the beginning and end of the project showed *improvement on each of these dimensions of student performance*. The degree of improvement was modest, however, and could possibly be attributed to normal student growth in learning over a 6-month period.

In an effort to improve teaching and learning and to assist teachers in implementing the graduation standards, the Minnesota Department of Children, Families and Learning sponsored several projects during the winter-spring of 2001. One such project, *Linking Authentic Instruction to Students' Achievement Using Peer Coaching* (hereinafter referred to as *Linking Authentic Instruction*), provided a group of predominantly secondary social studies teachers in the Minneapolis School District the opportunity to participate in a series of professional development seminars. Dana Carmichael-Tanaka, Social Studies Curriculum Coordinator for the Minneapolis Public Schools, designed and coordinated the seminars.

The goals of the seminars were for teachers to be able to:

1. Translate the theoretical framework that links the Minnesota High Standards and authentic pedagogy (instruction and assessment) into practice;
2. Create peer-coaching teams to embed the authentic instruction criteria into daily practice at each participating site;
3. Implement model lessons and score their own students' work.

The evaluation of the *Linking Authentic Instruction* project was designed to document both project processes and outcomes that address the following questions:

- | What were the nature of the professional development activities?
- | How effective was the professional development model in promoting authentic pedagogy?
- | What were the effects of authentic pedagogy on the learning and achievement of students?

To address these questions, a one-group pre/post design was used to collect data on teachers' instruction, teacher-designed assessment tasks and student work at the beginning and the end of the project. Data were gathered through student and teacher surveys, classroom observations, document analysis, seminar attendance records, and participant observation at each of the seminars.

This report summarizes the results of this evaluation. It is organized by the major topics generated from the above guiding questions:

- | *Project Features* describes the model of professional development;
- | *Participant Characteristics* describes the school, teachers and students involved in the project
- | *Instructional Setting* describes the teachers' perceptions of their school climate, sense of professional community, the way in which they allocate their instructional time, and typical classroom activities and assignments. This section also shows students' attitudes and engagement in the social studies.

- | *Impact on Instruction, Assessment and Student Performance* examines the impact of the seminars and the peer coaching training on teaching and learning;
- | *Teachers' Perceptions of the Project* identifies aspects of the project that were most meaningful to teachers;
- | *Conclusions* presents conclusions about the effectiveness of this particular model of professional development; and
- | *Appendices A, B, and C* contain copies of the criteria used to score the authenticity of classroom instruction, assessment tasks, and student performance.

Project Features

This section describes essential features of the *Linking Authentic Instruction* project. Information was drawn from program documents as well as interviews with the Project Coordinator, Dana Carmichael-Tanaka.

Project Features

Rationale

Using the concept of authentic pedagogy and the Minnesota High Standards as a foundation, the *Linking Authentic Instruction* project sought to enhance teachers' understanding and skills as they relate to authentic pedagogy (instruction and assessment) and student achievement. Many professional development efforts involve one-day workshops with little, if any, follow-up. In this project, peer coaching was used as the vehicle for sustaining professional development over the six-month period. Ultimately, the goal was to help students think more deeply and become more engaged in substantive conversation about the key concepts included in the Minnesota High Standards, as well as making more connections beyond the classroom.

Research Base

The *Linking Authentic Instruction* project is based primarily on the work of Dr. Fred Newmann and his associates at the University of Wisconsin. Newmann and Associates (1996) provide a strong research base and a cohesive framework for thinking about the nature of authentic achievement. Their work offers an integrated conception of authentic achievement that encompasses assessment tasks, instruction, and student work. All three elements—tasks, instruction, and student work—must focus on the core principles of authenticity: the *construction of knowledge*, *disciplined inquiry*, and *value beyond the classroom* (see Table 1).

In Newmann's (1996) national study, authentic pedagogy (assessment and instruction) was a strong predictor of student performance. In addition, all students—regardless of achievement level or demographics—benefited from authentic pedagogy. A study by Avery (1999) of teachers from one urban high school's social studies department supports Newmann's research. Both studies found that the higher the level of authentic instruction (i.e., focus on higher level thinking, disciplined inquiry, substantive conversation and connections beyond the classroom), the higher the level of student performance for all students, regardless of students' achievement level or demographic characteristics.

Table 1

Vision for Authentic Achievement, Pedagogy and Authentic Student Performance (from Newmann, Secada & Wehlage, 1995, p. 64)

Authentic Achievement	Authentic Assessment Tasks	Authentic Instruction	Authentic Student Performance
Construction of Knowledge	-Organization of Information -Consideration of Alternatives	-Higher Order Thinking	-Analysis
Disciplined Inquiry	-Content -Process -Elaborated Written Communication	-Deep Knowledge -Substantive Conversation	-Disciplinary Concepts -Elaborated Written Communication
Value Beyond School	-Problem -Audience	-Connections to the World Beyond the Classroom	

Avery later conducted a series of professional development seminars for secondary social studies teachers specifically designed to help the teachers develop an in-depth understanding of “authentic pedagogy” and its significance for instruction and assessment. During the 1998–99 academic year, monthly seminars were held with teachers from middle and high school social studies departments in three districts committed to long-term changes in pedagogy. Teachers focused on improving the quality of their instruction and assessment. Teachers’ instruction was observed and assessment tasks were collected at the beginning and conclusion of the seminars. The assessment tasks were significantly more “authentic” (according to the criteria for authenticity) at the conclusion of the seminars; the quality of instruction, however, was unchanged. Avery and Palmer (2001) concluded that “even with extensive support and the desire to make substantive changes in pedagogy, teachers’ practices are deeply rooted in their training and belief systems, and are highly resistant to change” (p. 27). Other studies have also documented the difficulty of changing instructional practices (Airasian, 1997; Ashbacher, 1993; Borko, Flory, & Cumbo, 1993; Firestone, Mayrowetz, & Fairman, 1998; McDonnell, & Choisser, 1997; Shepard, 1997; Shepard, et al., 1995; Stringfield & Ross, 1997).

The Professional Development Model

The results of the previous studies underscore the importance, as well as the difficulty, of improving the quality of instruction. The professional development model in this study addresses instruction in two ways that differ from previous efforts. First, content area experts were invited to present “model lessons” and to serve as consultants. Second, teachers were trained in peer coaching. They were then given release time to visit one another’s classrooms one day every two weeks, and to provide feedback to colleagues on their instruction using the skills they had learned through peer coaching.

The primary Minnesota High Standards addressed in the project included:

Learning Area Seven: People and Cultures

Middle-level Content Standards:

Current Issue Analysis
Geography and Culture
History and Citizenship

High School Content Standards:

Themes of U.S. History
U.S. Citizenship
Diverse Perspectives
Human Geography

The goals were that teachers would be able to:

1. Translate the theoretical framework that links the Minnesota High Standards and authentic pedagogy (instruction and assessment) into practice;
2. Create peer-coaching teams to embed the authentic instruction criteria into daily practice at each participating site;
3. Implement model lessons and score their own students’ work.

Following is a description of the content of each seminar (see Figure 1 for an overview of the seminars).

Seminar I

Seminar I focused on introducing teachers to the criteria for authentic instruction and giving them practice using the rating system developed by Newmann, Secada and Wehlage (1995). During the second half of the day, participants divided into two groups: those who had already had peer coaching training, and those who had not had the training. The former group received a “refresher course” and learned how to coach each other using the authentic instruction criteria. The teachers who had not had any peer coaching began their 20-hour training that afternoon. The expectation was that all participants would begin embedding the authentic instruction criteria into their pedagogy immediately.

Seminar II

For the second seminar, teachers could choose to participate in pairs of seminars with one of three foci: civics/government, geography or history. The seminars were led by Jennifer Bloom (civics/government), Director of the Center for Community Legal Education at the University of Minnesota; Tim Hoogland, Teacher Education Specialist at the Minnesota History Center; and Dr. David Lanegran, Professor of Geography at Macalester College. These experts demonstrated model lessons that addressed relevant Minnesota High Standards for citizenship (grades 6, 9, and 12), geography (grades 7 and 10), and history (grades 8 and 11). Lessons were subsequently critiqued according to the criteria for authentic instruction. Teachers were requested to take the model lessons back to their classrooms and use them to enhance their teaching.

In the second seminar, teachers also reflected on their instruction (e.g., to what degree does their instruction engage students in higher order thinking?). Coaching pairs were given an opportunity to share their experiences with the peer coaching consultants.

Seminar III

The third seminar extended the work of the second seminar. Teachers again met with content-area experts and participated in model lessons. Teachers also discussed with the experts their own teaching of the model lessons from Seminar II.

Teachers shared student work and rated it according to the criteria for authentic student performance (e.g., to what degree does the work reflect a substantial level of analysis?). They discussed how student performance should inform instruction and assessment.

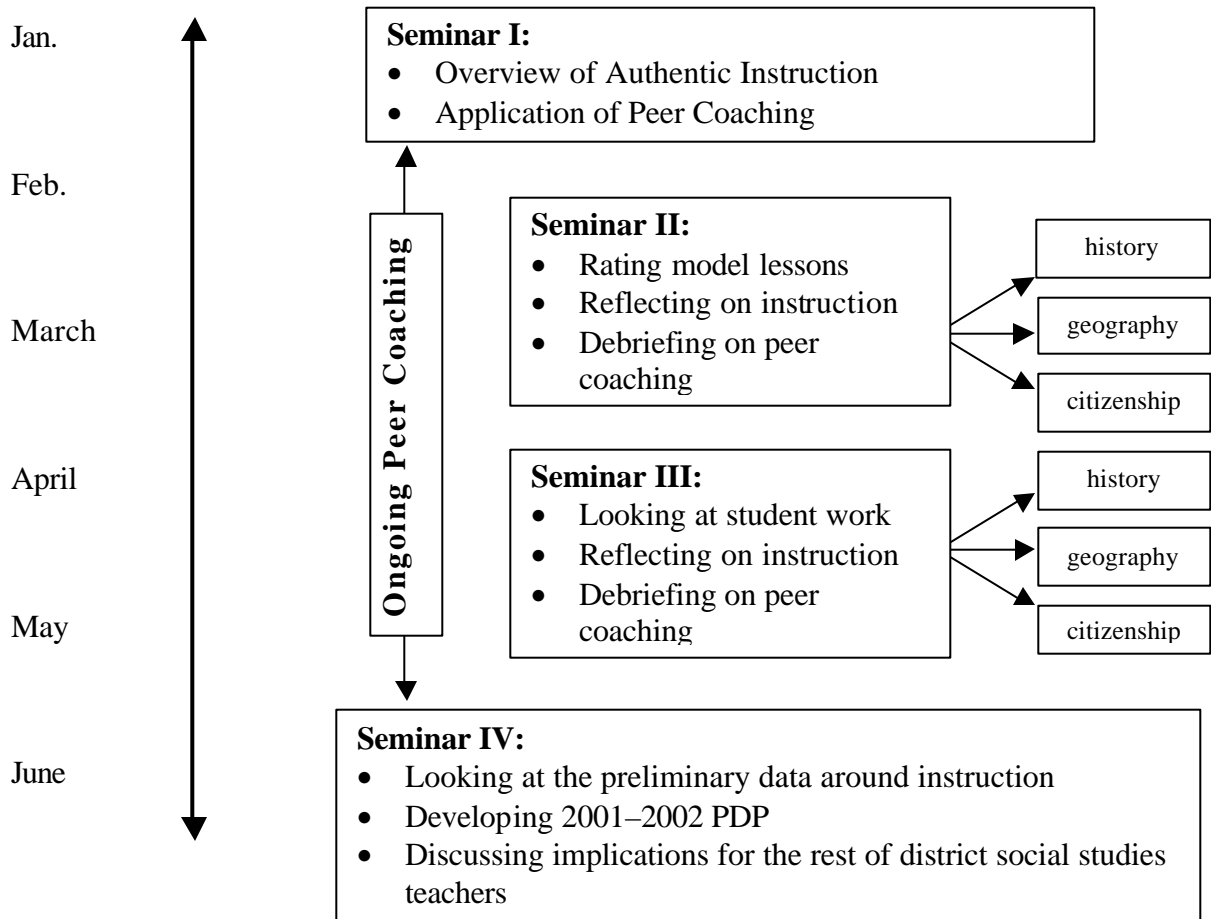
Finally, teachers were again asked to reflect on their instruction (e.g., to what degree does their instruction engage students in substantive conversation?), and coaching pairs were given an opportunity to share their experiences with the peer coaching consultants.

Seminar IV

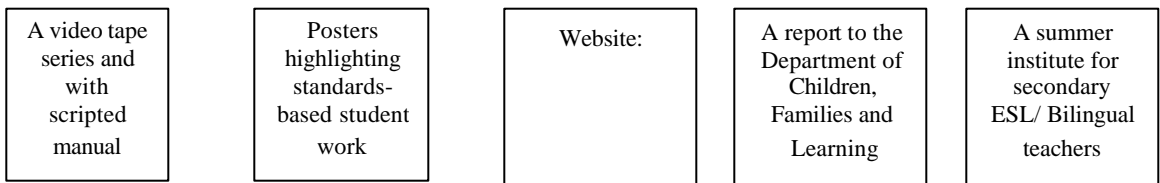
The final seminar allowed teachers to meet with the evaluation coordinators and reflect on the effectiveness of the professional development model. Teachers examined the preliminary results from the study, and reflected on the significance of the data. Teachers also discussed how their participation in the project could be incorporated into their 2001-2002 Professional Development Plan (PDP), and gave suggestions for incorporating aspects of the project into the August 2001 District Staff Development Day.

Figure 1

Overview of the *Linking Authentic Instruction* Project



Dissemination Plan:



Participant Characteristics

This section describes characteristics of the teachers and students participating in the project. Information was drawn from surveys of both groups.

Participating Teachers

Forty of the 45 teachers who chose to participate in the project completed a brief questionnaire at the first seminar on February 15, 2001; 30 teachers completed a brief questionnaire at the final seminar on June 8, 2001. Of those teachers, 26 completed both questionnaires; these are the data included in this report.

The questionnaire was designed to gather data on teacher demographics (gender, ethnicity, years of teaching experience, etc.) as well as information regarding four factors generally considered to be related to authentic pedagogy: school climate, professional community, general instructional practices, and classroom activities.

Middle school teachers tended to be female, a bit younger with fewer years in their current school and fewer years in teaching (see Table 2). High school teachers were more likely to be male, white, and a bit older. The average participant was 37.8 years old, had 9.3 years of teaching experience, and had an advanced degree. About 60% of the project teachers were female and 66.7% were white.

Table 2

Demographic Characteristics of Teachers Participating in the Project

	Middle school	High school	Total
	(14)	(12)	(26)
Percent female	78.6	37.5	59.6
Percent white	51.9	83.3	66.7
Percent with advanced degree ¹	92.6	87.5	90.2
Percent social studies	81.4	100	86.6
Average age	35.2	40.7	37.8
Average years in current school	2.9	5.3	4.0
Average years in teaching	8.3	10.4	9.3

Note: ¹Advanced degrees include specialist certificate, master's degree, Ph.D. or Ed.D.

Participating Students

Teachers selected a target class on which they would concentrate to improve instruction, assessment tasks, and student work. Teachers were asked to provide one assignment and/or assessment task from that class and the students' work for that task at the beginning of the project and one task and accompanying student work at the end of the project.

Teachers also asked their students to complete a brief questionnaire about their engagement in that social studies class and about the types of teaching strategies used by their teacher at the beginning of the project and at the end of the project. There were 281 students who completed both questionnaires. The questionnaire gathered some demographic information about the students. The data included in this report were those given by the 281 students.

Middle school students were less likely to be white and more likely to say they qualify for free and reduced lunch (see Table 3). Middle school students report getting lower grades in school and in social studies than do high school students. Both groups report getting lower grades in social studies than in other subjects. Approximately one-fourth (26%) of students were born outside the United States.

Table 3

Demographic Characteristics of Students Participating in the Project

	Middle school (102)	High school (179)	Total (281)
Percent female	55.7	56.0	55.9
Percent white	12.1	42.2	30.9
Eligible free/reduced lunch	86.6	54.3	66.4
Born in the U.S.	74.5	74.1	74.2
Typical Grades in School			
Mostly A's	13.9	25.3	21.0
A's and B's	40.6	38.6	39.3
B's and C's	27.7	27.7	27.7
Typical Social Studies Grades			
Mostly A's	21.8	23.0	22.6
A's and B's	27.7	27.9	27.8
B's and C's	27.7	32.7	30.8

Note: Of the 281 students, from 14 to 22 students skipped one or more of these questions.

Instructional Setting

At the first seminar, teachers were asked to describe the instructional settings in which they were currently teaching. Although we often think of the classroom as the place where teachers spend most of their time, the broader context of the school and teacher interactions with students and staff outside the classroom also affect their performance and satisfaction. Key areas include teachers' views on:

- | their school's general climate;
- | the degree of collaboration and sense of professional community among their teaching staff;
- | instructional time, and
- | typical classroom activities and assignments.

School Climate

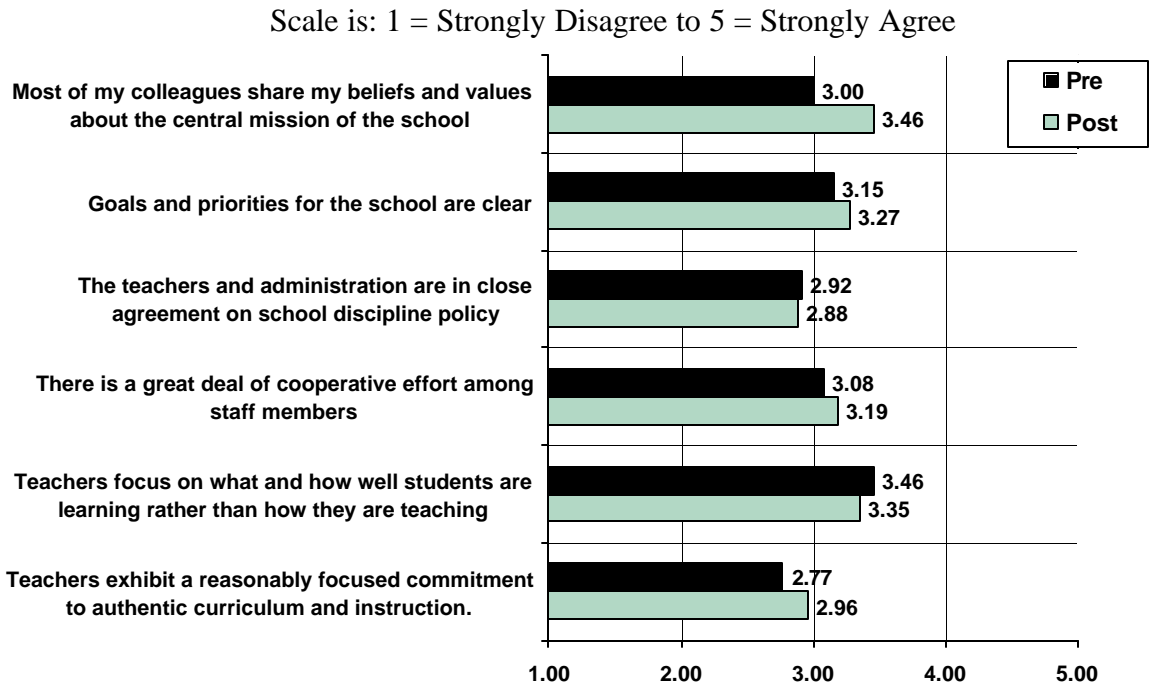
Previous research (Newmann & Associates, 1996) suggests that school climate and teachers' sense of professional community within the school can play an important role in supporting authentic pedagogy. Project teachers were asked to rate their school's climate on six items (see Figure 2).

The greatest positive change from the initial questionnaire to the end-of-project questionnaire was with "most of my colleagues share my beliefs and values about the central mission of the school" (mean of 3.46 compared to 3.00). Although none of the changes were statistically significant, most of the changes were in the expected direction.

Teachers rated "teachers exhibit a reasonably focused commitment to authentic curriculum and instruction" more positively (mean of 2.96 compared to 2.77) though the response is still neither positive or negative. Teachers reported a bit more "cooperative effort among staff members" (mean of 3.19 compared to 3.09) and slightly more clarity with respect to the "goals and priorities for the school" (mean of 3.27 compared to 3.15). Response to the item "teachers focus on what and how well students are learning rather than how they are teaching" (mean of 3.35 compared to 3.46) may show that teachers are focusing more on the way they are teaching than at the start of the project.

Figure 2

School Climate Average Responses Initial and End-Of-Project Questionnaires



Professional community

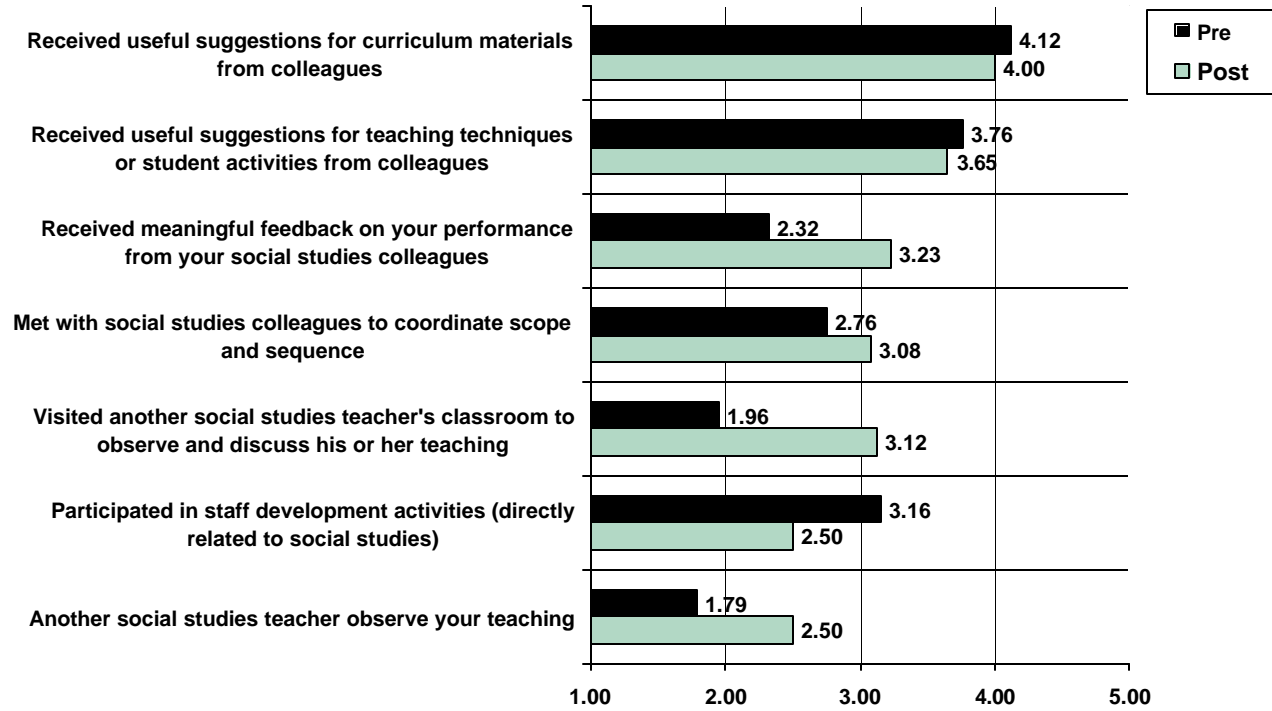
Responses to the seven items used to measure professional community are similar to those from previous studies (Newmann & Associates, 1996; Palmer & Avery, 1999). Whether due to time constraints or cultural norms, teachers are much more likely to share curriculum materials and teaching activities with their colleagues than they are to observe and critique one another's teaching performance (see Figure 3).

Nevertheless, there are significant increases in teachers "receiving meaningful feedback on performance from social studies colleagues" (mean of 2.32 increases to 3.23) and "visiting another social studies teacher's classroom to observe and discuss his or her teaching" (mean of 1.96 increases to 3.12). Both of the professional activities were key activities built into the project with resources for peer coaching. Teachers also reported "meeting with social studies colleagues to coordinate scope and sequence" slightly more often (mean of 2.76 increases to 3.08).

Figure 3

Teacher Reports of Professional Community Activities, Pre and Post

Scale was 1=never, 2=once, 3=twice, 4=3-4 times, 5=9 times, and 6=10 or more times.



Instructional Orientations

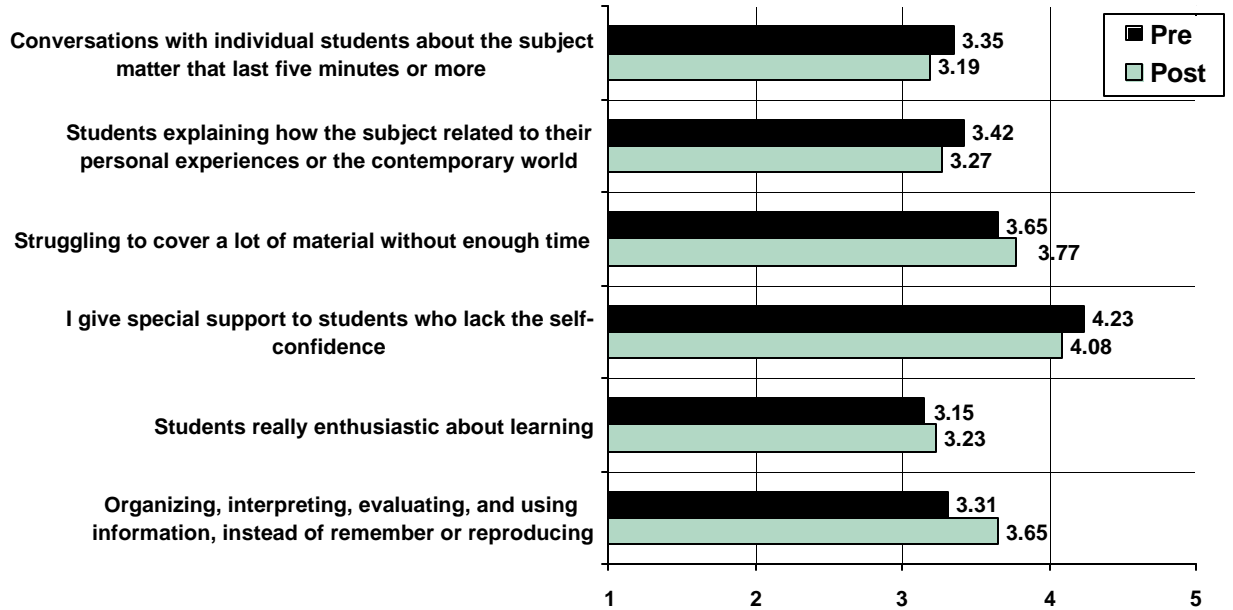
Teachers were asked to describe how they and their students spend their time during a typical class (see Figure 4). There were no statistically significant differences in responses from the initial (pre) questionnaire to the end-of-year (post) questionnaire, and only two of the six items were moving in a positive direction.

Teachers were most positive (means of 4.23 decreasing to 4.08 on a scale of 1 to 5) about “giving special attention or support to students who lacked the self-confidence to try hard in school.” Teachers were “struggling to cover a lot of material without enough time” a bit more (means of 3.65 and 3.77), but they found more time for “organizing, interpreting, evaluating, and using information, instead of trying to remember or to reproduce it” (mean of 3.31 increased to 3.65). Fewer teachers reported having “conversations with individual students about the subject matter that last five minutes or more” (means of 3.35 decreases to 3.19). Teachers were slightly less likely to report having “students explain how the subject related to their personal experiences or the contemporary world” (mean of 3.42 decreasing to 3.27), a key component of authentic instruction.

Figure 4

Teachers' Instructional Orientations, Pre and Post

Scale is 1=never, 2=rarely, 3=sometimes, 4=frequently, and 5=always.



Instructional Activities

Teachers

Finally, teachers were asked how frequently they engage in various instructional activities (see Figure 5). As in previous studies of social studies teachers (Niemi & Junn, 1998), project teachers reported at the beginning of the project that students are most likely to listen to the teacher present material on a daily basis. However, at the end of the project, teachers ranked “work in small groups” as the activity students take part in most frequently.

Although none of the changes in responses from beginning to end of the project were statistically significant, several reports of instructional activities changed in the hoped for direction. At the end of the project, teachers were more likely to report students “discussing current events,” “participating in student-led discussions,” “writing reflections,” “displaying work outside the classroom,” and “designing or conducting their own inquiry.” Also, teachers reported students doing less “filling out worksheets or study guides.” Less positive is that students were writing fewer papers of three pages or more.

Students

On the initial questionnaire, a fairly high percentage (70%) of students report that they spend more time “discussing ideas” than “listening to teacher lectures and completing worksheets.” This increased to nearly 73% by the end of the project (see Table 4).

On the other hand, over 50% of the students say that tests place more importance on “remembering information” as opposed to “explaining what I know” (see Table 5). Students’ responses at the end of the project are more positive toward explaining what they know.

Figure 5

Teachers’ Reports of Classroom Activities, Pre and Post

Scale is 1=Rarely or never, 2=1-2 times a month, 3=Once a week, 4=2-3 times a week, and 5=Daily.

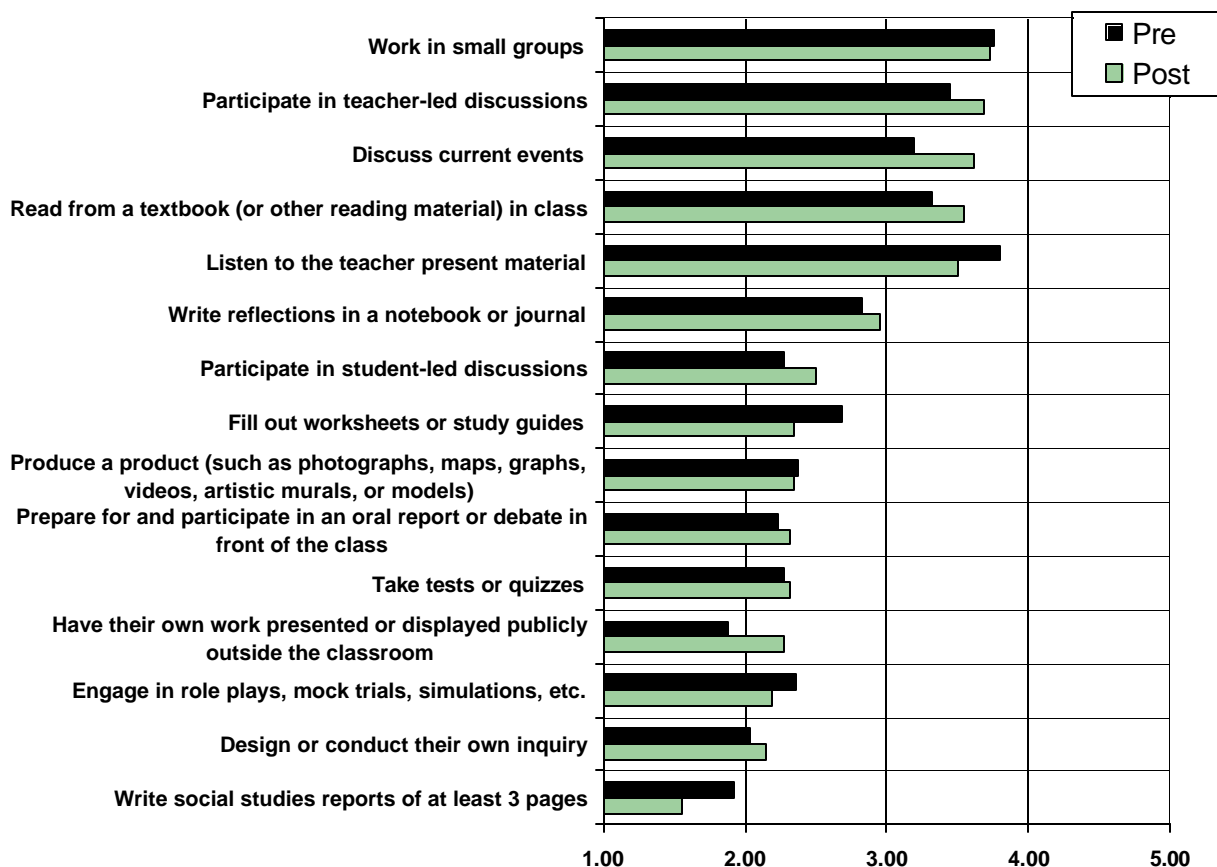


Table 4

Classroom Activities Reported by Students, Pre and Post

	Pre	Post
We discuss ideas with the teacher and other students.	70.2	72.8
We listen to the teacher lecture and/or fill out worksheets.	29.8	27.2

Table 5

Types of Tests as Described by Students, Pre and Post

	Pre	Post
The tests in this class put most importance on remembering information.	54.2	51.7
The tests in this class put most importance on explaining what I know.	45.8	48.3

Students Attitudes and Engagement

Student Enjoyment of Social Studies

Teachers selected a target class on which they would concentrate to improve instruction, assessment tasks, and student work. Students from these target classes completed a brief questionnaire at the beginning of the project and at the end of the project.

When asked how often they enjoy learning about the social studies, almost 60% of the student responded “most of the time” or “always” on the initial questionnaire and almost 64% at the end of the project (see Table 6 and Figure 6).

Table 6

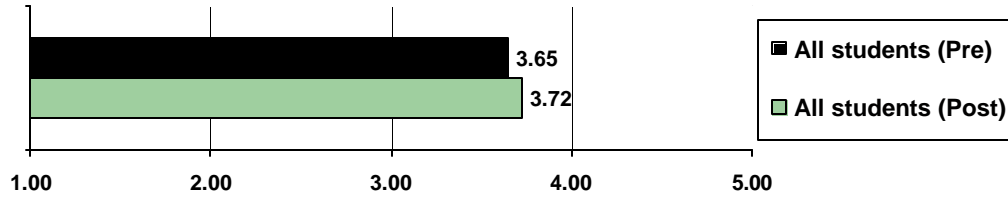
Students’ Enjoyment of Social Studies, Pre and Post

	Never (1)	Rarely (2)	Some of the time (3)	Most of the time (4)	Always (5)
I enjoy learning about social studies .					
Pre	1.3	7.5	32.1	43.2	16.0
Post	1.8	6.4	28.2	45.7	17.9

Figure 6

Students' Enjoyment of Social Studies, Pre and Post

Scale is 1=never, 2=rarely, 3=some of the time, 4=most of the time, and 5=always.

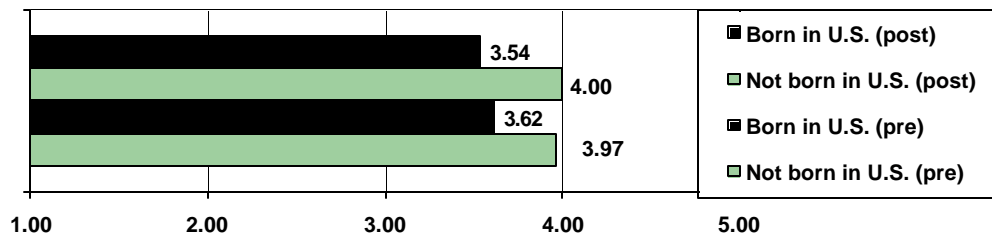


There was one difference among students that was statistically significant. Students born outside the United States were more likely to enjoy social studies than students born in the US (see Figure 7).

Figure 7

Students' Enjoyment of Social Studies by Place of Birth, Pre and Post

Scale is 1=always, 2=most of the time, 3=some of the time, 4=rarely, and 5=never.



Students' Engagement in Social Studies

Four items measured students' engagement in the class (see Table 7). There was little difference between the beginning and end of the project responses. A high percentage (70% to 80%) of students, at both time periods report they tried as hard as they could, completed assignments, and paid attention in class frequently or always. Lower percentages (36% to 40%) of students reported that they were rarely or never bored in class.

Consistent with students' reports of their enjoyment of social studies, students born outside the United States responded more positively on each of the student engagement items as compared to their U.S.-born counterparts.

Table 7

Students' Self-Reported Engagement in Social Studies, Pre and Post

(percent of responses)

		Never	Rarely	Sometimes	Frequently	Always
		(1)	(2)	(3)	(4)	(5)
I felt bored in class	Pre	12.3	23.9	43.5	14.4	6.0
	Post	15.0	25.4	37.9	17.5	4.3
I tried as hard as I could	Pre	.9	4.4	21.1	39.2	34.4
	Post	2.5	4.0	16.3	42.0	35.1
I completed assignments	Pre	.6	4.5	21.2	39.7	34.1
	Post		5.4	23.8	36.8	33.9
I paid attention in class	Pre	.7	1.7	20.3	41.6	35.7
	Post	.4	2.5	17.0	44.2	35.9

Impact on Instruction, Assessment and Student Performance

Introduction

The goal of the *Linking Authentic Instruction* project was to improve instruction and assessment, and of course, student achievement. This project used the concept of authentic pedagogy and the Minnesota High Standards as a foundation for professional development. Ultimately, the focus was on getting students to think more deeply and to become more engaged in substantive conversation about the key concepts included in the standards, as well as making more connections beyond the classroom.

Research design features

In order to document the degree to which the project influenced instruction, assessment, and student performance, each teacher selected one class as his or her “target class.” Teachers selected one assignment/ assessment task given to this class before the start of the project and one task at the end of the project. Teachers also provided the student work done in response to these assignments/ assessment tasks. In addition, project staff observed teachers’ target classes one class period at the start of the project and one class period at the end of the project.

In this section, we provide an analysis of the changes in instruction, assessment and student performance from the beginning of the project to the end of the project.

Instruction

Authentic pedagogy – instruction and assessment – requires students to construct knowledge, engage in disciplined inquiry, and make connections to the world beyond the classroom and the school.

Four standards for instruction are considered equally important. In looking at changes between the first observation and the second, we saw significant improvements in the extent to which teachers engaged in authentic instruction (see Table 8). In particular, teachers showed great improvements in engaging students in “higher order thinking” and using “deep knowledge.” There were also some significant increases in “substantive conversation,” although this standard began with and continued receiving the lowest scores.

Table 8

Comparison of Authenticity of Instruction, Beginning of Project to End of Project

	Potential	Beginning	Endin	Effect
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	range	mean	mean	size
Standard 1. Higher Order Thinking	1 - 5	2.37	3.17	.82
Standard 2. Deep Knowledge	1 - 5	2.40	3.03	.71
Standard 3. Substantive Conversation	1 - 5	1.90	2.34	.38
Standard 4. Connections to the World Beyond the Classroom	1 - 5	2.27	2.72	.41
Total Authentic Instruction Score	4 - 20	8.93	11.28	.64

Notes: Effect size = (post-project instructional mean – pre-project instructional mean)/S.D._{ave.} Researchers differ as to what constitutes a significant effect size. Jacob Cohen (1988) suggests that an effect size of .20 can be considered small; an effect size of .50 medium, and an effect size of .80 large. Rosenthal and Rosnow (1984), however, categorize an effect size between .1 and .3 as small; between .3 and .5 medium; and over .5 large.

Scoring Criteria for Authentic Classroom Instruction

Each standard was scored on a 5-point numeric scale with 1 being low and 5 high.

Standard 1. Higher Order Thinking

Instruction involves students in manipulating information and ideas by synthesizing, generalizing, explaining, hypothesizing, or arriving at conclusions that produce new meaning and understandings for them.

Standard 2. Deep Knowledge

Instruction addresses central ideas of a social studies discipline or topic with enough thoroughness to explore connections and relationships and to produce relatively complex understandings.

Standard 3. Substantive Conversation

Students engage in extended conversational exchanges with the teacher and/or their peers about subject matter in a way that builds an improved and shared understanding of ideas or topics.

Standard 4. Connections to the World Beyond the Classroom

A lesson gains in power and authenticity the more there is a connection to the larger social context in which students live.

Assessment Tasks

Teachers submitted copies of assessment tasks (assignments) they had used with their target class at the beginning of the project period and again at the end of the project period. As shown in Table 9, the quality of the assessment tasks in terms of authenticity improved on every standard except “consideration of alternatives” and “elaborated written communication.” At both the beginning and the end of the project, the greatest weaknesses across the tasks were in not requiring students to consider alternatives and not having students share their work with audiences beyond the classroom. The very small effect sizes associated with the change in the assessment tasks indicate virtually no improvement in this area. The results for changes in instruction (Table 8) and changes in assessment tasks (Table 9) reflect the focus of the project: Substantial time was devoted to improving instruction and little time was allocated to improving assessment tasks.

Table 9

Comparison of Authenticity of Assessment Tasks, Beginning of Project to End of Project

	Potential range	Beginning mean	Ending mean	Effect size
Standard 1. Organization of Information	1–3	2.38	2.44	.02
Standard 2. Consideration of Alternatives	1–3	1.94	1.87	.03
Standard 3. Disciplinary Content	1–3	2.25	2.44	.08
Standard 4. Disciplinary Process	1–3	2.19	2.44	.11
Standard 5. Elaborated Written Communication	1–4	3.31	2.94	.12
Standard 6. Problem Connected to the World Beyond the Classroom	1–3	2.06	2.06	.00
Standard 7. Audience Beyond the School	1–4	1.13	1.25	.11
Standard 8. Clarity (added for this project; not part of the framework designed by Newmann et al., 1995)	1–3	2.25	2.56	.13
Total Authentic Task Score	8–26	17.50	18.00	.03

Notes: Effect size = (post-project assessment task mean – pre-project assessment task mean)/S.D._{ave}. Researchers differ as to what constitutes a significant effect size. Jacob Cohen (1988) suggests that an effect size of .20 can be considered small; an effect size of .50 medium, and an effect size of .80 large. Rosenthal and Rosnow (1984), however, categorize an effect size between .1 and .3 as small; between .3 and .5 medium; and over .5 large.

Scoring Criteria for Assessment Tasks

Standard 1. *Organization of Information*

The task asks students to organize, synthesize, interpret, explain, or evaluate complex information in addressing a concept, problem, or issue.

Standard 2. *Consideration of Alternatives*

The task asks students to consider alternative solutions, strategies, perspectives, or points of view as they address a concept, problem, or issue.

Standard 3. *Disciplinary Content*

The task asks students to show understanding and/or use of ideas, theories, or perspectives considered central to an academic or professional discipline (e.g., democracy, social class, market economy, theories of revolution). Reference to isolated factual claims, definitions—though necessary to inquiry within a discipline—will not be considered indicators of significant disciplinary content unless the task requires students to apply powerful disciplinary ideas that organize and interpret the information.

Standard 4. *Disciplinary Process*

The task asks students to use methods of inquiry, research, or communication characteristic of an academic or professional discipline. Some powerful processes of inquiry may not be linked uniquely to any specific discipline (e.g., interpreting graphs), but they will be valued here if the task calls for their use in ways similar to important uses within the discipline.

Standard 5. *Elaborated Written Communication*

The task asks students to elaborate on their understanding, explanations, or conclusions through extended writing.

Standard 6. *Problem Connected to the World Beyond the Classroom*

The task asks students to address a concept, problem, or issue that is similar to one that they have encountered, or are likely to encounter, in life beyond the classroom.

Standard 7. *Audience Beyond the School*

The task asks students to communicate their knowledge, present a product or performance, or take some action for an audience beyond the teacher, classroom, and school building.

Standard 8. *Clarity*

Directions to students are clear; teacher anticipates potential problems/questions, and provides examples as appropriate. Directions are sequenced and written in such a way that independent learners could complete the task with little or no assistance.

Student Performance on Assessment Tasks

Teachers provided copies of student work resulting from the assessment tasks that they used with their target class before the project began and student work resulting from the assessment task they used toward the end of the project. Student work is considered more authentic when students demonstrate strong analytical abilities, show an understanding of significant disciplinary concepts, and convey their ideas through extended writing. In the *Linking Authentic Instruction* project, students demonstrated gains on each of these standards from the beginning to the end of the project (see Table 10). The improvement is small, however, as indicated by the modest effect sizes. Without a comparison group, it is unknown whether these gains would have been evident as part of normal student growth over a 6-month period.

Table 10

Comparison of Authenticity of Student Performance, Beginning of Project to End of Project

	Potential range	Beginning mean	Ending mean	Effect size
Standard 1. Analysis	1 – 4	1.94	2.55	.27
Standard 2. Disciplinary Concepts	1 – 4	1.95	2.41	.21
Standard 3. Elaborated Written Communication	1 – 4	1.92	2.28	.17
Total Authentic Performance Score	3 – 12	5.81	7.26	.22

Notes: Effect size = (post-project student performance mean – pre-project student performance mean)/S.D._{ave}. Researchers differ as to what constitutes a significant effect size. Jacob Cohen (1988) suggests that an effect size of .20 can be considered small; an effect size of .50 medium, and an effect size of .80 large. Rosenthal and Rosnow (1984), however, categorize an effect size between .1 and .3 as small; between .3 and .5 medium; and over .5 large.

Scoring Criteria for Student Performance

There were three standards used when assessing student work.

Standard 1. Analysis

Student performance demonstrates higher order thinking with disciplinary content by organizing, synthesizing, interpreting, evaluating, and hypothesizing to produce comparisons/contrasts, arguments, application of information to new contexts, and consideration of different ideas or points of view.

Standard 2. Disciplinary Concepts

Student performance demonstrates an understanding of ideas, concepts, theories, and principles from the disciplines and/or civic life by using them to interpret and explain specific, concrete information or events.

Standard 3. Elaborated Written Communication

Student performance demonstrates an elaborated account that is clear, coherent, and provides richness in details, qualifications and argument. The standard could be met by elaborated consideration of alternative points of view.

Teachers' Perceptions of the Project

At the conclusion of the *Linking Authentic Instruction* project, teachers were asked to evaluate the quality of various components of the project. The components may be grouped into three categories: Authentic Pedagogy, Social Science Content, and Peer Coaching. Several open-ended questions also gave teachers an opportunity to comment on any aspect of the project.

Authentic Pedagogy

During the seminars, the teachers were provided with an overview of the concept of “authentic pedagogy.” Teachers viewed videotapes of classroom instruction, and rated the authenticity of the instruction according to the framework developed by Newmann and his colleagues (1995). Following one of the content seminars, teachers critiqued the model lessons provided by the content experts according to the criteria for authentic instruction. Teachers also scored their own students’ work according to the criteria for authentic student performance.

As shown in Table 11, most of the teachers thought their training in using the criteria for authenticity was either “very effective” or “effective.”

Table 11

Teachers’ perceptions of their training for scoring instruction, task, and performance authenticity

	Number of Teachers Responding:					Mean Rating
	Not at all effective				Very effective	
Scoring authentic instruction	0	0	3	11	15	4.41
Scoring authentic assessment tasks.	0	0	4	12	13	4.31
Scoring student performance	0	0	5	12	12	4.24

Social Science Content

Teachers had an opportunity to choose to attend one set of social science content seminars—civics, geography or history. Within each content area, teachers met twice with the content expert who demonstrated model lessons and shared instructional resources. As shown in Table 12, the majority of teachers found these seminars to be “very effective.”

Table 12

Teachers' Perceptions of the Effectiveness of the Social Science Content Seminars

	Number of Teachers Responding:					Mean Rating
	Not at all effective				Very effective	
Civics content seminar	0	0	0	2	9	4.82
Geography content seminar	1	0	0	2	7	4.40
History content seminar	1	0	1	4	8	4.29

Note: Teachers chose to attend one of the content area seminars, thus the total number of teachers rating a given seminar is significantly smaller than the total number of teachers involved in the project.

Peer Coaching

The peer-coaching component of the project was designed to help teachers give feedback to one another on the authenticity of their instruction. Approximately one-half of the teachers had previously had training in peer coaching; the other half received training as part of the project. As shown in Table 13, most of the teachers perceived the peer coaching training to be either “very effective” or “effective.”

Table 13

Teachers' Perceptions of the Effectiveness of the Peer Coaching Training

	Number of Teachers Responding:					Mean Rating
	Not at all effective				Very effective	
Peer coaching training	0	4	1	12	11	4.07

Comments on the Project

Teachers were asked four open-ended questions about the project:

- | What was the best thing about this project for you?
- | What was the most important thing you learned from this project?

- | How, if at all, will your work with this project affect your approach to teaching in the future?
- | If a similar project were offered another time, what suggestions would you offer the coordinator?

The “Best Thing”

When asked what the “best thing” was about the project, teachers were most likely to mention the content seminars and the increased level of collegiality with their peers. Representative comments on the content seminars include:

The single best thing had to be the two content seminars.

Content Seminars were excellent! I wish I could have participated in ALL THREE because all of the feedback was extremely positive!

The content specialist’s (Geographer David Lanegran) demonstrations of Newmann’s model.

I enjoyed my contact with Jennifer Bloom [civics expert].

Tim Hoogland [history expert] was great at presenting lesson ideas.

Many of the teachers clearly enjoyed the opportunity to work with their colleagues, and found these relationships to be a source of professional growth. Comments such as the following were typical:

Getting to know all these wonderful people and the opportunity to learn from each other.

Bringing teachers of the same field to share what they teach in order to improve the effectiveness of teachers.

The best aspect was the opportunity to work in a meaningful way with another teacher who understands the situation I am involved with. The opportunity to work for longer periods of time with a teaching peer was essential to our success.

The Most Important Thing I Learned

When teachers were asked to name “the most important thing I have learned” as a part of the project, they were most likely to mention some aspect of the authentic pedagogy framework. Comments included:

Constant going over and designing my instruction to better line up with Newmann’s model.

My intense discussions with students have a name, substantive conversation. Also, I don't have to find something of relevance in the lives of my students to make my instruction more meaningful. I can construct it.

I learn a little more every time I work with the Newmann stuff.

The implementation of authentic instruction and evaluation was a definite plus to both student and teacher.

Impact on Teaching

Teachers were asked: "How, if at all, will your work with this project affect your approach to teaching in the future?" Again, the majority of the teachers mentioned some aspect of the authentic pedagogy model that was particularly meaningful to them. One teacher wrote that she will "try to make connections to the real world" more often, another wrote that he plans to design "more assignments that include higher order thinking," and still another said that she will look for more ways to "share our work outside the classroom."

Many teachers plan to use the authentic pedagogy framework as a tool for reflecting on their work:

It gives me a formal structure to support my instruction. I often create curriculum that I think I would be interested in doing. The authentic assessment rubrics (instruction and student performance, too) give me something to check myself by. It raises the level of quality in my work.

I will certainly take more time to reflect on my instruction and how it aligns with Newmann's criteria.

Suggestions for Improvement

Teachers were asked what suggestions they would offer to the project coordinator if the project were implemented again. About one-fourth of the participants had no suggestions, and urged the coordinator to "keep up the great work!" and to do "more of what you've done." Seven of the teachers suggested that the project extend over a year rather than a 6-month period. Two teachers mentioned that they would have liked more feedback on their instruction. Three teachers mentioned that they were uncertain of the role of the non-social studies teachers.

Summary

The *Linking Authentic Instruction* project was clearly successful from the participants' point of view. Instruction in pedagogical knowledge (the authentic pedagogy framework) and content knowledge (the social science model lessons) appears to be a powerful combination. Almost all of the teachers found the seminars to be intellectually stimulating and useful.

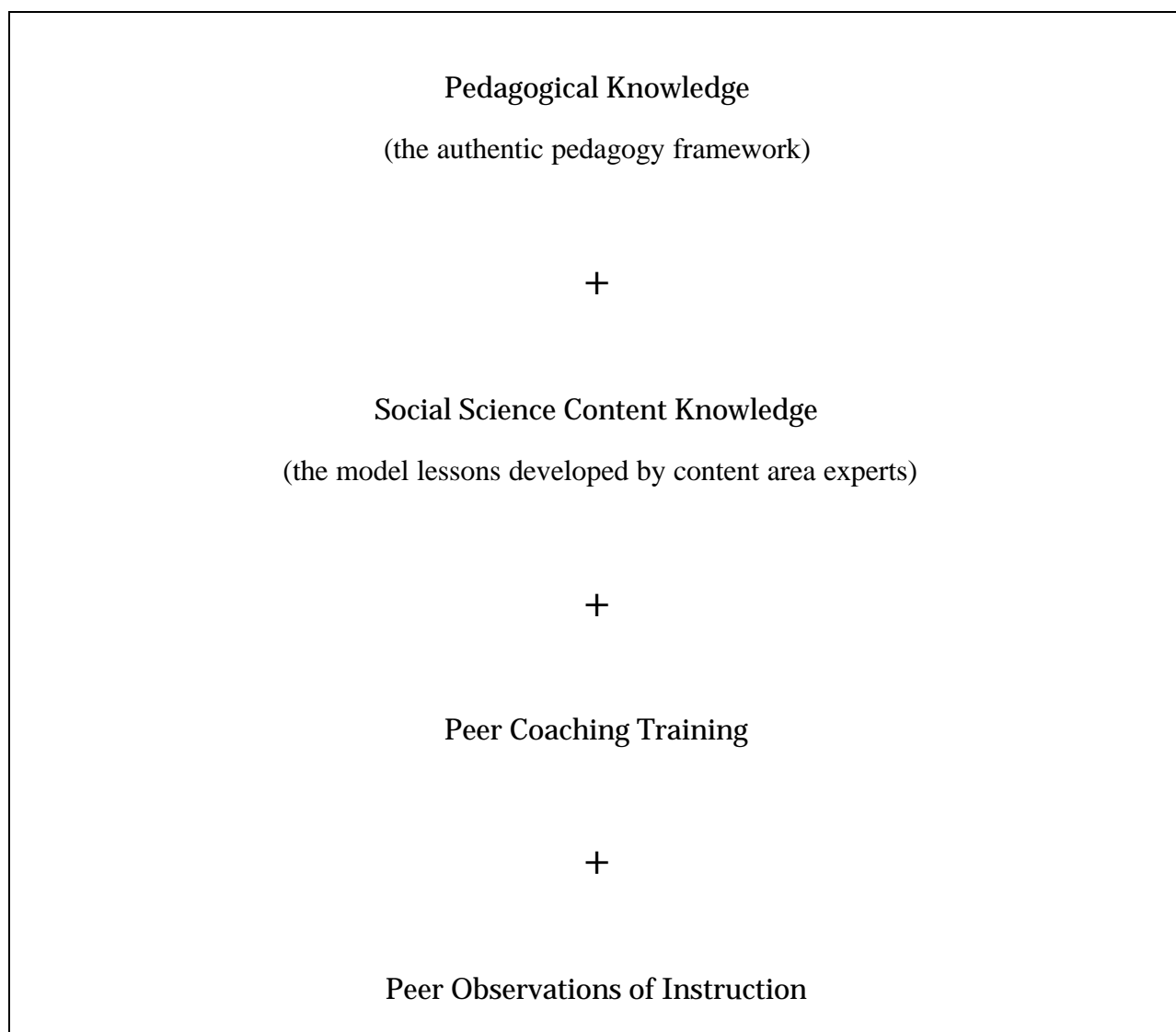
A strong theme throughout the teachers' comments is their sense of increased collegiality. Some of the teachers credited the peer coaching training with giving them the tools to communicate

with their colleagues about instruction. Others attributed the increased sense of collegiality to the amount of time they were afforded to engage in substantive discussions about pedagogy. Regardless, the teachers in this project appear to have created a professional community with a strong commitment to improving teaching and learning.

Conclusions

The *Linking Authentic Instruction* project began in January 2001, and concluded in June 2001. Forty-five teachers, predominantly secondary social studies teachers, participated in four professional development seminars. The first seminar was devoted to familiarizing teachers with the authentic pedagogy framework, and the second and third seminars focused on developing teachers' content knowledge through model lesson demonstrations. Throughout the project, pairs of teachers were given opportunities to observe one another's teaching and debrief their instruction according to the criteria for authentic instruction. Training in peer coaching helped teachers develop the skills to give one another constructive feedback.

The professional development model was based on:



Each of these components played a very important role in the teachers' professional development.

The structure and format of the project exemplifies many of the characteristics of high-quality professional development: the combination of pedagogical and content knowledge; adequate time for inquiry, reflection and mentoring; a focus on improving student learning; collaboration among colleagues; and ongoing systems of support (Louis, Marks & Kruse, 1995; National Foundation for the Improvement of Education, 1996). The model stands in stark contrast to the typical one-shot, half-day staff development workshop.

Data on teachers' instruction, teacher-designed assessment tasks and student work were collected at the beginning and the end of the project. The results indicate:

- | a very significant improvement in the authenticity of teachers' instruction,
- | virtually no change in the authenticity of the assessment tasks designed by teachers; and
- | a very modest improvement in the authenticity of student work.

The importance of the improvement in instruction should not be underestimated—many projects designed to improve instruction yield little change in instructional practices. The lack of a change in the intellectual quality of the assessment tasks teachers designed reflects the project's focus on instruction. Although teachers were familiar with the standards for authentic assessment, they did not practice developing higher quality assessments in the seminars.

In summary, the professional development model used in the *Linking Authentic Instruction* project appears to have been quite successful in terms of enhancing teachers' instructional practices and in promoting a strong sense of collegiality.

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Appendix A Authentic Instruction Scoring Rubric

Scoring Criteria for Authentic Classroom Instruction

(from Newmann, F.M., Secada, W.G. & Wehlage, G.G. (1995). *A guide to authentic instruction and assessment: Vision, standards and scoring*. Madison, WI: Wisconsin Center for Education Research, pp. 86 - 93.)

General Rules for Scoring:

The four standards for instruction are considered equally important. Each standard is scored on a 5-point numeric scale with 1 being low and 5 high. The descriptions which follow for scores on each standard constitute the minimal criteria for that score. Scoring should follow these general rules:

- | If in doubt between two scores, make the decision by asking whether the minimal conditions of the higher score have been met. If not, use the lower score.
- | In determining scores for each standard, consider only the evidence during the observation. This should include an examination of any handouts the teacher uses during class.
- | "Many" students refers to at least one-third of the students in a class; "most" refers to more than half; "almost all" should be interpreted as all but a few.
- | Scores should take into account what students can reasonably be expected to do at the grade level.

[Note: For an in-depth description of the standards, see Chapter 3 in *A Guide to Authentic Instruction and Assessment: Vision, Standards and Scoring*, Newmann, Secada, & Wehlage.]

Standard 1. Higher Order Thinking

Instruction involves students in manipulating information and ideas by synthesizing, generalizing, explaining, hypothesizing, or arriving at conclusions that produce new meaning and understandings for them.

Higher order thinking requires students to manipulate information and ideas in ways that transform their meaning and implications. This occurs when students combine facts and ideas in order to synthesize, generalize, explain, hypothesize, or arrive at some conclusion or interpretation. Manipulating information and ideas through these processes allows students to solve problems and discover new (for them) meanings and understandings. When students engage in higher order thinking, an element of uncertainty is introduced into the instructional process which makes instructional outcomes not always predictable, i.e., the teacher is not certain what students will say. In helping students become constructors of knowledge, the teacher's main instructional task is to create activities or environments that allow them opportunities to engage in higher order thinking.

Lower order thinking occurs when students are asked to receive or recite factual information, or to employ rules or procedures through repetitive routines. As information receivers, students are given pre-specified knowledge ranging from simple facts and information to more complex concepts. Students are not required to do much intellectual work, since the purpose of instruction is simply to transmit knowledge or to practice procedural routines. Students are in a similar role when they are reciting previously acquired knowledge, i.e., responding to test-type questions that require recall of pre-specified knowledge. Even more complex activities may involve lower order thinking if students only need to follow pre-specified steps and routines in rote fashion.

_____5 = Almost all students, almost all of the time, are performing HOT.

_____4 = Students are engaged in at least one major activity during the lesson in which they perform HOT operations. This activity occupies a substantial portion of the lesson and many students are performing HOT.

_____3 = Students are primarily engaged in routine LOT operations a good share of the lesson. There is at least one significant question or activity in which some students perform some HOT operations.

_____2 = Students are primarily engaged in LOT, but at some point they perform HOT as a minor diversion within the lesson.

_____1 = Students are engaged only in LOT operations, i.e., they either receive, or recite, or participate in routine practice and in no activities during the lesson do students go beyond LOT.

Standard 2. **Deep Knowledge**

Instruction addresses central ideas of a social studies discipline or topic with enough thoroughness to explore connections and relationships and to produce relatively complex understandings.

Knowledge is deep when central ideas of a topic or discipline are explored in considerable detail that shows interconnections and relationships. Knowledge is deep when, instead of being able to recite only fragmented pieces of information, students express relatively systematic, integrated, or holistic understandings of central concepts. Mastery is demonstrated by students discussing relationships, solving problems, constructing explanations, and drawing conclusions.

Knowledge is superficial or thin when it does not deal with significant concepts or central ideas of a topic or discipline. Knowledge is also shallow when important central ideas have been trivialized or when knowledge is presented as non-problematic. Knowledge is thin when important ideas are covered in a way that gives students only a surface acquaintance with their meaning. This superficiality can occur when teachers cover large quantities of fragmented ideas and bits of information that are unconnected to other knowledge. Evidence of shallow knowledge exists when students do not, or cannot, use knowledge to make clear distinctions or arguments, to solve problems, or to develop more complex understandings of other related phenomena.

Depth of knowledge and understanding can be indicated by the substantive character of the ideas that the teacher presents in the lesson, and by the level of understanding that students demonstrate as they consider these ideas. It is possible to have a lesson which contains substantively important, deep knowledge, but where students do not become engaged or where they fail to show understanding of the complexity or the significance of the ideas. The criteria below ask observers to consider both the depth of knowledge represented by the teacher and the depth of understanding that students develop of that content.

_____5 = Knowledge is very deep because during the lesson almost all students do at least one of the following: sustain a focus on a significant topic; demonstrate their understanding of the problematic nature of information and/or ideas; demonstrate complex understanding by arriving at a reasoned, supported conclusion; explain how they solved a complex problem. In general, students' reasoning, explanations and arguments demonstrate fullness and complexity of understanding.

_____4 = Knowledge is relatively deep because either the teacher or the students provide information, arguments or reasoning that demonstrate the complexity of an important idea. During the lesson many students do at least one of the following: sustain a focus on a significant topic for a period of time; demonstrate their understanding of the problematic nature of information and/or ideas; demonstrate understanding by arriving at a reasoned, supported conclusion; explain how they solved a relatively complex problem.

_____3 = Knowledge is treated unevenly during instruction, i.e., deep understanding of something is countered by superficial understanding of other ideas. At least one significant idea may be presented in depth and its significance grasped, but in general the focus is not sustained.

_____2 = Knowledge remains superficial and fragmented; while some key concepts and ideas are mentioned or covered, only a superficial acquaintance or trivialized understanding of these complex ideas is evident.

_____1 = Knowledge is very thin because it does not deal with significant topics or ideas; teacher and students are involved in the coverage of simple information which they are to remember.

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Standard 3. Substantive Conversation

Students engage in extended conversational exchanges with the teacher and/or their peers about subject matter in a way that builds an improved and shared understanding of ideas or topics.

In lessons characterized by high levels of substantive conversation, there is sustained teacher-student and/or sustained student-student interaction about a topic; the interaction is reciprocal, and it promotes coherent shared understanding.

Substantive conversation has three features:

- (1) The talk is about subject matter in the discipline and includes higher order thinking, such as making distinctions, applying ideas, forming generalizations, or raising questions; not just reporting of experiences, facts, definitions, or procedures.
- (2) The conversation involves sharing of ideas and is not completely scripted or controlled by one party (as in teacher-led recitation). Sharing is best illustrated when participants explain themselves or ask questions in complete sentences, and when they respond directly to comments of previous speakers.
- (3) The dialogue builds coherently on participants' ideas to promote improved collective understanding of a theme or topic (which does not necessarily require an explicit summary statement).

To score 2 or above, conversation must focus on subject matter as defined in feature 1.

In short, substantive conversation resembles the kind of sustained exploration of content that is characteristic of a good seminar, where student contributions lead to shared understandings.

During lessons with little or no substantive conversation, teacher-student interaction typically consists of a lecture with recitation, where the teacher deviates very little from delivering a preplanned body of information and set of questions. Students give very short answers. Because the teacher's questions are motivated principally by a pre-planned checklist of questions, facts, and concepts, the discourse is frequently choppy, rather than coherent; there is often little or no

follow-up of students' responses. Such discourse is the oral equivalent of fill-in-the-blank or short-answer study questions. Student-to-student interaction can also reflect these qualities.

To recognize substantive conversation, we first define an interchange as a statement by one person and a response by another. Interchanges can occur between teacher and student or student and student. Sustained conversation is defined as at least three consecutive interchanges. Three consecutive interchanges would require at least four statements. A single statement could serve as both a response to a previous statement (completing one interchange) and as a stimulus to a subsequent statement (beginning a second interchange). The interchanges need not be between the same two people, but they must be linked substantively as consecutive responses.

____5 = All three features of substantive conversation occur, with at least one example of sustained conversation, and almost all students participate.

____4 = All three features of substantive conversation occur, with at least one example of sustained conversation, and many students participate.

____3 = Features 2 (sharing) and/or 3 (coherent promotion of collective understanding) occur and involve at least one example of sustained conversation, i.e., at least 3 consecutive interchanges).

____2 = Features 2 and/or 3 occur briefly and involve at least one example of two consecutive interchanges.

____1 = Virtually no features or substantive conversation occur during the lesson.

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Standard 4. Connections to the World Beyond the Classroom

A lesson gains in power and authenticity the more there is a connection to the larger social context in which students live.

There are at least three ways in which student activity in classrooms can reflect some connections to life beyond school:

- | Lessons might focus on understanding a real world public problem of some contemporary significance; for example, applying statistical analysis in preparing a report on a traffic problem to the city council.
- | Lessons can build upon students' personal experiences to teach important ideas in the disciplines; for example, by comparing approaches to conflict resolution between people and nations.
- | If students attempt to communicate their knowledge to others beyond the classroom, or to influence or assist others, school knowledge is more likely to have value beyond simply achieving success in school.

High scores depend upon the extent to which the lesson demonstrates these qualities.

_____5 = Students study or work on a topic, problem or issue that the teacher and students see as connected to their personal experiences or actual contemporary public situations. Students recognize the connection between classroom knowledge and situations outside the classroom. They explore these connections in ways that create personal meaning and significance for the knowledge. This meaning and significance is strong enough to lead students to become involved in an effort to affect or influence a large audience beyond their classroom in one of the following ways: by communicating knowledge to others (including within the school), advocating solutions to social problems, providing assistance to people, creating performances of products with utilitarian or aesthetic value.

_____4 = Students study or work on a topic, problem or issue that the teacher and students see as connected to their personal experiences or actual contemporary public situations. Students recognize the connection between the classroom knowledge and situations outside the classroom. They explore these connections in ways that create personal meaning and significance for the knowledge. However, there is no effort to use the knowledge in ways that go beyond the classroom to actually influence a large audience.

_____3 = Students study a topic, problem or issue that the teacher and students see as connected to their personal experiences or actual contemporary public situations. Students recognize the connection between classroom knowledge and situations outside the classroom, but they do not explore the implications of these connections, which remain abstract or hypothetical. There is no effort to actually influence a large audience.

_____2 = Students encounter a topic, problem or issue that the teacher tries to connect to students' experiences or to contemporary public situations, i.e., the teacher informs students that there is potential value in the knowledge being studied because it relates to the world beyond the classroom. For example, students are told that understanding Middle Eastern history is important for politicians trying to bring peace to the region; however, the connection is weak and there is no evidence that the students make the connection.

_____1 = Lesson topic and activities have no clear connection to anything beyond itself; the teacher offers no justification beyond the need to perform well in class.

Appendix B

Authentic Assessment Scoring Rubric

Scoring Criteria for Assessment Tasks

(from Newmann, F.M., Secada, W.G. & Wehlage, G.G. (1995). *A guide to authentic instruction and assessment: Vision, standards and scoring*. Madison, WI: Wisconsin Center for Education Research, pp. 81-85).

Notes: For an in-depth description of the standards, see Chapter 2 in Newmann, Secada, & Wehlage (1995).

[Standard 8, Clarity, was specifically added for this project. This standard is not part of the framework development by Newmann and his colleagues.]

Standard 1. Organization of Information

The task asks students to organize, synthesize, interpret, explain, or evaluate complex information in addressing a concept, problem, or issue.

Consider the extent to which the task asks the student to organize, interpret, evaluate, or synthesize complex information, rather than to retrieve or to reproduce isolated fragments of knowledge or to repeatedly apply previously learned procedures. To score high, the task should call for interpretation of nuances of a topic that go deeper than surface exposure or familiarity.

When students are asked to gather information for reports that indicates some selectivity and organizing beyond mechanical copying, but are not asked for interpretation, evaluation, or synthesis, give a score of 2.

_____ 3 = high

_____ 2 = moderate

_____ 1 = low

Standard 2. Consideration of Alternatives

The task asks students to consider alternative solutions, strategies, perspectives, or points of view as they address a concept, problem, or issue.

To score high, the task should clearly involve students in considering alternatives, either through explicit presentation of the alternatives or through an activity that cannot be successfully completed without examination of alternatives implicit in the work. It is not necessary that

students' final conclusions include listing or weighing of alternatives, but this could be an impressive indicator that it was an expectation of the task.

_____3 = high

_____2 = moderate

_____1 = low

Standard 3. Disciplinary Content

The task asks students to show understanding and/or use of ideas, theories, or perspectives considered central to an academic or professional discipline (e.g., democracy, social class, market economy, theories of revolution). Reference to isolated factual claims, definitions-- though necessary to inquiry within a discipline--will not be considered indicators of significant disciplinary content unless the task requires students to apply powerful disciplinary ideas that organize and interpret the information.

_____3 = Success in the task clearly requires understanding of concepts, ideas, or theories central in a discipline.

_____2 = Success in the task seems to require understanding of concepts, ideas or theories central in a discipline, but the task does not make these very explicit.

_____1 = Success in the task can be achieved with a very superficial (or even without any) understanding of concepts, ideas, or theories central to any specific discipline.

Standard 4. Disciplinary Process

The task asks students to use methods of inquiry, research, or communication characteristic of an academic or professional discipline. Some powerful processes of inquiry may not be linked uniquely to any specific discipline (e.g., interpreting graphs), but they will be valued here if the task calls for their use in ways similar to important uses within the discipline.

_____3 = Success in the task requires the use of methods of inquiry or discourse important to the conduct of a discipline. Examples of methods of disciplinary inquiry would include interpreting primary sources.

_____2 = Success in the task requires use of methods of inquiry or discourse not central to the conduct of a discipline.

_____1 = Success can be achieved without any specific methods of inquiry or discourse.

Standard 5. Elaborated Written Communication

The task asks students to elaborate on their understanding, explanations, or conclusions through extended writing.

_____4 = Analysis/Persuasion/Theory. The task requires explanations of generalizations, classifications and relationships relevant to a situation, problem, or theme. Examples include attempts to argue, convince, or persuade and to develop or test hypotheses.

_____3 = Report/Summary. The task calls for an account of particular events or series of events (“This is what happened.”), a generalized narrative, or a description of a recurrent pattern of events or steps in a procedure (“This is what happens.” “This is the way it is done.”)

_____2 = Short-answer exercises. Only one or two brief sentences per question are expected.

_____1 = Multiple Choice Exercises; Fill-in-the-blank Exercises (answered with less than a sentence)

Standard 6. Problem Connected to the World Beyond the Classroom

The task asks students to address a concept, problem, or issue that is similar to one that they have encountered, or are likely to encounter, in life beyond the classroom.

_____3 = The question, issue, or problem clearly resembles one that students have encountered, or are likely to encounter, in life beyond school. The resemblance is so clear that teacher explanation is not necessary for most students to grasp it.

_____2 = The question, issue, or problem bears some resemblance to real word experiences of the students, but the connections are not immediately apparent. The connections would be reasonably clear if explained by the teacher, but the task need not include such explanations to be rated 2.

_____1 = The problem has virtually no resemblance to questions, issues, or problems that students have encountered, or are likely to encounter, beyond school. Even if the teacher tried to show the connections, it would be difficult to make a persuasive argument.

Standard 7. Audience Beyond the School

The task asks students to communicate their knowledge, present a product or performance, or take some action for an audience beyond the teacher, classroom, and school building.

Authenticity increases when students complete the task with the intention of communicating their knowledge to an audience beyond the teacher and when they actually communicate with that audience. Such communication can include informing others, trying to persuade others, performing, and taking other actions beyond the classroom. This refers not to the process of working on the task, but to the nature of the students’ final product.

_____4 = Final product is presented to an audience beyond the school.

_____3 = Final product is presented to an audience beyond the classroom, but within the school.

_____2 = Final product is presented to peers within the classroom.

_____1 = Final product is presented only to the teacher.

Standard 8. Clarity

Clarity refers to the extent to which the directions to the task are clear and coherent.

_____3 = Directions to students are very clear; the teacher anticipates potential problems/questions, and provides examples as appropriate. Directions are sequenced and written in such a way that independent learners could complete the task with little or no assistance.

_____2 = Directions to students are fairly clear; however, the teacher has not anticipated major questions. Almost all students will require clarification or directions.

_____1 = Directions are vague and confusing. The teacher has envisioned a product, but has not communicated her/his ideas to students.

Appendix C

Authentic Student Performance Scoring Rubric

Scoring Criteria for Student Performance

(from Newmann, F.M., Secada, W.G. & Wehlage, G.G. (1995). *A guide to authentic instruction and assessment: Vision, standards and scoring*. Madison, WI: Wisconsin Center for Education Research, pp. 94-102.)

Note: For an in-depth description of the standards, see Chapter 4 in *A Guide to Authentic Instruction and Assessment: Vision, Standards and Scoring*, Newmann, Secada, & Wehlage.

Standard 1. Analysis

Student performance demonstrates higher order thinking with disciplinary content by organizing, synthesizing, interpreting, evaluating, and hypothesizing to produce comparisons/contrasts, arguments, application of information to new contexts, and consideration of different ideas or points of view.

_____4 = Substantial evidence of analysis. Most of the student's work includes analysis. At least three statements indicate that the student has successfully generalized, interpreted, tested, or synthesized specific information.

_____3 = Moderate evidence of analysis. A central portion of the student's work includes analysis. At least two statements indicate that the student has successfully generalized, interpreted, tested, or synthesized specific information.

_____2 = Some evidence of analysis. A small but not central, portion of the student's work includes analysis. At least one statement shows that the student has successfully generalized, interpreted, tested, or synthesized specific information.

_____1 = No evidence of analysis. Almost all statements consist of recording, or reporting specific information, without evidence of the student's organizing it or reflecting upon it; OR virtually all analysis offered is unsuccessful or in error.

Standard 2. Disciplinary Concepts

Student performance demonstrates an understanding of ideas, concepts, theories, and principles from the disciplines and/or civic life by using them to interpret and explain specific, concrete information or events.

_____4 = The student has used disciplinary concepts to organize, explain, interpret, summarize, and extend the meaning and significance of otherwise discrete pieces of information. The use of the ideas illustrates exemplary understanding.

_____3 = The student has included disciplinary concepts to organize, explain, interpret, summarize, and extend the meaning and significance of otherwise discrete pieces of information. The use of the ideas is somewhat limited and/or shows some flaws in understanding.

_____2 = Disciplinary concepts are included, but their use is significantly limited and/or shows significant flaws in understanding.

_____1 = The work includes virtually no disciplinary concepts, or the use of any that are included shows almost no understanding.

Standard 3. Elaborated Written Communication

Student performance demonstrates an elaborated account that is clear, coherent, and provides richness in details, qualifications and argument. The standard could be met by elaborated consideration of alternative points of view.

_____4 = Exceptional. The writer provides substantial and accurate elaboration for two or more important statements. The details, qualifications, and nuances are expressed within an overall coherent framework intended for the reader, and relevant to the topic. The response is so rich as to be worthy of display as an outstanding example of writing in the discipline.

_____3 = Elaborated. The writer provides some elaboration for two or three important statements OR provides substantial elaboration for one important statement. In either case, the details, qualifications, and nuances are expressed within a coherent overall framework intended for the reader, relevant to the topic, and without major inaccuracies.

_____2 = Minimal. The writer provides reasonably accurate elaboration for at least one important statement.

_____1 = Unsatisfactory. The writer provides virtually no information or provides only disjointed details. OR, the writer provides discrete claims, broad generalizations, slogans, or conclusions, but none are elaborated.